Subsidized housing and intergenerational mobility: evidence from Brazil*

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Job market paper

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Abstract

Housing assistance programs are among the most widely used policies to provide affordable housing to low-income families worldwide. In this paper, we study a large-scale subsidized housing program in Brazil and estimate its effects on individuals who received their homes as adults and those who were exposed as children. We find that adult beneficiaries experience small declines in formal employment. Unlike in other settings, these effects are not driven by spatial isolation, but are instead consistent with modest income effects. In contrast, the impacts on children are large and transformative. Childhood exposure to subsidized housing increases educational attainment, raising college attendance and completion by up to 30 percent in a population where most children do not complete high school and very few reach college. These educational gains then translate into persistent improvements in labor market outcomes. Those who receive subsidized housing at age 11 are 22 percent more likely to hold a formal job at age 25 than those who receive their homes at age 18 or older. These gains are concentrated among children of the poorest families and are driven by the proximity to high-quality schools.

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1 Introduction

Housing assistance programs are among the most prevalent and expensive policies used to provide affordable housing to the poor worldwide (UN Habitat, 2020). Although primarily aimed at easing the burden of housing expenses, programs such as rent vouchers, subsidized rentals, and homeownership subsidies often induce low-income families to relocate within cities. As a result, these initiatives affect families' economic outcomes through two distinct channels: an income effect, by lowering housing costs and relaxing household budget constraints, and a place effect, by changing the environments in which adults work and children grow up.

Empirical evidence from both developed and developing countries shows that while housing assistance succeeds at reducing housing expenses, it often distances families from jobs, leading to modest declines in adult employment (Jacob and Ludwig, 2012; Barnhardt et al., 2016). Yet relocation can expose families to higher-opportunity neighborhoods for their children, which the literature on place effects shows to be crucial for long-run gains in human capital and economic mobility (Chetty et al., 2016; Chetty and Hendren, 2018). Despite the scale of these programs and their potential to influence socioeconomic mobility, rigorous evidence on their long-term impacts remains scarce. Most existing studies focus on short-run effects for adults (Ludwig et al., 2013; Picarelli, 2019), while less is known about how children fare once they reach adulthood, who benefits the most from housing programs, and through which mechanisms these effects operate. Understanding the overall impacts of housing programs, including their distributional patterns and underlying mechanisms, is essential to evaluating whether housing assistance delivers only short-lived improvements or generates effects that persist and extend across generations.

In this paper, we examine how subsidized housing affects the labor market outcomes of adult beneficiaries and the educational attainment and labor market outcomes of their children when they grow up, providing evidence on the intergenerational mobility effects of housing assistance programs. We study Brazil's *Minha Casa Minha Vida* (MCMV) program, one of the largest housing initiatives in the world, which provided heavily subsidized mortgages to low-income families. We link program administrative records on more than 300,000 beneficiary families to individual school records and matched employer–employee data, which together allow us to measure adults' labor market trajectories after receiving housing and to measure children's educational attainment and observe them up to 14 years later in the labor market.

Our analysis is divided into three parts. We start with descriptive evidence that the MCMV program improved housing conditions among beneficiaries. Using a simple before-and-after comparison for a sample of households for which we observe home quality and rent expenditures over time, we find that the program increased housing size and access to basic public services while significantly lowering housing costs and relaxing beneficiaries' budget constraints.

Using a sample of beneficiaries who received their housing units early in the program matched to those treated later, we then use a staggered event-study design to estimate the causal impacts of the MCMV program on labor market outcomes of adults. Consistent with findings from other housing policies and large-scale relocation programs (Barnhardt et al., 2016; Belchior et al., 2023), we document a reduction in employment among beneficiaries following their move to their subsidized units. In particular, we find that the Brazilian program led to a 4.5 percent decline in the probability that adults hold a job in the formal sector up to three years after receiving their unit.

In contrast to previous studies on similar interventions that attribute declines in employment to spatial isolation and reduced job access, our findings are not consistent with these channels playing a major role in the Brazilian context. The reduction in formal employment is of similar magnitude among households relocated to developments close to and far from city centers, suggesting that spatial isolation or reduced access to jobs are unlikely to be the primary drivers of this result. Moreover, given the large size of Brazil's informal labor market, an important question is whether beneficiaries substitute from formal to informal employment after receiving their housing units. If this were the case, we would expect the reduction in formal employment to be larger in areas where informality is more prevalent. To examine this possibility, we estimate heterogeneous effects by local informality, comparing adults in cities with high and low shares of informal employment at the time the housing program started. Contrary to the substitution hypothesis, we find that in high-informality areas the program has no effect on the probability that adults are employed. This pattern is not consistent with substitution toward informal work as a key mechanism. Taken together, our results suggest that the modest reduction in formal employment primarily reflects income effects associated with the program's heavy subsidies, rather than diminished access to labor markets or spatial isolation.

Next, we study the effects of the MCMV program on those exposed to it when they were children, who provide a window into the intergenerational consequences of subsidized housing. Using an empirical approach similar to Chetty and Hendren (2018), we exploit differences in the age at which children moved to their MCMV units to estimate the causal effects of exposure to subsidized housing on their levels of education and labor market outcomes as adults. We observe children who were as young as 11 at the time they moved to subsidized homes and follow them up to age 25. Our data allows us to estimate the long-term impacts of subsidized housing exposure on educational attainment and adult employment and earnings and provide novel evidence on how a large-scale housing program shapes labor market trajectories over the life course.

Whereas adults exhibit modest decreases in formal employment following the receipt of their new homes, the results for children reveal sizable gains in educational attainment and large and persistent increases in the probability of having a formal job. As discussed in Section 5, the MCMV program targeted families with very low levels of schooling: parents

had completed, on average, no more than primary education. Even in this disadvantaged context, exposure to MCMV during childhood improves children's educational attainment. In particular, the effects on high school outcomes are positive but modest, in a context where dropout rates remain high and many children do not complete secondary school.

The largest relative effects of early exposure to the MCMV program on educational attainment are observed in college. Exposure to subsidized housing at age 11 increases college attendance by 2.4 percentage points, relative to those who were first exposed to MCMV only at age 21. Since only 13 percent of those exposed at age 21 went to college, the effect represents an 18 percent increase in the probability of attending college. By age 25, children exposed to the MCMV program at age 11 are 0.9 percentage points more likely to complete college. This effect is especially notable because college graduation is extremely rare in this population: among children first exposed at age 21, only 3 percent had completed college by age 25. The effects we estimate therefore correspond to a sizable 30 percent increase in college completion relative to children exposed to MCMV at age 21.

These educational gains translate into large and persistent improvements in employment in the formal labor sector in adulthood. This is especially meaningful given the labor market background of beneficiary families: most parents of MCMV children are outside the formal sector, which typically offers higher wages, greater job stability, and access to employment benefits. Exposure to MCMV during childhood therefore increases access to a segment of the labor market that was largely unavailable to the previous generation. Each additional year of exposure during childhood increases the likelihood of formal employment at age 25 by approximately 3 percent. For children first exposed at age 11, the accumulated effects imply formal employment rates in adulthood about 22 percent higher than for those first exposed after age 18. The effects are larger among the most vulnerable children, specifically those from the poorest families, which underscores subsidized housing's potential to reduce inequality.

Heterogeneity in the effects across locations suggests that proximity to higher-quality schools plays an important role in explaining these intergenerational gains. Children whose families relocated to areas close to high-quality schools, defined as those with the highest student performance in each city, experience substantially larger improvements in employment in adulthood compared to those who moved to homes near low-performing schools. In addition, relocating the most vulnerable families to subsidized housing located near high-quality schools yields the largest gains. Among the poorest households, moving children at age 11 to MCMV units with access to these schools increases their probability of having a formal job at age 25 by roughly 50 percent relative to those first exposed at age 18 or later. Our findings are consistent with improvements in educational access, reinforced by residential stability and lower housing costs, playing an important role in explaining the long-run mobility gains associated with subsidized housing.

This paper contributes to two main literature strands. First, we add to the growing

literature on the economic effects of housing assistance and relocation programs. In the United States, experimental evidence from housing voucher programs such as Moving to Opportunity shows that while these interventions moved families to lower poverty neighborhoods, they had little to no effect on adults' earnings, and even negative effects on teenagers through disruption effects (Kling et al., 2007; Ludwig et al., 2013; Chetty et al., 2016). Similar patterns have been documented in both developed- and developing-country contexts. Barnhardt et al. (2016) show that a housing program in India significantly improved home quality and satisfaction, but did not raise employment or income of adult beneficiaries. Franklin (2025) and Picarelli (2019) find comparable results in Africa, documenting high demand for housing programs, but negative or muted employment gains for adults. Similar results for comparable housing assistance or relocation programs are also found in Latin America (Alzúa et al., 2016; Armentano et al., 2024; Galiani et al., 2017; Rojas-Ampuero and Carrera, 2025). Together, these studies suggest that while housing assistance and relocation initiatives can improve living standards, they do not necessarily enhance adults' labor market outcomes.

There is growing, but still limited evidence on the effects of housing assistance programs on children. Evidence from housing vouchers and public housing programs shows that when relocation does not substantially improve neighborhood environments, impacts on children's long-term education, health, or behavior tend to be small (Jacob et al., 2015). Yet, when families move to higher-opportunity areas or benefit from more stable housing conditions, children experience measurable gains in human capital and early-adult outcomes (Agness and Getahun, 2024; Barnhardt et al., 2016; Camacho et al., 2022; Fuenzalida et al., 2024; Han and Schwartz, 2025). These improvements are typically attributed to better access to schools and safer, less crowded environments that facilitate learning and development. However, not all programs yield positive results. When relocations are abrupt or socially disruptive, children's well-being may deteriorate (Rojas-Ampuero and Carrera, 2025; Tamim et al., 2025).

Although improvements in education, health, and early-life conditions are valuable for understanding the short- and medium-run benefits of housing assistance on children, they may not fully capture children's long-term economic well-being, socioeconomic status, or the potential of such programs to foster economic mobility. Understanding whether housing assistance improves children's employment and earnings as adults is therefore central to evaluating its lasting effects. The scarce evidence that exists points to positive and persistent gains: children exposed to housing assistance programs achieve higher earnings and greater upward mobility as adults (Pollakowski et al., 2022; Beauregard, 2025; Chaudhry and Eng, 2024). Our paper contributes to this emerging literature by not only estimating the long-term effects of subsidized housing exposure on children's educational attainment and labor market outcomes, but also providing evidence on who benefits the most and why. And to the best of our knowledge, this is the first study to examine these long-term effects in a developing-country context, where intergenerational mobility remains especially low. We find that gains are largest among the most vulnerable families and that location plays a decisive

role: children who grow up in developments near high-quality schools experience substantial improvements in employment and earnings as adults. These findings provide new insights into how housing assistance can promote intergenerational mobility if designed to target disadvantaged households and prioritize housing investments in neighborhoods that expand access to opportunity for children.

We also add to the evidence on Brazil's *Minha Casa Minha Vida* program, most of which focuses on adult beneficiaries solely in the city of Rio de Janeiro. There, families were mostly relocated to peripheral and lower-income neighborhoods. For example, Belchior et al. (2023) report declines in formal employment among beneficiaries, suggesting that distance from jobs constrained labor market opportunities. In contrast, Rachter and Machado (2023), focusing exclusively on cash transfer recipients, finds no significant effects on earnings of adults. Our analysis extends this evidence by examining the program across hundreds of cities throughout Brazil, capturing the full spectrum of its implementation rather than the experience of a single urban setting. This nationwide perspective allows us to assess the role of location under a variety of market and policy contexts and suggests that relocation plays a limited role in explaining employment effects on adults when viewed at scale. In addition, we present evidence consistent with changes in formal employment not being primarily driven by substitution toward informal work. Finally, unlike existing studies that focus exclusively on adult beneficiaries, we extend the analysis of the impacts of the MCMV program to children, uncovering the long-term and intergenerational effects of subsidized housing exposure on labor market outcomes and economic mobility.

Lastly, our paper contributes to the literature on neighborhood effects and intergenerational mobility (see Chyn and Katz (2021), for a review). Seminal studies by Chetty and Hendren (2018) and Chetty et al. (2016) show that exposure to higher-opportunity neighborhoods during childhood has lasting impacts on education and earnings. Subsequent research, such as Laliberté (2021), further disentangles the mechanisms behind these effects and highlights the role of educational environments in shaping children's life trajectories. We extend this literature by examining how a large-scale housing policy in a developing country altered children's access to high-quality schools through relocation. Comparing children relocated to developments near high-quality schools with those near lower-quality schools, we find suggestive evidence that access to better educational environments contributes to the intergenerational gains associated with housing assistance. Our findings offer new insights into how the design of subsidized housing (particularly the location of the units) can amplify or constrain the long-term benefits of housing programs.

The remainder of the paper is organized as follows. Section 2 provides institutional background on the Brazilian housing program *Minha Casa Minha Vida* (MCMV). Section 3 describes our data sources. Section 4 presents descriptive evidence on how participation in MCMV affected beneficiaries' housing conditions and housing expenditures. Section 5 examines the effects of MCMV on adult beneficiaries and presents evidence that helps dis-

entangle whether they are driven by location and income effects. Section 6 turns to the next generation of beneficiaries, analyzing how children's exposure to subsidized housing affects their educational attainment and labor market outcomes in adulthood and the likely mechanisms behind these effects. Section 7 concludes with a brief discussion of the implications of our findings for the design of housing assistance policies, as well as the study's limitations and avenues for future work.

2 The Brazilian housing program

Launched in 2009, the *Minha Casa Minha Vida* (MCMV) program was the flagship policy designed and funded by the federal government to expand homeownership for low-income families in Brazil. Beneficiaries were classified by income, with the poorest households receiving the largest benefits. Our analysis focuses on the urban component of Tier 1 (*Faixa* 1) of the MCMV program, which targeted families with the lowest income in municipalities with more than 50,000 inhabitants. Tier 1 both directly funded the construction of new homes and provided highly subsidized mortgages that allowed beneficiaries to acquire their homes at a fraction of market value, ultimately delivering more than a million units in nearly 900 cities across the country between 2010 and 2020.[1] In the remainder of the paper, we refer to Tier 1 of the MCMV program simply as the MCMV program, or MCMV for short.[2]

Eligibility for MCMV was defined by federal rules applied nationwide. Families were required to have monthly household income below three times the minimum wage, or BRL 1,395 in 2009.[3] This threshold corresponded to roughly the median per capita household income in Brazil, meaning that more than half of urban households met the income criterion for the program.[4] For comparison, the eligibility cutoff for *Bolsa Família*, Brazil's means-tested cash transfer program, was BRL 140 per capita in 2009, indicating that MCMV reached well beyond the poorest households while still focusing on the lower half of the

[1]The program was structured into four income tiers (*faixas*). While Tier 1 provided the largest subsidies and targeted the poor, higher tiers covered families with incomes up to ten times the minimum wage. These higher tiers relied mostly on smaller subsidies to interest rates, and in some cases provided no direct subsidies at all, functioning instead as directed credit programs for housing finance. In addition, there was a separate branch of the program targeting rural households. Its design and implementation differed substantially from the urban tiers, and we therefore focus exclusively on the urban component of Tier 1 in this paper. We also exclude the *Oferta Pública de Recursos* modality, which targeted municipalities with fewer than 50,000 inhabitants. This component followed a distinct implementation model: projects were proposed by city governments, selected by the federal government, and financed through local financial intermediaries. Given these design differences, this modality is not directly comparable to the main urban program modality analyzed in this paper.

[2]We exclude housing units financed under the *Entidades* modality of the MCMV program. In this subprogram, implementation was carried out by civil society organizations and cooperatives that organized eligible households to jointly apply for funding and managed the design and construction of their projects. This participatory model differs substantially from the main modality in which the government and financial institutions directly manage beneficiary selection and project execution. According to data from the *Sistema de Habitação* (SISHAB), units financed under the *Entidades* modality account for approximately 1 percent of Tier 1 MCMV units contracted in municipalities with at least 50,000 inhabitants up to 2017.

[3]The federal minimum wage in 2009 was BRL 465, set annually by presidential decree. The Tier 1 income threshold rose periodically with real increases in the minimum wage.

[4]The average urban household in 2009 had three members, implying a per capita cutoff of BRL 465, slightly above the 2008 national median of BRL 415 (Instituto Brasileiro de Geografia e Estatística, 2008, 2009)

income distribution.[5]

On top of the income requirements, the federal government established a few additional eligibility criteria for the MCMV program. The mortgage signatory had to be at least 18 years old, and the family could not already own a home or be a beneficiary of another housing program. Most importantly, the MCMV program gave priority to households headed by women, with smaller quotas reserved for those including elderly members or individuals with disabilities. This focus on female household heads sets MCMV apart from most large-scale housing initiatives in other developing countries, which generally allocate units based on income or housing deficits rather than gender.[6] The approach mirrors the design of *Bolsa Família*, where payments are made to women under the rationale that mothers are more likely to allocate resources toward children's well-being and household stability (Armand et al., 2021; De Brauw et al., 2014). As discussed in Sections 5 and 6, as a consequence of this policy choice, nearly all households in our study sample are led by women, many of whom are single mothers.

The program subsidized more than 90 percent of the cost of each unit, with beneficiary families required to pay the remaining balance over a maximum of ten years in monthly installments that should not exceed 10 percent of the household monthly income. Until the unit was fully paid off, beneficiaries were prohibited from selling, renting, or using their homes as collateral. These restrictions ensured that the properties remained with the targeted families throughout the subsidy period, but also limited their liquidity and mobility, and heavily constrained households from leveraging their new asset to get new credit. Each unit consisted of either a house or an apartment of at least 40 square meters with two bedrooms, a kitchen, a bathroom, and a living room. The units were subject to a cost cap and minimum quality requirements. Combined with the standardized layout and minimum size, ensured that essentially the same homes were built across the country.[7]

Financing and construction of the subsidized units relied on financial intermediation by the state-owned federal bank *Caixa Econômica Federal* (*Caixa*). The bank channeled funds for construction of 92 percent of MCMV units delivered between 2010 and 2020.[8] Private

[5] *Bolsa Família* is Brazil's national cash transfer program, and the government's main policy aimed at direct poverty relief. It started in 2004 and, by 2012, it covered around one quarter of the population. It is composed of a conditional cash transfer targeted at households in poverty (monthly per-capita income up to BRL 140) who have school-aged children and must comply with conditionalities related to children's school attendance and health checks, as well as an extra unconditional component targeted at all households in extreme poverty (monthly per-capita income up to BRL 70). For more details, see (Gerard et al., 2025), for example.

[6] Examples of programs that mostly rely on income-based eligibility include programs in the US (Chaudhry and Eng, 2024; Chetty et al., 2016; Pollakowski et al., 2022), Europe (Van Dijk, 2019), South Africa (Franklin, 2025), Ethiopia (Agness and Getahun, 2024), Chile (Fuenzalida et al., 2024), and Canada (Beauregard, 2025). Notable exceptions include the program in India targeting women-led slum households (Barnhardt et al., 2016) and Colombia's prioritization of displaced or disaster-affected families (Camacho et al., 2022)

[7] In certain metropolitan areas, the federal government allowed higher cost caps to account for higher construction costs. These adjustments ensured that the units built in these locations followed the standard MCMV design specifications and the program's minimum construction quality standards.

[8] The data on number of units and the financial intermediaries responsible for managing the funds for different tiers of the MCMV policy were extracted in January 2023 from the Housing Management System of Brazil's Ministry of Regional Development (*Sistema de Gerenciamento da Habitação do Ministério do Desenvolvimento Regional*, SISHAB).

construction firms submitted project proposals to *Caixa*, which evaluated whether the projects met the program's specifications regarding unit size, quality standards, and cost ceilings. Approved firms received financing for construction, and a few months before completion, *Caixa* issued subsidized mortgages directly to beneficiary families. This structure effectively centralized financial control in *Caixa* while relying on private developers to carry out the large-scale building effort.

Local governments played a central role in mediating access to the program and shaping its implementation at the city level. City governments could introduce additional eligibility criteria beyond the federal ones, such as minimum residency requirements for families. They could also prioritize households that combined multiple criteria, such as female-headed families with children or elderly members. City authorities identified local demand and managed the registration of households, and they could influence the geographic distribution of projects by donating land for construction. They also participated in the selection of beneficiaries, but the final lists had to be vetted by *Caixa*, which verified compliance with the federal eligibility criteria. Certain groups received priority access, including households displaced by public works or living in areas at imminent risk of collapse or flooding. When demand exceeded the available supply of units, city governments were required to allocate them by public lottery. Finally, they were responsible for providing the surrounding infrastructure, including roads, water, and sanitation, to serve the new housing developments.

3 Data

In this section, we describe the various datasets we use to identify MCMV beneficiaries and their families and estimate the effects of the MCMV program on education attainment of children and labor market outcomes of those exposed to the subsidized housing as children and adults. We construct two main samples: one of adult beneficiaries of the program and another of their children. The key sources of data are MCMV administrative records, the Unified Registry for Social Programs (*Cadastro Único*), individual-level school records, and the Brazilian matched employer–employee data (RAIS). We also use the 2010 Population Census and school-level data on standardized tests to shed light on the mechanisms through which the impacts of the MCMV program operate.

3.1 Administrative records of the MCMV program

Our main sampling frame is the administrative records of the MCMV program. The data includes all 882,177 mortgages issued by *Caixa*, the program's main financial intermediary, between 2009 and 2017, covering 2,290 housing developments, roughly two-thirds of all

units built during this period.[9] Each record identifies the signatory of the mortgage contract and reports information on the year of signing, the type of housing unit, and the city where it was built, as well as identifiers that map individual units to their corresponding housing complexes.

Accurate geographic coordinates are available for approximately 70 percent of these complexes, covering roughly the same share of housing units. Coordinates come from two sources: direct administrative information provided by the National Housing Secretariat (*Secretaria Nacional de Habitação*) and additional locations we geocoded based on the registered street addresses of the complexes. The geographic information allows us to locate MCMV projects in space and to compute their distance to city centers and nearby schools, which we use in the mechanism analysis to study how location affects program impacts for both children and adults.[10]

3.2 Unified Registry for Social Programs (*Cadastro Único*)

We also have access to the Brazilian Unified Registry for Social Programs (*Cadastro Único*), the national registry of low-income households maintained by the Federal Ministry of Social Development (*Ministério do Desenvolvimento Social*). The Unified Registry is the administrative database used by the federal government to target and manage most social programs, including MCMV.[11] The data spans the years 2012 to 2019 and provides information at both the family and individual levels, allowing us to observe the full composition of each household and the characteristics of all members, including children. In addition, the Unified Registry contains detailed information on housing conditions and access to basic services such as piped water, sewage treatment, and electricity.

To be eligible for registration in the Unified Registry, households must either have (i) monthly per capita income below 50 percent of the national minimum wage, or (ii) monthly per capita income above 50 percent of the national minimum wage, but still be eligible for a social program that requires beneficiaries to be registered in the Unified Registry. As discussed in Section 2, the income eligibility threshold for MCMV was substantially higher than the threshold used in most other social programs. Nevertheless, households were still required to be registered in the Unified Registry in order to participate. To remain eligible for major welfare programs, most households are typically required to update their information at least every two years.[12] But contrary to beneficiaries of the Brazilian cash transfer program

[9] Construction of the first housing complexes began in 2009, but mortgage contracts started being signed in 2010.

[10] The remaining 30 percent of complexes lack usable location data because of missing or overly generic addresses, often corresponding to new development areas that were not yet registered with specific street identifiers at the time of program implementation. This partial coverage does not pose an important limitation to our main results.

[11] Other programs that rely on the Unified Registry include *Bolsa Família*, the national means-tested cash transfer, and *Benefício de Prestação Continuada*, a cash transfer for the elderly and people with disabilities.

[12] Registration and updates are conducted through an interview with the household head, either during a visit to the local social assistance office or through an unannounced home visit by social workers. Home visits serve to verify reported information, identify

Bolsa Família who need to have their information updated to keep receiving their benefits, once MCMV beneficiaries receive their new home, they were not required to update their information in the Unified Registry.

The Unified Registry records the composition of each household, including both family-level and individual-level information for all household members. This provides us with data on the MCMV signatories, but also allows us to observe their children and their characteristics. At the household level, the Unified Registry has information on family income, whether the household is a recipient of the cash transfer program *Bolsa Família*, as well as home attributes such as dwelling conditions and access to basic services. At the individual level, the Registry reports basic demographics, as well as self-reported employment status, income, and education. We use yearly extractions from the Unified Registry taken every December between 2012 and 2019.[13] Families do not necessarily update their information every year, so we construct an unbalanced panel in which households and individuals appear in a given year only if they have updated their records. For each adult in the household, the head reports labor income (from either formal or informal work) and non-labor income such as pensions, transfers, and private support. These reports are aggregated into monthly household income per capita, which serves as the eligibility criterion for most social programs.

We observe 89% of MCMV beneficiary households in the Unified Registry either in the year of their mortgage signing or within the two preceding years, consistent with the program's registration requirement. Since beneficiaries are not required to update their information after receiving their new homes, we are unable to follow most families longitudinally, and post-treatment updates occur in a non-random manner. We use the Unified Registry to measure household composition and baseline socioeconomic conditions, and in Section 5 we use a subset of families observed both before and after MCMV receipt to document the changes in beneficiaries' home quality and access to basic public services induced by the subsidized housing program.

3.3 School records

We use individual-level data from the Brazilian School Census (*Censo Escolar*), collected by the National Institute for Educational Studies and Research (*Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira*, INEP), which covers the universe of students enrolled in both public and private schools in Brazil. The data span the years 2007 to 2021 and allow us to track individual students over time using unique student identifiers. These records contain yearly information on school enrollment, enabling us to follow children's educational trajectories from primary school to college. Because linking education records to employment outcomes requires a valid Brazilian Social Insurance Number (SIN), or *Cadastro*

household vulnerabilities (e.g., domestic violence), and ensure that families access all benefits for which they are eligible.

[13] The 2019 extraction was taken in May instead of December due to the timing of the data request process.

de Pessoa Física (*CPF*), the analysis using the individual-level education data is restricted to children with a registered SIN.

3.4 Matched employer-employee data

We measure labor market outcomes at the individual level using the Brazilian matched employer–employee data (RAIS, *Relação Anual de Informações Sociais*) from 2005 to 2021. RAIS is an annual administrative census of the formal labor market maintained by the Federal Ministry of Labor (*Ministério do Trabalho e Emprego*). All firms and public entities are legally required to report employment information for each registered worker, covering both private- and public-sector employees under formal contracts.[14]

Observations in RAIS correspond to individual employment contracts, identified by unique worker and firm identifiers, which allow us to link jobs to workers over time and construct a longitudinal panel of formal employment histories. We exclude all public-sector jobs and focus exclusively on private-sector formal employment. The vast majority of formal contracts in RAIS correspond to full-time positions, reflecting the rigidity of Brazilian labor legislation, which prescribes a standard 44-hour workweek for most registered employees.[15]

Using these records, we build an annual panel with three main outcomes: (i) an indicator for whether the individual held a formal job in a given year, (ii) contracted weekly hours, and (iii) average monthly wages.[16] To ensure comparability of wages over time, we convert all nominal monetary values to Brazilian Reais of 2019 using the *Índice Nacional de Preços ao Consumidor Amplo* (IPCA). The IPCA is the official consumer price index in Brazil and the most widely used measure of inflation, produced by the Brazilian Census Bureau (IBGE).

3.5 Other data sources

City hall coordinates We use the geographic coordinates of municipal city halls as proxies for city centers. City hall addresses were collected from official municipal government websites, Google Maps, and targeted Google searches, and subsequently geocoded using the Google Maps Geocoding API to obtain latitude and longitude coordinates. These coordinates are used to compute distances between MCMV housing complexes and city centers, as well as to construct our measure of city radius described below. The data was collected in July 2023.

[14] RAIS does not capture self-employment or *microempreendedores individuais* (microentrepreneurs) without employees.

[15] This characterization of formal employment applies to the period analyzed. In 2017, Brazil passed a labor reform that made employment contracts more flexible and expanded the use of temporary and intermittent work arrangements. Our analysis measures labor market outcomes only up to 2016, before these changes took effect. See Kohli (2025) for more details on the 2017 labor reform, for example.

[16] When individuals hold more than one formal job within a year, we use hours and wages from their highest-paying job in each month. Because it is uncommon for workers in Brazil to hold two formal jobs simultaneously, this approach captures the primary employment relationship and avoids overstating annual earnings by summing across multiple jobs.

2010 Brazilian Population Census We use data from the 2010 Population Census collected by the Brazilian Census Bureau (*IBGE*) to construct a measure of local labor market informality, which we use to examine how the prevalence of informal employment might mediate the effects we estimate on adults' formal labor market outcomes. Using data from the representative 2010 Census sample (*amostra*), we define informality as the share of the employed population who report working as employees without a formal labor contract.

In addition, we use the geographic coordinates of census tracts to compute an approximate measure of each city's radius, defined as the distance from the city hall to the outermost census tract within the same municipality. This measure is used to normalize distances between MCMV housing complexes and city centers. Together, these indicators provide contextual measures of local labor market structure and spatial characteristics that help us explore potential mechanisms underlying the MCMV program's effects on adults' labor outcomes in Section 5.

Location and quality of schools Finally, we also use school-level data from INEP, which also collects and disseminates information on Brazil's education system. Our main measure of school quality is the Ideb (*Índice de Desenvolvimento da Educação Básica*), which combines student performance on standardized national assessments and indicators of grade progression to produce a widely used measure of school performance in Brazil. The assessments started in 2007, are conducted every two years for students in primary school, and results are aggregated at the school level. In this paper, we use Ideb scores at grade 9 as our main indicator of school quality, since most children in our sample were exposed to the MCMV program around the time they would be completing primary school.

We match schools to MCMV housing complexes using their geographic coordinates and assign to each family the Ideb score of the school geographically closest to the complex they moved into. For each beneficiary family, we take as baseline the last Ideb score observed before the family signed their mortgage contract. We use this indicator to characterize the educational environment surrounding each family's new residence at the time of relocation and to explore how differences in local school quality drive the effects of the MCMV program on children's outcomes in adulthood.

4 Changes in housing quality and rent expenditures

We start our analysis by providing descriptive evidence on how home quality and rent expenditures of MCMV beneficiaries changed after they received their subsidized housing units. To do so, we construct a sample of households that appear in the Unified Registry both before and after signing their MCMV mortgage. Although not causal, this analysis provides valuable insights into how the program reshaped beneficiaries' home infrastructure

and housing expenses.

We construct a sample of 409,339 MCMV beneficiary households that signed their mortgages between 2010 and 2017 and appear in the Unified Registry between 2012 and 2019 at least once before and once after signing the mortgage. For each family, we use the last record available before the year of signing and the first record available after signing to capture changes in living conditions associated with program participation. This yields a non-random sample that allows us to compare pre- and post-treatment housing conditions for a subset of MCMV beneficiaries. Households that continue to appear in the Unified Registry after receiving their MCMV unit were, by definition, more vulnerable, as the Unified Registry is primarily used to target and monitor eligibility for social welfare programs.[17]

We use information from the Unified Registry to construct a set of indicators capturing housing quality and a measure of household spending on housing. Our home-quality measures capture access to basic infrastructure and the physical characteristics of the dwelling, including features such as room availability, access to utilities, and overall structural adequacy.[18] We also summarize these characteristics into a home-quality index using the first component of a principal component analysis (PCA) computed each year for all families in the Unified Registry. The index is standardized to have mean zero and unit variance within each year, so values are expressed in standard deviations relative to all registered families in that same year. Housing expenditures are measured as the share of total monthly household expenditures devoted to rent, capturing the burden of housing costs on family budgets.[19]

Figures 1 and 2 summarize our measures of housing quality and rent expenditures among MCMV beneficiaries observed in the Unified Registry before and after receiving their housing unit. The numbers reveal substantial improvements in housing conditions following participation in the program. In particular, the share of households living in dwellings with at least two bedrooms and a standard five-room layout of two bedrooms, one bathroom, one kitchen, and one living room, consistent with the typical MCMV design, increases sharply after the program, from 44 percent to over 70 percent.

Although baseline home conditions were already relatively high for certain basic amenities, the MCMV program also brought nearly all beneficiary families into adequate housing standards. After signing their mortgages, almost all recipient households reported living in

[17] Among families appearing in the Unified Registry both before and after receiving their MCMV unit, 57 percent are beneficiaries of the Bolsa Família cash transfer program, compared to 23 percent among those observed only before receiving subsidized housing. Average household income per capita for the before-and-after sample was BRL 287 (in 2019 values), compared to BRL 548 among households observed only before treatment. These differences indicate that families who remain in the Unified Registry after obtaining their MCMV unit were significantly poorer and more likely to rely on social assistance programs.

[18] Specifically, we use eleven binary variables indicating whether the household (i) has two bedrooms; (ii) has a standard layout with two bedrooms, one kitchen, one living room, and one bathroom; (iii) has a bathroom; (iv) does not have a dirt floor; (v) has concrete walls; (vi) has access to electricity; (vii) is connected to the public water network; (viii) has indoor piped water; (ix) is connected to the public sewage system; (x) benefits from regular trash collection; and (xi) has a sidewalk outside the dwelling.

[19] Specifically, total household expenditures are computed as the sum of reported monthly spending on (i) electricity, (ii) water, (iii) gas, (iv) food, (v) transportation, (vi) rent, and (vii) medication, all recorded in the Unified Registry. The housing expenditure share is then calculated as rent spending divided by total monthly expenditures. All monetary values are expressed in Brazilian reais of 2019.

homes with access to electricity, connection to the public water supply, indoor plumbing, trash collection, and sidewalks outside the unit, as well as durable building materials such as concrete walls and non-dirt floors. As shown in Figure 2, these improvements translate into an average increase of approximately one-quarter of a standard deviation in the home-quality PCA index relative to pre-treatment levels. This suggests that the MCMV program expanded living space and standardized housing quality across the board, bringing nearly all beneficiary families into comparable, adequate living conditions.

Figure 2 also shows a sharp reduction in rent expenditures after households move into their MCMV units. On average, families reported spending 16 percent of their total monthly expenditures on rent before receiving their unit and only 6 percent afterward, a reduction of roughly two-thirds relative to the pre-program level. This decline reflects the program's design, under which beneficiaries replace market rent payments with highly subsidized mortgage installments capped at 10 percent of monthly income.

5 Impacts of subsidized housing on adults

In this section, we estimate the impacts of the MCMV program on labor market outcomes of adult beneficiaries. In particular, we study the effects of receiving a subsidized housing unit on formal employment and earnings of household heads in the first years after they signed their mortgages. We start by describing the empirical strategy and the sample construction for adults in Section 5.1. We then present the main results in Section 5.2 and shed light on the mechanisms that drive the estimated average effects on adults in Section 5.3.

5.1 Empirical strategy

We estimate the impacts of Brazil's housing program on the labor market outcomes of adult beneficiaries using a matched event-study design that exploits variation in the timing of housing receipt. The sample includes only MCMV beneficiaries, and we compare adults who signed their mortgages in the first half of the period covered by our administrative data (the treated group) to a subset of those with similar observable characteristics who signed their contracts in the second half (the control group). This setup allows us to estimate the effects of the program on formal employment and wages up to three years after beneficiaries receive

their new homes.[20,21]

We estimate the following equation using OLS

$$y_{it} = \eta_t + \alpha_i + \sum_{k=-4}^{3} \theta_k \cdot \mathbf{1}\{t = treatyear_i + k\} + \sum_{k=-4}^{3} \beta_k \cdot \mathbf{1}\{t = treatyear_i + k\} \cdot treat_i + \epsilon_{it} \quad \text{(Equation 1)}$$

for individual i in year t, where η_t are year fixed effects, α_i are individual fixed effects, $treat_i$ is an indicator for whether i belongs to the treatment group, and $treatyear_i$ is the year of treatment. The dependent variables of interest y_{it} are employment and earnings indicators constructed using the Brazilian matched employer-employee data (RAIS). The coefficients of interest, β_k, capture the impact of the subsidized housing program on individual i for each year following the receipt of the unit, indexed by k. Our identification assumption is that, absent treatment, the labor market outcomes of early- and late-treated beneficiaries would have followed parallel trends in the years surrounding the treatment date of the early group.

The administrative records of the MCMV program show that 882,177 families signed their mortgages between 2010 and 2017. We define the treatment group as adult beneficiaries who signed their MCMV mortgages between 2010 and 2013, which correspond to approximately 40 percent of beneficiaries in our data. The control group is then drawn from the remaining 60 percent of beneficiaries who received units between 2014 and 2017. We implement a parsimonious matching procedure (with replacement) that pairs each treated individual with one control. We match treated and control individuals on their exact same gender, marital status, and whether they report having an informal job at the time of treatment, as well as whether they lived in cities in the same quartile of the distribution of labor informality in 2010.[22] In addition, treated and controls must be born within two years of each other, have

[20] An alternative strategy would be to compare beneficiaries to households that never received MCMV housing, which would extend the post-treatment follow-up period. Implementing such a design would require drawing the control group from the Unified Registry. However, because the program's income eligibility threshold is well above that of other social programs recorded in the Unified Registry, comparable non-recipient families are rarely observed there. Many households appear in the Unified Registry only once, likely when applying for MCMV, and would not be observed in the absence of the program. In contrast, our preferred design relies exclusively on administrative records from the MCMV program, in which all individuals are observed, and pairs early and late beneficiaries using a parsimonious matching procedure. As shown later in this same section, the two groups have similar characteristics and parallel pre-treatment trends in labor market outcomes, ensuring credible identification at the cost of a shorter post-treatment window.

[21] Similarly to other large-scale housing programs in developing countries, the selection of MCMV beneficiaries in some cities was conducted through public lotteries, which could in principle be used to identify causal effects by comparing lottery winners and losers. However, while the federal government delegated beneficiary selection to city governments, it did not require them to systematically record how beneficiaries were chosen, whether through discretionary selection or random draws, nor to maintain or share lists of lottery participants. The federal government even initiated the design of a national system to consolidate local demand registries, beneficiary selection processes, and lottery records (*Sistema Nacional de Cadastro Habitacional*, SNCH), but this system was never implemented. The city of Rio de Janeiro represents a rare exception: it conducted public lotteries, kept records of both participants and winners, and made these lists publicly available. These data have been used by Belchior et al. (2023) and Rachter and Machado (2023) to estimate the impacts of the MCMV program in that city. Beyond Rio and a handful of similar cases, however, few municipalities systematically documented their selection processes, preventing the use of lottery-based identification at the national level.

[22] As presented in Section 3, we define labor informality as the share of the employed population who report working as employees

at most a two-year difference in completed schooling, and report total household income within BRL 150 (in 2019 values) of each other. This set of matching variables balances the need for parsimony with the inclusion of key characteristics that plausibly affect individuals' participation in the program and outcomes in both the formal and informal labor markets. It also ensures that treated and control households are comparable in their socioeconomic conditions prior to treatment, which is particularly important given the high income eligibility threshold of the MCMV program. The same control individual can be matched to multiple treated individuals, so we cluster standard errors at the individual level. Finally, we assign to each matched control the treatment year of the treated individual with whom they are paired.

Final sample of adults

Our final matched sample includes 319,941 treated–control pairs, covering 86 percent of all household heads of MCMV families who signed their mortgages between 2010 and 2013. Column 1 of Table 1 reports summary statistics for treated adults in this matched sample.

As a result of the priority given to female-led households, 88 percent of adults in our sample are women. On average, they are 38 years old at the time of signing their mortgage. The vast majority of household heads are single (71 percent), only 29 percent identify as white, and they have completed less than eight years of schooling on average, meaning that the typical household head has not completed middle school. Nearly 69 percent report having at least one child aged 16 or younger. The mean household income per capita is BRL 334.50, placing the average household in our sample below the 2019 poverty line of BRL 436 (World Bank, 2018). Given their vulnerable socioeconomic status, around half of these households receive *Bolsa Família*, the Brazilian federal cash transfer program.

In terms of labor market outcomes before treatment, less than one-third of household heads held a formal job in the year prior to signing their mortgage, and just over one-quarter reported having an informal job, implying that roughly 40 percent were not working when they received their MCMV unit. Among those with formal jobs, the average monthly wage is BRL 1,247, about 20 percent above the national minimum wage in 2019. Most household heads work in blue-collar occupations: 63 percent in services (e.g., domestic workers or waitresses) and 19 percent in manufacturing (e.g., extractive industries or construction).

Column 2 of Table 1 reports the same statistics for the matched control group, which exhibits very similar characteristics. By construction, controls are about four years younger, as treated and control households are matched on year of birth but receive their units at least four years apart. They are also slightly less likely to have children (61 percent versus 69 percent among treated) and to receive cash transfers (47 percent versus 51 percent).

without a formal labor contract in each city using 2010 Census data.

5.2 Results

Figures 3–5 show the estimated impacts of the MCMV program on adults' labor market outcomes. The figures plot the coefficients from the event-study specification in Equation 1, with dots representing the estimated effects relative to the year before signing the mortgage and bars showing 95-percent confidence intervals. Table 2 reports the corresponding OLS estimates. At the bottom of each figure, we also report the mean of the dependent variable among controls in the year prior to treatment as a reference to compute the relative size of the estimated effects of the MCMV program.[23]

Figure 3 shows the estimated coefficients from Equation 1 using as the outcome an indicator equal to one if the individual holds a formal job in a given year. The estimates indicate a modest but statistically significant decline in formal employment following the receipt of an MCMV housing unit. On average, the probability of holding a formal job decreases by approximately 1.3 percentage points three years after treatment, relative to the year prior to signing. This reduction corresponds to about 4.5 percent of the mean formal employment rate of 0.29 among the control group in the pre-treatment year.

Figures 4 and 5 present the estimated effects of MCMV receipt on contracted weekly hours and monthly formal wages, respectively. Both outcomes are measured conditionally on having a formal job and estimated for the subset of matched pairs in which both treated and control individuals held a formal job in every single year of the sample. This ensures that the estimates capture differences in contracted hours and monthly wages among continuously employed adults, rather than composition effects from changes in formal employment status. We observe no changes in contracted hours following MCMV receipt. This is consistent with Brazil's labor market institutions, where legislation allows little flexibility for workers and firms to negotiate variable-hour contracts and where part-time employment remains uncommon. Monthly formal wages show a small and statistically significant increase in the second and third years after treatment, of approximately BRL 68 and BRL 93, respectively. These increases are economically small (between 5 and 7 percent of the average earnings of controls before treatment) and are likely driven by differential inflation across calendar years: because treated individuals received their housing units roughly four years earlier, and all values are expressed in 2019 BRL, the apparent wage growth likely reflects mechanical price-level adjustments rather than real wage gains. Overall, the evidence indicates that the MCMV program did not materially alter working hours or real earnings among continuously employed adults. Instead, it only had impacts on the extensive margin by reducing the probability that beneficiaries had a formal job in the immediate years following the receipt of their subsidized homes.

[23] We also estimate the effects of the MCMV on labor market outcomes of the subset of adults with children to verify whether results differ for parents, the group whose children are studied in Section 6. The results are reported in Appendix Figures **??**-B3 and Appendix Table A1. The estimates are nearly identical to those for the full sample, suggesting no differential impacts for parents.

Informal labor markets Given the high levels of labor market informality in Brazil (Ulyssea, 2018), it is possible that the modest declines in formal employment observed among MCMV beneficiaries after receiving their units do not necessarily reflect a reduction in overall employment, but rather a shift from formal to informal work. Adults who relocate after receiving their housing units may not exclusively seek formal jobs. Instead, they might transition to informal employment opportunities. To examine this possibility, we test whether the estimated effects on formal employment vary with the degree of informality in local labor markets. Our conjecture is that, in cities where informality is widespread, the scarcity of formal job opportunities and the relative ease of entry into informal occupations make it more likely for workers to shift toward informal employment after relocation. In that case, we would expect to observe a larger reduction in the probability that beneficiaries have a formal job after receiving their subsidized units in high-informality areas.

Table 3 explores this mechanism by splitting the sample according to whether the household head lives in a city with an informality rate above or below the median of the national distribution, as measured in the 2010 Census. As discussed in Section 3, the informality rate is defined as the share of employed individuals who report working as employees without a formal contract. In our adult sample, the median city exhibits an informality rate of 43 percent, the same as the national median in 2010. Because the number of MCMV beneficiaries differs across cities, the average beneficiary living in high-informality locations resides in a city where informality reaches 52 percent, or roughly half of the entire labor market.

Odd-numbered columns of Table 3 report estimates for adults living in cities with low levels of informality, while even-numbered columns report the results for those in cities with high informality. Columns 1 and 2 report the estimates of the effects of the MCMV program on employment. The mean rate of formal employment among matched controls is 0.31 in low-informality cities, very similar to the average in the full sample, but only 0.14 in high-informality cities. These numbers reassuringly reflect the broader structure of local labor markets: in cities with higher informality, workers have fewer opportunities for formal employment, and MCMV beneficiaries are correspondingly less likely to hold formal jobs.

The estimated effects on formal employment in column 1 are virtually identical to those in the full sample, with a decline of about 1.5 percentage points three years after treatment. However, in column 2 we observe no changes in employment of MCMV beneficiaries in high-informality cities, which is not consistent with workers in these cities substituting into informal jobs. The results for weekly hours and monthly wages show no economically meaningful changes in either low- or high-informality cities. Overall, the evidence is consistent with the conjecture that the modest decline in formal employment among MCMV beneficiaries is not primarily driven by substitution into informal work.

5.3 Mechanisms: income versus location effects

Given that the MCMV program simultaneously relocates families and reduces their housing costs, it is important to understand whether the observed changes in adult labor market outcomes stem from income effects or from spatial relocation. On one hand, lower housing expenses following MCMV receipt may generate income effects that reduce adults' labor supply. This mechanism is illustrated in the simple model presented in Appendix C, where lower housing expenditures translate into an inward shift of labor supply, and is consistent with the descriptive evidence in Section 4 showing that MCMV beneficiaries substantially reduce rent expenses after receiving their housing unit.[24] At the same time, moving to more peripheral areas could increase commuting costs or reduce access to jobs, also leading to lower formal employment. To disentangle these channels, we compare adults who move to housing complexes located close to the city center with those who move to more distant, peripheral areas. If the reduction in employment were primarily driven by relocation and isolation, we would expect larger declines among households assigned to distant complexes. If it mostly reflects income effects, the differences across locations should be limited.[25]

Table 4 presents the estimated effects of the MCMV program by distance to the city center, using the same definition applied throughout the paper: "far" corresponds to complexes located above the median distance of MCMV complexes to the city center, while "close" includes units closer than the median. Odd-numbered columns of Table 4 report estimates for adults who moved to MCMV complexes located closer to the city center, while even-numbered columns show results for those who moved to more peripheral areas. As discussed in Section 3, we measure distance from housing complexes to the city center as a share of the city's radius. In our data, the median distance from MCMV complexes to the city center corresponds to roughly half the city's radius.

The estimated effects on formal employment for those who move to units close to city center (column 1) are very similar to effects estimated using the full sample, with a decline of about 2 percentage points three years after treatment. In contrast, among adults who moved to more peripheral areas (column 2), the estimated decline is smaller, around 0.8 percentage points. Given the respective baseline employment rates of 0.32 for households close to the city center and 0.25 for those farther away, these effects correspond to relative reductions of roughly 6 and 3 percent. The results for weekly contracted hours and monthly wages show no economically meaningful changes in either group, whether measured unconditionally or

[24] Wealth effects may also accompany the income effects discussed above. Receiving a subsidized home could affect labor supply through channels such as higher perceived lifetime wealth, reduced precautionary savings needs, greater willingness to take risks in the labor market, or changes in time devoted to home production. We believe that some of these mechanisms, particularly those related to precautionary savings and access to formal credit, are limited in our context. Beneficiaries' socioeconomic vulnerability likely constrains their ability to reduce precautionary savings, and because they do not formally own their homes until mortgages are fully repaid, they cannot sell or use them as collateral to access formal credit markets. Nonetheless, we cannot rule out that other wealth-related effects may also be at play.

[25] Distance to the city center is commonly used in the literature on housing programs as a proxy for spatial isolation and access to employment opportunities (Barnhardt et al., 2016; Picarelli, 2019; Rojas-Ampuero and Carrera, 2025).

conditional on continuous formal employment. Overall, the evidence suggests that the modest reduction in formal employment among MCMV beneficiaries is not driven by relocation to peripheral areas or reduced access to urban labor markets. Instead, the pattern is consistent with income effects following the receipt of subsidized housing, which lowered housing expenditures and may have temporarily reduced labor supply.

6 Impacts of subsidized housing on children

In Section 5, we showed that the MCMV program led to modest reductions in adult employment three years after beneficiaries received their new homes. To examine how these effects extend to the next generation, we now turn to the impacts of the Brazilian housing policy on educational attainment and labor market outcomes of children of beneficiary families measured in adulthood. In Section 6.1 we outline our empirical strategy and sample construction, followed by the presentation of our estimates of the average effects in Section 6.2. We then show in Section 6.3 that the effects of the MCMV on children are driven by the most economically vulnerable families in our sample and by the quality of the schools in the places where families move, which suggests that both income and neighborhood effects from subsidized housing are at play.

6.1 Empirical strategy

Children of families that received subsidized housing are observed in the labor market only years later, once they reach adulthood. Because they are not observed prior to treatment, we cannot directly test for parallel pre-trends as we do for adults. To address this, we follow an empirical strategy similar to Chetty and Hendren (2018), restricting the sample to children whose families all benefited from the MCMV program and exploiting variation in their age at the time their families received subsidized housing.

Specifically, we estimate the following equation using OLS:

$$y_i = \sum_k b_k \cdot \mathbf{1}\{agetreat_i = k\} + X_i\Phi + W_{h(i)}\Psi + V_{f(i)}\Omega + \epsilon_i \qquad \text{(Equation 2)}$$

where y_i is the outcome of child i, measured at a common age for all children. The key regressor, $agetreat_i$, is the age of child i when the family signed their MCMV mortgage. To account for differences across children and families that might be confounded with the age children were first exposed to subsidized housing, we include as controls observable characteristics of children (X_i), their parents ($W_{h(i)}$) and their families ($V_{f(i)}$) at the time they were treated. The key identification assumption is that, after conditioning on the observable characteristics of children, their parents, and their families included as controls, the timing

of exposure to subsidized housing, measured by the child's age at the time of treatment, is as good as random with respect to their potential outcomes as adults.[26] The coefficients of interest are b_k and measure differences in average outcomes between children who were exposed to subsidized housing at age k and those in the omitted category, which we choose to be those who were 21 years old when their parents signed the MCMV mortgage. We provide more details on this choice, as well as in the variables we include as controls in the equation above, when we describe the sample construction below.

We measure outcomes starting at age 21 to allow individuals sufficient time to complete compulsory schooling through high school, pursue postsecondary education, and enter the labor market. High dropout rates during high school in Brazil motivate our choice to measure outcomes at relatively young ages in adulthood, since fewer individuals continue into higher education compared to settings with lower dropout rates and higher college attendance.[27] In our empirical analysis, we also measure outcomes at age 25 to examine the persistence of effects into early adulthood.[28] Because RAIS ends in 2021, outcomes measured at age 25 are available only for children who were at least 14 years old when their families received MCMV housing; for comparability, we impose the same restriction when estimating educational outcomes at age 25. Our outcomes of interest are educational attainment, measured using individual school records, and employment and monthly wages in the formal sector, which we measure using administrative matched employer–employee data (RAIS).

In addition to flexibly estimating separate treatment effects by age at exposure, we also run an alternative specification that recovers the marginal linear effect of an additional year of exposure to subsidized housing. For that, we estimate

$$y_i = \gamma \cdot \max\left\{18 - agetreat_i,\, 0\right\} + X_i\Theta + W_{h(i)}\Lambda + V_{f(i)}\Gamma + \epsilon_i \qquad \text{(Equation 3)}$$

where y_i is the outcome of interest, $agetreat_i$ denotes the age of the child when the family signed their MCMV mortgage, and $\max\left\{18 - agetreat_i,\, 0\right\}$ captures the number of years of potential exposure up to age 18. We include the same controls from Equation 2.

The parameter of interest, γ, captures the average effect of an additional year of exposure to subsidized housing before age 18. This specification relies on the same identifying assumption as Equation 2: that conditional on the set of observables included in the OLS regression, the age

[26] An alternative specification, discussed by Chetty and Hendren (2018) and used by Chaudhry and Eng (2024) and Pollakowski et al. (2022), includes family fixed effects to exploit within-family variation in the age of exposure among siblings. This approach has the advantage of controlling for unobserved family-level factors that could jointly influence outcomes and timing of housing receipt. In our context, however, this strategy would substantially reduce the usable sample, since roughly three quarters of families include only one child observed in the labor market.

[27] In Brazil, high school dropout rates remain close to 20 percent, compared to about 5 percent in the United States, and fewer than 20 percent of adults hold a college degree, compared to nearly 40 percent in the United States (Instituto Brasileiro de Geografia e Estatística, 2025; Organisation for Economic Co-operation and Development, 2024)

[28] In the Appendix we also report estimates using outcomes at intermediate ages of 22, 23 and 24. Due to data limitations, we do not extend our analysis beyond the age of 25.

at which a child is first exposed to subsidized housing is orthogonal to unobserved determinants of their adult outcomes. When estimating Equation 3, we further assume that marginal effects are linear in the number of years of exposure, implying that each additional year of exposure has the same impact regardless of when it occurs during childhood. We find empirical support for this linearity assumption in our main specification, consistent with evidence from other studies using similar exposure-based designs (Chetty and Hendren, 2018; Laliberté, 2021). This alternative specification improves precision by collapsing multiple treatment indicators into a single continuous measure, increases power to estimate heterogeneous effects, and offers a more straightforward interpretation of the estimated parameter of interest.[29]

Final sample of children

We use the Unified Registry data to recover the family composition of MCMV beneficiary households and identify their children. Beneficiary children are defined as individuals under age 18 observed living with their parents in any year of the Unified Registry (2012-2019) and born before the family received MCMV housing. We restrict our sample to children born between 1993 and 2000. We focus on those born in 2000 or earlier because our labor market data (RAIS) end in 2021 and we begin measuring outcomes at age 21. We exclude those born before 1993, as they cannot be observed in the Unified Registry while still under age 18. We assign the year the *families* signed their mortgage as the treatment year for the children.[30] In cases where parents signed their mortgage after their children reached adulthood, we include only those children who were observed as minors living with their parents.[31]

Since MCMV beneficiaries in our data signed their mortgages between 2010 and 2017, children born between 1993 and 2000 were exposed to the program at ages 9 to 24. However, as shown in Appendix Figure B4, we observe very few children in our data who were treated below age 11 or above age 21. To ensure adequate support across ages, we restrict our sample to those treated between ages 11 and 21. Our final sample includes 393,560 children in 270,373 households observed in the Unified Registry between 2012 and 2019.

Table 5 presents summary statistics for children and families in our sample, reported at the household, household head, spouse, and child levels in Panels A through D, respectively.

Panel A shows that the median household has one child and a per capita income of BRL 161 (in values of 2019), slightly above the extreme poverty line of BRL 151 and well below the national poverty line of BRL 436 in 2019 (World Bank, 2018). Reflecting this vulnerability, 63 percent of households are recipients of *Bolsa Família*, Brazil's cash transfer program.

[29]The gain in precision arises because the alternative specification estimates a single treatment coefficient rather than a separate coefficient for each age at exposure.

[30]This approach mitigates potential selection bias from observing only children who remain with their parents after turning 18, since those who move out are not necessarily captured in the Unified Registry. Our approach parallels Chetty and Hendren (2018), who assign children's treatment based on their parents' location.

[31]For example, consider a household observed in 2015 with a 17-year-old and a 19-year-old child. If the family received its MCMV unit in 2017, only the younger child, observed as a minor before treatment, would be included in our sample.

Panel B summarizes characteristics of household heads. Consistent with the MCMV's mandate to prioritize families led by women, nearly all heads are female (95 percent), and 71 percent are single mothers. They average 40 years of age and 7.2 years of schooling, falling short of completing middle school. Most household heads identify as non-white (83 percent) and only 30 percent hold formal jobs the year before receiving MCMV housing. Among the formally employed, two-thirds work in services, commonly as maids or waitresses, with average monthly earnings of BRL 1,140, slightly above the Brazilian minimum wage of BRL 998 as of 2019.

Panel C reports characteristics of spouses, present in only 29 percent of households. Spouses are a bit older than the heads, averaging 42 years of age, typically have not completed middle school either, and are more likely to have a formal job than household heads (42 percent vs. 30 percent). Spouses that work in the formal sector earn about 20 percent more than household heads, with nearly half employed in construction. Finally, Panel D presents statistics on children. Gender balance is roughly even, and the racial composition mirrors that of their parents. Children were on average 15.6 years old when their families received MCMV housing, with half exposed to the program between ages 14 and 17. The last line of Panel D shows that 72 percent of children in our data have a registered Brazilian Social Insurance Number (SIN), or *Cadastro de Pessoa Física* (*CPF*). As discussed in Section 3, because linking educational attainment and adult employment records requires a SIN, the analysis of the impacts of the MCMV program on schooling outcomes is restricted to the subsample of children with a registered SIN. We compare children with and without a SIN when presenting the results below.

The characteristics reported in Table 5 naturally vary with the age at which children were exposed to the MCMV program. Households with older children are likely to differ systematically from those with younger ones. For example, older children typically have older parents, who on average earn higher wages and are therefore less likely to receive cash transfers.

Figure 6 illustrates several of these patterns. Children treated at older ages are more likely to live in larger households (graph 1), with older heads (graph 4), and in families that are less likely to receive cash transfers (graph 2). We also observe some variation in racial composition, with the share of white parents and children rising modestly with age at treatment (graphs 3 and 5). In contrast, both parental education (graph 7) and the share of formally employed heads (graph 8) decline slightly as treatment age increases. The prevalence of single-parent households and wages among formally employed heads remain relatively stable across treatment ages.

These systematic differences could bias estimates of the program's effects on children's later labor market outcomes if not taken into account. To address this, our OLS specifications include a rich set of baseline characteristics. Specifically, the vector X_i in Equation 2 includes

children's gender, race, and year of birth, which captures differences in labor market entry timing and macroeconomic conditions. The vector $W_{h(i)}$ contains characteristics of household heads that are correlated with both the age of treatment and children's later outcomes, including the head's age at mortgage signing, gender, race, education, and formal employment status in the year before treatment. Finally, the vector $V_{f(i)}$ includes household-level characteristics that may be related to both treatment timing and future outcomes of children, namely whether the family has one or two parents, the number of children under 18, and whether the family received the Brazilian cash transfer program *Bolsa Família*, a proxy for socioeconomic status.

6.2 Results

Schooling We begin by examining the effects of childhood exposure to the MCMV program on educational attainment. Because linking education records to adult outcomes requires a valid Brazilian Social Insurance Number (SIN), the analysis using schooling outcomes is restricted to the 72 percent of children in our sample with a registered SIN. Appendix Table A4 compares observable characteristics of children with and without a SIN. Reassuringly, differences between groups are small in magnitude, suggesting that focusing on children with a SIN does not substantially alter the composition of our sample.

Table 6 reports the estimates of Equation 2 using schooling outcomes measured at age 21. The goal is to test whether exposure to the MCMV program at young ages led children to reach higher education milestones. Columns 1 and 2 present effects on the probability of having attended high school, while columns 3 and 4 report effects on high school completion. Columns 5 and 6 present estimates for college attendance. Odd-numbered columns include only child-level controls, X_i, whereas even-numbered columns also add household head characteristics, $W_{h(i)}$, and household controls, $V_{f(i)}$. Our preferred specification includes all three vectors of controls. Each row corresponds to an indicator for the age at which the child was exposed to MCMV housing, with those exposed at age 21 being the omitted category. At the bottom of the table, we report the averages of the dependent variables among the omitted group, which provide a baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses below each coefficient.

The results in Table 6 indicate that the effects of MCMV on schooling are concentrated among children exposed to the program at younger ages and fade out after age 18. Column 2 shows that children exposed to the MCMV program at age 11 are 2.2 percentage points more likely to have attended high school by age 21 than those first exposed at age 21, an increase of roughly 5 percent relative to the baseline high school attendance rate of 42 percent. The effects on high school attendance also decline with age of exposure, falling to 0.9 percentage points for those exposed at age 17, although estimates are no longer statistically significant starting at age 13. Consistent with high dropout rates in Brazilian secondary schools, column 4 of Table 6 shows that only 25 percent of those exposed to the MCMV program as adults finished high

school. Exposure to the program at earlier ages does seem to increase high school completion, but the effects are only statistically significant for children who moved into MCMV housing at ages 16, 17, and 18, precisely the ages at which they would typically be enrolled in high school. They are 1.2, 1.5, and 1.3 percentage points more likely, respectively, to complete high school than those first exposed at age 21, which correspond to relative increases of 5 to 6 percent.

Finally, despite the low baseline levels of formal education among the population eligible to the MCMV program, column 6 shows that large relative gains are observed for college attendance, with exposure at age 11 associated with an increase of 2.4 percentage points. Relative to the baseline college attendance of 13 percent among those treated at 21, college attendance increases by 18 percent.

Figures 7–9 visually present the main results from Table 6 by plotting the coefficients from our preferred specifications against the age at which individuals are first exposed to the MCMV program. We also plot the fitted line implied by the slope estimated in the alternative specification that assumes linearity in the effects of subsidized housing up to age 18 (Equation 3). In all three graphs, dots represent point estimates, and bars indicate 95-percent confidence intervals. We multiply the point estimates by 100 so they can be interpreted as percentage points. Table 8 presents the precise OLS estimates of the alternative specification (Equation 3) on the same education outcomes from Table 6.

The effects on several educational milestones measured by age 21 decrease roughly linearly with age of exposure to the MCMV program. Each additional year of exposure to the MCMV program starting at 11 increases the chance of attending high school by age 21 by 0.2 percentage points. The effects on high school attendance, however, are not statistically significant starting at age 13. As shown in Table 6, the effects on high school completion are concentrated among those exposed at ages 15 to 18 rather than displaying a linear decline. Finally, each year of childhood exposure to subsidized housing increases college attendance by 0.2 percentage points.

Table 7 reports the estimated effects of the MCMV program on educational attainment measured at age 25. The first six columns mirror those in Table 6.[32] By that age, individuals have arguably had more time to complete post-secondary education, so we also measure whether individuals finished college at that age. Columns 7 and 8 of Table 7 present effects of subsidized housing on college completion by age 25. Again, even-numbered columns control for observable characteristics of children (X_i), household heads ($W_{h(i)}$), and households ($V_{f(i)}$), which is our preferred specification. Our matched employer–employee data ends in 2021, so we can observe outcomes at age 25 only for children who were at least 14 years old when their families received their subsidized housing units. To ensure comparability of

[32] Appendix Tables A6–A8 and Appendix Figures B5–B14 present results for outcomes measured at ages 22 through 24. The sample gradually excludes children treated at younger ages, as only those treated at 12 or older can be observed at age 23, and at 13 or older at age 24.

our results on schooling and employment outcomes, we restrict the analysis of the effects of MCMV on schooling outcomes measured at 25 to children who were at least 14 years old when their families received their subsidized housing units.

The results at age 25 largely follow the patterns observed at age 21. As before, the effects are concentrated among children exposed to the program at younger ages and, for most schooling outcomes, become statistically indistinguishable from zero for those first exposed after age 18. The MCMV program seems to have had virtually no effect on high school attendance and completion when both are measured at age 25 (see columns 2 and 4). Turning to higher education in column 6, children exposed to the MCMV as early as age 14 are 3 percentage points more likely to have attended college by age 25, an increase of 16 percent relative to a baseline attendance rate of 18 percent among those first exposed at age 21. Our estimates in column 8 indicate that exposure to the Brazilian policy increases the probability of completing college by as much as 0.9 percentage points for those treated at 16 years old, a sizable 30 percent increase relative to a baseline completion rate of 3 percent among those treated at 21.

Figures 10–13 plot the corresponding coefficients from Table 7 again with a fitted line implied by the slopes estimated in Equation 3, which are reported in Table 9.[33] As in the results for age 21, the figures show that the estimated effects fade out for children first exposed after age 18. The age gradient is once again approximately linear for all the outcomes, except again high school attendance. The effects on college attendance by age 25 are even more sizable. One additional year of childhood exposure to the MCMV program increases the probability that children attend college by 0.4 percentage points. The marginal effect on the probability that individuals start and finish college, measured by our alternative specification, is an increase of 0.1 percentage point per year of exposure before the age of 18.

Taken together, the results reveal a clear pattern across educational milestones. In a population with relatively low baseline levels of formal education, the MCMV program increases schooling attainment for children exposed before age 18, especially through gains in high school attendance at age 21 and college attendance by ages 21 and 25. The largest effects are observed among those exposed at younger ages and decline approximately linearly with age at exposure. The only exception is high school completion, for which the effects are concentrated among children exposed at the ages when they would typically be enrolled in high school. This age gradient closely parallels the childhood exposure effects in Chetty and Hendren (2018), who show that the positive impacts of moving young children to a higher-opportunity area in the US on their socioeconomic outcomes decreases approximately linearly with the age children move.

[33] Appendix Tables A9–A11 report the estimates of our linear specification using outcomes measured at ages 22 through 24.

Labor market outcomes We next examine whether the observed improvements in educational attainment of children exposed to the MCMV program translate into better labor market outcomes in early adulthood. Table 10 reports the OLS estimates of Equation 2 using outcomes measured at age 21. Columns 1 and 2 report results for formal employment, and Columns 3 and 4 for (unconditional) monthly formal earnings. Columns 1 and 3 include only child-level controls, X_i, while in Columns 2 and 4 we also add household head controls $W_{h(i)}$ and household controls $V_{f(i)}$, which is our preferred specification. Each row in the table corresponds to an indicator for the age at which the child was exposed to MCMV housing, with age 21 as the omitted category.

The estimates reveal a clear and monotonic pattern: the longer children are exposed to MCMV housing, the higher their probability of having a formal job and their formal job earnings in early adulthood. Children whose families received housing at age 11 are 4.5 percentage points more likely to have a formal job at age 21 than those exposed at 21, and earn roughly BRL 62 more per month. Thirty-six percent of those treated at age 21 hold a formal job at that same age, so receiving housing ten years earlier, at age 11, raises formal employment by roughly 13 percent relative to this baseline. The increase in monthly earnings also represents a gain of approximately 13 percent relative to the average of (unconditional) earnings of BRL 479 among those treated at age 21.

The coefficients for both employment and wages decline steadily with the age at exposure and become negligible for those treated at age 18. Including or excluding household and family controls has little effect on either the point estimates or the overall gradient, suggesting that the results are not driven by observable differences in parental or household characteristics. The coefficients for those who received subsidized housing at ages 19 and 20 are small and negative, although not statistically significant when using monthly wages as outcomes. This is consistent with the modest declines in employment we documented among adults that received subsidized housing at the age of 23 or older in Section 5, suggesting that the short-run adjustment costs observed for adults may also extend to younger adults transitioning into the labor market. In Appendix Table A5, we also show that the employment results at age 21 remain positive and decline with age at exposure when we restrict the sample to children with a registered SIN, the same subsample used in the education analysis.

Figures 14 and 15 visually present the estimates on employment and wages, respectively. The figures plot the employment coefficients from our preferred specification in Table 10 multiplied by 100, so they can be read as percentage points. Dots represent the estimated coefficients for each exposure age, and bars indicate 95-percent confidence intervals. The figures highlight the nearly linear decline in the estimated effects as exposure occurs later in childhood and adolescence. This approximately linear pattern motivates our alternative specification, which assumes a constant marginal effect of an additional year of exposure to the MCMV program during childhood and that we discuss next.

Tables 11 and 12 present the OLS estimates of the alternative specification (Equation 3) on employment and wages, respectively, assuming linearity. Column 1 of each table reports the effect of interest on labor market outcomes measured at the age of 21. The point estimate in Table 11 of 0.006 implies that each year of exposure to MCMV at childhood increases the likelihood of formal employment by about 0.6 percentage points. For a child who moved with their family to subsidized housing at 11, the effects accumulate to an increase on employment at 21 of 4.2 percentage points, close to the non-parametric estimate of 4.5 reported in Table 10. Column 1 of Table 12 shows that each additional year of exposure to MCMV increases (unconditional) wages by BRL 7.8 as of 2019, or BRL 54.6 for a child exposed at age 11. The results reinforce the interpretation of a strong, approximately linear dose–response relationship between early exposure to improved housing conditions and formal employment outcomes in early adulthood.

We now turn to outcomes measured at age 25, the oldest age for which we can observe labor market data in our sample. Because our matched employer–employee data ends in 2021, this analysis includes only children who were at least 14 years old when their families received their subsidized housing units. Figures 16 and 17 present the estimated effects of exposure to subsidized housing on employment and earnings, respectively, based on Equation 2.[34] Column 5 of Tables 11 and 12 shows results for the same outcomes using the linear specification in Equation 3.[35]

The results at age 25 show large and economically meaningful effects. Children whose families received subsidized housing at age 14 are 6.4 percentage points more likely to have a formal job than those first exposed at 21, an increase of 18 percent relative to the baseline employment rate of 35 percent. Monthly earnings also rise substantially, by around BRL 93, or roughly 19 percent relative to the unconditional mean of BRL 498 among those treated at age 21. Taken together, these results indicate that earlier exposure to subsidized housing produces persistent and growing improvements in labor market outcomes into adulthood.

The results from the linear specification, reported in Column 5 of Tables 11 and 12, confirm the pattern observed in the estimates by treatment age. Each additional year of exposure to subsidized housing before age 18 increases the probability of holding a formal job at age 25 by 1.1 percentage point and raises monthly earnings by approximately BRL 19. Relative to the average levels among those first exposed after age 18, these effects correspond to gains of slightly over 3 percent in formal employment and almost 4 percent in earnings per additional year of exposure. Accumulated over seven years of exposure, from age 11 to 18, these estimates imply an overall increase in formal employment of 22 percent and a cumulative rise in monthly earnings of about 27 percent at age 25. Together, these findings reinforce

[34] The point estimates plotted in these figures are reported in column 5 of Appendix Tables A12 and A13.

[35] Appendix Tables A12 and A13 and Figures B15–B20 present results for outcomes measured at ages 22 through 24. The sample gradually excludes children treated at younger ages, as only those treated at 12 or older can be observed at age 23, at 13 or older at age 24, and at 14 or older at age 25.

the conclusion that earlier and longer exposure to subsidized housing leads to substantial and persistent improvements in labor market outcomes in adulthood.

Heterogeneity We next examine whether subsidized housing benefits the most vulnerable children within already disadvantaged families. Specifically, we test whether the effects of early exposure to the MCMV program are larger for groups that face structural barriers in the Brazilian labor market, namely women, non-white individuals, and whether the program helps narrow the gaps these groups face when entering the workforce.[36]

In addition, we explore heterogeneity by the education level and formal employment status of the household head to assess whether subsidized housing can foster intergenerational occupational mobility. A large body of research on occupational mobility documents strong intergenerational correlations in educational attainment and occupation between parents and their children (Black and Devereux, 2011; Behrman et al., 2001). In Latin America, and in Brazil in particular, the informal sector accounts for a substantial share of employment, and evidence shows that informal jobs are disproportionately concentrated in low-skill activities Ulyssea (2018). In this context, we test whether parental attachment to the formal sector is associated with a higher likelihood that children also work formally when they reach adulthood.

Table 13 presents results for formal employment measured at age 25, estimated using the linear specification in Equation 3.[37] Column 1 reports our baseline results using the full sample of children. Columns 2 and 3 report results separately for boys and girls, columns 4 and 5 for white and non-white children, columns 6 and 7 for children of household heads with no or some high school education, and columns 8 and 9 for those whose household heads held or did not hold a formal job at the time of treatment.

The effects are almost three times larger for girls than for boys relative to the mean employment rate among those first treated at 18 or later, helping to close about half of the gender gap in formal employment observed at that age. By contrast, children of parents who were formally employed before receiving housing have both higher baseline employment rates and larger estimated gains, suggesting that subsidized housing amplifies rather than offsets the advantage associated with parental attachment to the formal labor market. For other dimensions of heterogeneity, such as race and parental education, we find no economically meaningful differences in the effects of exposure. Overall, the results indicate that while subsidized housing benefits all groups, it delivers the largest relative gains to women yet does little to reduce the gap in formal employment between children of formally and informally employed parents.

[36] Fryer et al. (2013); Kleven et al. (2025); Olivetti and Petrongolo (2016) document gender and racial disparities in employment and earnings worldwide. For evidence on persistent gender and racial gaps in employment and wages in Brazil, see Machado et al. (2018); Theodoro (2008).

[37] Full results, including estimates for monthly earnings and for outcomes measured at ages 21 through 25, are reported in Appendix Tables A14–A22. The qualitative patterns are similar across specifications and outcome ages.

6.3 Mechanisms: income versus location effects

In this section, we provide evidence that helps disentangle the mechanisms through which exposure to MCMV housing during childhood affects later labor market outcomes. As in the analysis for adults, we aim to provide evidence that helps distinguish effects associated with the places where beneficiaries move from income effects that arise following program participation. On the income side, we have shown in Section 4 that the program substantially reduces rent expenditures, which frees up the household budget and could lead to a reduction in labor supply. In fact, in Section 5 we provide suggestive evidence that income effects following the housing transfer seem to be driving the reduction in employment observed among adults.

To shed light on similar channels for children, we estimate heterogeneous effects by the location of the MCMV complex and by families' pre-treatment socioeconomic status. Specifically, we compare children in families who moved to housing complexes located closer to the city center, who likely experience primarily income effects, to those who relocated to more peripheral areas, who may face both income and neighborhood effects. We then analyze heterogeneity by families' pre-treatment income levels, proxied by participation in the federal cash transfer program *Bolsa Família*. This comparison allows us to explore whether the program's benefits are strongest among the most financially vulnerable. Prior evidence from Brazil suggests that the poorest families tend to gain the most from housing and cash transfer programs (Belchior et al., 2023; Rachter and Machado, 2023). Finally, we examine whether school quality mediates the program's effects on children's outcomes, as previous research identifies access to high-performing schools as a key channel through which neighborhoods influence children's development and intergenerational mobility (Camacho et al., 2022; Laliberté, 2021). Specifically, we contrast families who relocate near schools with high versus low student performance, using Ideb, Brazil's national index of educational performance, based on the latest year available prior to each family's receipt of housing.

In Table 14, we report the estimated effects of exposure to MCMV housing on formal employment at age 25 for different subsamples of children. These results are based on our linear specification in Equation 3, which expresses the coefficients as the marginal effect of one additional year of exposure to subsidized housing before age 18.[38]

In column 1, we report the baseline estimate of 0.011, indicating that each additional year of exposure to MCMV housing before age 18 increases the likelihood of having a formal job by the age of 25 by 1.1 percentage points, or about 3 percent relative to the control mean of 0.35. The first comparison distinguishes between children in families who moved to MCMV complexes located closer to the city center and those who relocated to more peripheral areas.

[38] Appendix Tables A23–A30 report analogous results for employment measured at ages 21–24 and for monthly formal wages across all ages, showing very similar patterns across specifications and outcomes. Appendix Figures B21-**??** plot the estimates for formal employment at ages 21-25 using the different subsamples in columns 2-7 of Table 14.

The definition of proximity follows the same criterion used in the analysis for adults, with "far" corresponding to complexes above the median of the distribution of distance to the city center, measured as a share of the city radius. The estimated coefficient for children living closer to the city center (column 2) is 0.013, close to our baseline estimate, while that for those living farther away (column 3) is almost half (0.007), suggesting that children of families who move close to the city center drive the program's long-term impacts.

Columns 4 and 5 show heterogeneity by participation in *Bolsa Família*, which proxies for lower pre-treatment household income. The coefficient for children in *Bolsa Família* families is 0.013, roughly twice the coefficient of 0.007 for those in non-recipient households. This pattern is consistent with the presence of income effects and indicates that the gains in employment are primarily driven by the poorest families, who likely experienced the largest budget relief after moving into MCMV housing. The reduction in rent expenditures may have freed up household resources, potentially allowing parents to improve living conditions or support their children in ways that contribute to better outcomes later in life.

Columns 6 and 7 of Table 14 examine heterogeneity by the quality of the schools located near the MCMV complexes, measured by the Ideb of grade 9. As described in Section 3, we use Ideb at grade 9, since most children in our sample were exposed to the MCMV program around the time they would be completing primary school. [39] We classify complexes according to whether the nearest school's Ideb score is above or below the 75th percentile of the distribution of school quality within the same city, using the last Ideb year available before the family signed its mortgage.[40] The results suggests that school quality likely plays a substantial role in driving the effects of the MCMV on children's outcomes. The estimated effect for children who moved to areas with lower-quality schools is 0.009, while for those who moved near higher-quality schools it is 0.015, or almost 70 percent bigger. This difference indicate that neighborhood effects, particularly those associated with exposure to better educational environments, are likely an important mechanism driving the program's long-term impacts on children's employment.[41]

Finally, the largest gains are observed among children of *Bolsa Família* recipient families who also moved to areas served by higher-quality schools (column 8), where the coefficient reaches 0.019. This group combines two reinforcing advantages: improved financial conditions through income support and exposure to better educational opportunities. The magnitude of the effect is substantial relative to the baseline: among children in this group

[39] Some families in our sample received their subsidized units when their children were about to start high school. Unfortunately, Ideb scores for high schools were only introduced in 2017, the final year in which families in our data signed their mortgages, and are therefore unavailable for our analysis.

[40] Panel B of A3 reports summary statistics for the school quality measures used in this analysis, including the share of MCMV complexes located near schools with Ideb score above different percentiles of the within-city Ideb distribution, for the years 2009 to 2015. We define high-quality schools as those above the 75th percentile of the Ideb distribution as average school performance in Brazil is broadly low. This threshold allows us to capture schools with relatively high absolute levels of test scores and passing rates.

[41] We cannot rule out that other local amenities or neighborhood characteristics that might be correlated with school quality, such as crime rates, access to other public services or the mix of peers, may also contribute to these neighborhood effects.

who were first exposed at age 18 or older, the average formal employment rate at age 25 is 28 percent, implying that those first exposed at age 11 experience gains of almost 50 percent of that mean. The combination of these channels appears to generate the strongest and most sustained improvements in labor market outcomes for children of MCMV beneficiaries. These findings reinforce the idea that the benefits of MCMV exposure are largest for the most vulnerable families that gain access to high-quality education, underscoring the complementary roles of income and neighborhood mechanisms in shaping intergenerational outcomes.

7 Conclusion

This paper studies the impacts of Brazil's *Minha Casa Minha Vida* (MCMV) program, one of the world's largest housing assistance policies, on labor market outcomes of adult beneficiaries and their children when they grow up. Linking administrative data from the housing program, the Unified Social Registry (*Cadastro Único*), individual school records, and matched employer–employee records, we document how subsidized homeownership reshaped housing conditions and economic outcomes for over 300,000 low-income families. For adults, the program led to small declines in formal employment up to three years after treatment. We show that this result is consistent with modest income effects associated with lower housing costs rather than with spatial isolation or substitution toward informal work. In contrast, the effects on children are large and enduring: those first exposed to subsidized housing at young ages are substantially more likely to hold formal jobs and earn higher wages in adulthood. The gains are concentrated among the poorest families and suggestive evidence points to proximity to high-quality schools as a likely channel through which subsidized housing fosters intergenerational improvements in labor market outcomes.

The results highlight that housing programs can foster intergenerational mobility when designed to enhance children's access to opportunity. Given that large-scale housing programs represent some of the most expensive policies undertaken by governments to promote housing affordability, these findings point to ways to improve their socioeconomic returns. Beyond improving housing quality and reducing costs, programs that strategically locate developments near high-quality schools and other opportunity-enhancing amenities are shown, in the context of Brazil, to generate lasting economic benefits that extend across generations. Targeting the most vulnerable families and integrating location-based criteria into program design can thus transform subsidized housing from a short-term welfare intervention into a powerful engine of long-run mobility.

While our findings shed light on how subsidized housing affects both adults and their children, some limitations remain. For adults, we find small and short-lived declines in formal employment that are consistent with income effects from lower housing costs. However, because our data do not include measures of informal work, we cannot directly observe

transitions between the formal and informal sectors. This limits our ability to fully assess whether beneficiaries adjust their labor supply by shifting into informal employment. Other potential channels, such as neighborhood social interactions or time spent on home production, may also contribute to the observed effects and cannot be fully ruled out. For children, our main results show that exposure to subsidized housing generates large and persistent improvements in formal employment and earnings in adulthood. We provide suggestive evidence that proximity to high-quality schools plays an important role in driving these intergenerational gains. However, we cannot rule out other mechanisms through which subsidized housing might influence children's long-term outcomes. These may include safer neighborhoods, improved access to public services, enhanced peer environments, and greater residential stability. Moreover, our estimated effects combine the direct impacts of exposure to improved housing and neighborhoods with potential spillover effects operating through changes in parents' behavior and economic conditions following program participation.

Looking ahead, several avenues for future research emerge from this study. While we now link individual-level educational records to later labor market outcomes, the current analysis does not fully disentangle whether children from the most vulnerable households experience larger educational gains when they relocate to areas served by higher-quality schools. Examining this interaction more directly would provide clearer evidence on whether improvements in school quality amplify the effects of subsidized housing on human capital accumulation.

More broadly, school quality is unlikely to be the only place-based channel through which subsidized housing affects children's trajectories. Relocation may also change children's exposure to neighborhood safety, transportation access, peer environments, health infrastructure, and other local amenities that shape educational investment and long-run opportunity. Future work could therefore seek to quantify the relative contribution of each of these mechanisms to the treatment effects we estimate. Doing so would help clarify whether the intergenerational returns to housing assistance are driven primarily by access to better schools, by broader improvements in neighborhood environments, or by complementarities across multiple dimensions of place-based opportunity.

In addition, the nationwide scale of the MCMV program and the discretion granted to local governments in identifying and selecting beneficiaries likely created substantial variation in how the program was implemented across cities. Future work could exploit this heterogeneity to examine how differences in local governance, targeting practices, and urban context shape the educational and long-run mobility returns to subsidized housing policies.

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Tables

Table 1: Summary statistics: sample of MCMV adult beneficiaries and matched controls

	(1) Treated	(2) Matched controls	(3) Standardized difference
Female (0/1)	0.88	0.88	0.00
	(0.33)	(0.33)	
White (0/1)	0.29	0.27	0.05
	(0.45)	(0.44)	
Age (years)	38.14	42.03	-0.33
	(11.78)	(11.88)	
Years of education	7.87	7.90	-0.01
	(3.71)	(3.69)	
Single (0/1)	0.71	0.71	0.00
	(0.45)	(0.45)	
Had kids (0/1)	0.69	0.61	0.16
	(0.46)	(0.49)	
Household income per capita (2019 BRL)	334.50	352.10	-0.05
	(351.98)	(363.18)	
Cash transfer beneficiary (0/1)	0.51	0.47	0.09
	(0.50)	(0.50)	
Had informal job (0/1)	0.27	0.27	0.00
	(0.45)	(0.45)	
Had formal job (0/1)	0.31	0.29	0.05
	(0.46)	(0.45)	
Monthly earnings, conditional on formal job (2019 BRL)	1247.09	1260.17	-0.01
	(1003.69)	(937.51)	
Formal job in services (share of formally employed)	0.63	0.64	-0.02
	(0.48)	(0.48)	
Formal job in manufacturing (share of formally employed)	0.19	0.20	-0.02
	(0.39)	(0.40)	
Number of observations	319,941	319,941	

Notes: This table reports summary statistics for the matched sample of household heads from families of MCMV beneficiaries and their controls. Each row corresponds to one variable. Columns 1 and 2 report the mean for treated individuals and controls, respectively, with standard deviations in parentheses. Column 3 reports the standardized difference in means between the two groups. The sample includes 319,941 adult beneficiaries who signed MCMV mortgage contracts between 2010 and 2013 and an equal number of matched controls who received housing between 2014 and 2017. Treated and control individuals are matched on gender, marital status, informal employment status, age (within two years), years of education (within two years), and household income (within BRL 150, in 2019 values). Standardized differences are computed as the difference in means divided by the pooled standard deviation. Information on formal employment, earnings, and occupation is drawn from the matched employer-employee data (RAIS) in the year before treatment, while all other variables are constructed using data from the Unified Registry in the year before treatment or the closest available year. For additional details on the matching procedure and sample construction, see Section 5.

Table 2: Effects of MCMV on labor market outcomes of adults

	(1)	(2)	(3)
		Sample with a formal job	
	Formal job (0/1)	Weekly hours	Monthly formal wages (in 2019 BRL)
$\mathbf{1}\{t = treatyear_i - 5\} \times Treat_i$	-0.000	0.168***	-11.450
	(0.002)	(0.052)	(17.873)
$\mathbf{1}\{t = treatyear_i - 4\} \times Treat_i$	0.002	0.077*	-10.391
	(0.001)	(0.044)	(14.859)
$\mathbf{1}\{t = treatyear_i - 3\} \times Treat_i$	0.001	0.071*	-27.843**
	(0.001)	(0.038)	(12.667)
$\mathbf{1}\{t = treatyear_i - 2\} \times Treat_i$	0.002*	0.006	-7.616
	(0.001)	(0.029)	(11.381)
$\mathbf{1}\{t = treatyear_i\} \times Treat_i$	-0.004***	-0.045	4.956
	(0.001)	(0.029)	(16.156)
$\mathbf{1}\{t = treatyear_i + 1\} \times Treat_i$	-0.008***	-0.021	20.931
	(0.001)	(0.035)	(24.075)
$\mathbf{1}\{t = treatyear_i + 2\} \times Treat_i$	-0.012***	0.020	67.995***
	(0.002)	(0.039)	(23.135)
$\mathbf{1}\{t = treatyear_i + 3\} \times Treat_i$	-0.013***	-0.062	93.168***
	(0.002)	(0.041)	(24.771)
Observations	5,758,938	654,462	654,462
Number of matched pairs	319,941	40,094	40,094
R-squared	0.629	0.648	0.389
Outcome mean of controls at t-1	0.290	42.68	1,321

Notes: This table reports OLS estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Labor market outcomes are measured using the Brazilian matched employer–employee data (RAIS). Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Column 1 reports estimates using as dependent variable an indicator equal to one if the individual held a formal job in a given year. Columns 2 and 3 report effects on the number of weekly hours contracted and on monthly formal wages (in 2019 BRL), respectively, considering individuals who were formally employed in every single year of the sample period. Each coefficient represents the estimated effect of MCMV receipt relative to the year before signing. The number of matched pairs in the sample and the mean of the dependent variable in the year prior to treatment are shown at the bottom of each column. See Section 5 for details on the sample construction and matching procedures. Standard errors are clustered at the individual level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table 3: Effects of MCMV on labor market outcomes of adults by levels of city labor informality

	(1)	(2)	(3)	(4)	(5)	(6)
			Sample with a formal job			
	Formal job (0/1)		Weekly hours		Monthly formal wages (in 2019 BRL)	
Level of city informality	Low	High	Low	High	Low	High
$\mathbf{1}\{t = treatyear_i - 5\} \times Treat_i$	0.000	-0.005	0.159***	0.374	-13.447	44.124
	(0.002)	(0.004)	(0.052)	(0.338)	(18.379)	(51.722)
$\mathbf{1}\{t = treatyear_i - 4\} \times Treat_i$	0.002	-0.002	0.065	0.356	-10.826	0.835
	(0.002)	(0.004)	(0.044)	(0.298)	(15.232)	(58.108)
$\mathbf{1}\{t = treatyear_i - 3\} \times Treat_i$	0.001	-0.004	0.056	0.455*	-31.623**	75.699
	(0.001)	(0.003)	(0.038)	(0.232)	(12.798)	(78.745)
$\mathbf{1}\{t = treatyear_i - 2\} \times Treat_i$	0.002**	0.000	0.011	-0.121	-8.475	15.199
	(0.001)	(0.003)	(0.030)	(0.205)	(11.737)	(35.754)
$\mathbf{1}\{t = treatyear_i\} \times Treat_i$	-0.006***	0.004	-0.052*	0.156	3.337	42.378
	(0.001)	(0.003)	(0.029)	(0.163)	(16.754)	(31.309)
$\mathbf{1}\{t = treatyear_i + 1\} \times Treat_i$	-0.008***	-0.003	-0.043	0.532***	22.040	-3.277
	(0.002)	(0.004)	(0.036)	(0.199)	(24.937)	(58.320)
$\mathbf{1}\{t = treatyear_i + 2\} \times Treat_i$	-0.014***	-0.002	-0.008	0.691***	68.111***	65.576
	(0.002)	(0.004)	(0.039)	(0.232)	(23.964)	(55.548)
$\mathbf{1}\{t = treatyear_i + 3\} \times Treat_i$	-0.015***	0.004	-0.091**	0.609**	92.505***	107.045**
	(0.002)	(0.004)	(0.042)	(0.250)	(25.738)	(46.307)
Observations	5,030,064	728,874	627,634	26,828	627,634	26,828
Number of matched pairs	279,448	40,493	38,520	1,574	38,520	1,574
R-squared	0.624	0.621	0.642	0.721	0.388	0.395
Outcome mean of controls at t-1	0.310	0.140	42.72	41.74	1,326	1,198

Notes: This table reports OLS estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes, separately by the level of city labor informality. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Labor market outcomes are measured using the Brazilian matched employer–employee data (RAIS). Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Odd-numbered columns use the subsample of adults living in cities with below-median levels of informality, while even-numbered columns use the subsample living in cities with above-median levels. City-level informality is measured using the 2010 Population Census as the share of employed workers who report having no formal labor contract. Columns 1 and 2 report estimates for an indicator equal to one if the individual held a formal job in a given year. Columns 3 and 4 report effects on total weekly contracted hours, while columns 5 and 6 report effects on monthly formal wages (in 2019 BRL). Columns 3-6 restrict the sample to individuals who were formally employed in every single year of the sample period. Each coefficient represents the estimated effect of MCMV receipt relative to the year before signing. The number of matched pairs in the sample and the mean of the dependent variable in the year prior to treatment are shown at the bottom of each column. See Section 5 for details on the sample construction and matching procedures. Standard errors are clustered at the individual level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table 4: Effects of MCMV on labor market outcomes of adults by distance to city center

	(1)	(2)	(3)	(4)	(5)	(6)
			Sample with a formal job			
	Formal job (0/1)		Weekly hours		Monthly formal wages (in 2019 BRL)	
Distance to city center	Close	Far	Close	Far	Close	Far
$\mathbf{1}\{t = treatyear_i - 5\} \times Treat_i$	-0.001	-0.003	0.085	0.297***	-22.996	6.020
	(0.003)	(0.003)	(0.077)	(0.101)	(26.613)	(33.192)
$\mathbf{1}\{t = treatyear_i - 4\} \times Treat_i$	0.002	-0.001	-0.043	0.198**	-22.958	-15.595
	(0.002)	(0.002)	(0.066)	(0.088)	(19.882)	(30.625)
$\mathbf{1}\{t = treatyear_i - 3\} \times Treat_i$	0.001	-0.001	0.020	0.147*	-29.580	-20.581
	(0.002)	(0.002)	(0.059)	(0.077)	(18.255)	(25.478)
$\mathbf{1}\{t = treatyear_i - 2\} \times Treat_i$	0.002	0.001	-0.001	0.037	2.849	-20.015
	(0.002)	(0.002)	(0.045)	(0.062)	(18.486)	(19.659)
$\mathbf{1}\{t = treatyear_i\} \times Treat_i$	-0.008***	-0.005***	-0.071	0.012	23.720	-17.330
	(0.002)	(0.002)	(0.044)	(0.060)	(15.502)	(28.516)
$\mathbf{1}\{t = treatyear_i + 1\} \times Treat_i$	-0.014***	-0.010***	-0.039	0.084	45.732**	-14.152
	(0.002)	(0.002)	(0.053)	(0.070)	(18.554)	(45.446)
$\mathbf{1}\{t = treatyear_i + 2\} \times Treat_i$	-0.018***	-0.011***	-0.017	0.138*	72.076***	55.388
	(0.002)	(0.003)	(0.059)	(0.078)	(21.122)	(42.327)
$\mathbf{1}\{t = treatyear_i + 3\} \times Treat_i$	-0.020***	-0.008***	-0.065	-0.045	101.007***	69.979
	(0.003)	(0.003)	(0.063)	(0.084)	(21.511)	(42.998)
Observations	1,868,058	1,617,750	256,768	141,354	256,768	141,354
Number of matched pairs	103,781	89,875	15,618	8,648	15,618	8,648
R-squared	0.629	0.633	0.633	0.677	0.379	0.381
Outcome mean of controls at t-1	0.320	0.250	42.73	42.62	1,349	1,277

Notes: This table reports OLS estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes, separately by the proximity of the MCMV complex to the city center. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Labor market outcomes are measured using the Brazilian matched employer–employee data (RAIS). Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Odd-numbered columns use the subsample of households that moved to MCMV complexes located close to the city center, while even-numbered columns correspond to households that moved to complexes located farther away. Distance is measured using the GPS coordinates of each MCMV complex relative to the city hall, expressed as a share of the distance between the city hall and the outermost 2010 Census tract within the same municipality. Complexes classified as "close" are those located within the median of this distance distribution, while those classified as "far" are located beyond it. GPS coordinates are available for approximately 70% of all MCMV complexes, so the subsamples of households classified as close and far from the city center do not add up to the full sample of household heads. Columns 1 and 2 report estimates for an indicator equal to one if the individual held a formal job in a given year. Columns 3 and 4 report effects on total weekly contracted hours, while columns 5 and 6 report effects on monthly formal wages (in 2019 BRL). Columns 3-6 restrict the sample to individuals who were formally employed in every single year of the sample period. Each coefficient represents the estimated effect of MCMV receipt relative to the year before signing. The number of matched pairs in the sample and the mean of the dependent variable in the year prior to treatment are shown at the bottom of each column. See Section 5 for details on the sample construction and matching procedures. Standard errors are clustered at the individual level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table 5: Summary statistics: sample of MCMV children

	(1) Mean	(2) SD	(3) 25th	(4) Median	(5) 75th
Panel A: Household characteristics (N=270,373)					
Number of kids	1.47	0.72	1.00	1.00	2.00
Household income per capita (2019 BRL)	217.48	199.98	69.72	161.00	310.23
Cash transfer beneficiary (0/1)	0.63	0.48	0.00	1.00	1.00
Panel B: Household head characteristics (N=270,373)					
Female (0/1)	0.95	0.23	1.00	1.00	1.00
Single parent (0/1)	0.71	0.45	0.00	1.00	1.00
White (0/1)	0.27	0.45	0.00	0.00	1.00
Age (years)	39.78	8.48	34.00	38.00	44.00
Years of education	7.20	3.57	5.00	7.00	11.00
Had formal job (0/1)	0.30	0.46	0.00	0.00	1.00
Conditional monthly earnings (2019 BRL)	1,252.46	943.19	982.44	1,140.47	1,389.31
Occupation: services (share of formally employed)	0.67	0.47	0.00	1.00	1.00
Occupation: manufacturing (share of formally employed)	0.16	0.37	0.00	0.00	0.00
Panel C: Spouse characteristics (N=78,777)					
Female (0/1)	0.10	0.30	0.00	0.00	0.00
White (0/1)	0.27	0.45	0.00	0.00	1.00
Age (years)	42.20	10.31	36.00	41.00	48.00
Years of education	6.27	3.58	4.00	6.00	9.00
Had formal job (0/1)	0.42	0.49	0.00	0.00	1.00
Conditional monthly earnings (2019 BRL)	1,534.44	1,299.79	1,071.78	1,355.94	1,746.90
Occupation: services (share of formally employed)	0.32	0.47	0.00	0.00	1.00
Occupation: manufacturing (share of formally employed)	0.46	0.50	0.00	0.00	1.00
Panel D: Children characteristics (N=393,560)					
Female (0/1)	0.50	0.50	0.00	0.00	1.00
White (0/1)	0.27	0.44	0.00	0.00	1.00
Age when treated (years)	15.62	2.40	14.00	16.00	17.00
Has a SIN (0/1)	0.72	0.45	0.00	1.00	1.00

Notes: This table reports summary statistics for households, household heads, spouses of household heads, and children in the sample of children of MCMV beneficiaries. Each line corresponds to one variable. Column 1 reports the average, Column 2 reports the standard deviation, and Columns 3 to 5 report the 25th, 50th and 75th percentile, respectively. Panel A shows summary statistics for entire households. Panel B reports figures for household heads and Panel C reports numbers for spouses of household heads, for those who had one by the time of the treatment. Panel D reports summary statistics on the children themselves. The sample includes children observed in the Unified Registry data when they were younger than 18 years old living with MCMV mortgage signatories between 2012 and 2019. "Has a SIN (0/1)" is an indicator that takes value 1 if the child has a registered Brazilian Social Insurance Number (SIN), or *Cadastro de Pessoa Física* (*CPF*). All monetary values are expressed in 2019 BRL. For more details on the sample construction, see Section 6.

Table 6: Effects of exposure to MCMV as children on educational attainment at 21 years old

	(1)	(2)	(3)	(4)	(5)	(6)
	Attended high school by age 21 (0/1)		Completed high school by age 21 (0/1)		Attended college by age 21 (0/1)	
Treated at 11 years old (0/1)	0.039***	0.022***	0.021***	0.006	0.040***	0.024***
	(0.009)	(0.008)	(0.008)	(0.008)	(0.006)	(0.006)
Treated at 12 years old (0/1)	0.033***	0.017**	0.026***	0.012*	0.044***	0.029***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)	(0.006)
Treated at 13 years old (0/1)	0.024***	0.009	0.018***	0.004	0.041***	0.026***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.005)	(0.005)
Treated at 14 years old (0/1)	0.023***	0.009	0.021***	0.009	0.040***	0.026***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 15 years old (0/1)	0.026***	0.011	0.024***	0.012*	0.039***	0.024***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 16 years old (0/1)	0.023***	0.009	0.024***	0.012**	0.040***	0.026***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 17 years old (0/1)	0.024***	0.009	0.028***	0.015**	0.039***	0.024***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 18 years old (0/1)	0.015**	0.004	0.023***	0.013**	0.030***	0.019***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 19 years old (0/1)	0.003	-0.004	0.006	0.000	0.011**	0.004
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 20 years old (0/1)	0.007	0.004	0.010	0.008	0.011**	0.008
	(0.007)	(0.007)	(0.007)	(0.007)	(0.005)	(0.005)
Observations	281,509	281,509	281,509	281,509	281,509	281,509
R-squared	0.022	0.051	0.021	0.048	0.015	0.058
Omitted group treated at age	21	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	No	Yes	No	Yes	No	Yes
Household controls	No	Yes	No	Yes	No	Yes
Outcome mean of omitted group	0.420	0.420	0.250	0.250	0.130	0.130

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age relative to age 21, the omitted category, on educational outcomes measured at age 21. Odd-numbered columns include only individual-level controls X_i (gender, race, and year of birth). Even-numbered columns include the full set of controls, adding household-head characteristics $W_{h(i)}$ and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for the omitted group. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 7: Effects of exposure to MCMV as children on educational attainment at 25 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Attended high school by age 25 (0/1)		Completed high school by age 25 (0/1)		Attended college by age 25 (0/1)		Completed college by age 25 (0/1)	
Treated at 14 years old (0/1)	0.021***	0.008	0.017**	0.005	0.045***	0.030***	0.011***	0.006**
	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.003)	(0.003)
Treated at 15 years old (0/1)	0.024***	0.010	0.020***	0.008	0.044***	0.028***	0.011***	0.007**
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.003)	(0.003)
Treated at 16 years old (0/1)	0.023***	0.009	0.021***	0.009	0.045***	0.029***	0.014***	0.009***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.003)	(0.003)
Treated at 17 years old (0/1)	0.023***	0.008	0.024***	0.012**	0.044***	0.026***	0.012***	0.008***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.003)	(0.003)
Treated at 18 years old (0/1)	0.013*	0.002	0.018***	0.009	0.034***	0.021***	0.010***	0.006**
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.003)	(0.003)
Treated at 19 years old (0/1)	0.002	-0.005	0.003	-0.002	0.012**	0.004	0.003	0.001
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.003)	(0.003)
Treated at 20 years old (0/1)	0.006	0.003	0.008	0.005	0.010*	0.007	0.002	0.001
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.003)	(0.003)
Observations	229,565	229,565	229,565	229,565	229,565	229,565	229,565	229,565
R-squared	0.022	0.052	0.020	0.046	0.018	0.066	0.007	0.022
Omitted group treated at age	21	21	21	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	No	Yes	No	Yes	No	Yes	No	Yes
Household controls	No	Yes	No	Yes	No	Yes	No	Yes
Outcome mean of omitted group	0.420	0.420	0.270	0.270	0.180	0.180	0.030	0.030

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age relative to age 21, the omitted category, on educational outcomes measured at age 25. Odd-numbered columns include only individual-level controls X_i (gender, race, and year of birth). Even-numbered columns include the full set of controls, adding household-head characteristics $W_{h(i)}$ and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for the omitted group. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 8: Marginal effects of exposure to MCMV as children on educational attainment at 21 years old

	(1) Attended high school by age 21	(2) Completed high school by age 21	(3) Attended college by age 21
Years of exposure to MCMV before 18	0.002***	-0.001	0.002***
	(0.001)	(0.001)	0.000
Observations	281,509	281,509	281,509
R-squared	0.051	0.048	0.057
Children controls	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Outcome mean at 18yo or older	0.440	0.280	0.150

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on educational attainment measured at age 21. All specifications include the full set of controls: individual-level characteristics X_i, household-head characteristics $W_{h(i)}$, and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for those treated at 18 years old or older. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 9: Marginal effects of exposure to MCMV as children on educational attainment at 25 years old

	(1) Attended high school by age 25	(2) Completed high school by age 25	(3) Attended college by age 25	(4) Completed college by age 25
Years of exposure to MCMV before 18	0.002**	0.000	0.004***	0.001*
	(0.001)	(0.001)	(0.001)	0.000
Observations	229,565	229,565	229,565	229,565
R-squared	0.051	0.046	0.066	0.021
Children controls	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.440	0.290	0.190	0.040

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on educational attainment measured at age 25. All specifications include the full set of controls: individual-level characteristics X_i, household-head characteristics $W_{h(i)}$, and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for those treated at 18 years old or older. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 10: Effects of exposure to MCMV as children on formal employment and wages at 21 years old

	(1)	(2)	(3)	(4)
	Formal employment at 21 years old (0/1)		Monthly formal wages at 21 years old (in 2019 BRL)	
Treated at 11 years old (0/1)	0.047***	0.045***	61.272***	62.193***
	(0.007)	(0.007)	(13.008)	(13.066)
Treated at 12 years old (0/1)	0.024***	0.023***	34.842***	36.426***
	(0.007)	(0.007)	(12.523)	(12.587)
Treated at 13 years old (0/1)	0.016**	0.015**	29.723**	31.087**
	(0.006)	(0.006)	(12.316)	(12.380)
Treated at 14 years old (0/1)	0.015**	0.012*	29.491**	28.432**
	(0.006)	(0.006)	(12.305)	(12.357)
Treated at 15 years old (0/1)	0.013**	0.008	22.735*	18.528
	(0.006)	(0.006)	(12.104)	(12.146)
Treated at 16 years old (0/1)	0.011*	0.005	19.132	13.087
	(0.006)	(0.006)	(12.007)	(12.037)
Treated at 17 years old (0/1)	0.008	0.002	20.121*	12.994
	(0.006)	(0.006)	(11.997)	(11.999)
Treated at 18 years old (0/1)	-0.004	-0.008	-2.608	-8.245
	(0.006)	(0.006)	(11.973)	(11.969)
Treated at 19 years old (0/1)	-0.009	-0.012*	-9.429	-12.364
	(0.006)	(0.006)	(12.144)	(12.117)
Treated at 20 years old (0/1)	-0.014**	-0.015**	-8.827	-9.876
	(0.006)	(0.006)	(15.294)	(15.272)
Observations	393,560	393,560	393,560	393,560
R-squared	0.021	0.038	0.024	0.038
Omitted group treated at age	21	21	21	21
Children controls	Yes	Yes	Yes	Yes
Household head controls	No	Yes	No	Yes
Household controls	No	Yes	No	Yes
Outcome mean of omitted group	0.360	0.360	479.1	479.1

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age (relative to age 21, the omitted category) on formal employment (columns 1–2) and monthly formal earnings in Brazilian Reais as of 2019 (columns 3–4). Columns 1 and 3 include only individual-level controls X_i (gender, race, and year of birth). Columns 2 and 4 include the full set of controls, adding household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment) and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the very bottom we report the average of the dependent variable for the omitted group in the regression, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 11: Marginal effects of exposure to MCMV as children on formal employment at different ages

	(1)	(2)	(3)	(4)	(5)
	Formal employment at				
	21 years old (0/1)	22 years old (0/1)	23 years old (0/1)	24 years old (0/1)	25 years old (0/1)
Years of exposure to MCMV before 18	0.006***	0.006***	0.007***	0.008***	0.011***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	393,560	319,487	243,599	175,953	113,413
R-squared	0.038	0.035	0.032	0.029	0.026
Children controls	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.310	0.320	0.330	0.340	0.350

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on formal employment measured at ages 21 to 25. Each column uses as outcome employment at a different age. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the very bottom we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 12: Marginal effects of exposure to MCMV as children on formal wages at different ages

	(1)	(2)	(3)	(4)	(5)
	Monthly formal wages (in 2019 BRL) at				
	21 years old (0/1)	22 years old (0/1)	23 years old (0/1)	24 years old (0/1)	25 years old (0/1)
Years of exposure to MCMV before 18	7.787***	8.944***	11.097***	13.063***	19.105***
	(0.691)	(0.820)	(1.066)	(1.460)	(2.229)
Observations	393,560	319,487	243,599	175,953	113,413
R-squared	0.038	0.041	0.037	0.034	0.036
Children controls	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	426.4	450	465.9	476.7	487.4

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on monthly formal earnings (in Brazilian Reais as of 2019) measured at ages 21 to 25. Each column uses as outcome monthly earnings at a different age. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the very bottom we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$..

Table 13: Heterogeneity of marginal effects of exposure to MCMV as children on formal employment at 25 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal employment at 25 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	0.011***	0.007***	0.015***	0.013***	0.011***	0.011***	0.011***	0.016***	0.009***
	(0.001)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)
Observations	113,413	56,233	57,180	29,944	83,469	85,680	27,733	30,518	82,895
R-squared	0.026	0.012	0.029	0.016	0.022	0.029	0.014	0.012	0.023
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.350	0.400	0.310	0.410	0.330	0.340	0.400	0.430	0.320

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on formal employment at age 25. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

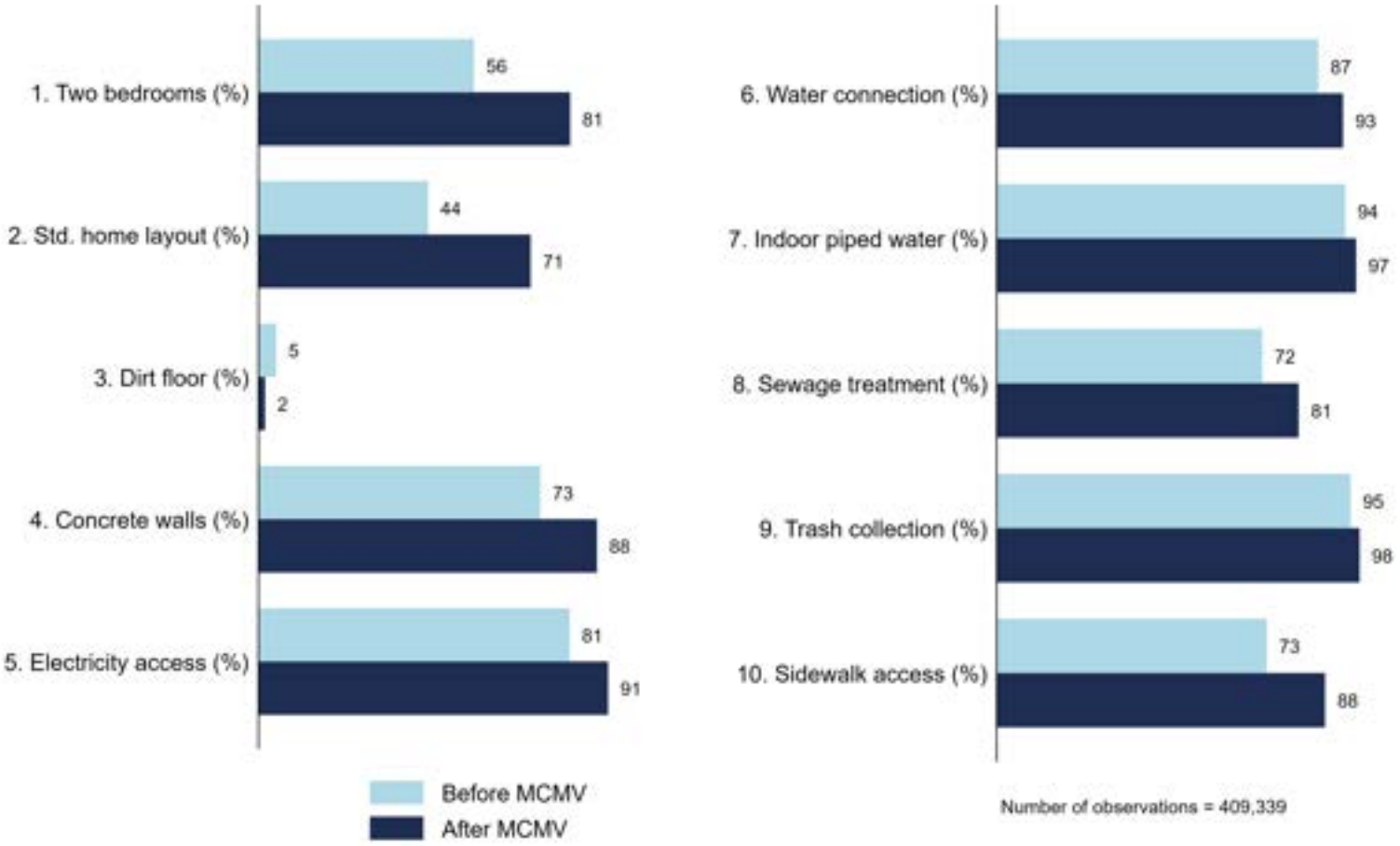
Table 14: Mechanisms of marginal effects of exposure to MCMV as children on formal employment at 25 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal employment at 25 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	0.011***	0.013***	0.007***	0.013***	0.007***	0.015***	0.009***	0.019***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.002)	(0.005)
Observations	113,413	37,754	38,278	71,141	42,272	12,847	63,163	8,154
R-squared	0.026	0.022	0.027	0.025	0.019	0.029	0.024	0.029
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.350	0.360	0.340	0.300	0.400	0.320	0.360	0.280

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on formal employment at age 25. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on formal employment. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality, so that the median cutoff approximately corresponds to half the size of the city. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2-3 and 6-7 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

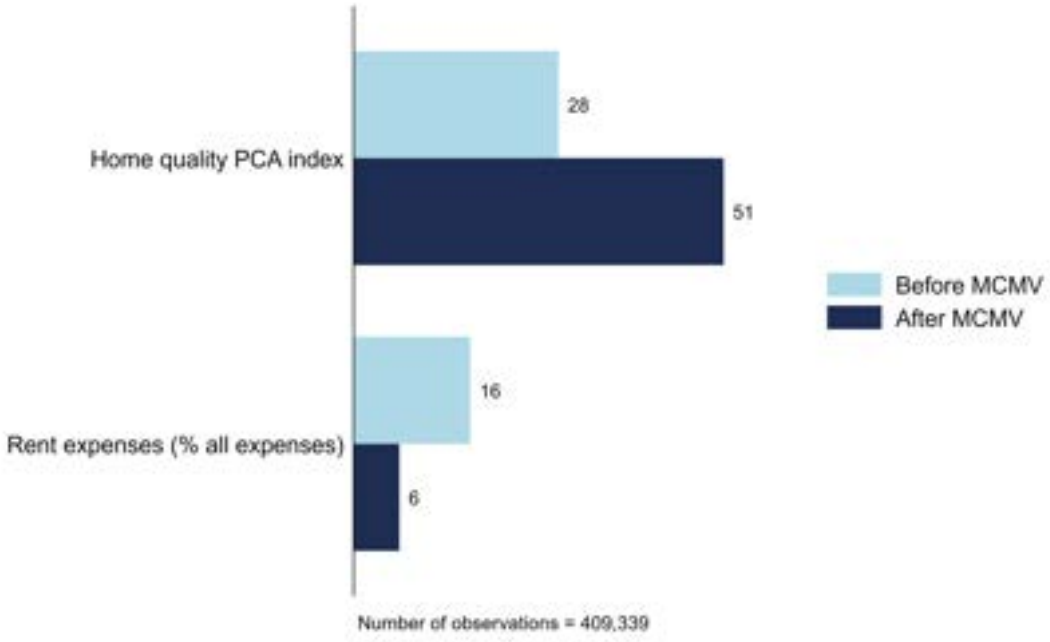
Figures

Figure 1: Homes characteristics of MCMV beneficiaries before and after receiving housing



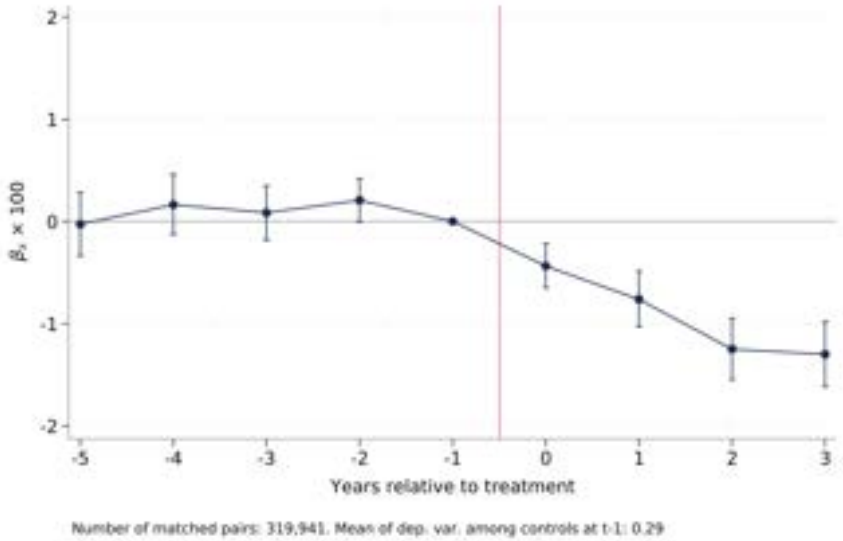
Notes: This figure presents ten indicators of housing and neighborhood characteristics for MCMV beneficiary households before and after receiving their subsidized housing units. The sample includes a non-random subset of 409,339 MCMV families who signed their mortgage contracts between 2010 and 2017 and are observed in the Unified Registry both before and after signing, between 2012 and 2019. Light blue bars correspond to the period before MCMV and dark blue bars to the period after MCMV. "Before MCMV" refers to the year prior to contract signing or the closest available year before signing, and "After MCMV" to the year following contract signing or the closest available year after signing, excluding the signing year itself. Each numbered graph reports the share of households with: (1) two bedrooms; (2) a standard home layout with two bedrooms, one kitchen, one living room, and one bathroom; (3) a dirt floor; (4) concrete walls; (5) electricity access; (6) a connection to the public water network; (7) indoor piped water; (8) connection to the public sewage treatment system; (9) regular trash collection; and (10) access to a sidewalk outside dwelling.

Figure 2: Home quality index and rent expenses of MCMV beneficiaries before and after receiving housing



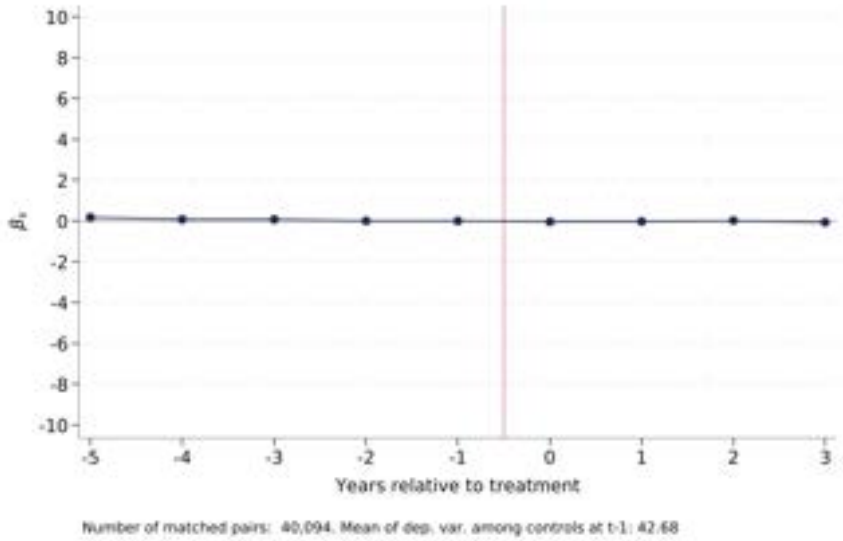
Notes: This figure presents two indicators of housing quality and household expenditures for MCMV beneficiary families before and after receiving their subsidized housing units. The sample includes a non-random subset of 409,339 MCMV families who signed their mortgage contracts between 2010 and 2017 and are observed in the Unified Registry both before and after signing, between 2012 and 2019. Light blue bars correspond to the period before MCMV and dark blue bars to the period after MCMV. "Before MCMV" refers to the year prior to contract signing or the closest available year before signing, and "After MCMV" to the year following contract signing or the closest available year after signing, excluding the signing year itself. The first graph reports the average value of a home quality index constructed using principal component analysis (PCA) of standardized indicators for eleven housing attributes: having two bedrooms; having a standard layout with two bedrooms, one kitchen, one living room, and one bathroom; having a bathroom; not having dirt floor; having concrete walls; having access to electricity; being connected to the public water network; having indoor piped water; being connected to the public sewage system; having access to regular trash collection; and the presence of a sidewalk outside the dwelling. The PCA is computed using all families observed in the Unified Registry in each year, so the index measures the standardized difference in housing quality relative to all other families in the Unified Registry in the same year, expressed in standard deviations. The second graph shows the share of total monthly household expenditures devoted to rent payments. Total household expenditures are calculated as the sum of reported monthly expenses on electricity, water, gas, food, transportation, rent, and medication, as recorded in the Unified Registry and measured in Brazilian Reais as of 2019.

Figure 3: Effects of MCMV on employment of adults



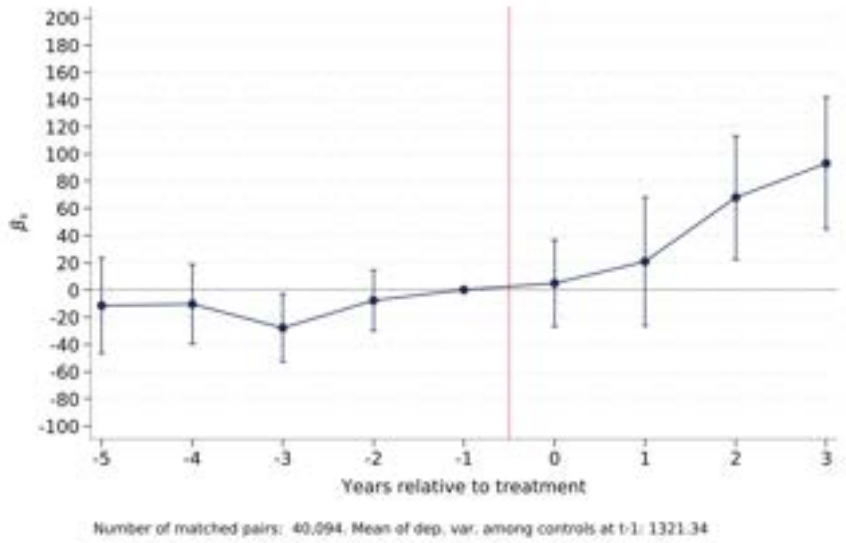
Notes: This figure plots the event-study estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes. The outcome is an indicator equal to one if the individual held a formal job in a given year. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Each point represents the estimated effect of MCMV receipt relative to the year before signing, and the vertical lines indicate 95% confidence intervals based on standard errors clustered at the individual level. The underlying estimates correspond to those reported in Column 1 of Table 2 At the bottom of the figure, we report the number of matched pairs in the sample and the mean of the dependent variable among control individuals in the year prior to treatment. See Section 5 for details on the sample construction and matching procedures.

Figure 4: Effects of MCMV on (conditional) weekly work hours of adults



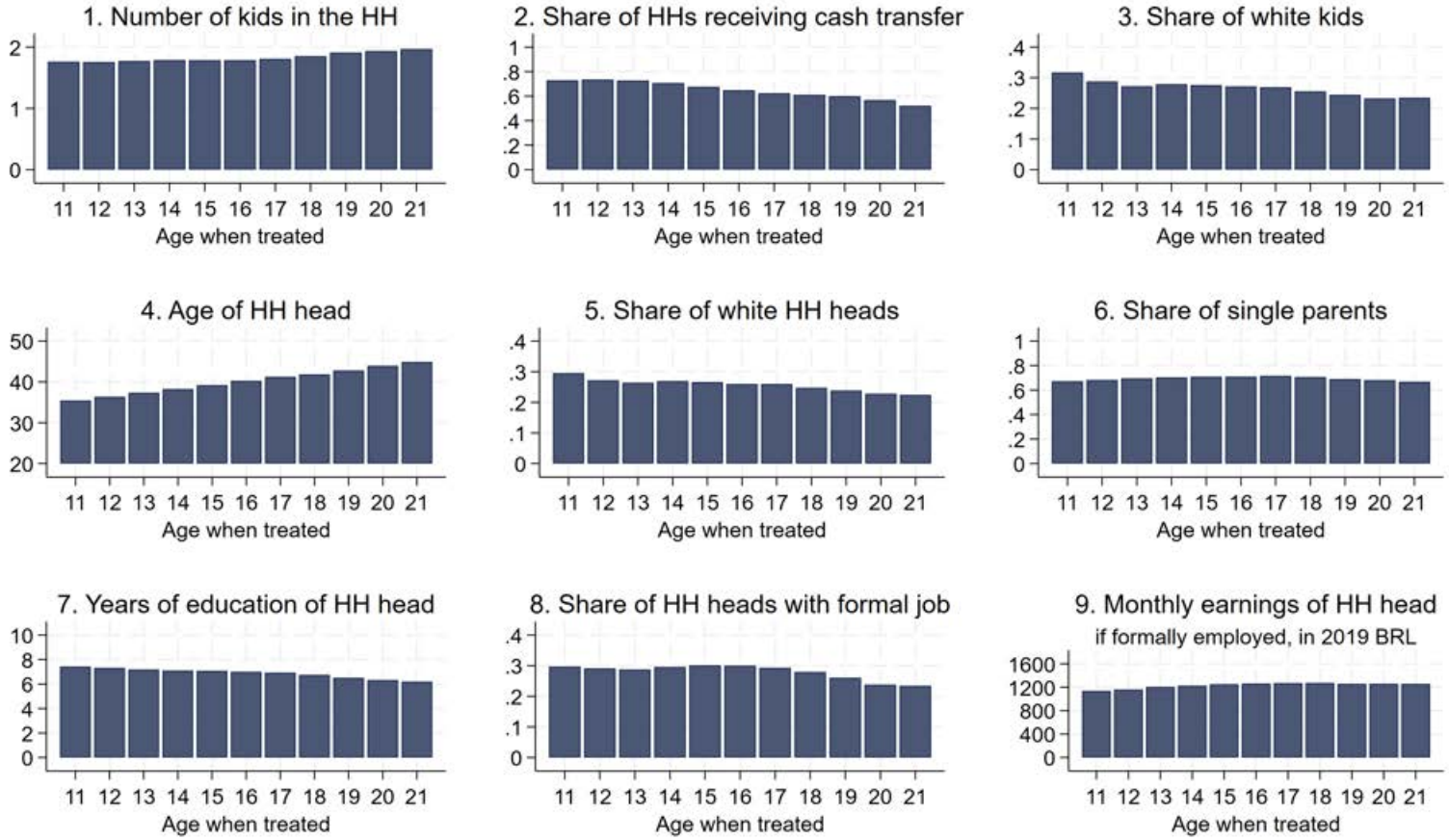
Notes: This figure plots the event-study estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes. The outcome is the total number of weekly hours contracted, restricting the sample to individuals who were formally employed in every single year of the sample period. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Each point represents the estimated effect of MCMV receipt relative to the year before signing, and the vertical lines indicate 95% confidence intervals based on standard errors clustered at the individual level. The underlying estimates correspond to those reported in Column 4 of Table 2. At the bottom of the figure, we report the number of matched pairs in the sample and the mean of the dependent variable among control individuals in the year prior to treatment. See Section 5 for details on the sample construction and matching procedures.

Figure 5: Effects of MCMV on (conditional) monthly wages of adults



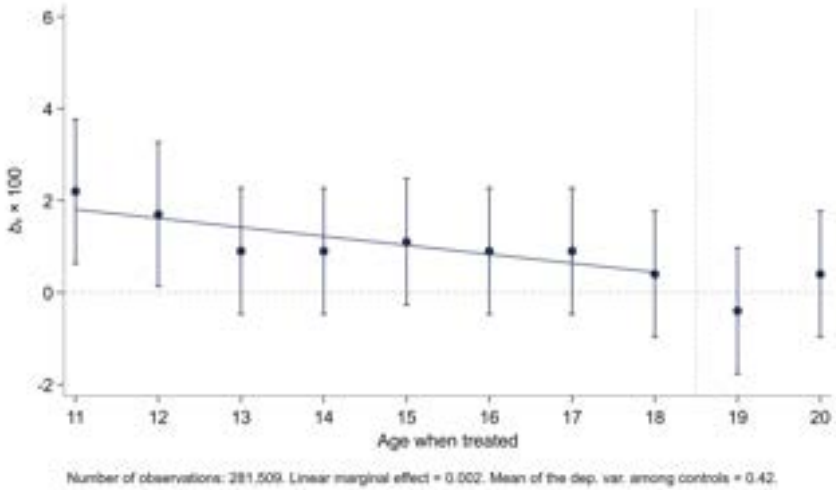
Notes: This figure plots the event-study estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes. The outcome is monthly formal wages (in 2019 BRL), restricting the sample to individuals who were formally employed in every single year of the sample period. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Each point represents the estimated effect of MCMV receipt relative to the year before signing, and the vertical lines indicate 95% confidence intervals based on standard errors clustered at the individual level. The underlying estimates correspond to those reported in Column 5 of Table 2. At the bottom of the figure, we report the number of matched pairs in the sample and the mean of the dependent variable among control individuals in the year prior to treatment. See Section 5 for details on the sample construction and matching procedures.

Figure 6: Summary statistics of MCMV children sample by age kids were treated



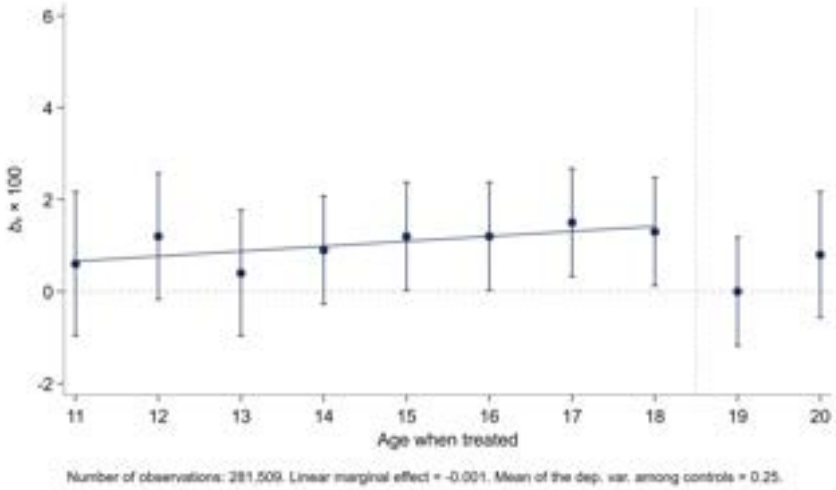
Notes: This figure shows 9 graphs with summary statistics of the households, household heads, and kids in our final sample of children of MCMV beneficiaries by the age of kids when their parents signed their MCMV mortgages. Each bar corresponds to the average or share of different characteristics, divided into those who were treated when they were 11, 12, and so on. The first graph shows the average number of kids in our sample per household. The second graph reports the share of households that receive the Brazilian cash transfer program (*Bolsa Família*) in the year before the treatment or the year closest to that. The third graph shows the share of white kids, while the fourth graph shows the average age of household heads by the time they were treated. Graph 5 shows the proportion of white household heads, while graph 6 shows the proportion of single household heads. Graph 7 shows the average years of education of household heads. Graph 8 reports the share of household heads with a formal job in the year before they were treated, while the last graph shows the average earnings(in Brazilian Reais of 2019) of household heads that had a formal job in the year before treatment. The information reported in graphs 2-7 comes from the Unified Registry, while data on formal employment and earnings in the last two graphs come from the Brazilian matched employer-employee dataset (RAIS).

Figure 7: Effects of exposure to MCMV as children on high school attendance by 21 years old



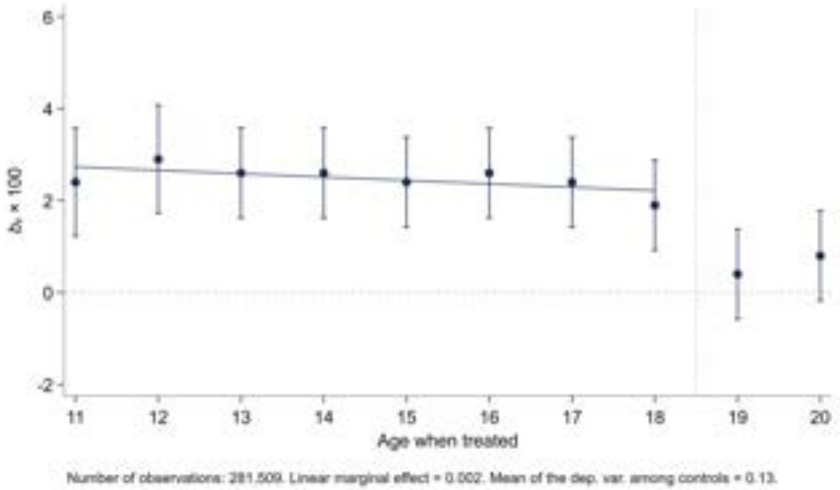
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended high school by the age of 21, also reported in Column 2 of Table 6. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended high school by age 21, and the marginal effect of one additional year of exposure to MCMV, based on Table 8.

Figure 8: Effects of exposure to MCMV as children on high school completion by 21 years old



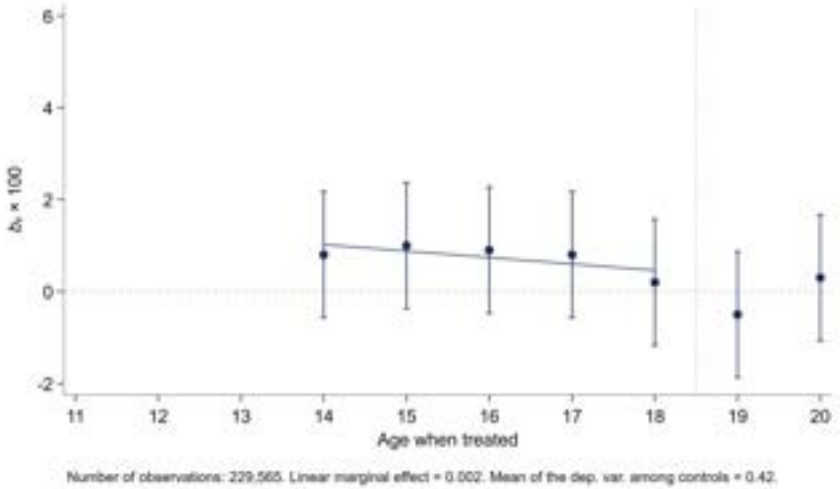
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed high school by the age of 21, also reported in Column 4 of Table 6. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed high school by age 21, and the marginal effect of one additional year of exposure to MCMV, based on Table 8.

Figure 9: Effects of exposure to MCMV as children on college attendance by 21 years old



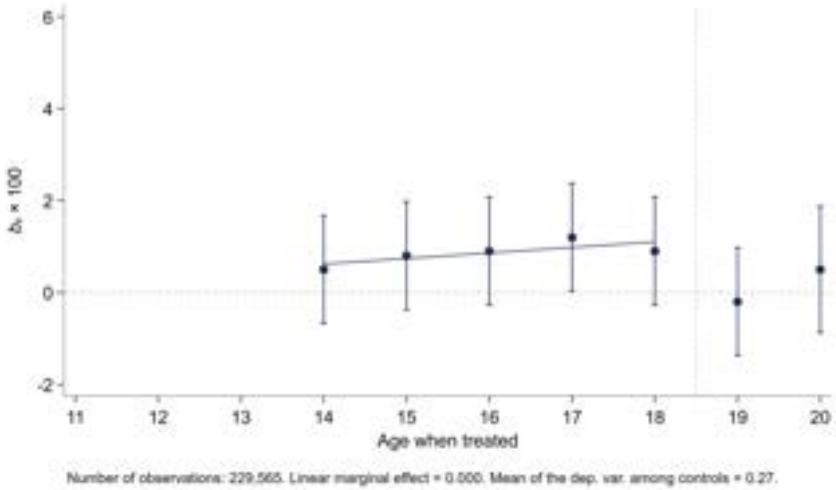
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended college by the age of 21, also reported in Column 6 of Table 6. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended college by age 21, and the marginal effect of one additional year of exposure to MCMV, based on Table 8.

Figure 10: Effects of exposure to MCMV as children on high school attendance by 25 years old



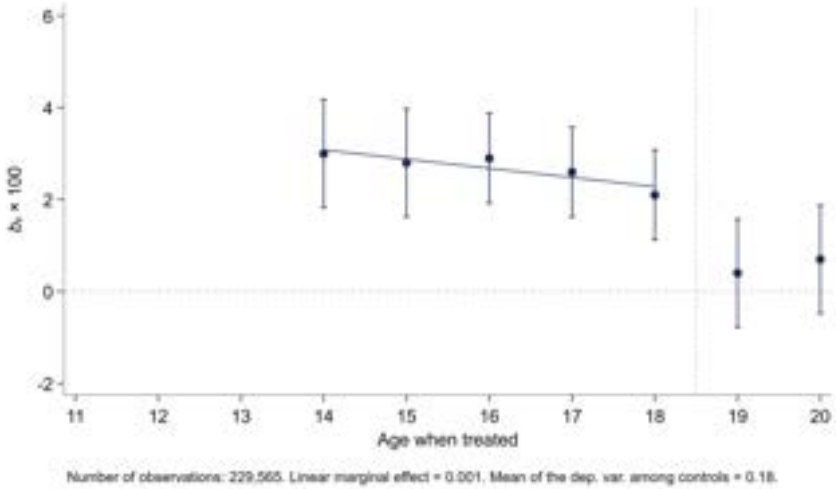
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended high school by the age of 25, also reported in Column 2 of Table 7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended high school by age 25, and the marginal effect of one additional year of exposure to MCMV, based on Table 9.

Figure 11: Effects of exposure to MCMV as children on high school completion by 25 years old



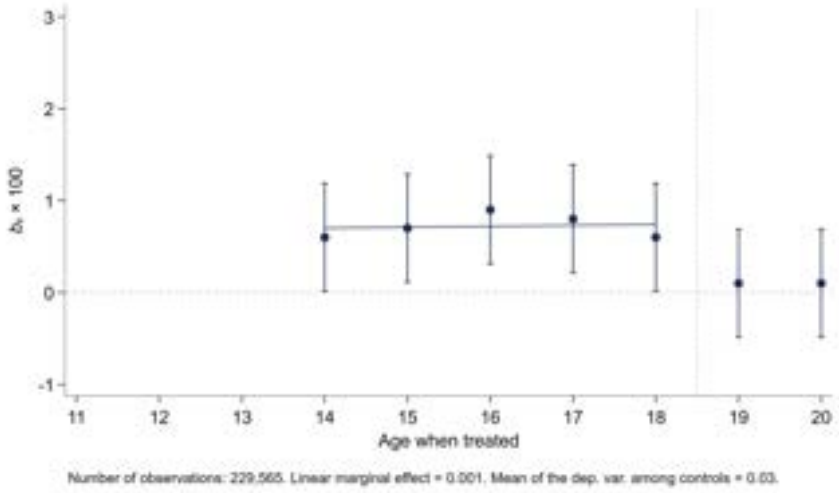
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed high school by the age of 25, also reported in Column 4 of Table 7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed high school by age 25, and the marginal effect of one additional year of exposure to MCMV, based on Table 9.

Figure 12: Effects of exposure to MCMV as children on college attendance by 25 years old



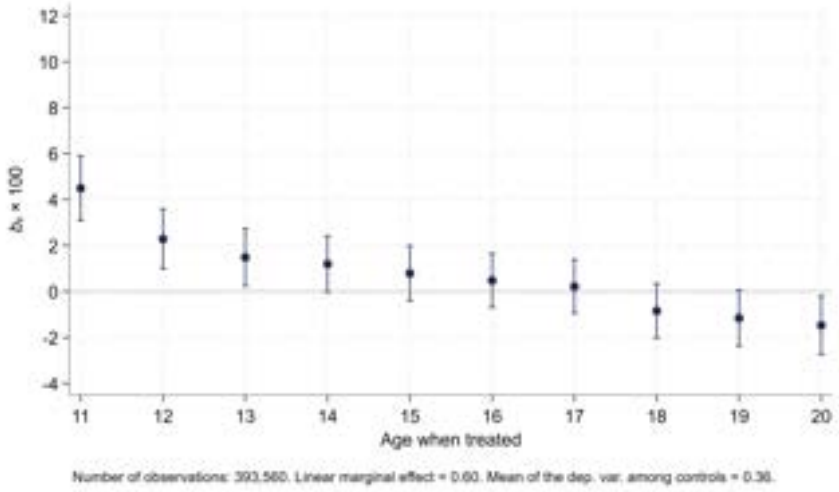
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended college by the age of 25, also reported in Column 6 of Table 7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended college by age 25, and the marginal effect of one additional year of exposure to MCMV, based on Table 9.

Figure 13: Effects of exposure to MCMV as children on college completion by 25 years old



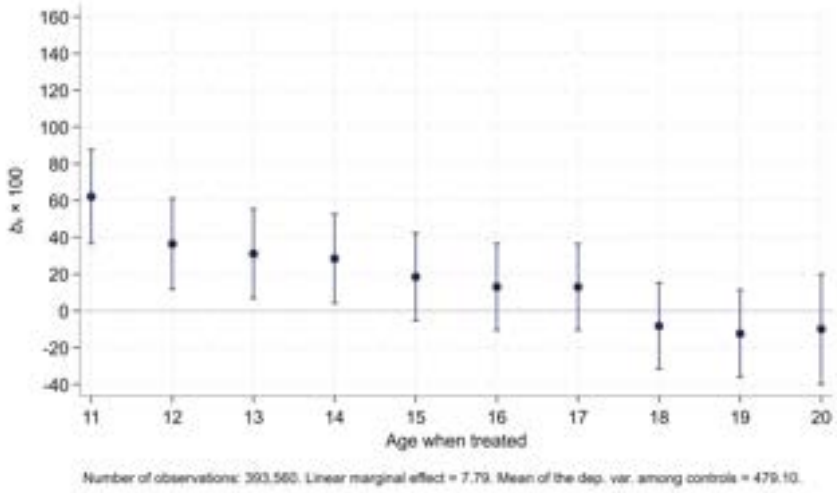
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed college by the age of 25, also reported in Column 8 of Table 7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed college by age 25, and the marginal effect of one additional year of exposure to MCMV, based on Table 9.

Figure 14: Effects of exposure to MCMV as children on formal employment at 21 years old



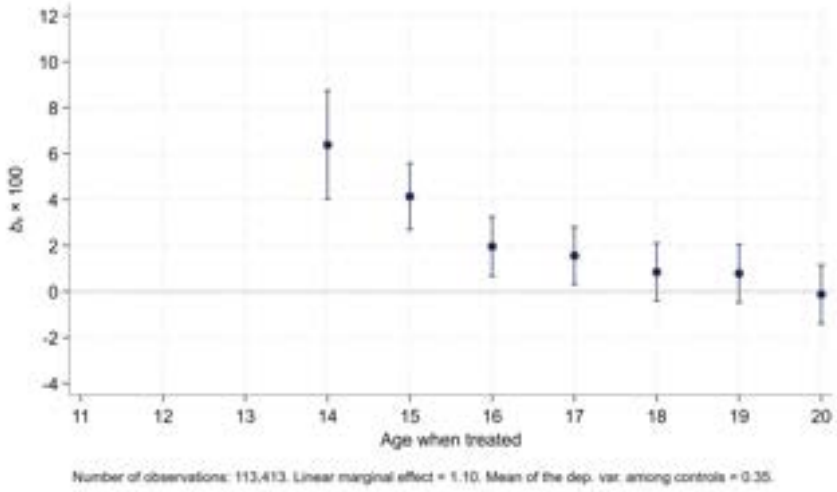
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21, also reported in Column 1 of Table A12. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 1 of Table 11.

Figure 15: Effects of exposure to MCMV as children on formal earnings at 21 years old



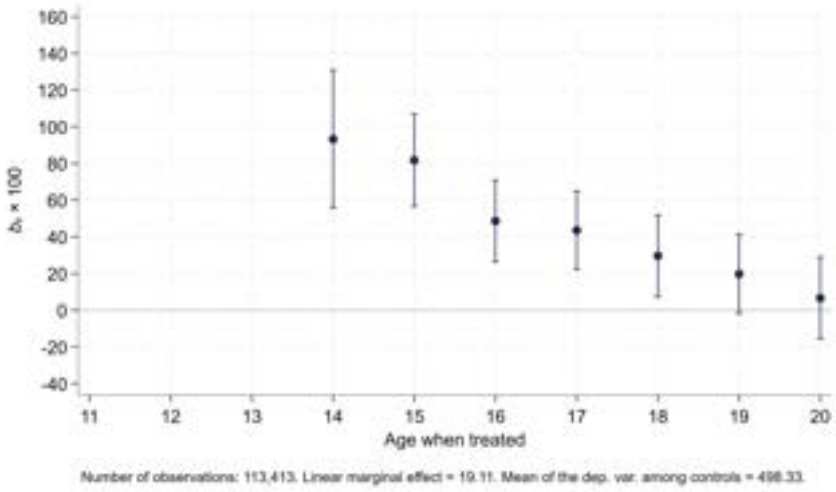
Notes: This figure plots the estimated coefficients from Equation 2 for monthly formal earnings at age 21 (in Brazilian Reais as of 2019), also reported in Column 1 of Table A13. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average monthly earnings of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 1 of Table 12.

Figure 16: Effects of exposure to MCMV as children on formal employment at 25 years old



Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 25, also reported in Column 5 of Table A12. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Table 11.

Figure 17: Effects of exposure to MCMV as children on formal earnings at 25 years old



Notes: This figure plots the estimated coefficients from Equation 2 for monthly formal earnings at age 25 (in Brazilian Reais as of 2019), also reported in Column 5 of Table A13. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average monthly earnings of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Table 12.

A Appendix tables

Table A1: Effects of MCMV on labor market outcomes of adults with and without kids

	(1)	(2)	(3)	(4)	(5)	(6)
			Sample with a formal job			
	Formal job (0/1)		Weekly hours		Monthly formal wages (in 2019 BRL)	
With kids	Yes	No	Yes	No	Yes	No
$\mathbf{1}\{t = treatyear_i - 5\} \times Treat_i$	-0.000	-0.001	0.194***	0.079	12.526	-93.212**
	(0.002)	(0.003)	(0.060)	(0.095)	(18.169)	(41.619)
$\mathbf{1}\{t = treatyear_i - 4\} \times Treat_i$	0.002	0.002	0.070	0.097	7.127	-73.103**
	(0.002)	(0.003)	(0.050)	(0.085)	(16.129)	(29.245)
$\mathbf{1}\{t = treatyear_i - 3\} \times Treat_i$	-0.000	0.005**	0.058	0.119	-14.184	-78.610***
	(0.002)	(0.002)	(0.043)	(0.073)	(13.748)	(27.004)
$\mathbf{1}\{t = treatyear_i - 2\} \times Treat_i$	0.002	0.003	0.009	-0.005	-2.311	-28.545
	(0.001)	(0.002)	(0.034)	(0.055)	(11.389)	(32.273)
$\mathbf{1}\{t = treatyear_i\} \times Treat_i$	-0.005***	-0.003*	-0.032	-0.099*	11.828	-23.616
	(0.001)	(0.002)	(0.033)	(0.060)	(17.003)	(26.206)
$\mathbf{1}\{t = treatyear_i + 1\} \times Treat_i$	-0.007***	-0.012***	-0.018	-0.033	24.057	8.273
	(0.002)	(0.002)	(0.039)	(0.073)	(24.919)	(34.834)
$\mathbf{1}\{t = treatyear_i + 2\} \times Treat_i$	-0.011***	-0.019***	0.013	0.051	70.715***	56.415*
	(0.002)	(0.002)	(0.044)	(0.080)	(23.788)	(33.773)
$\mathbf{1}\{t = treatyear_i + 3\} \times Treat_i$	-0.011***	-0.023***	-0.059	-0.079	87.239***	121.337***
	(0.002)	(0.003)	(0.046)	(0.083)	(25.982)	(32.130)
Observations	4,579,110	1,179,828	527,254	127,208	527,254	127,208
Number of matched pairs	254,395	65,546	32,223	7,871	32,223	7,871
R-squared	0.609	0.715	0.637	0.692	0.390	0.381
Outcome mean of controls at t-1	0.300	0.260	42.71	42.57	1298	1,417

Notes: This table reports OLS estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes, separately by whether the household head has children aged 16 or younger. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Labor market outcomes are measured using the Brazilian matched employer–employee data (RAIS). Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Odd-numbered columns use the subsample of household heads with children aged 16 or younger, and even-numbered columns use the subsample without children in that age range. The presence of children is measured in the Unified Registry in the year before treatment or the closest available to that year. Columns 1 and 2 report estimates for an indicator equal to one if the individual held a formal job in a given year. Columns 3 and 4 report effects on total weekly contracted hours, while columns 5 and 6 report effects on monthly formal wages (in 2019 BRL). Columns 3-6 restrict the sample to individuals who were formally employed in every single year of the sample period. Each coefficient represents the estimated effect of MCMV receipt relative to the year before signing. The number of matched pairs in the sample and the mean of the dependent variable in the year prior to treatment are shown at the bottom of each column. See Section 5 for details on the sample construction and matching procedures. Standard errors are clustered at the individual level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table A2: Effects of MCMV on labor market outcomes of adult recipients and non-recipients of cash transfer

	(1)	(2)	(3)	(4)	(5)	(6)
			Sample with a formal job			
	Formal job (0/1)		Weekly hours		Monthly formal wages (in 2019 BRL)	
Cash transfer recipients	Yes	No	Yes	No	Yes	No
$\mathbf{1}\{t = treatyear_i - 5\} \times Treat_i$	-0.003	0.004	0.186**	0.162***	14.567	-23.403
	(0.002)	(0.002)	(0.090)	(0.061)	(22.603)	(23.103)
$\mathbf{1}\{t = treatyear_i - 4\} \times Treat_i$	-0.002	0.007***	0.057	0.089*	19.498	-25.067
	(0.002)	(0.002)	(0.074)	(0.053)	(20.242)	(19.021)
$\mathbf{1}\{t = treatyear_i - 3\} \times Treat_i$	-0.003	0.007***	0.003	0.110**	-14.120	-34.599**
	(0.002)	(0.002)	(0.064)	(0.045)	(17.752)	(16.280)
$\mathbf{1}\{t = treatyear_i - 2\} \times Treat_i$	-0.002	0.008***	-0.046	0.037	-17.742	-1.383
	(0.001)	(0.002)	(0.049)	(0.035)	(17.100)	(14.764)
$\mathbf{1}\{t = treatyear_i\} \times Treat_i$	-0.001	-0.011***	-0.030	-0.055	14.318	-1.318
	(0.001)	(0.002)	(0.049)	(0.034)	(14.793)	(23.925)
$\mathbf{1}\{t = treatyear_i + 1\} \times Treat_i$	0.004**	-0.028***	-0.078	0.016	19.908	20.804
	(0.002)	(0.002)	(0.055)	(0.043)	(18.044)	(36.584)
$\mathbf{1}\{t = treatyear_i + 2\} \times Treat_i$	0.007***	-0.046***	-0.022	0.045	51.979***	77.510**
	(0.002)	(0.002)	(0.062)	(0.047)	(18.984)	(34.593)
$\mathbf{1}\{t = treatyear_i + 3\} \times Treat_i$	0.010***	-0.052***	-0.100	-0.041	70.100***	106.551***
	(0.002)	(0.002)	(0.066)	(0.050)	(19.723)	(36.962)
Observations	3,630,996	2,127,942	257,182	397,280	257,182	397,280
Number of matched pairs	201,722	118,219	15,715	24,379	15,715	24,379
R-squared	0.573	0.683	0.623	0.663	0.359	0.396
Outcome mean of controls at t-1	0.240	0.380	42.79	42.61	1,259	1,362

Notes: This table reports OLS estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes, separately by whether the household was a beneficiary of the *Bolsa Família* cash transfer program prior to receiving MCMV housing. The sample includes household heads who signed their MCMV mortgages between 2010 and 2017. Labor market outcomes are measured using the Brazilian matched employer–employee data (RAIS). Individuals who received their units between 2010 and 2013 form the treated group, who are matched to control adults that signed their contracts between 2014 and 2017. Odd-numbered columns use the subsample of households identified as *Bolsa Família* beneficiaries, and even-numbered columns use the subsample of non-beneficiaries. *Bolsa Família* participation is measured in the Unified Registry in the year before treatment or the closest available to that year. Columns 1 and 2 report estimates for an indicator equal to one if the individual held a formal job in a given year. Columns 3 and 4 report effects on total weekly contracted hours, while columns 5 and 6 report effects on monthly formal wages (in 2019 BRL). Columns 3-6 restrict the sample to individuals who were formally employed in every single year of the sample period. Each coefficient represents the estimated effect of MCMV receipt relative to the year before signing. The number of matched pairs in the sample and the mean of the dependent variable in the year prior to treatment are shown at the bottom of each column. See Section 5 for details on the sample construction and matching procedures. Standard errors are clustered at the individual level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table A3: Summary statistics of MCMV complexes

	(1) Mean	(2) SD	(3) 25th	(4) Median	(5) 75th
Panel A: All MCMV complexes (N=2,290)					
Number of MCMV units	345.04	336.31	162.00	288.00	459.00
Complex has GPS coordinates (0/1)	0.71	0.45	0.00	1.00	1.00
Panel B: MCMV complexes with GPS coordinates (N=1,629)					
Distance to the city center (km)	4.03	1.10	3.27	3.79	4.41
Distance to the city center (% of city radius)	41.05	53.74	13.43	24.56	45.97
Distance to the closest school (km)	1.20	1.46	0.62	0.93	1.49
Ideb 2009 of closest school	3.66	0.80	3.10	3.70	4.20
Ideb 2009 of closest school is above city average (0/1)	0.40	0.49	0.00	0.00	1.00
Ideb 2009 of closest school is above city 25th percentile (0/1)	0.69	0.46	0.00	1.00	1.00
Ideb 2009 of closest school is above city median (0/1)	0.40	0.49	0.00	0.00	1.00
Ideb 2009 of closest school is above city 75th percentile (0/1)	0.17	0.37	0.00	0.00	0.00
Ideb 2011 of closest school	3.84	0.81	3.30	3.90	4.40
Ideb 2011 of closest school is above city average (0/1)	0.42	0.49	0.00	0.00	1.00
Ideb 2011 of closest school is above city 25th percentile (0/1)	0.68	0.47	0.00	1.00	1.00
Ideb 2011 of closest school is above city median (0/1)	0.43	0.49	0.00	0.00	1.00
Ideb 2011 of closest school is above city 75th percentile (0/1)	0.17	0.38	0.00	0.00	0.00
Ideb 2013 of closest school	3.89	0.78	3.40	3.90	4.40
Ideb 2013 of closest school is above city average (0/1)	0.37	0.48	0.00	0.00	1.00
Ideb 2013 of closest school is above city 25th percentile (0/1)	0.67	0.47	0.00	1.00	1.00
Ideb 2013 of closest school is above city median (0/1)	0.39	0.49	0.00	0.00	1.00
Ideb 2013 of closest school is above city 75th percentile (0/1)	0.16	0.37	0.00	0.00	0.00
Ideb 2015 of closest school	4.08	0.78	3.60	4.10	4.60
Ideb 2015 of closest school is above city average (0/1)	0.38	0.49	0.00	0.00	1.00
Ideb 2015 of closest school is above city 25th percentile (0/1)	0.65	0.48	0.00	1.00	1.00
Ideb 2015 of closest school is above city median (0/1)	0.38	0.49	0.00	0.00	1.00
Ideb 2015 of closest school is above city 75th percentile (0/1)	0.16	0.37	0.00	0.00	0.00

Notes: This table reports descriptive statistics for the MCMV housing complexes to which households in our sample of mortgage signatories between 2010 and 2017 moved. Each observation corresponds to a distinct complex. Panel A includes all 2,290 complexes in our administrative records, while Panel B restricts the sample to the 1,629 complexes with available geographic coordinates. For each variable, we report the mean, standard deviation, and the 25th, 50th, and 75th percentiles in Columns 1–5, respectively. In Panel B, "distance to city center" corresponds to the distance from each complex to the city hall, expressed either in kilometers or as a share of the distance between the city hall and the outermost 2010 Census tract within the same municipality. We also report the distance from MCMV complexes to the nearest public school offering grades 5–9. Measures of school quality are based on the *Índice de Desenvolvimento da Educação Básica* (Ideb), Brazil's national indicator of educational performance. Ideb combines standardized test scores and grade progression rates and is measured every two years between 2009 and 2015. For each complex, we compute whether the nearest school's Ideb score is above the 25th percentile, median, mean, or 75th percentile of the distribution of Ideb scores across all schools offering grades 5–9 within the same municipality.

Table A4: Summary statistics: MCMV children with vs without Social Insurance Number (SIN)

	(1) With SIN	(2) Without SIN	(3) Standardized difference
Panel A: Household characteristics			
Number of kids	1.54	1.23	0.47
Household income per capita (2019 BRL)	216.14	222.64	-0.03
Received cash transfer (0/1)	0.64	0.60	0.08
Number of observations	214,510	55,863	
Panel B: Household head characteristics			
Female (0/1)	0.95	0.93	0.07
Single parent (0/1)	0.71	0.72	-0.02
White (0/1)	0.28	0.26	0.05
Age (years)	39.87	39.42	0.05
Years of education	7.21	7.17	0.01
Had job in the formal sector (0/1)	0.30	0.28	0.04
Monthly earnings from job in the formal sector (conditional, 2019 BRL)	1242.62	1292.18	-0.05
Job in the formal sector: services (conditional)	0.67	0.67	-0.00
Job in the formal sector: cleaning (conditional)	0.10	0.09	0.04
Job in the formal sector: salesperson (conditional)	0.07	0.08	-0.03
Job in the formal sector: waiter (conditional)	0.19	0.17	0.05
Job in the formal sector: manufacturing (conditional)	0.17	0.15	0.05
Number of observations	214,510	55,863	
Panel C: Spouse characteristics			
Female (0/1)	0.10	0.11	-0.05
White (0/1)	0.28	0.25	0.06
Age (years)	42.33	41.69	0.06
Years of education	6.24	6.38	-0.04
Had job in the formal sector (0/1)	0.43	0.41	0.04
Monthly earnings from job in the formal sector (conditional, 2019 BRL)	1533.44	1540.49	-0.01
Job in the formal sector: services (conditional)	0.31	0.33	-0.04
Job in the formal sector: manufacturing (conditional)	0.47	0.45	0.04
Job in the formal sector: construction (conditional)	0.24	0.22	0.05
Number of observations	62,986	15,826	
Panel D: Children characteristics			
Female (0/1)	0.52	0.45	0.13
White (0/1)	0.28	0.24	0.08
Age when treated (years)	15.78	15.21	0.24
Number of observations	281,509	112,051	

Notes: This table reports summary statistics for households, household heads, spouses of household heads, and children in the sample of children of MCMV beneficiaries, separately by whether their children have a registered Brazilian Social Insurance Number (SIN) or *Cadastro de Pessoa Física* (*CPF*). Panel A shows summary statistics for entire households. Panel B reports figures for household heads and Panel C reports numbers for spouses of household heads, for those who had one by the time of the treatment. Panel D reports summary statistics on the children themselves. In Panels A, B and C, column 1 reports averages for families with at least one child with a SIN, column 2 reports averages for families with no children with a SIN, and column 3 reports the standardized difference between the two groups. In Panel D, we compare children with a SIN (column 1) with children without a SIN (column 2) and again report the standardized difference between the two groups in column 3. Standardized differences are computed as the difference in means divided by the pooled standard deviation. The sample includes children observed in the Unified Registry data when they were younger than 18 years old living with MCMV mortgage signatories between 2012 and 2019. "Received cash transfer (0/1)" is an indicator that takes value 1 if the family received the Brazilian cash transfer program (*Bolsa Família*) in the year before the treatment or in the closest year to it before treatment when they were observed in the Unified Registry. Household income per capita and years of education are measured in the Unified Registry in the year before the treatment or in the closest year to it before treatment when adults were observed in the data. Employment in the formal sector and earnings from a job in the formal sector are measured using the Brazilian matched employer–employee data (RAIS) in the year prior to treatment. All monetary values are expressed in 2019 BRL. For additional details on sample construction, see Section 6.

Table A5: Children with SIN: selection and effects of exposure to MCMV on formal employment at 21 years old

	(1)	(2)	(3)	(4)
	Has a SIN (0/1)		Formal employment at 21 years old (0/1)	
Treated at 11 years old (0/1)	-0.052***	-0.067***	0.080***	0.088***
	(0.006)	(0.006)	(0.009)	(0.009)
Treated at 12 years old (0/1)	-0.053***	-0.068***	0.049***	0.057***
	(0.006)	(0.006)	(0.008)	(0.008)
Treated at 13 years old (0/1)	-0.062***	-0.076***	0.041***	0.048***
	(0.005)	(0.006)	(0.007)	(0.007)
Treated at 14 years old (0/1)	-0.055***	-0.067***	0.038***	0.043***
	(0.005)	(0.005)	(0.007)	(0.007)
Treated at 15 years old (0/1)	-0.045***	-0.057***	0.033***	0.034***
	(0.005)	(0.005)	(0.007)	(0.007)
Treated at 16 years old (0/1)	-0.040***	-0.051***	0.029***	0.028***
	(0.005)	(0.005)	(0.007)	(0.007)
Treated at 17 years old (0/1)	-0.032***	-0.042***	0.025***	0.022***
	(0.005)	(0.005)	(0.007)	(0.007)
Treated at 18 years old (0/1)	-0.025***	-0.032***	0.005	0.003
	(0.005)	(0.005)	(0.007)	(0.007)
Treated at 19 years old (0/1)	-0.021***	-0.026***	-0.004	-0.004
	(0.005)	(0.005)	(0.007)	(0.007)
Treated at 20 years old (0/1)	-0.015***	-0.017***	-0.010	-0.010
	(0.005)	(0.005)	(0.007)	(0.007)
Observations	393,560	393,560	281,509	281,509
R-squared	0.024	0.032	0.030	0.048
Sample	Full	Full	With SIN	With SIN
Omitted group treated at age	21	21	21	21
Children controls	Yes	Yes	Yes	Yes
Household head controls	No	Yes	No	Yes
Household controls	No	Yes	No	Yes
Outcome mean of omitted group	0.820	0.820	0.420	0.420

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age relative to age 21, the omitted category, on indicators that take value 1 if the individual has a SIN (columns 1 and 2) and on formal employment at age 21 (columns 3 and 4). In columns 1 and 2, we use the entire sample of MCMV children, while in columns 3 and 4 we restrict the sample to those with a registered SIN. Odd-numbered columns include only individual-level controls X_i (gender, race, and year of birth). Even-numbered columns include the full set of controls, adding household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment employment in the formal sector) and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom, we report the average of the dependent variable for the omitted group. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A6: Effects of exposure to MCMV as children on educational attainment at 22 years old

	(1)	(2)	(3)	(4)	(5)	(6)
	Attended high school by age 22 (0/1)		Completed high school by age 22 (0/1)		Attended college by age 22 (0/1)	
Treated at 11 years old (0/1)	0.039***	0.022***	0.020**	0.005	0.039***	0.022***
	(0.009)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)
Treated at 12 years old (0/1)	0.032***	0.016**	0.025***	0.011	0.042***	0.027***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)	(0.006)
Treated at 13 years old (0/1)	0.024***	0.009	0.017**	0.003	0.041***	0.025***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)
Treated at 14 years old (0/1)	0.022***	0.008	0.020***	0.008	0.040***	0.026***
	(0.007)	(0.007)	(0.007)	(0.006)	(0.005)	(0.005)
Treated at 15 years old (0/1)	0.025***	0.01	0.023***	0.011*	0.039***	0.024***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 16 years old (0/1)	0.023***	0.008	0.024***	0.012*	0.041***	0.026***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 17 years old (0/1)	0.024***	0.009	0.027***	0.014**	0.041***	0.025***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 18 years old (0/1)	0.014**	0.003	0.022***	0.012**	0.030***	0.018***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 19 years old (0/1)	0.003	-0.004	0.005	0.000	0.010**	0.003
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)
Treated at 20 years old (0/1)	0.006	0.003	0.010	0.007	0.010*	0.006
	(0.007)	(0.007)	(0.007)	(0.007)	(0.005)	(0.005)
Observations	281,509	281,509	281,509	281,509	281,509	281,509
R-squared	0.022	0.051	0.021	0.048	0.016	0.061
Ommited group treated at age	21	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	No	Yes	No	Yes	No	Yes
Outcome mean of omitted group	0.420	0.420	0.260	0.260	0.150	0.150

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age relative to age 21, the omitted category, on educational outcomes measured at age 22. Odd-numbered columns include only individual-level controls X_i. Even-numbered columns include the full set of controls, adding household-head characteristics $W_{h(i)}$ and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for the omitted group. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A7: Effects of exposure to MCMV as children on educational attainment at 23 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Attended high school by age 23 (0/1)		Completed high school by age 23 (0/1)		Attended college by age 23 (0/1)		Completed college by age 23 (0/1)	
Treated at 12 years old (0/1)	0.032***	0.016**	0.023***	0.009	0.044***	0.027***	0.003	0.001
	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)	(0.006)	(0.002)	(0.002)
Treated at 13 years old (0/1)	0.024***	0.009	0.015**	0.001	0.042***	0.025***	0.003*	0.001
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.002)	(0.002)
Treated at 14 years old (0/1)	0.022***	0.008	0.018***	0.006	0.042***	0.027***	0.003*	0.001
	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.002)	(0.002)
Treated at 15 years old (0/1)	0.025***	0.01	0.021***	0.009	0.041***	0.025***	0.004**	0.002
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 16 years old (0/1)	0.023***	0.009	0.022***	0.01	0.041***	0.026***	0.005***	0.003
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 17 years old (0/1)	0.024***	0.009	0.025***	0.013**	0.041***	0.024***	0.003*	0.001
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 18 years old (0/1)	0.014**	0.003	0.020***	0.011*	0.031***	0.019***	0.004**	0.002
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 19 years old (0/1)	0.003	-0.004	0.005	-0.001	0.010*	0.002	0.000	-0.001
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 20 years old (0/1)	0.007	0.004	0.008	0.006	0.010*	0.006	0.001	0.000
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.002)	(0.002)
Observations	272,248	272,248	272,248	272,248	272,248	272,248	272,248	272,248
R-squared	0.021	0.050	0.020	0.047	0.017	0.064	0.003	0.010
Ommited group treated at age	21	21	21	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	No	Yes	No	Yes	No	Yes	No	Yes
Outcome mean of omitted group	0.420	0.420	0.260	0.260	0.160	0.160	0.010	0.010

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age relative to age 21, the omitted category, on educational outcomes measured at age 23. Odd-numbered columns include only individual-level controls X_i. Even-numbered columns include the full set of controls, adding household-head characteristics $W_{h(i)}$ and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for the omitted group. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A8: Effects of exposure to MCMV as children on educational attainment at 24 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Attended high school by age 24 (0/1)		Completed high school by age 24 (0/1)		Attended college by age 24 (0/1)		Completed college by age 24 (0/1)	
Treated at 13 years old (0/1)	0.024***	0.009	0.014**	0.001	0.043***	0.026***	0.008***	0.005*
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.002)	(0.002)
Treated at 14 years old (0/1)	0.022***	0.008	0.017***	0.006	0.044***	0.028***	0.007***	0.004*
	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.002)	(0.002)
Treated at 15 years old (0/1)	0.025***	0.01	0.021***	0.008	0.044***	0.027***	0.009***	0.005**
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)	(0.002)	(0.002)
Treated at 16 years old (0/1)	0.023***	0.009	0.021***	0.009	0.044***	0.027***	0.011***	0.007***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 17 years old (0/1)	0.023***	0.009	0.024***	0.012**	0.043***	0.026***	0.009***	0.006***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 18 years old (0/1)	0.014**	0.002	0.019***	0.010	0.034***	0.021***	0.008***	0.006**
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.002)	(0.002)
Treated at 19 years old (0/1)	0.002	-0.004	0.004	-0.002	0.011**	0.003	0.003	0.001
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)	(0.002)	(0.002)
Treated at 20 years old (0/1)	0.006	0.003	0.008	0.006	0.011**	0.008	0.002	0.001
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.002)	(0.002)
Observations	254,989	254,989	254,989	254,989	254,989	254,989	254,989	254,989
R-squared	0.022	0.051	0.02	0.046	0.017	0.065	0.005	0.016
Ommited group treated at age	21	21	21	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	No	Yes	No	Yes	No	Yes	No	Yes
Outcome mean of omitted group	0.420	0.420	0.270	0.270	0.170	0.170	0.020	0.020

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age relative to age 21, the omitted category, on educational outcomes measured at age 24. Odd-numbered columns include only individual-level controls X_i. Even-numbered columns include the full set of controls, adding household-head characteristics $W_{h(i)}$ and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for the omitted group. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A9: Marginal effects of exposure to MCMV as children on educational attainment at 22 years old

	(1) Attended high school by age 22	(2) Completed high school by age 22	(3) Attended college by age 22
Years of exposure to MCMV before 18	0.002***	-0.001	0.002***
	(0.001)	(0.001)	0.000
Observations	281,509	281,509	281,509
R-squared	0.051	0.048	0.061
Children controls	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Outcome mean at 18yo or older	0.440	0.280	0.160

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on educational attainment measured at age 22. All specifications include the full set of controls: individual-level characteristics X_i, household-head characteristics $W_{h(i)}$, and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for those treated at 18 years old or older. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A10: Marginal effects of exposure to MCMV as children on educational attainment at 23 years old

	(1) Attended high school by age 23	(2) Completed high school by age 23	(3) Attended college by age 23	(4) Completed college by age 23
Years of exposure to MCMV before 18	0.002**	-0.001	0.002***	0.000
	(0.001)	(0.001)	(0.001)	0.000
Observations	272,248	272,248	272,248	272,248
R-squared	0.050	0.047	0.064	0.010
Children controls	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.440	0.280	0.170	0.010

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on educational attainment measured at age 23. All specifications include the full set of controls: individual-level characteristics X_i, household-head characteristics $W_{h(i)}$, and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for those treated at 18 years old or older. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A11: Marginal effects of exposure to MCMV as children on educational attainment at 24 years old

	(1) Attended high school by age 24	(2) Completed high school by age 24	(3) Attended college by age 24	(4) Completed college by age 24
Years of exposure to MCMV before 18	0.001**	-0.001	0.002***	0.000
	(0.001)	(0.001)	(0.001)	0.000
Observations	254,989	254,989	254,989	254,989
R-squared	0.051	0.046	0.065	0.016
Children controls	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.440	0.290	0.180	0.030

Notes: This table reports OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on educational attainment measured at age 24. All specifications include the full set of controls: individual-level characteristics X_i, household-head characteristics $W_{h(i)}$, and household characteristics $V_{f(i)}$. At the bottom, we report the average of the dependent variable for those treated at 18 years old or older. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A12: Effects of exposure to MCMV as children on formal employment at different ages

	(1)	(2)	(3)	(4)	(5)
	Formal employment at				
	21 years old (0/1)	22 years old (0/1)	23 years old (0/1)	24 years old (0/1)	25 years old (0/1)
Treated at 11 years old (0/1)	0.045***	0.066***			
	(0.007)	(0.011)			
Treated at 12 years old (0/1)	0.023***	0.040***	0.071***		
	(0.007)	(0.007)	(0.011)		
Treated at 13 years old (0/1)	0.015**	0.024***	0.038***	0.028**	
	(0.006)	(0.007)	(0.007)	(0.011)	
Treated at 14 years old (0/1)	0.012*	0.018***	0.027***	0.034***	0.064***
	(0.006)	(0.006)	(0.007)	(0.007)	(0.012)
Treated at 15 years old (0/1)	0.008	0.013**	0.023***	0.019***	0.041***
	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)
Treated at 16 years old (0/1)	0.005	0.009	0.013**	0.007	0.020***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)
Treated at 17 years old (0/1)	0.002	0.008	0.015**	0.010*	0.016**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Treated at 18 years old (0/1)	-0.008	-0.001	0.004	-0.005	0.008
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Treated at 19 years old (0/1)	-0.012*	-0.006	-0.002	-0.001	0.008
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Treated at 20 years old (0/1)	-0.015**	-0.010	-0.004	-0.004	-0.001
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)
Observations	393,560	319,487	243,599	175,953	113,413
R-squared	0.038	0.035	0.032	0.029	0.026
Omitted group treated at age	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes
Outcome mean of omitted group	0.360	0.340	0.340	0.360	0.350

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age on formal employment measured at ages 22 to 25. In each column we use as outcome employment at different ages. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the very bottom we report the average of the dependent variable for the omitted group in each regression, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A13: Effects of exposure to MCMV as children on formal wages at different ages

	(1)	(2)	(3)	(4)	(5)
	Monthly formal wages (in 2019 BRL) at				
	21 years old (0/1)	22 years old (0/1)	23 years old (0/1)	24 years old (0/1)	25 years old (0/1)
Treated at 11 years old (0/1)	62.193***	104.054***			
	(13.066)	(16.486)			
Treated at 12 years old (0/1)	36.426***	66.130***	114.356***		
	(12.587)	(11.909)	(17.665)		
Treated at 13 years old (0/1)	31.087**	50.239***	63.975***	59.637***	
	(12.380)	(11.332)	(11.984)	(17.615)	
Treated at 14 years old (0/1)	28.432**	43.039***	51.082***	69.817***	93.277***
	(12.357)	(11.102)	(11.290)	(11.816)	(19.160)
Treated at 15 years old (0/1)	18.528	37.346***	45.617***	50.889***	81.757***
	(12.146)	(10.893)	(10.926)	(10.896)	(12.784)
Treated at 16 years old (0/1)	13.087	26.745**	32.329***	35.177***	48.672***
	(12.037)	(10.600)	(10.764)	(10.969)	(11.327)
Treated at 17 years old (0/1)	12.994	25.789**	32.315***	41.997***	43.582***
	(11.999)	(10.579)	(10.605)	(10.128)	(10.904)
Treated at 18 years old (0/1)	-8.245	10.432	11.857	7.441	29.651***
	(11.969)	(10.881)	(10.562)	(10.055)	(11.350)
Treated at 19 years old (0/1)	-12.364	6.756	11.135	17.523	19.777*
	(12.117)	(10.884)	(11.379)	(10.756)	(10.989)
Treated at 20 years old (0/1)	-9.876	-2.113	-6.068	5.594	6.703
	(15.272)	(11.572)	(11.135)	(10.667)	(11.319)
Observations	393,560	319,487	243,599	175,953	113,413
R-squared	0.038	0.041	0.037	0.034	0.036
Omitted group treated at age	21	21	21	21	21
Children controls	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes
Outcome mean of omitted group	479.1	476.8	497.7	509.2	498.3

Notes: This table reports OLS estimates of Equation 2, where each coefficient represents the effect of receiving MCMV housing at a given age on monthly formal earnings (in Brazilian Reais as of 2019) measured at ages 22 to 25. In each column we use as outcome monthly formal earnings (in Brazilian Reais as of 2019) at different ages. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the very bottom we report the average of the dependent variable for the omitted group in each regression, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A14: Heterogeneity of marginal effects of exposure to MCMV as children on formal employment at 21 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal employment at 21 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	0.006***	0.005***	0.006***	0.005***	0.006***	0.007***	0.003***	0.008***	0.004***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	393,560	197,560	196,000	106,434	287,126	286,921	106,639	113,521	280,039
R-squared	0.038	0.025	0.039	0.025	0.030	0.043	0.026	0.022	0.030
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.360	0.420	0.310	0.430	0.340	0.350	0.400	0.440	0.330

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on formal employment at age 21. Column 1 reports the baseline specification for all children. Columns 2-9 use different subsample of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before they signed their MCMV mortgage and those without formal employment before receiving MCMV housing. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A15: Heterogeneity of marginal effects of exposure to MCMV as children on formal employment at 22 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal employment at 22 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	0.006***	0.005***	0.007***	0.006***	0.006***	0.007***	0.003***	0.007***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	319,487	160,104	159,383	86,035	233,452	235,386	84,101	91,153	228,334
R-squared	0.035	0.020	0.036	0.022	0.028	0.039	0.023	0.018	0.029
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.340	0.400	0.300	0.410	0.320	0.330	0.380	0.420	0.320

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on formal employment at age 22. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A16: Heterogeneity of marginal effects of exposure to MCMV as children on formal employment at 23 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal employment at 23 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	0.007***	0.005***	0.009***	0.007***	0.007***	0.009***	0.003**	0.010***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	243,599	121,629	121,970	65,348	178,251	181,267	62,332	68,610	174,989
R-squared	0.032	0.016	0.034	0.020	0.027	0.036	0.018	0.017	0.026
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.340	0.400	0.300	0.420	0.320	0.330	0.390	0.420	0.320

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on formal employment at age 23. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A17: Heterogeneity of marginal effects of exposure to MCMV as children on formal employment at 24 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal employment at 24 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	0.008***	0.005***	0.010***	0.007***	0.008***	0.008***	0.005***	0.011***	0.006***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)
Observations	175,953	87,578	88,375	46,775	129,178	132,121	43,832	48,393	127,560
R-squared	0.029	0.014	0.031	0.019	0.025	0.032	0.017	0.014	0.025
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.360	0.410	0.310	0.420	0.340	0.340	0.410	0.440	0.330

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on formal employment at age 24. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A18: Heterogeneity of marginal effects of exposure to MCMV as children on formal wages at 21 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal wages (in 2019 BRL) at 21 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	7.787***	7.975***	7.518***	8.046***	7.620***	9.084***	4.314***	12.141***	5.985***
	(0.691)	(1.053)	(0.894)	(1.448)	(0.777)	(0.799)	(1.360)	(1.428)	(0.778)
Observations	393,560	197,560	196,000	106,434	287,126	286,921	106,639	113,521	280,039
R-squared	0.038	0.028	0.034	0.026	0.028	0.040	0.032	0.027	0.031
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	479.1	590.3	385	602.6	441.2	457.3	562.7	601.6	441.6

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on monthly formal earnings (in Brazilian Reais as of 2019) at age 21. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$..

Table A19: Heterogeneity of marginal effects of exposure to MCMV as children on formal wages at 22 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal wages (in 2019 BRL) at 22 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	8.944***	8.071***	9.689***	11.648***	7.853***	10.299***	5.134***	10.611***	8.210***
	(0.820)	(1.269)	(1.038)	(1.706)	(0.925)	(0.932)	(1.688)	(1.656)	(0.937)
Observations	319,487	160,104	159,383	86,035	233,452	235,386	84,101	91,153	228,334
R-squared	0.041	0.025	0.039	0.031	0.030	0.045	0.028	0.027	0.034
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	476.8	573.4	395	609	436.1	464.9	522.3	590.2	442.1

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on monthly formal earnings (in Brazilian Reais as of 2019) at age 22. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: X_i, $W_{h(i)}$, and $V_{f(i)}$. At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A20: Heterogeneity of marginal effects of exposure to MCMV as children on formal wages at 23 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal wages (in 2019 BRL) at 23 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	11.097***	8.418***	13.712***	13.153***	10.262***	12.581***	6.939***	15.503***	9.246***
	(1.066)	(1.666)	(1.325)	(2.139)	(1.223)	(1.231)	(2.132)	(2.084)	(1.235)
Observations	243,599	121,629	121,970	65,348	178,251	181,267	62,332	68,610	174,989
R-squared	0.037	0.021	0.036	0.027	0.028	0.038	0.029	0.028	0.029
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	497.7	603.3	408.3	639.3	454.2	476.4	579.5	626.2	458.3

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on monthly formal earnings (in Brazilian Reais as of 2019) at age 23. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: X_i, $W_{h(i)}$, and $V_{f(i)}$. At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A21: Heterogeneity of marginal effects of exposure to MCMV as children on formal wages at 24 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal wages (in 2019 BRL) at 24 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	13.063***	9.461***	16.500***	14.229***	12.544***	13.503***	12.026***	17.146***	11.525***
	(1.460)	(2.122)	(2.001)	(2.860)	(1.698)	(1.660)	(3.047)	(2.873)	(1.693)
Observations	175,953	87,578	88,375	46,775	129,178	132,121	43,832	48,393	127,560
R-squared	0.034	0.022	0.029	0.032	0.025	0.036	0.024	0.025	0.028
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	509.2	612.6	421.7	624.9	473.7	487.5	592.7	639.7	469.3

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on monthly formal earnings (in Brazilian Reais as of 2019) at age 24. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: X_i, $W_{h(i)}$, and $V_{f(i)}$. At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A22: Heterogeneity of marginal effects of exposure to MCMV as children on formal wages at 25 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Formal wages (in 2019 BRL) at 25 years old								
	All children	Boys	Girls	Whites	Non-whites	HH head with no high school	HH head with some high school	HH head with a formal job	HH head with no formal job
Years of exposure to MCMV before 18	19.105***	10.975***	27.029***	20.583***	18.501***	19.197***	19.585***	26.765***	16.215***
	(2.229)	(3.392)	(2.887)	(4.459)	(2.561)	(2.456)	(5.004)	(4.803)	(2.469)
Observations	113,413	56,233	57,180	29,944	83,469	85,680	27,733	30,518	82,895
R-squared	0.036	0.020	0.035	0.028	0.029	0.039	0.021	0.021	0.033
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	498.3	595.8	415.9	619.3	461.2	481.6	562.6	627.4	458.8

Notes: This table reports heterogeneous effects from OLS estimates of Equation 3, which models the effect of one additional year of exposure to MCMV housing before age 18 on monthly formal earnings (in Brazilian Reais as of 2019) at age 25. Column 1 reports the baseline specification for all children. Columns 2–9 use different subsamples of MCMV children. Columns 2 and 3 restrict the sample to boys and girls, respectively. Columns 4 and 5 separate white and non-white children. Columns 6 and 7 split the sample by the education level of the household head, distinguishing those with no high school education from those with incomplete or complete high school. Columns 8 and 9 differentiate households whose head held a formal job the year before signing their MCMV mortgage from those without formal employment before receiving MCMV housing. All specifications include the full set of controls: X_i, $W_{h(i)}$, and $V_{f(i)}$. At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A23: Mechanisms of marginal effects of exposure to MCMV as children on formal employment at 21 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal employment at 21 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	0.006***	0.011***	0.003***	0.008***	0.000	0.013***	0.006***	0.014***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Observations	393,560	131,543	131,746	260,232	133,328	43,471	219,721	29,230
R-squared	0.038	0.033	0.039	0.035	0.031	0.043	0.035	0.040
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.360	0.400	0.370	0.290	0.430	0.370	0.390	0.310

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on formal employment at age 21. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on formal employment. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality, so that the median cutoff approximately corresponds to half the size of the city. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A24: Mechanisms of marginal effects of exposure to MCMV as children on formal employment at 22 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal employment at 22 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	0.006***	0.010***	0.005***	0.009***	0.000	0.015***	0.005***	0.018***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
Observations	319,487	107,046	107,189	209,470	110,017	35,615	178,540	23,813
R-squared	0.035	0.030	0.037	0.033	0.027	0.040	0.032	0.039
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.340	0.390	0.350	0.280	0.410	0.340	0.370	0.290

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on formal employment at age 22. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on formal employment. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A25: Mechanisms of marginal effects of exposure to MCMV as children on formal employment at 23 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal employment at 23 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	0.007***	0.011***	0.006***	0.010***	0.002	0.015***	0.007***	0.019***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
Observations	243,599	81,591	81,858	157,819	85,780	27,172	136,219	17,948
R-squared	0.032	0.028	0.033	0.031	0.024	0.038	0.029	0.039
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.340	0.380	0.330	0.290	0.400	0.340	0.360	0.300

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on formal employment at age 23. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on formal employment. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A26: Mechanisms of marginal effects of exposure to MCMV as children on formal employment at 24 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal employment at 24 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	0.008***	0.010***	0.005***	0.011***	0.002	0.016***	0.005***	0.021***
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.001)	(0.003)
Observations	175,953	58,869	59,265	112,556	63,397	19,729	98,366	12,836
R-squared	0.029	0.027	0.030	0.028	0.022	0.036	0.027	0.039
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	0.360	0.370	0.350	0.300	0.420	0.340	0.370	0.310

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on formal employment at age 24. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on formal employment. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A27: Mechanisms of marginal effects of exposure to MCMV as children on formal wages at 21 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal wages (in 2019 BRL) at 21 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	7.787***	16.027***	3.383***	10.474***	2.026	18.324***	7.741***	17.087***
	(0.691)	(1.245)	(1.259)	(0.811)	(1.294)	(2.050)	(0.982)	(2.322)
Observations	393,560	131,543	131,746	260,232	133,328	43,471	219,721	29,230
R-squared	0.038	0.037	0.036	0.035	0.031	0.052	0.034	0.047
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	479.1	554.2	493.1	390.5	575.7	513.9	528.6	430.6

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on monthly formal earnings in Brazilian Reais as of 2019 at age 21. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on monthly formal earnings in Brazilian Reais as of 2019. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A28: Mechanisms of marginal effects of exposure to MCMV as children on formal wages at 22 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal wages (in 2019 BRL) at 22 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	8.944***	14.357***	6.488***	11.701***	2.860*	22.455***	7.857***	24.822***
	(0.820)	(1.499)	(1.480)	(0.965)	(1.527)	(2.459)	(1.163)	(2.826)
Observations	319,487	107,046	107,189	209,470	110,017	35,615	178,540	23,813
R-squared	0.041	0.040	0.040	0.037	0.033	0.044	0.039	0.043
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	476.8	553.5	472.5	382.3	579.7	526.4	513.1	463.2

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on monthly formal earnings in Brazilian Reais as of 2019 at age 22. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on monthly formal earnings in Brazilian Reais as of 2019. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A29: Mechanisms of marginal effects of exposure to MCMV as children on formal wages at 23 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal wages (in 2019 BRL) at 23 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	11.097***	14.526***	10.154***	13.647***	5.245***	24.261***	9.672***	27.004***
	(1.066)	(2.016)	(1.840)	(1.277)	(1.927)	(3.006)	(1.543)	(3.472)
Observations	243,599	81,591	81,858	157,819	85,780	27,172	136,219	17,948
R-squared	0.037	0.032	0.039	0.030	0.034	0.039	0.034	0.032
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	497.7	573.2	482.9	398.4	605.8	483.5	543.3	403.9

Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on monthly formal earnings in Brazilian Reais as of 2019 at age 23. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on monthly formal earnings in Brazilian Reais as of 2019. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A30: Mechanisms of marginal effects of exposure to MCMV as children on formal wages at 24 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal wages (in 2019 BRL) at 24 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	13.063***	15.494***	8.008***	14.661***	9.519***	24.783***	9.016***	27.628***
	(1.460)	(2.469)	(2.719)	(1.629)	(2.941)	(4.106)	(2.047)	(4.670)
Observations	175,953	58,869	59,265	112,556	63,397	19,729	98,366	12,836
R-squared	0.034	0.036	0.029	0.034	0.024	0.049	0.030	0.048
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	509.2	552.5	506.3	412.9	614.2	479.5	544.2	428.1

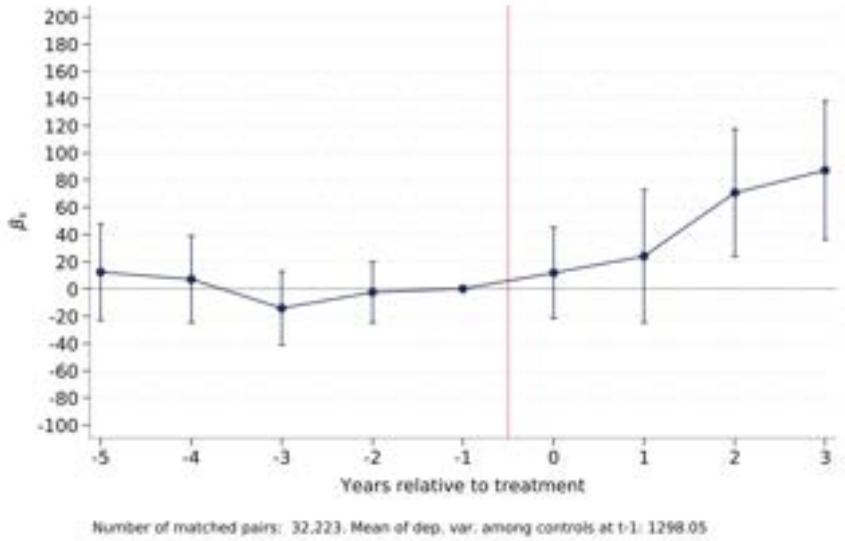
Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on monthly formal earnings in Brazilian Reais as of 2019 at age 24. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on monthly formal earnings in Brazilian Reais as of 2019. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A31: Mechanisms of marginal effects of exposure to MCMV as children on formal wages at 25 years old

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Formal wages (in 2019 BRL) at 25 years old							
	All children	Close to the city center	Far from the city center	Only cash transfer beneficiaries	No cash transfer beneficiaries	High quality schools	Low quality schools	Cash transfer beneficiaries in high quality schools
Years of exposure to MCMV before 18	19.105***	19.598***	14.594***	21.653***	12.960***	22.982***	15.801***	23.916***
	(2.229)	(3.842)	(3.788)	(2.600)	(4.200)	(6.314)	(2.984)	(7.216)
Observations	113,413	37,754	38,278	71,141	42,272	12,847	63,163	8,154
R-squared	0.036	0.033	0.036	0.033	0.027	0.038	0.034	0.037
Children controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome mean at 18yo or older	498.3	542.9	490.2	407.6	597.2	471.6	530.4	386

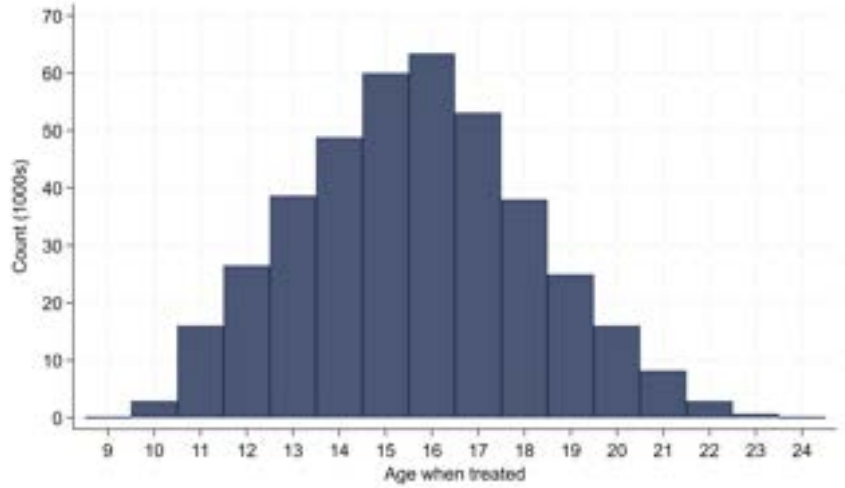
Notes: This table reports OLS estimates of Equation 3 examining mechanisms underlying the marginal effects of exposure to MCMV housing before age 18 on monthly formal earnings in Brazilian Reais as of 2019 at age 25. Each coefficient represents the estimated impact of one additional year of exposure to MCMV before age 18 on monthly formal earnings in Brazilian Reais as of 2019. Column 1 reports the baseline estimates for all children. Columns 2–8 use different subsamples of MCMV children. Columns 2 and 3 split the sample by the proximity of the subsidized housing complex to the city center, distinguishing families living closer than the median of the distance distribution from those living farther away. Distances are measured as a share of the distance between the city hall and the outermost 2010 Census tract of the municipality. Columns 4 and 5 compare families that did and did not receive the Brazilian cash transfer *Bolsa Família* as reported in the Unified Registry in the year closest to the year before signing their MCMV mortgage, Columns 6 and 7 split the sample by the quality of the closest school to the subsidized housing complex where families moved, measured by the Ideb index of standardized test scores in the last year available before receiving MCMV housing, with the cutoff set at the 75th percentile of the distribution of test scores of schools in the same city. Column 8 restricts the sample to children whose families received *Bolsa Família* and moved near schools with IDEB test scores above the city 75th percentile. We have GPS coordinates for approximately 70 percent of the subsidized housing complexes in our sample, so the subsamples used in Columns 2, 3, and 6–9 do not add up to the full sample in Column 1. All specifications include the full set of controls: individual-level characteristics X_i (gender, race, and year of birth), household-head characteristics $W_{h(i)}$ (age at mortgage signing, gender, race, years of education, and pre-treatment formal employment), and household characteristics $V_{f(i)}$ (number of children and *Bolsa Família* receipt). At the bottom of the table, we report the average of the dependent variable for those treated at 18 years old or older, which provides the baseline for interpreting the magnitude of the estimated effects. Robust standard errors are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Figure B3: Effects of MCMV on (conditional) monthly wages of adults with kids



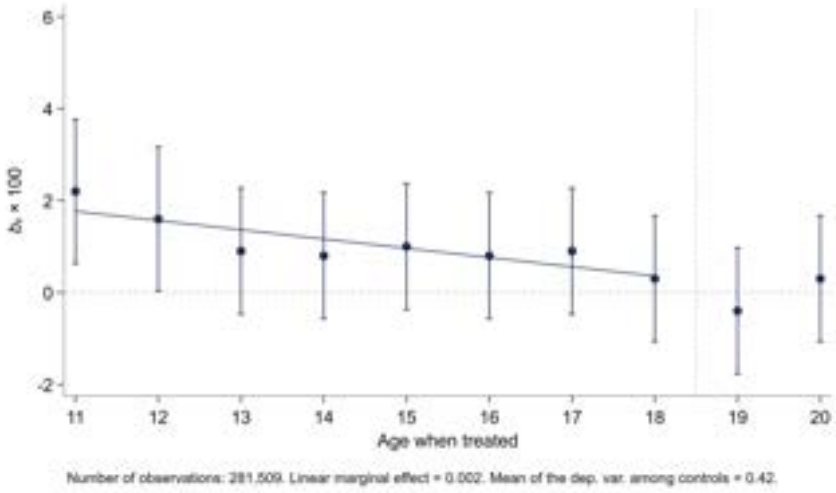
Notes: This figure plots the event-study estimates of Equation 1, which examines the impacts of the MCMV program on adult labor market outcomes. The outcome is monthly formal wages (in 2019 BRL), restricting the sample to individuals who were formally employed in every single year of the sample period. The sample further restricts to household heads with at least one child under age 16, as identified in the Unified Registry data. Treated adults are those who received their units between 2010 and 2013, matched to control adults who signed their contracts between 2014 and 2017. Each point represents the estimated effect of MCMV receipt relative to the year before signing, and the vertical lines indicate 95% confidence intervals based on standard errors clustered at the individual level. The underlying estimates correspond to those reported in Column 5 of Table A1 At the bottom of the figure, we report the number of matched pairs in the restricted sample and the mean of the dependent variable among control individuals in the year prior to treatment. See Section 5 for details on the sample construction and matching procedures.

Figure B4: Raw distribution of age when MCMV children were treated



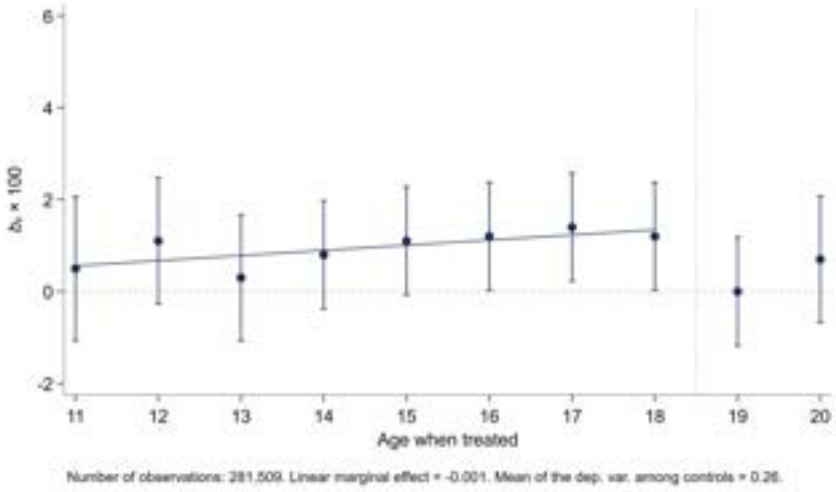
Notes: This figure shows the number of children of MCMV beneficiaries in our sample by their age when they were treated. Each bar corresponds to the number of children divided by 1,000. In the final sample we use to estimate the impacts of the MCMV program on labor market outcomes of children when they become adults, we exclude kids treated when they were younger than 11 or older than 22 years old when their parents signed their MCMV mortgage. For more details on the sample construction, see Section 6.

Figure B5: Effects of exposure to MCMV as children on high school attendance by 22 years old



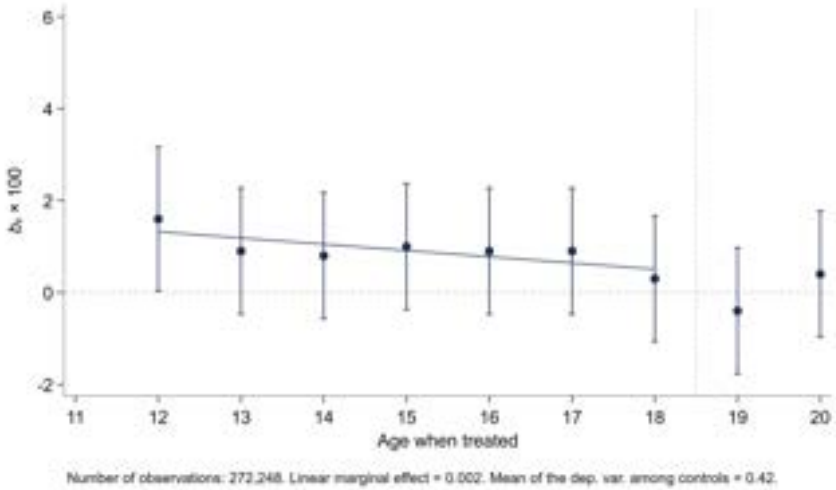
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended high school by the age of 22, also reported in Column 2 of Appendix Table A6. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended high school by age 22, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A9.

Figure B6: Effects of exposure to MCMV as children on high school completion by 22 years old



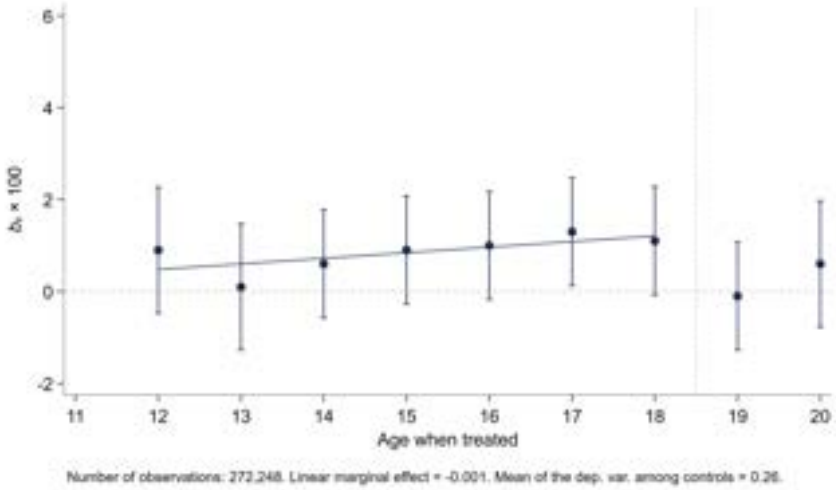
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed high school by the age of 22, also reported in Column 4 of Appendix Table A6. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed high school by age 22, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A9.

Figure B7: Effects of exposure to MCMV as children on high school attendance by 23 years old



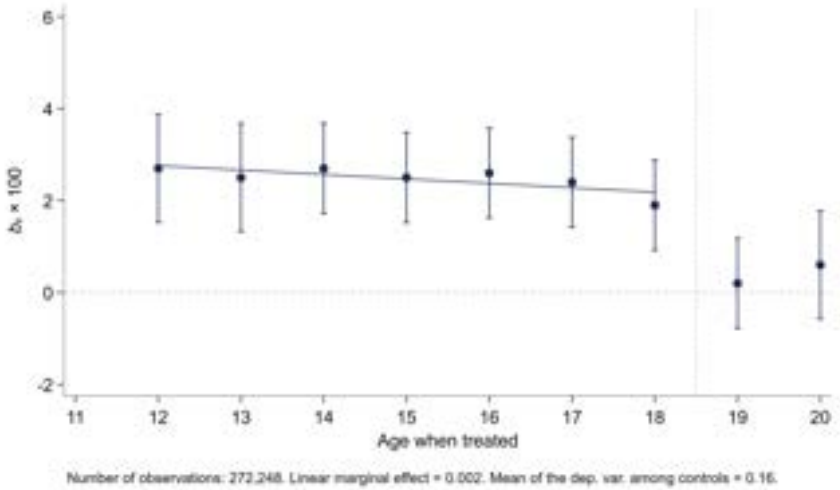
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended high school by the age of 23, also reported in Column 2 of Appendix Table A7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended high school by age 23, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A10.

Figure B8: Effects of exposure to MCMV as children on high school completion by 23 years old



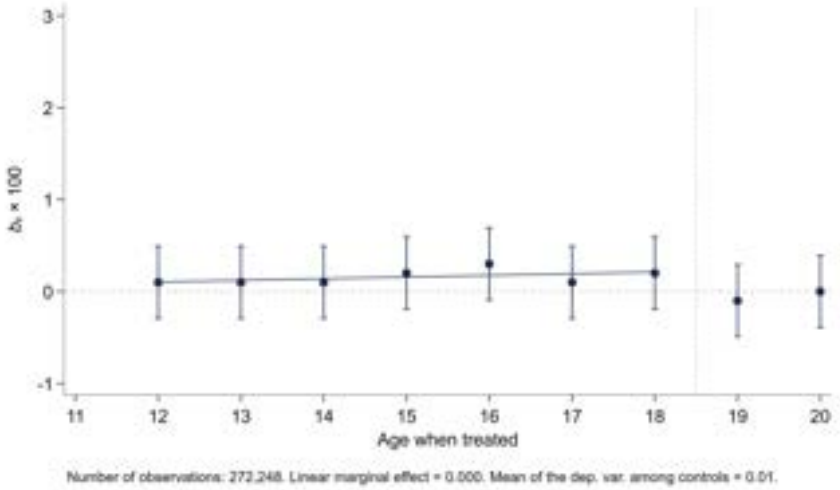
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed high school by the age of 23, also reported in Column 4 of Appendix Table A7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed high school by age 23, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A10.

Figure B9: Effects of exposure to MCMV as children on college attendance by 23 years old



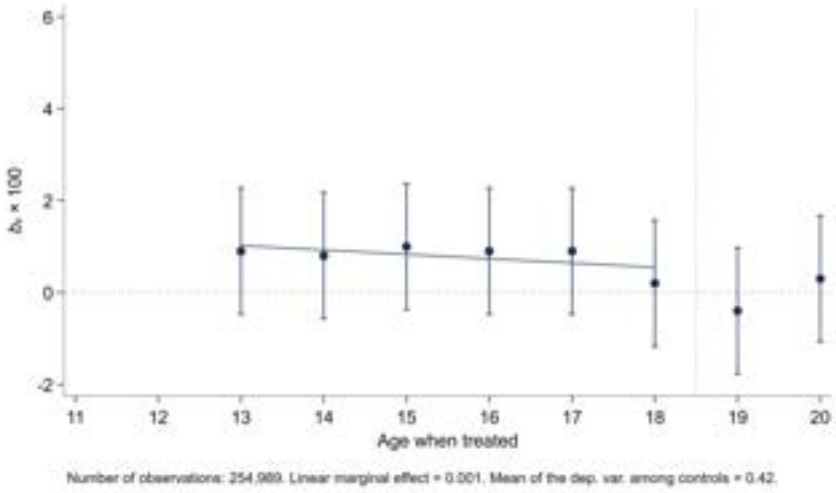
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended college by the age of 23, also reported in Column 6 of Appendix Table A7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended college by age 23, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A10.

Figure B10: Effects of exposure to MCMV as children on college completion by 23 years old



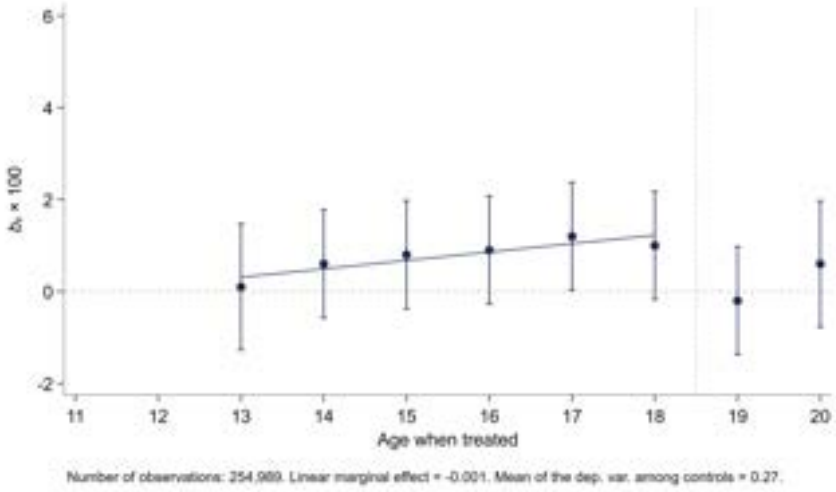
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed college by the age of 23, also reported in Column 8 of Appendix Table A7. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed college by age 23, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A10.

Figure B11: Effects of exposure to MCMV as children on high school attendance by 24 years old



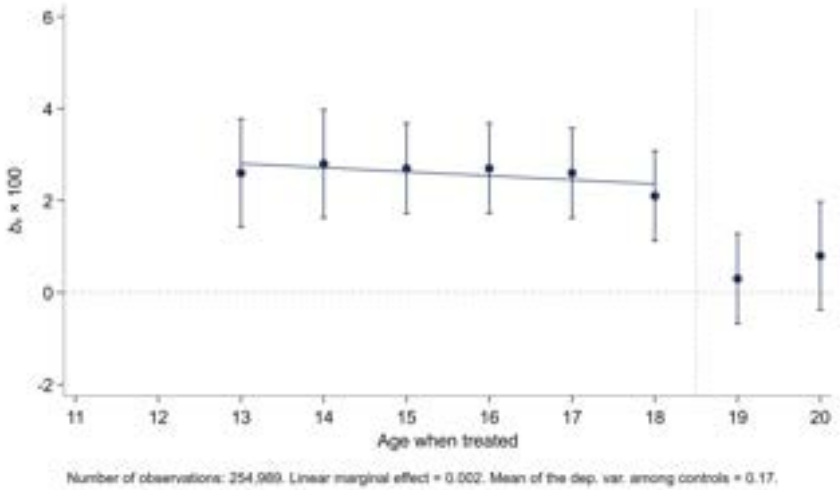
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended high school by the age of 24, also reported in Column 2 of Appendix Table A8. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended high school by age 24, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A11.

Figure B12: Effects of exposure to MCMV as children on high school completion by 24 years old



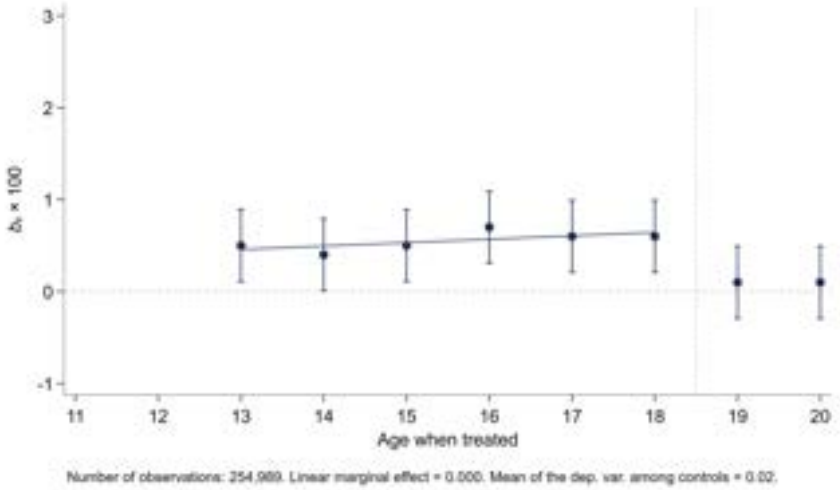
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed high school by the age of 24, also reported in Column 4 of Appendix Table A8. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed high school by age 24, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A11.

Figure B13: Effects of exposure to MCMV as children on college attendance by 24 years old



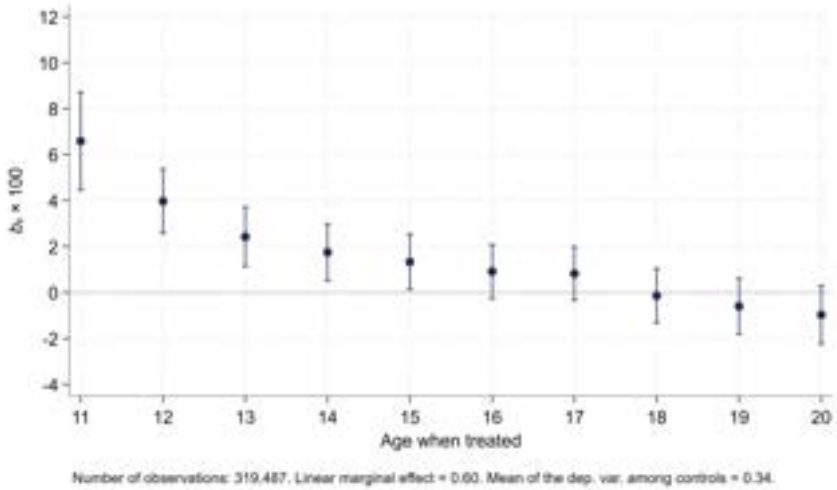
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having attended college by the age of 24, also reported in Column 6 of Appendix Table A8. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that attended college by age 24, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A11.

Figure B14: Effects of exposure to MCMV as children on college completion by 24 years old



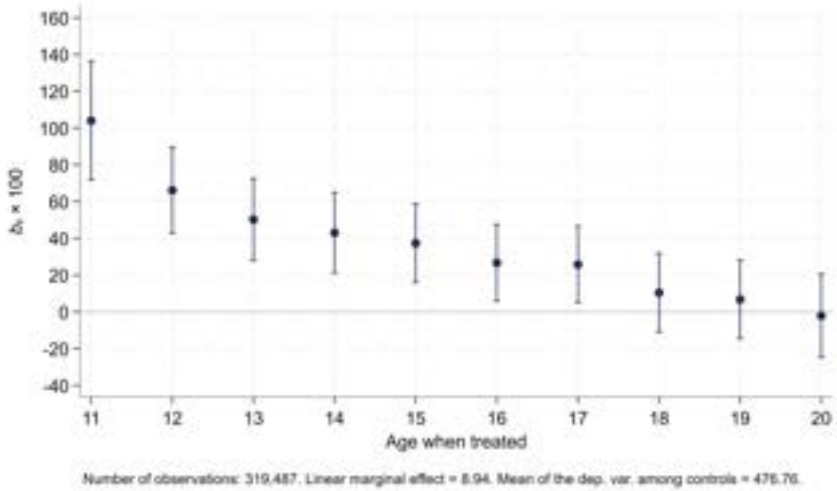
Notes: This figure plots the estimated coefficients from Equation 2 when the dependent variable is an indicator for having completed college by the age of 24, also reported in Column 8 of Appendix Table A8. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the share of the omitted group that completed college by age 24, and the marginal effect of one additional year of exposure to MCMV, based on Appendix Table A11.

Figure B15: Effects of exposure to MCMV as children on formal employment at 22 years old



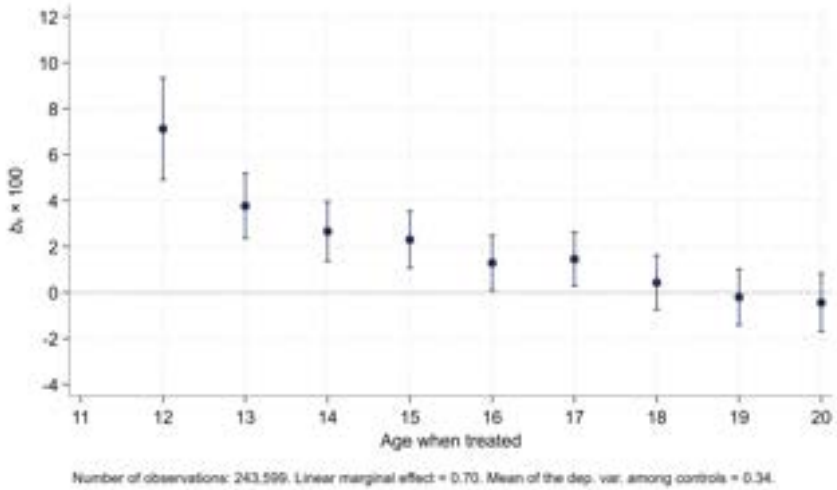
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22, also reported in Column 2 of Table A12. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table 11.

Figure B16: Effects of exposure to MCMV as children on formal earnings at 22 years old



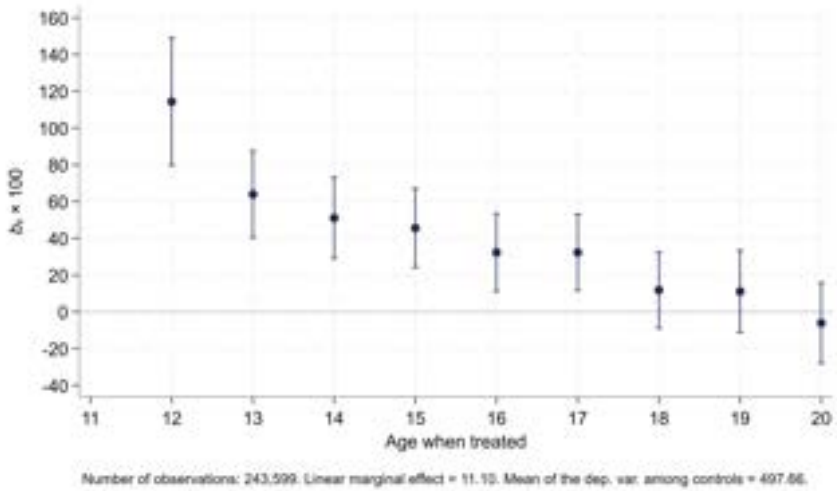
Notes: This figure plots the estimated coefficients from Equation 2 for monthly formal earnings at age 21 (in Brazilian Reais as of 2019), also reported in Column 2 of Table A13. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average monthly earnings of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table 12.

Figure B17: Effects of exposure to MCMV as children on formal employment at 23 years old



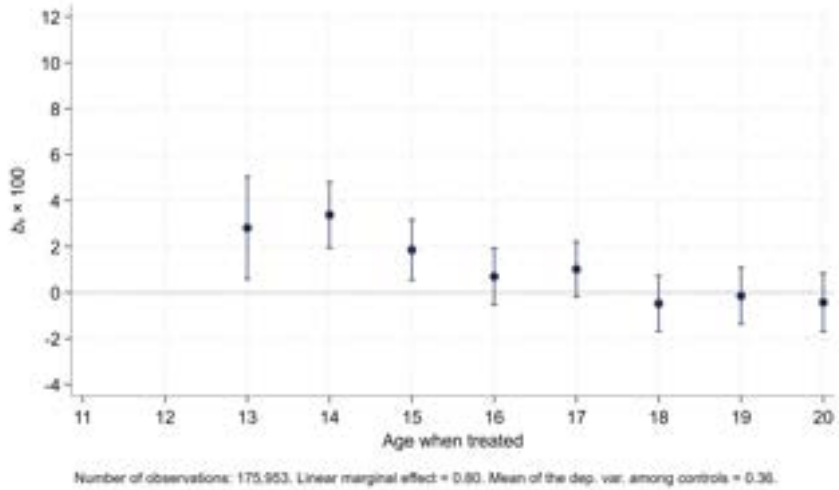
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23, also reported in Column 3 of Table A12. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table 11.

Figure B18: Effects of exposure to MCMV as children on formal earnings at 23 years old



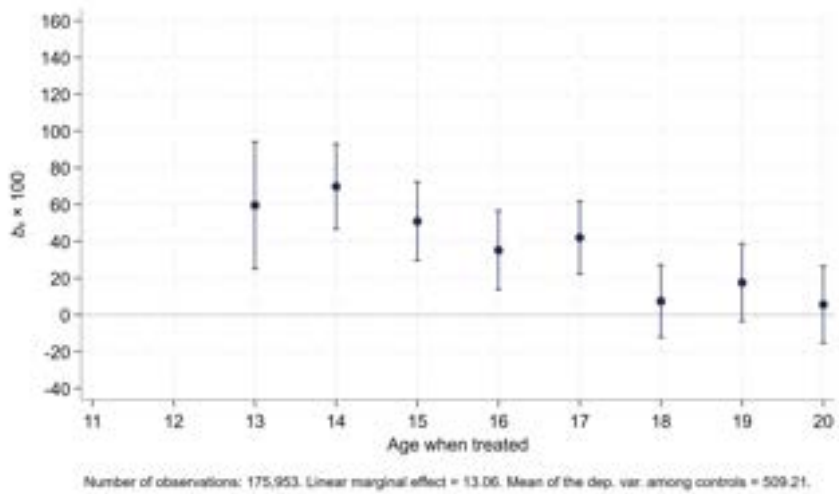
Notes: This figure plots the estimated coefficients from Equation 2 for monthly formal earnings at age 23 (in Brazilian Reais as of 2019), also reported in Column 3 of Table A13. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average monthly earnings of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table 12.

Figure B19: Effects of exposure to MCMV as children on formal employment at 24 years old



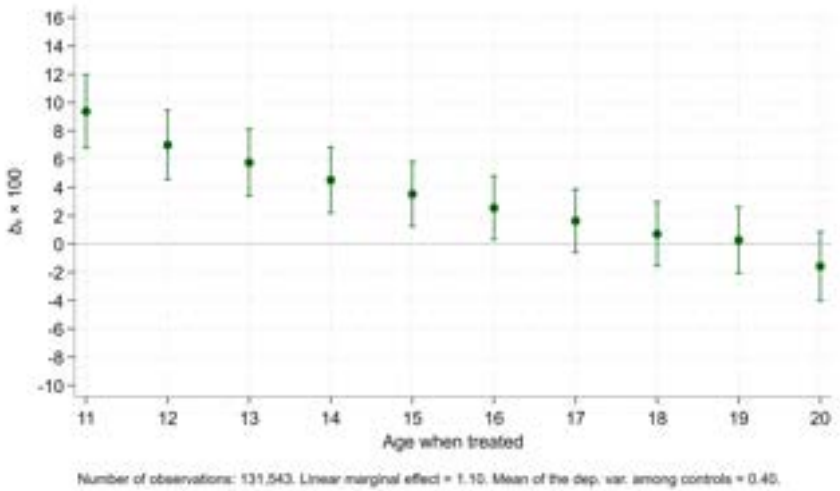
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24, also reported in Column 4 of Table A12. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Table 11.

Figure B20: Effects of exposure to MCMV as children on formal earnings at 24 years old



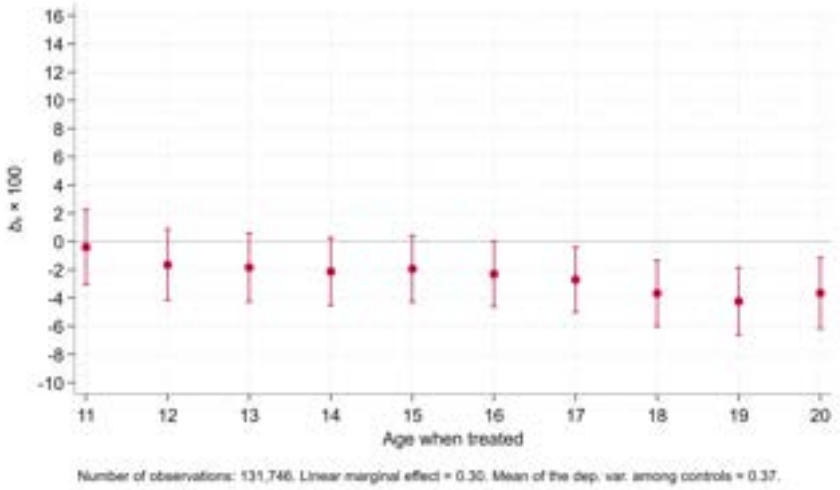
Notes: This figure plots the estimated coefficients from Equation 2 for monthly formal earnings at age 24 (in Brazilian Reais as of 2019), also reported in Column 4 of Table A13. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average monthly earnings of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Table 12.

Figure B21: Effects of exposure to MCMV as children on formal employment at 21 years old: homes close to the city center



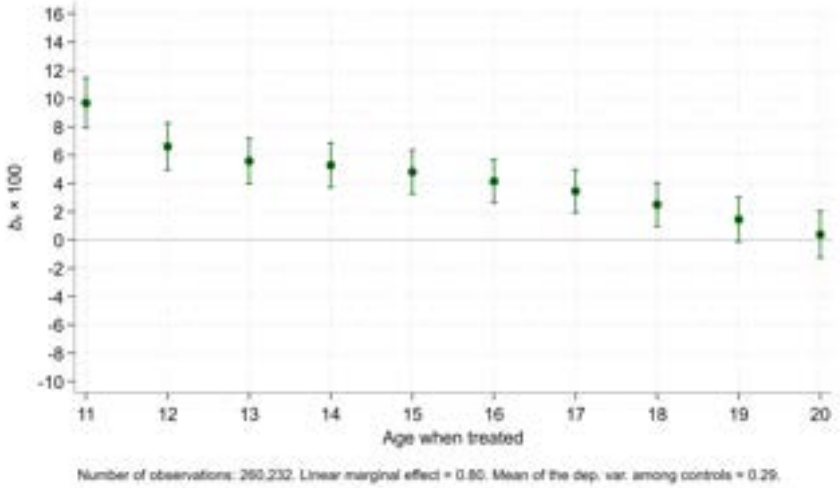
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21 using the subsample of children whose families moved to subsidized housing complexes located close to the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "close" are those located within the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table A23

Figure B22: Effects of exposure to MCMV as children on formal employment at 21 years old: homes far from the city center



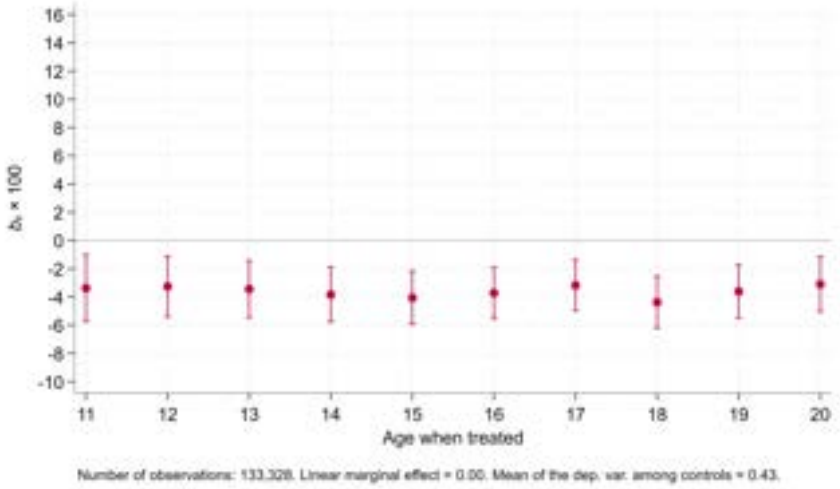
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21 using the subsample of children whose families moved to subsidized housing complexes located far from the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "far" are those located beyond the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table A23

Figure B23: Effects of exposure to MCMV as children on formal employment at 21 years old: families that receive cash transfer



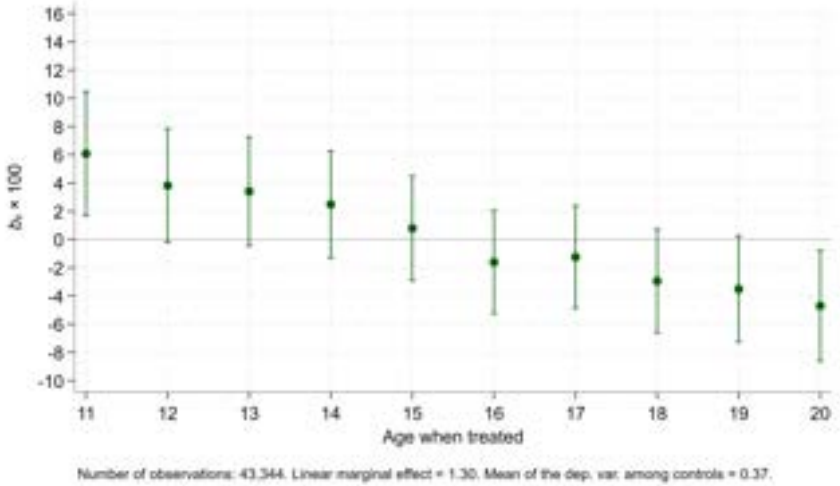
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21 using a subsample of children whose families received *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Table A23.

Figure B24: Effects of exposure to MCMV as children on formal employment at 21 years old: families that do not receive cash transfer



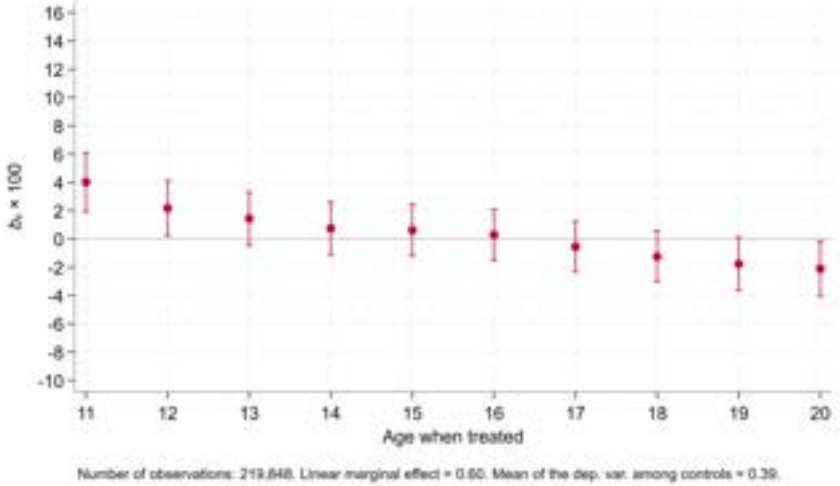
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21 using a subsample of children whose families did not receive *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Table A23.

Figure B25: Effects of exposure to MCMV as children on formal employment at 21 years old: families that move close to high-quality schools



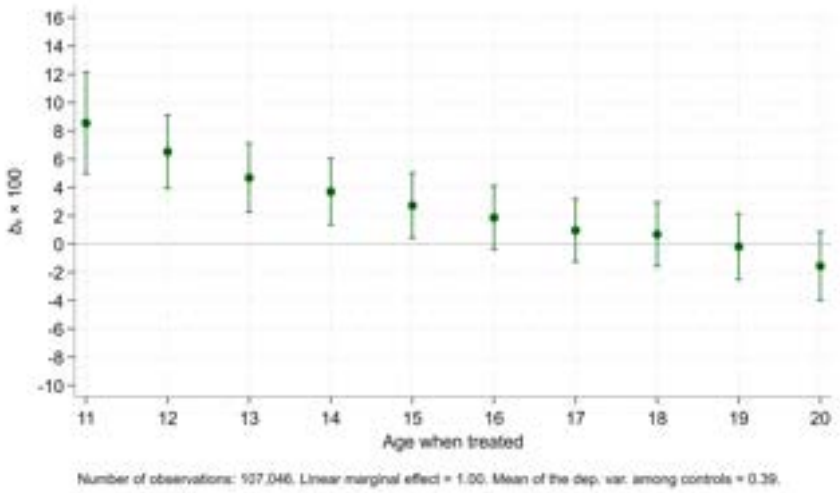
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21 using the subsample of children whose families moved to subsidized housing complexes located near high-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. High-quality schools are defined as those with Ideb scores above the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 6 of Table A23.

Figure B26: Effects of exposure to MCMV as children on formal employment at 21 years old: families that move close to low-quality schools



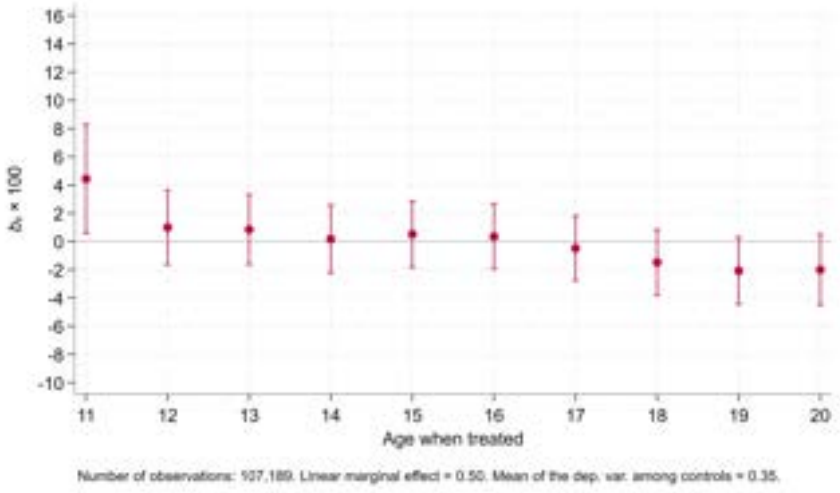
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 21 using the subsample of children whose families moved to subsidized housing complexes located near low-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. Low-quality schools are defined as those with Ideb scores below the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 7 of Table A23.

Figure B27: Effects of exposure to MCMV as children on formal employment at 22 years old: homes close to the city center



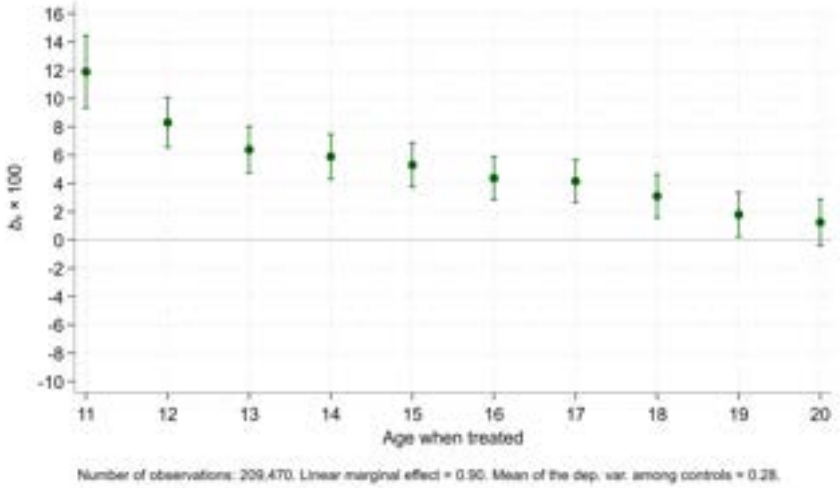
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22 using the subsample of children whose families moved to subsidized housing complexes located close to the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "close" are those located within the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table A24

Figure B28: Effects of exposure to MCMV as children on formal employment at 22 years old: homes far from the city center



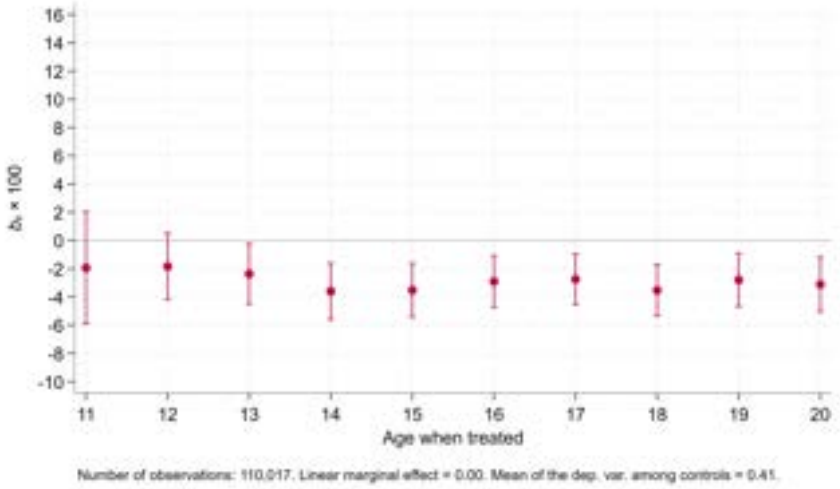
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22 using the subsample of children whose families moved to subsidized housing complexes located far from the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "far" are those located beyond the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table A24

Figure B29: Effects of exposure to MCMV as children on formal employment at 22 years old: families that receive cash transfer



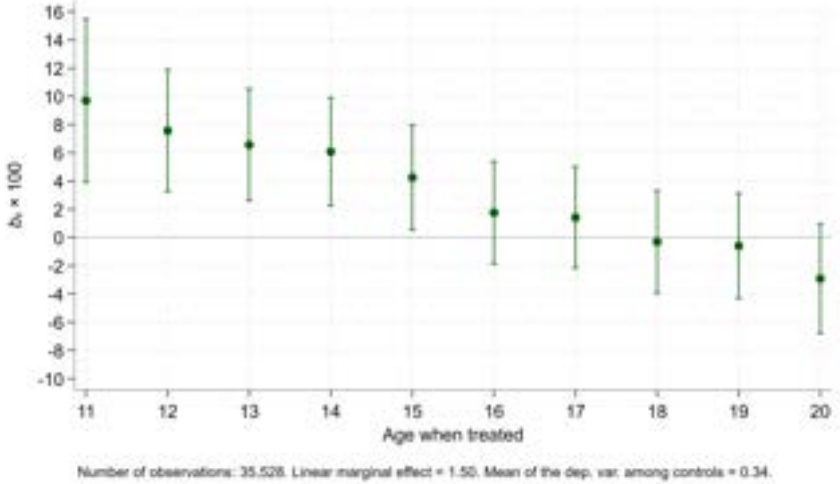
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22 using a subsample of children whose families received *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Appendix Table A24.

Figure B30: Effects of exposure to MCMV as children on formal employment at 22 years old: families that do not receive cash transfer



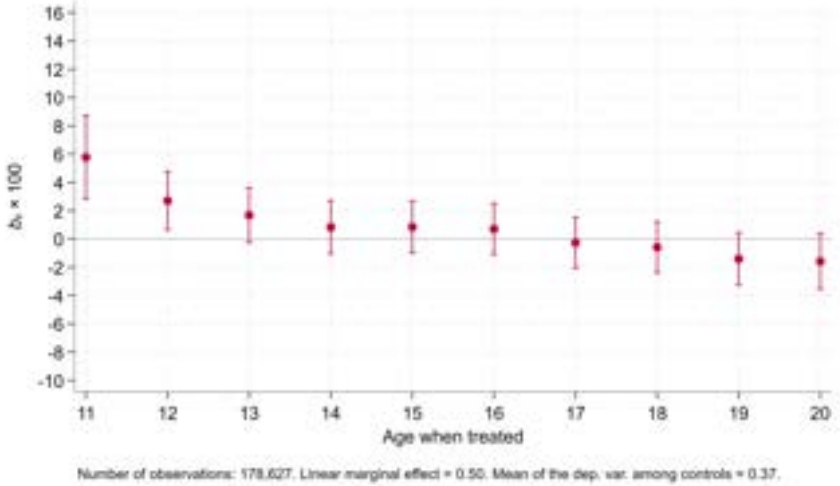
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22 using a subsample of children whose families did not receive *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Appendix Table A24.

Figure B31: Effects of exposure to MCMV as children on formal employment at 22 years old: families that move close to high-quality schools



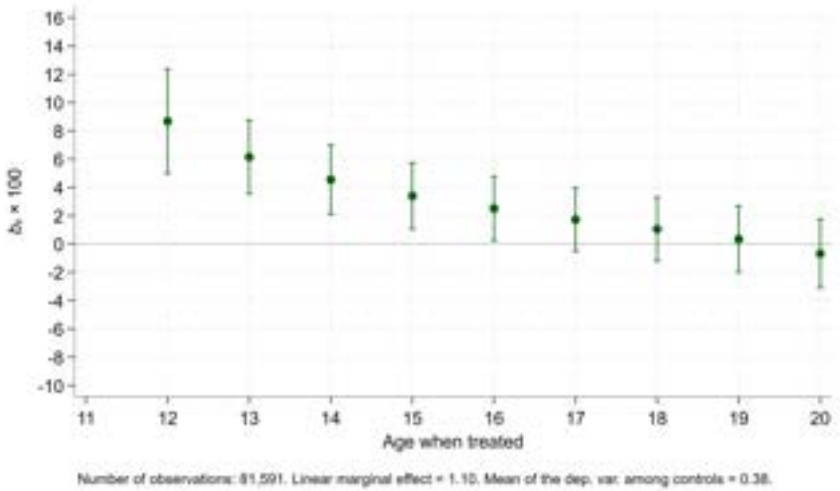
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22 using the subsample of children whose families moved to subsidized housing complexes located near high-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. High-quality schools are defined as those with Ideb scores above the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 6 of Table A24.

Figure B32: Effects of exposure to MCMV as children on formal employment at 22 years old: families that move close to low-quality schools



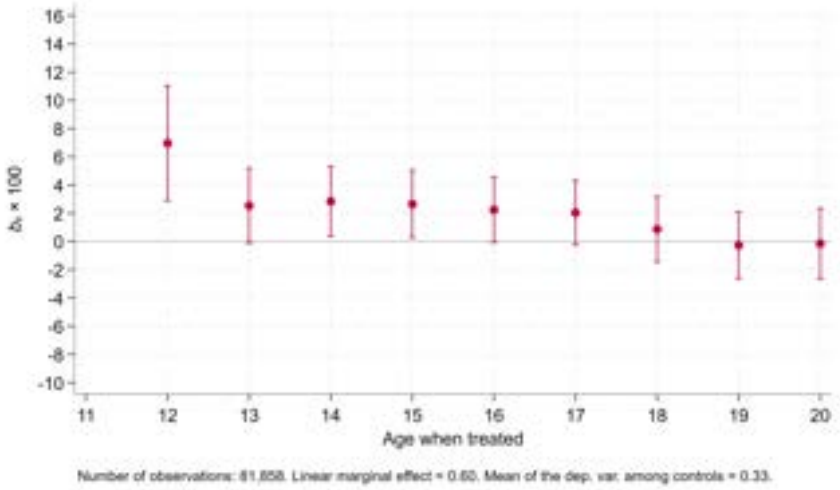
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 22 using the subsample of children whose families moved to subsidized housing complexes located near low-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. Low-quality schools are defined as those with Ideb scores below the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 7 of Table A24.

Figure B33: Effects of exposure to MCMV as children on formal employment at 23 years old: homes close to the city center



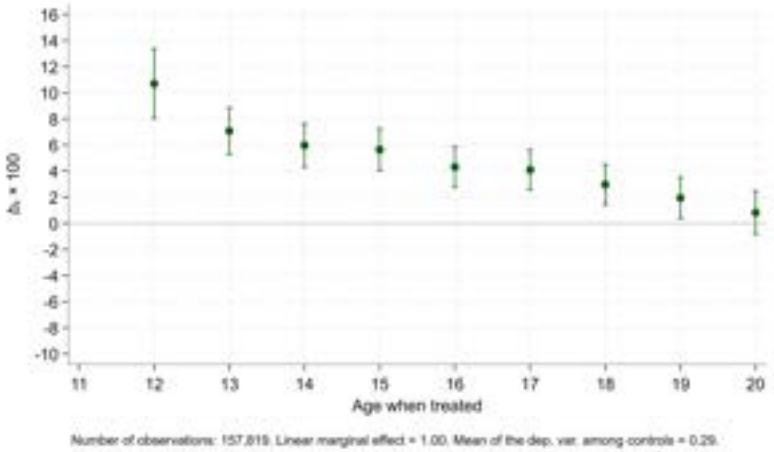
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23 using the subsample of children whose families moved to subsidized housing complexes located close to the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "close" are those located within the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table A25

Figure B34: Effects of exposure to MCMV as children on formal employment at 23 years old: homes far from the city center



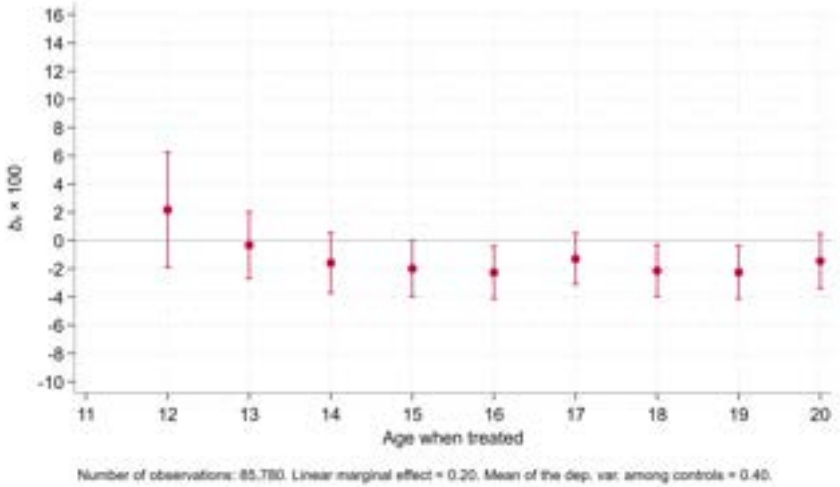
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23 using the subsample of children whose families moved to subsidized housing complexes located far from the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "far" are those located beyond the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table A25

Figure B35: Effects of exposure to MCMV as children on formal employment at 23 years old: families that receive cash transfer



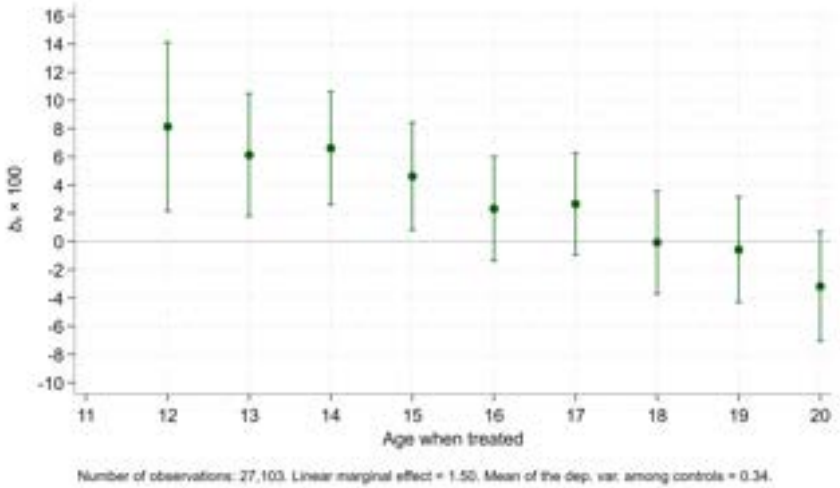
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23 using a subsample of children whose families received *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Appendix Table A25.

Figure B36: Effects of exposure to MCMV as children on formal employment at 23 years old: families that do not receive cash transfer



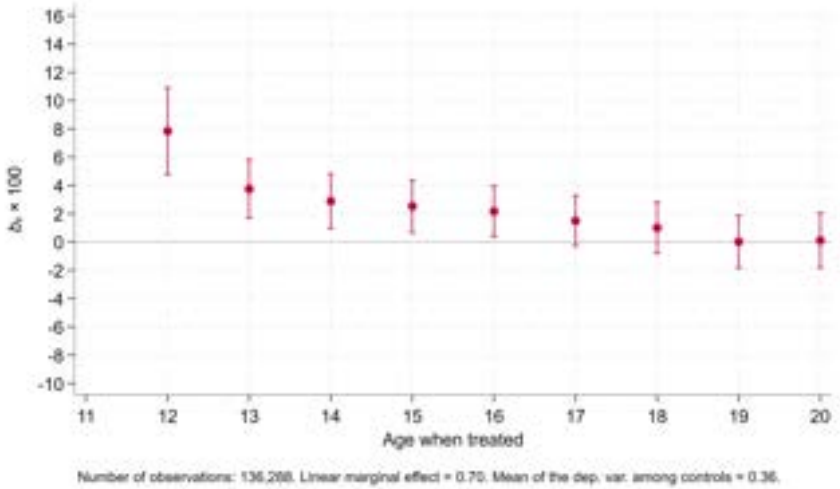
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23 using a subsample of children whose families did not receive *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Appendix Table A25.

Figure B37: Effects of exposure to MCMV as children on formal employment at 23 years old: families that move close to high-quality schools



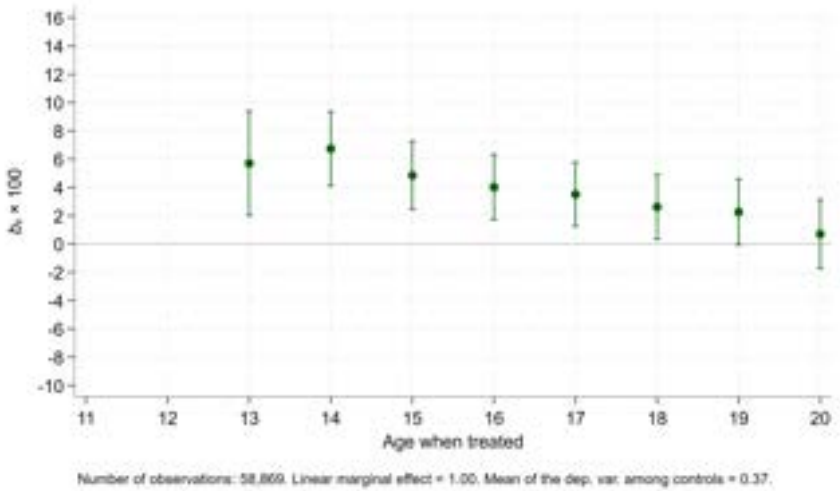
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23 using the subsample of children whose families moved to subsidized housing complexes located near high-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. High-quality schools are defined as those with Ideb scores above the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 6 of Table A25.

Figure B38: Effects of exposure to MCMV as children on formal employment at 23 years old: families that move close to low-quality schools



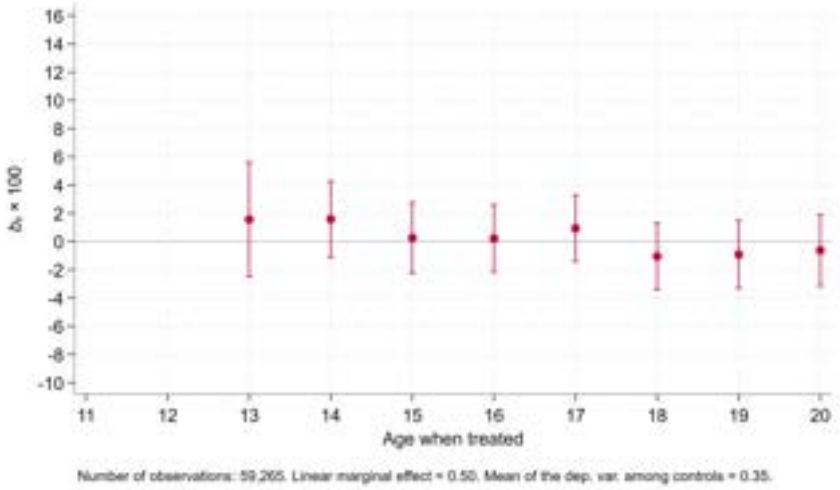
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 23 using the subsample of children whose families moved to subsidized housing complexes located near low-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. Low-quality schools are defined as those with Ideb scores below the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 7 of Table A25.

Figure B39: Effects of exposure to MCMV as children on formal employment at 24 years old: homes close to the city center



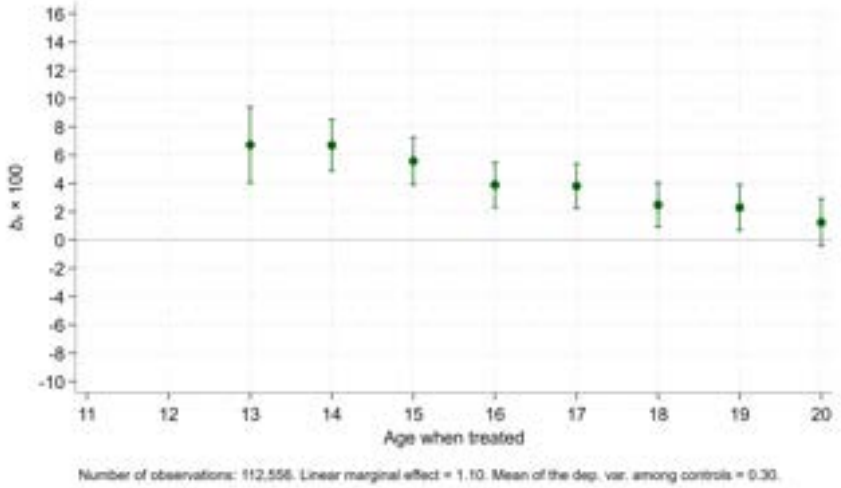
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24 using the subsample of children whose families moved to subsidized housing complexes located close to the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "close" are those located within the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table A26

Figure B40: Effects of exposure to MCMV as children on formal employment at 24 years old: homes far from the city center



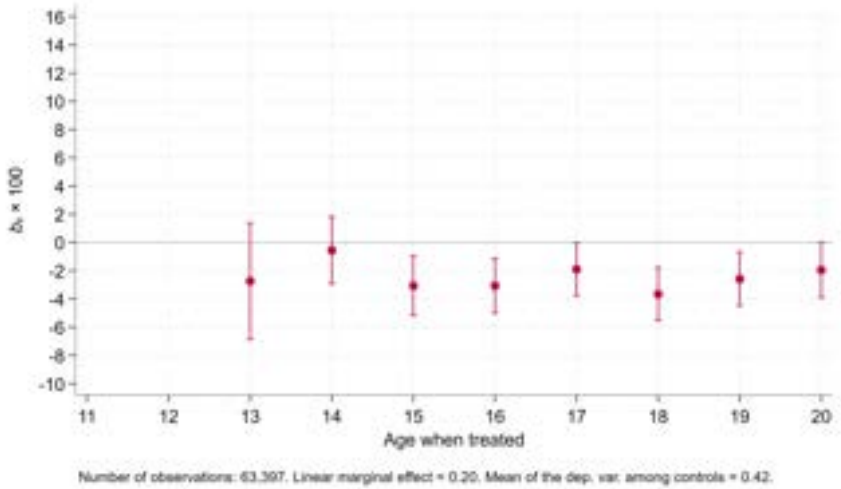
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24 using the subsample of children whose families moved to subsidized housing complexes located far from the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "far" are those located beyond the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table A26

Figure B41: Effects of exposure to MCMV as children on formal employment at 24 years old: families that receive cash transfer



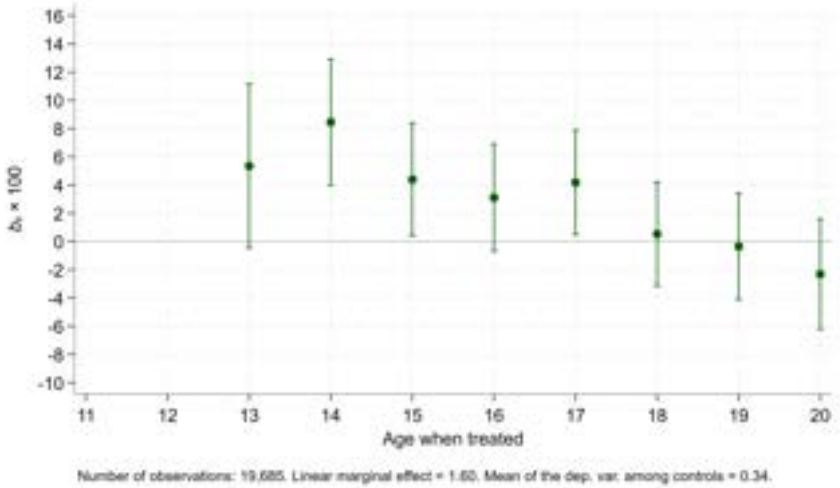
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24 using a subsample of children whose families received *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Appendix Table A26.

Figure B42: Effects of exposure to MCMV as children on formal employment at 24 years old: families that do not receive cash transfer



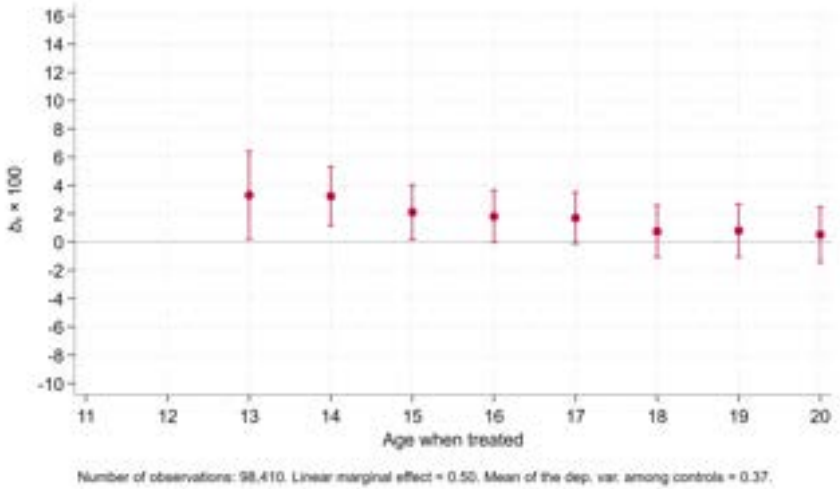
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24 using a subsample of children whose families did not receive *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Appendix Table A26.

Figure B43: Effects of exposure to MCMV as children on formal employment at 24 years old: families that move close to high-quality schools



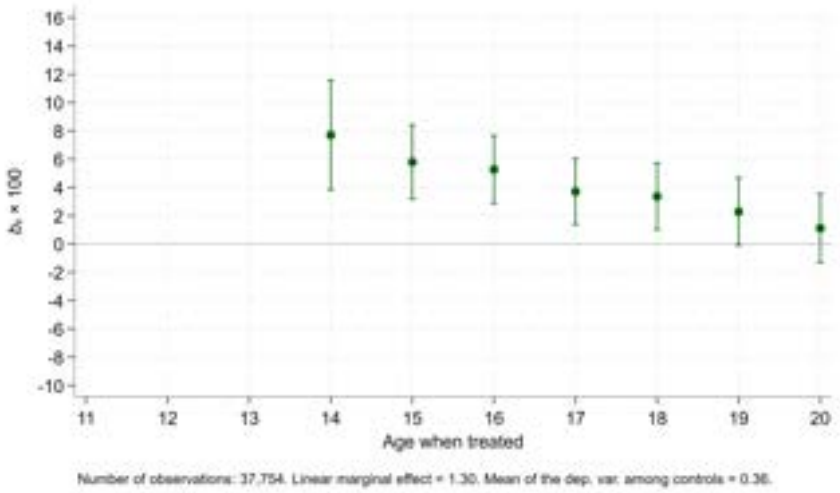
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24 using the subsample of children whose families moved to subsidized housing complexes located near high-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. High-quality schools are defined as those with Ideb scores above the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 6 of Table A26.

Figure B44: Effects of exposure to MCMV as children on formal employment at 24 years old: families that move close to low-quality schools



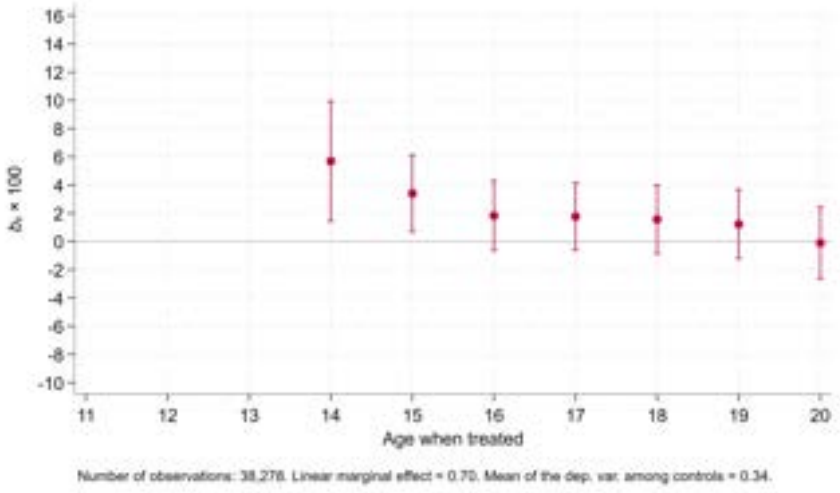
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 24 using the subsample of children whose families moved to subsidized housing complexes located near low-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. Low-quality schools are defined as those with Ideb scores below the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 7 of Table A26.

Figure B45: Effects of exposure to MCMV as children on formal employment at 25 years old: homes close to the city center



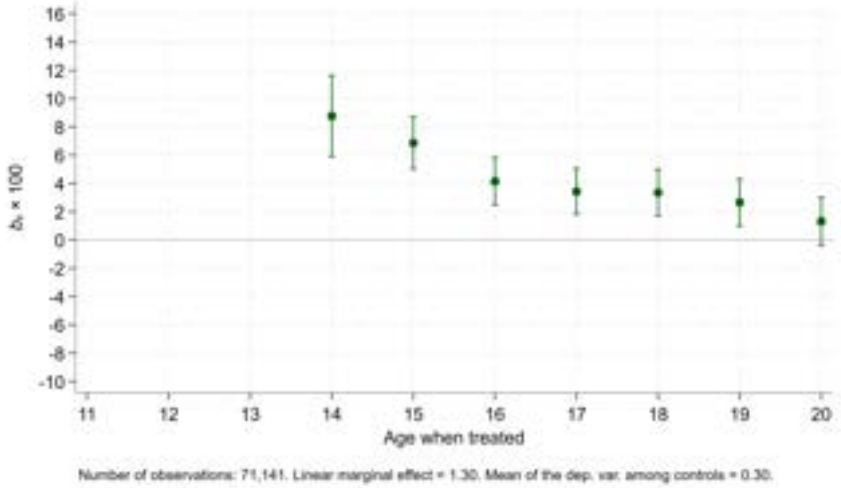
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 25 using the subsample of children whose families moved to subsidized housing complexes located close to the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "close" are those located within the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 2 of Table 14

Figure B46: Effects of exposure to MCMV as children on formal employment at 25 years old: homes far from the city center



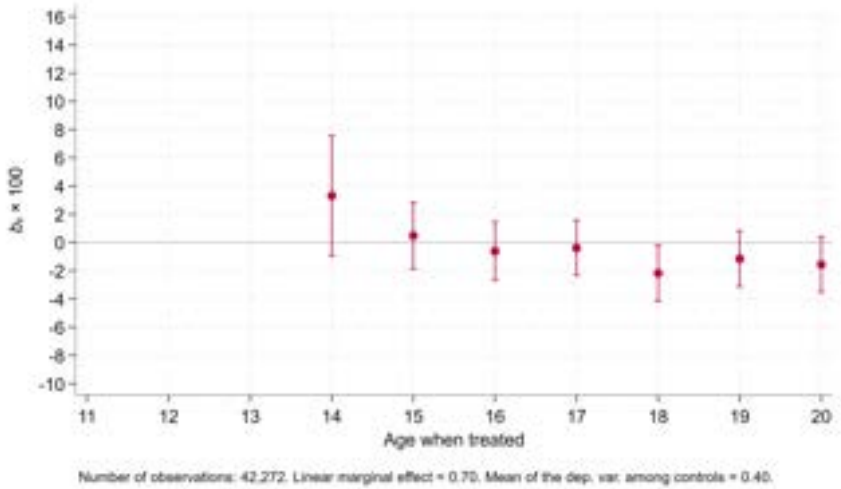
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 25 using the subsample of children whose families moved to subsidized housing complexes located far from the city center. Distance is measured using the GPS coordinates of each subsidized housing complex relative to the city hall, expressed as a share of the distance between the city hall and the furthest 2010 Census tract within the same city. Complexes classified as "far" are those located beyond the median of this distance distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to or far from the city center do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 3 of Table 14

Figure B47: Effects of exposure to MCMV as children on formal employment at 25 years old: families that receive cash transfer



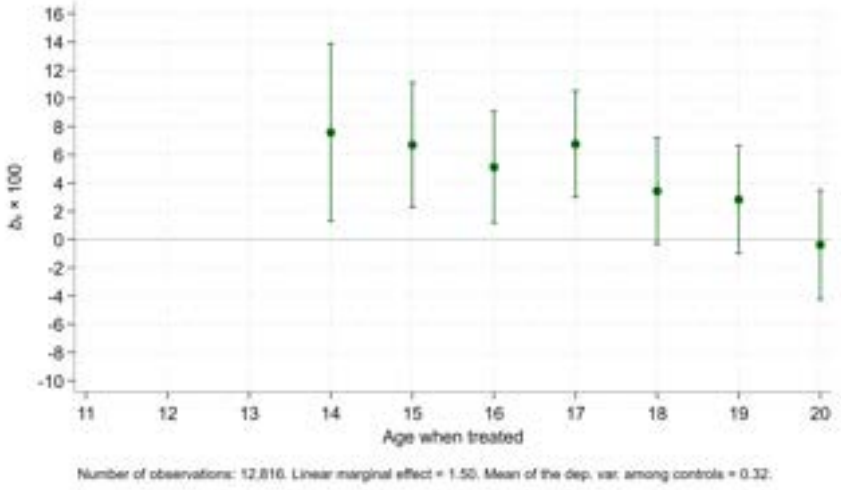
Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 25 using a subsample of children whose families received *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 4 of Table 14.

Figure B48: Effects of exposure to MCMV as children on formal employment at 25 years old: families that do not receive cash transfer



Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 25 using a subsample of children whose families did not receive *Bolsa Família* as reported in the Unified Registry in the year closest to the year before the family signed their MCMV mortgage. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 5 of Table 14.

Figure B49: Effects of exposure to MCMV as children on formal employment at 25 years old: families that move close to high-quality schools



Notes: This figure plots the estimated coefficients from Equation 2 for formal employment at age 25 using the subsample of children whose families moved to subsidized housing complexes located near high-quality schools. School quality is measured by the Ideb index of standardized test scores, using the most recent value available before families received their MCMV housing. High-quality schools are defined as those with Ideb scores above the 75th percentile of the distribution. Each point represents the estimated effect of receiving MCMV housing at a given age relative to those treated at age 21, multiplied by 100. Vertical bars represent 95 percent confidence intervals based on robust standard errors. GPS coordinates are available for approximately 70 percent of the subsidized housing complexes in our data, so the subsamples of children who move to complexes close to high- and low-quality schools do not add up to the full sample of MCMV children. At the bottom of the figure, we report the number of observations, the average formal employment rate of the omitted group (those treated at age 21), and the marginal effect of one additional year of exposure to MCMV, based on the estimate reported in Column 6 of Table 14.

C Theoretical framework: subsidized housing take-up and labor supply

Our empirical sample only includes families that accepted their offer for a MCMV unit. In this section, we outline a simple theoretical framework to rationalizes both who selects into the subsidized housing and how labor supply responds to receiving a new housing unit among takers. Our simple model allows us to make predictions about what drives the take-up of subsidized housing and what would be the expected effects of the MCMV program on labor market outcomes of adults under assumptions supported by our data.

Setup Consider a model in which individual agents have a time endowment of $\bar{T}$ and choose how much to buy of housing h, a non-housing consumption good c, and leisure ℓ. Wages are denoted by w and the price of the non-housing good is p_c. The market price of housing is p_h^m, and the price of government-subsidized housing is p_h^s. We assume that individual preferences are represented by a utility function $U(h, c, l)$ that is twice differentiable, strictly increasing in h, c, and l, and strictly concave in (c, l) for each h.

Baseline problem At market prices, the agent chooses housing h, non-housing consumption c, and leisure ℓ:

$$\max_{h,c,\ell} \; U(h, c, \ell) \quad \text{s.t.} \quad w\overline{T} = w\ell + p_h^m h + p_c c$$

Let (h_m, c_m, ℓ_m) solve this problem and define the non-housing budget $B_m \equiv w\overline{T} - p_h^m h_m$. The first-order condition is

$$\frac{U_\ell(h_m, c_m, \ell_m)}{U_c(h_m, c_m, \ell_m)} = \frac{w}{p_c}.$$

subsidized housing offer The program fixes housing at $\bar{h}$ and charges the subsidized price p_h^s. The household then chooses (c, ℓ):

$$\max_{c,\ell} \; U(\bar{h}, c, \ell) \quad \text{s.t.} \quad w\overline{T} = w\ell + p_h^s \bar{h} + p_c c.$$

Equivalently, $p_c c + w\ell = B_s$ with $B_s \equiv w\overline{T} - p_h^s h_s$, and the first-order condition is

$$\frac{U_\ell(\bar{h}, c_s, \ell_s)}{U_c(\bar{h}, c_s, \ell_s)} = \frac{w}{p_c}.$$

Housing expenses assumption By design of the MCMV program, MCMV beneficiaries own their home and therefore do not pay rent. Instead, they start paying mortgage installments

that should not exceed 10% of their monthly income. Figure 2 indeed confirms that this is the case in our data. We estimate that MCMV beneficiaries, on average, switch from paying, on average, 16% of their monthly expenses 6% on housing. In our theoretical framework, we there assume that the fraction of their budget share spent on housing *decreases*, or

$$B_s - B_m = p_h^m h_m - p_h^s \bar{h} > 0.$$

subsidized housing take-up Let $R \geq 0$ denote relocation/administrative costs. The indirect utilities of market and subsidized housing are

$$V_m \equiv \max_{h,c,\ell} \left\{ U(h,c,\ell) : p_c c + w\ell = w\bar{T} - p_h^m h \right\}$$

$$V_s \equiv \max_{c,\ell} \left\{ U(h_s,c,\ell) : p_c c + w\ell = B_s \right\}$$

and individual takes up subsidized housing iff

$$V_s \geq V_m - R.$$

The agent is more likely to accept their subsidized housing offer

- the bigger is the reduction in housing expenses, measured by $B_s - B_m = p_h^m h_m - p_h^s \bar{h}$, which frees up resources for leisure and consumption
- the closer the amount or quality of housing provided by the subsidized housing program ($\bar{h}$) is to the choice the individual would have made under housing prices p_h^s
- the lower the relocation/administrative cost R.

Effects on labor supply When the agent takes up subsidized housing, the amount of housing is fixed at $\bar{h}$, and now they need to choose the optimal non-housing consumption and leisure. The prices for c and ℓ are unchanged, so the slope of the non-housing budget remains the same at w/p_c. We assume that housing expenses decrease, so the non-housing budget line shifts outward. Assuming leisure and non-housing consumption are normal goods and imperfect substitutes, the individual agent now chooses both higher c and ℓ, so labor supply falls.