Free Homes and Youth Crime

PRELIMINARY - PLEASE DO NOT CITE[*]

Jorge Caputo[†] Valentina Duque[‡] Michael Gilraine[§] Fabio Sanchez[¶]

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Abstract

We investigate the impact of a program that granted housing units to disadvantaged families in Colombia on youth crime. To do so, we leverage the fact that housing receipt for some families was determined via lottery. We then link the housing lottery data to administrative records on prosecutions for youths aged 9-18 at the time of lottery. Ten years after the lottery, we find that youths from families that won the housing unit were less likely to have committed a violent crime or a drug offence.

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[*]All errors are our own.

[†]University of Los Andes. E-mail: je.caputo10@uniandes.edu.co

[‡]American University and NBER. E-mail: vduque@american.edu

[§]Simon Fraser University and NBER. E-mail: gilraine@sfu.edu

[¶]University of Los Andes. E-mail: fasanche@uniandes.edu.co

1 Introduction

Crime is a paramount issue that undermines quality of life, depresses property values, destabilizes neighborhoods, and consumes vast public resources. Yet little is known about the precise impacts of a large wealth shock in the form of housing on youth criminal activity. Clarifying this link is important, as sudden changes in family resources can reshape peer networks, neighborhood ties, and social expectations that strongly influence youth behavior.

This paper examines the impact of Colombia's *Programa de Vivienda Gratuita* ("Free Housing Program") on youth crime. Through this program, 100,000 highly disadvantaged families were granted housing units at no cost, with the sole restriction that the units could not be sold or rented for ten years. Each unit, valued at roughly US$30,000 – equivalent to about ten years of average recipient wages – constituted a substantial wealth transfer. Beyond the wealth effect, families also relocated to more desirable neighborhoods, as the housing developments were deliberately built near city centers, economic opportunities, and public services. Because demand far exceeded supply, 30 percent of the units were allocated by lottery, allowing us to identify the causal effect of winning a unit on children's criminal outcomes.

We find that winning access to a free housing unit significantly reduced youth involvement in crime. In particular, lottery winners committed 0.2 percentage points fewer violent crimes and 0.1 percentage points fewer drug-related offenses relative to non-winners. While these magnitudes may appear modest, they represent meaningful declines given the low baseline prevalence of such crimes and highlight the potential of housing interventions to alter the social environments that shape youth behavior. We find limited heterogeneity based on age of winning the lottery, which stands in contrast to prior research that finds larger gains for younger children (Chetty et al., 2016).

There are several potential mechanisms through which winning a house in a desirable neighborhood reduces youth crime. First, the transfer increases the opportunity cost of crime. In a previous study, we showed that children whose family won the house were more likely to graduate from high school, perform better in school, and go to tertiary education (Camacho

et al., 2022). Second, deterrence. The new neighborhoods offer better public services, including police presence and access to justice. Third, moving to better neighborhoods (and schools) can improve the composition of peers, which, in turn, could reduce the incentives to engage in criminal activities (Glaeser et al., 1996).

Our project contributes to several strands of the academic literature, most directly to research on the effects of public housing on crime. Chyn (2018) exploits demolition-induced departures from public housing and shows that children who left public housing were less likely to be arrested as adults. Similarly, Kling et al. (2005) study the Moving to Opportunity experiment, in which housing vouchers were randomly assigned, and find that relocating families from public housing to lower-poverty neighborhoods reduced arrests among both male and female youth. Our paper provides the first evidence from the random assignment of public housing on crime. While prior work has examined random assignment to public housing (Barnhardt et al., 2017; Van Dijk, 2019; Andersen et al., 2023), to our knowledge no economics research has specifically analyzed its effects on criminal outcomes.

Second, our project links to a large literature on the impact of neighbourhoods (Bobonis and Finan, 2009; Chetty et al., 2016; Chetty and Hendren, 2018; Deutscher, 2020; Laliberté, 2021; Nakamura et al., 2022). Specifically focusing on neighbourhoods' effects on criminal activity, Ludwig et al. (2001) use data from a randomized housing-mobility experiment in Baltimore and find that relocating families from high- to low-poverty neighbourhoods reduces violent criminal behavior by teens. Similarly, Dustmann et al. (2023) use random assignment of refugees to different municipalities in Denmark and show that youths assigned to high-crime neighbourhoods are more likely to commit crimes. In contrast, Oreopoulos (2003) finds no effect for youths being assigned to high-crime neighbourhoods in Toronto on earnings and social assistance receipt in adulthood. Kling et al. (2005) find that the Moving to Opportunity experiment in the U.S., which gave vouchers to disadvantaged families to move to better neighborhoods, found that males and females were less likely to be arrested for a violent crime in the first two years after randomization, but over time, males were then more likely to be arrested for

property crimes. The authors attribute this to the fact that young males learn about their comparative advantage in committing property crimes in their new neighborhoods.

2 Background

We study the Programa Vivienda Gratuita or "Free Housing" program which was introduced by President Juan Manuel Santos in April 2012. The program built and delivered 100,000 homes to the disadvantaged for free over four years (2012-2015). The only stipulation was that public housing recipients could not sell or sublet their unit for ten years. These 100,000 housing units were constructed throughout 295 public housing developments across 191 municipalities, and usually were two-bedroom apartments in cities or single-story row houses in towns. The size varied widely from dozens of units to full-sized neighbourhoods or apartment complexes with over 4,000 units.

The units themselves tended to be high-quality and located in desirable areas to avoid endemic problems in Colombia's previous public housing programs whereby subsidized housing was located on peripheral land or in regions with high flood risks (Gilbert, 2014). As a result, take-up of public housing assignment was near-universal (Camacho et al., 2022) and because units could neither be sold or rented almost all households lived in their units up until at least 2022 (when units could legally be sold). Three disadvantaged groups of individuals were eligible for the program: (i) victims of natural disasters, (ii) internally displaced persons (usually due to armed conflict), and (iii) the 'extreme poor.' As each project neared completion, housing units were assigned according to priority tier until all units were occupied. (See Departamento Nacional de Planeación (2014) for technical program details.) Crucial to our proposed study, if there were more applicants than units within a priority tier, a lottery would be held to determine the recipients. Approximately 70% of recipients were directly assigned to housing, while 30% were assigned via lottery.

The lotteries to determine public housing recipients were run by the Department of Social

Prosperity and to ensure fairness beneficiaries were invited to attend the draw alongside several public officials. The draws were then conducted at a suitable site (e.g., a soccer stadium). To determine public housing recipients, potential recipients came up one-at-a-time to pull a number from a physical urn; this number would then determine whether they "won" or "lost" the lottery. If a recipient did not physically attend either lottery, one of the public officials drew from the urn at the end of the draw for them.

3 Data

We restrict our sample to individuals who were between 9 and 18 years old at the time of the lottery. The upper bound ensures that individuals over 18, who are less likely to move with their families into the new housing units, are excluded. The lower bound is chosen so that individuals are old enough to plausibly face criminal prosecution. While prosecutions have no formal minimum age and criminal records can, in principle, exist for younger children, very few young minors (e.g., under 14) are actually prosecuted. Given that our data extend to 2024 and the lotteries were conducted between 2012 and 2015, the youngest individuals in our sample will be 18 years old by the end of our observation period, allowing sufficient time for any criminal record to appear.

Public Housing Application Data: The key data underlying our proposed project are the universe of public housing applications under Colombia's "Free Housing" program. These data were obtained from the Departamento Nacional de Planeación, the technical advisory body to the President of Colombia. The data contain public housing applications made by the household head. We then linked the household head to other family members in their household using Colombia's Census of the Poor (known as the "SISBEN") using name and national identification number. We match 94% of household heads to the Census data.

SISBEN: The SISBEN or the "Census of the Poor" is a census of Colombia's low-income population which captures the wealth of individuals for means tested social programs. The data

are collected door-to-door by surveyors and include rich demographic and socioeconomic information of all household members including sex, age, date of birth, education, marital status, occupation, income, household size, dwelling characteristics, and indicators of household wealth (e.g., has a fridge). The 2010 wave of the SISBEN covers roughly 28.5 million people, corresponding to 62 percent of the population. Since the SISBEN specifically targets poor households, however, the coverage rate for public housing recipients – our sample of interest – is near-universal.

Criminal Records: We match all youths that meet our age restrictions to prosecution records. Prosecution records in Colombia are publicly-available online for 20 out of 33 judicial districts in Colombia (which cover the most populous regions).[1] Our data collection procedure thereby follows that of Arteaga (2023) and involves taking each youth in our data and entering their national identification number into every judicial website.

Years 1-2: Data Collection (Month to Month) Year 1 will begin with data collection. Specifically we will work on obtaining criminal and prosecution records for each individual in our sample. These data are available onlin

4 Empirical Strategy

Because some applicants were assigned housing through lotteries, we estimate the causal effect of receiving a unit on youth crime by comparing winners and losers within the same lottery. To do so, we include lottery fixed effects, which exploit the fact that each lottery was uniquely identified by project, eligibility group, and priority tier.

Applicants in municipalities with multiple projects could apply more than once, increasing their chance of winning. To address this, we follow Ketel et al. (2016) and classify applicants based on the outcome of their first application. Applicants who lost their first lottery but later reapplied and won are still considered losers, although such cases are rare.

[1]For example, criminal records for Bogota, the largest judicial district in Colombia, are available at https://procesos.ramajudicial.gov.co/jepms/bogotajepms/conectar.asp.

We estimate:

$$crime_i = \alpha + \beta D_i + \delta X_i + LC_i + \epsilon_i, , \tag{1}$$

where $crime_i$ is an indicator that child i has committed a crime, D_i equals one if the family won its first lottery, X_i includes pre-lottery covariates, and LC_i are lottery fixed effects. The parameter of interest, β, measures the effect of winning housing on crime. Given high compliance with first lottery assignments, β can be interpreted as the causal effect of receiving a unit.

5 Results

Table 1 reports our results. Our analysis finds no statistically significant effect of winning the housing lottery on overall crime rates, suggesting that access to housing alone does not broadly alter individuals' likelihood of engaging in criminal activity. However, disaggregating the results by crime category reveals meaningful heterogeneity. Specifically, we observe that lottery winners are 0.2 percentage points less likely to commit violent crimes and 0.1 percentage points less likely to be involved in drug-related offenses, both of which are statistically significant reductions. Importantly, the decline in violent crimes is particularly meaningful, as the vast majority of the societal costs associated with crime are driven by violent offenses (Chalfin and McCrary, 2018).

Conversely, we find a statistically significant 0.2 percentage point increase in public security crimes among lottery winners. This category, however, is heavily concentrated—75% of these offenses are classified as "conspiracy," which typically corresponds to gang affiliation. (Illegal possession of a weapon constitutes the vast majority of the remaining crimes in this category.) While this increase may appear counterintuitive, it could reflect greater law enforcement surveillance in certain areas or shifts in individuals' social networks following relocation.

Figure 1 reveals relatively little heterogeneity in treatment effects by age at the time of the lottery. Figure 2 further breaks this down across the four crime categories. Across most

crime categories, the effects of winning the housing lottery appear fairly consistent regardless of whether individuals were younger or older when they entered. The notable exception is drug-related offenses, where the reductions are concentrated among older youths, particularly those aged 17 and 18 at the time of the lottery. This suggests that the protective effects of improved housing conditions on drug-related behavior may be more pronounced for individuals who are closer to adulthood and potentially more exposed to high-risk environments. For other types of crime, however, the similar impacts across age groups indicate that housing stability exerts a broadly uniform influence.

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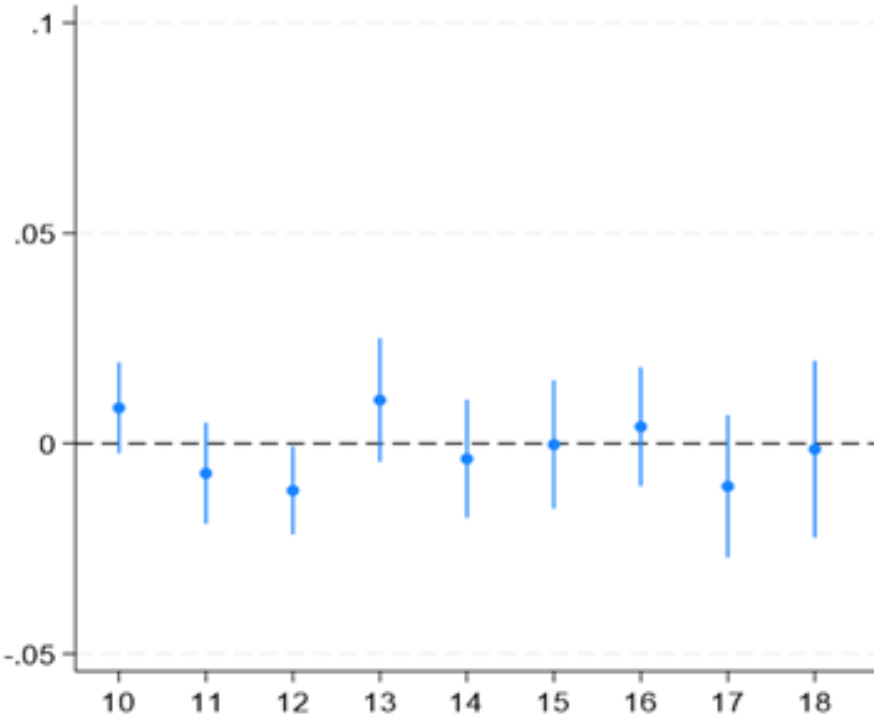
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Table 1: Impact of Winning Lottery on Crime Outcomes

Committed:	Any Crime (1)	Drug Crime (2)	Violent Crime (3)	Property Crime (4)	Public Security Crime (5)
Won Lottery (%)	-0.18	-0.11*	-0.19**	0.03	0.19**
	(0.21)	(0.08)	(0.07)	(0.14)	(0.10)
Control Mean (%)	2.2	0.4	0.4	0.8	0.4
Observations	37,916	37,916	37,916	37,916	37,916

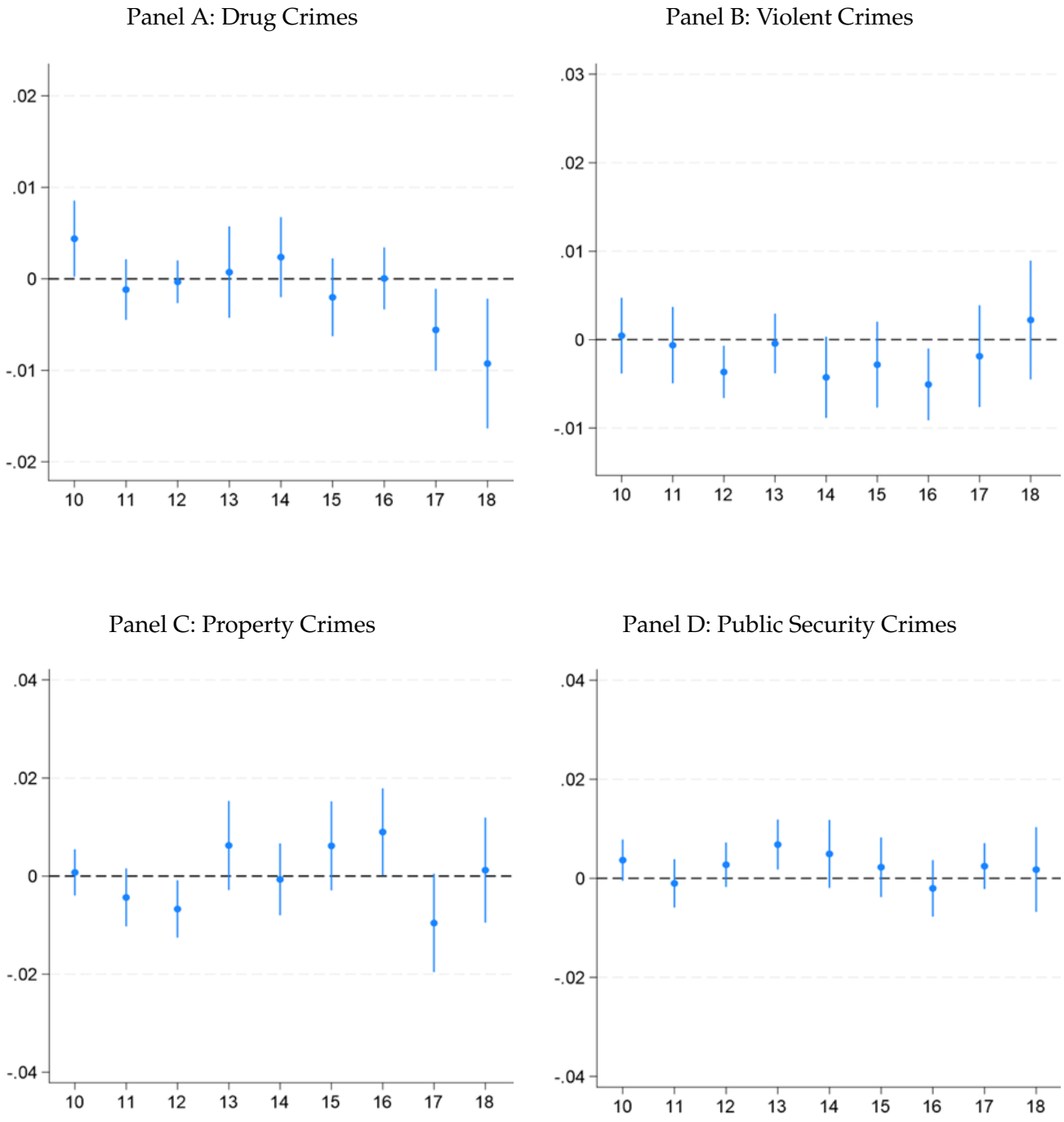
Note: This table reports the effect of winning a housing lottery on the probability one commits a crime. Sample includes boys aged 9-18 at the time of the housing lottery. Housing lotteries were run from 2012-2015 and our crime data cover up to 2024. All regressions include lottery fixed effects to ensure that only individuals in the same lottery are being compared. We also include controls for a child's gender, age at first lottery, whether a family lived in urban/rural area, household size, along with characteristics of the household head including age at birth, marital status, employment status and education (all measured pre-lottery in 2009-10). Standard errors are clustered at the family level. ***,** and * denote significance at the 1%, 5% and 10% levels, respectively.

Figure 1: Heterogeneity by Age at Lottery



Notes: The figure plots heterogeneity of the program's impact on crime by the child's age at lottery. To do so, we split our sample by the given demographic and estimate our main regression given by equation (1). Lottery fixed effects and controls for a child's gender, age at first lottery, whether a family lived in urban/rural area, household size, along with characteristics of the household head including age at birth, marital status, employment status and education (all measured pre-lottery in 2009-10) are included. Whiskers indicate 95% confidence intervals with standard errors clustered at the family level.

Figure 2: Location of Housing Projects Compared to Location of Main Analysis Sample



Notes: The figure plots heterogeneity of the program's impact on crime by the child's age at lottery for four categories of crime: drug crimes, violent crimes, property crimes, and public security crimes. To do so, we split our sample by the given demographic and estimate our main regression given by equation (1). Lottery fixed effects and controls for a child's gender, age at first lottery, whether a family lived in urban/rural area, household size, along with characteristics of the household head including age at birth, marital status, employment status and education (all measured pre-lottery in 2009-10) are included. Whiskers indicate 95% confidence intervals with standard errors clustered at the family level.