

Non-State Social Structures and Social Capital: Evidence on Crime and Conflict

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Abstract

Across the world, weak state capacity has led to the formation of nonstate security arrangements. But do these nonstate social structures, particularly bottom-up ones, impact long-term individual development trajectories and behavior? This paper explores the peasant rounds formed between 1976 and 1982 in Peru. Using variation in exposure to rounds at different ages and districts of birth, I find that childhood exposure to rounds decreases future criminal activity in 14% and conflict-related crimes in 32%. It prevents the expansion of armed nonstate groups, and the violence associated with them. I use a significant weather shock to explore the potential mechanisms. The effects persist even when individuals migrate to high crime areas or districts with lower state capacity, indicating influences beyond economic shocks, safety, or state capacity. Peasant rounds seem to foster lasting social capital, reinforcing both community bonds and broader social networks. I find persistent effects, including spillover and intergenerational effects in migrant-hosting districts. These findings highlight the power of bottom-up groups to strengthen social bonds and complement state capacity and bring insights into the understanding of institutional resilience and the lasting role of early life experiences in shaping individual trajectories.

1 Introduction

The provision of security and justice is a fundamental role of the state, yet many developing countries struggle to fulfill this function effectively. As a result, around the world, the weak state capacity has led to the emergence of non-state security arrangements. The different non-state social structures formed can significantly influence local development trajectories. The organizational structure of these non-state groups, whether bottom-up or top-down, has substantial implications for their outcomes beyond security provision [[Sabatier 1986](#); [Alesina and Ferrara 2002](#); [Ferrara 2003](#); [Easterly 2008](#); [Schubiger and Sulmont 2021](#)]. Yet, we know little about the long-term effects, particularly how exposure during critical developmental periods shapes individual and

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community outcomes, of bottom-up non-state actors and through what mechanisms these effects persist across time and space. This paper examines how bottom-up security institutions affect long-term development by studying Peru's Peasant Rounds (*Rondas Campesinas*), community-led patrols that emerged in the 1970s.

In Latin America, which has consistently reported the highest global homicide rates since the 1970s, this institutional void has led to the emergence of alternative structures, both state-sponsored and non-state actors. Consequently, a substantial proportion of the population in these regions grows up under the influence of such parallel institutions. Given that childhood environments critically shape the accumulation of human and social capital [Portes 1998; Reisch and Guyet 2007; Martin and Lee 2015; Moscona et al. 2018], understanding the long-term developmental impacts of exposure to these non-state actors is important.

In Peru, state and non-state groups emerged and consolidated during the 1970s, with the *rondas campesinas*, or peasant rounds, forming as a bottom-up structure in northern rural areas lacking established social order. These emerge from collective action, featuring decentralized decision-making and community-driven self-organization. While serving as alternative or complementary mechanisms to formal state institutions, bottom-up structures aim to address specific community needs more effectively. However, collective action can be challenging, potentially leading to internal disputes, power struggles, and co-optation by other institutions. Even when social control and order are coordinated among community members rather than imposed, it can result in repressive conditions, reduced individual liberties, and the normalization of harmful attitudes.

Could childhood exposure to a bottom-up and non-state social structure shape long-term development? To examine how variation in exposure to these bottom-up social structures affects long-run development, I estimate the impact of childhood exposure to peasant rounds on adult incarceration and conflict-related behavior. Identification comes from variation in peasant round presence across birth cohorts and across districts of birth. I exploit the fact that peasant rounds emerged rapidly in 1976 amidst an economic crisis and rising crime, initially to combat livestock theft and ensure community security. These autonomous, community-led organizations quickly proliferated throughout northern Peru in the late 1970s and early 1980s, providing an ideal setting to study the lasting impacts of exposure to alternative structures during critical developmental periods.

Leveraging administrative and survey data, I employ a difference-in-differences strategy to estimate the causal effects of childhood exposure to peasant rounds on adult criminality and support for insurgent groups. Identification relies on the plausibly exogenous timing and location of peasant round formation, exploiting variation in the age at exposure across birth cohorts and variation across districts of birth. To improve identification, I built a matched control group of districts that were statistically similar to treated districts before the emergence of peasant rounds.

For the analysis, I assembled a novel dataset linking historical records of peasant round formation to individual-level outcomes from various sources, including penitentiary census data, armed conflict records, and public opinion surveys. This district-year of birth panel enabled me

to track cohorts to determine whether they were exposed to peasant rounds during key developmental windows. Furthermore, the main identification assumption of the cross-sectional analysis is that the timing and location of the formation of a peasant round are not correlated with omitted variables that may also affect long-term criminal behavior and engagement in conflict. I take three approaches to bolster the credibility of this assumption. First, I began by reviewing historical sources on the emergence of peasant rounds, finding no evidence contradicting this identification assumption. Second, I use a data-driven matching procedure to construct a control group of districts statistically indistinguishable from treated districts prior to the formation of peasant round. Third, I present empirical tests confirming the plausibility of the identification assumption, particularly after controlling for key fixed effects and exploiting only cross-district variation within Peruvian regions.

The paper's findings indicate that exposure to peasant rounds formed between 1976 and 1982, particularly at ages 10 and under, reduces the likelihood of engaging in criminal activities and participating in conflict-related violence later in life. I find a reduction of 0.6 percentage points (pp.) which represents a 14% decrease in overall criminal activity. I also find an overall 32% decrease in terrorism-related crimes. These effects are concentrated among property and drug-related crimes, while no significant impacts are found for extremely violent offenses like homicide. The deterrent effect on criminality persists even for individuals who migrated to more crime-prone areas and without peasant rounds as adults, suggesting a lasting influence of childhood exposure on adult behavior. It also leads to a significant reduction in recidivism and the likelihood of juvenile incarceration. Furthermore, childhood exposure to this social structure seems to reduce the likelihood of engagement with insurgency and terrorism later in life. The results also indicate a reduced incidence of conflict-related fatalities and extrajudicial disappearances among individuals with such childhood exposure.

Beyond the substantial reductions in criminality and conflict-related engagement, I explore the potential mechanisms through which these effects operate. First, I examine whether effects persist after a large negative economic shock (El Niño), finding that impacts remain strong even when individuals migrate to high-crime urban areas, suggesting benefits beyond mere economic improvement or social control. Second, I explore the public service expansion or state capacity and find no evidence that increased state capacity drives the results. After exploring several potential mechanisms, I find evidence that the effects seem to be primarily driven by the accumulation of social capital during key developmental age groups. I explore the ways in which social capital could lead to less future criminality, and find that the development and formation of pro-social norms and behavior during childhood that could be behind these effects. Exposure to peasant rounds at young ages is associated with higher levels of bonding (within-group) and bridging (between-group) social capital in adulthood, measured through community engagement, interpersonal trust, out-group perceptions, views on violence, and democratic attitudes in adulthood. The results highlight the role of early childhood experiences in shaping long-term social preferences and behavioral patterns. These findings align with previous evidence that indicates that

violent crimes, such as robberies and homicides, are associated with low levels of social capital [Kawachi et al. 1999; Lederman et al. 2002; Buonanno et al. 2009; Moore and Recker 2016].

To further explore this mechanism, I explore the migration patterns caused by the exogenous weather shock. The results show that the prosocial behavior and norms' effects persist through multiple dimensions. The impact on social capital spans both bonding (within-community) and bridging (across-community) connections, with significant positive effects on trust, civic participation, and views toward democracy, across time and space. The effects remain robust when examining migration patterns following El Niño, suggesting the portability of acquired social capital. Moreover, I find evidence of spillover effects in host districts receiving migrants from Peasant Round areas, indicating broader diffusion of prosocial norms [Moscona et al. 2018; ?]. I also find significant effects across generations on those whose parents were exposed to the peasant rounds suggesting cultural persistence.

In addition, I explore whether exposure to any form of social structure could lead to similar results. I examine childhood exposure to a top-down social structure¹, the Self-Defense Committees, formed by the Armed Forces as a counterinsurgency strategy, to provide further into how different institutional designs could shape different dimensions of social capital formation.

This paper contributes to the literature on crime, social structures, collective action, and social capital by providing causal evidence on the long-term developmental impacts of exposure to collective action during childhood. The findings complement existing research examining the determinants of criminal behavior, such as social disorganization [Rose and Clear 1998], juvenile incarceration [Aizer and Doyle 2015], social influences and family structure [Glaeser and Sacerdote 1999], income inequality [Imrohoroglu et al. 2006; Cerulli et al. 2018], public expenditure [Cerulli et al. 2018], social exclusion and poverty [Buonanno 2003], business cycle conditions [Allen 1996], parental incarceration [Mark Billings 2019], youth unemployment [Buonanno and Montolio 2008], youth depression [Anderson et al. 2015], cognitive ability interventions [Hill et al. 2011], school desegregation [Weiner et al. 2009], labor market opportunities [Chalfin and McCrary 2017; Sviatschi 2022], social sanctions [Mann et al. 2016], social contentedness [Stuart and Taylor 2021], and education [Machin et al. 2011]. Moreover, the results highlight the importance of the early life environment in shaping criminal propensities and conflict engagement later in life, contributing to the growing literature on the long-term effects of childhood conditions [Case et al. 2005; Frankenberg 2017; Metzler et al. 2017; Schiman et al. 2017; Almond et al. 2018; Rosales-Rueda 2018; Attanasio et al. 2022; Sviatschi 2022; Chan 2023; Pacheco and Wagner 2023]. Additionally, the findings contribute to the understanding of the relationship between crime and the different forms of social capital [Buonanno et al. 2009; Calamunci and Frattini 2023; Buonanno et al. 2024]. The findings shed light on the role of social capital as a key mechanism linking childhood institutional exposure to adult behavior and demonstrate the potential for bottom-up governance

¹On the contrary to bottom-up social structures, these structures are established and structured by external entities or higher authorities, rather than emerging organically from collective action within a community. These structures are characterized by their centralized nature, where decision-making processes and governance mechanisms are imposed and controlled by external forces, such as the state, government agencies, or private actors.

structures to complement formal state institutions in fragile contexts [e.g., [Coleman 1988](#); [Lin 2001](#); [Granovetter 2005](#)].

The remainder of the paper proceeds as follows. Section 2 provides background on the origins and expansion of peasant rounds in Peru and an overview of the crime and conflict landscape. Section 3 describes the data sources and variable construction. Section 4 outlines the empirical strategy and identification assumptions. Section 5 presents the main results on the effects of exposure of the peasant round on criminal behavior and conflict-related results. Section 6 explores the underlying mechanisms, focusing on the role of social capital. Section 7 concludes and discusses the implications for policy.

2 Institutional Background

In this section, I provide essential background for my analysis, beginning with an overview of the origins, expansion, and establishment of peasant rounds in northern Peru as a bottom-up social structure. I then conceptually explore how childhood exposure to these institutions might influence adult crime and conflict engagement.

My overall argument is as follows. Peasant rounds, initially formed to combat cattle rustling, could shape behavior through their emphasis on collective problem-solving, civic responsibility, and non-violent conflict resolution. These effects might be most pronounced during early developmental stages, particularly before age 12, when parental influence is strong and pro-social behaviors are forming. Children exposed to peasant rounds during these formative years might develop a stronger sense of civic responsibility and community belonging. This early exposure could influence decision-making by increasing the perceived costs of criminal activities and strengthening societal bonds. The collective problem-solving approach of peasant rounds might equip individuals with non-violent conflict resolution skills, potentially reducing their propensity for criminal behavior and involvement in violent conflicts. These childhood experiences could create enduring behavioral patterns that deter criminal activities and insurgent involvement in adulthood, even if individuals relocate to areas without peasant rounds.

The long-term impact of childhood exposure to peasant rounds might primarily occur through the formation of social capital and pro-social behavior. Engagement with cooperative structures could foster both bonding and bridging social capital, strengthening adherence to positive norms while expanding perspectives and opportunities. The emphasis on collective decision-making and community responsibility could instill pro-social norms such as trust, reciprocity, and civic engagement, potentially serving as powerful deterrents against antisocial behavior in adulthood.

2.1 The Origins of Peasant Rounds

Peru experienced significant political and economic turmoil in the 1970s and 1980s. In 1975, a military regime implemented severe austerity measures, including the elimination of price controls, defunding of social services, and criminalization of strikes [[Starn 1999](#)]. These actions led

to increased lawlessness, particularly in rural areas where cattle rustling (*abigeato*) became prevalent.² In 1976, in response to growing insecurity, the limited effectiveness of local authorities in addressing the problem, and a minimal state presence, rural communities in northern Peru initiated collective action and formed peasant rounds (*rondas campesinas*).³ Their main focus was addressing cattle rustling, which was particularly relevant given that over 80% of families in the northern highlands depended heavily on livestock [Starn 1991].

Due to the nature of *abigeato*, the peasant rounds emerged in areas highly suitable for cattle raising, primarily in northern Peru.⁴ These areas lacked established peasant, indigenous, or historical social structures. They depended on cattle rearing and seasonal activities, featured small to medium-sized land parcels, were accessible, and were well-integrated with local markets. Each round was collectively organized around an assembly where the entire community or village participated. A democratically elected steering committee exercised their authority within their territorial scope (e.g., community, village, hamlet) and coordinated with neighboring rounds in their area, district, or province as needed.

Peasant rounds adopted a restorative justice approach to address cattle rustling and robberies, particularly in situations where authorities were unavailable or unresponsive. Offenders were required to return or restore the value of what was stolen. In severe cases, the harshest penalties typically involved communal work during the day or serving as a community *rondero*⁵ on alternative days for a specific period. These rounds firmly opposed torture, disappearances, and the death penalty. While their primary strategy was to engage with authorities, they focused on victim support, offender reintegration, damage repair, and security provision when official responses were lacking. Over time, peasant rounds expanded their scope beyond security, while maintaining their independence and community-based decision-making. They began advocating for broader community needs, addressing issues such as health, education, human rights, and agriculture. For instance, they called for improvements in school infrastructure, oversight of teacher absenteeism, and maintenance of community health centers. The assemblies served as crucial platforms for conflict resolution through consensus and dialogue with the state. Importantly, while addressing community issues, peasant rounds did not aim to replace local government functions, and any direct provision of services by the community remained isolated and atypical.

The peasant rounds experienced rapid expansion in northern Peru between 1976 and 1982, extending from Cajamarca to Piura, Ancash, San Martin, La Libertad, and Lambayeque. By 1990, there were approximately 3,435 peasant rounds. More recent data shows that from 2004 to 2022, 3,092 rounds were officially registered with the National Superintendence of Public Reg-

²*Abigeato* refers to the theft of livestock, such as cattle, sheep, or horses, typically stolen from farms or grazing lands for resale or slaughter.

³The formation of the first peasant round on December 29, 1976, was reportedly catalyzed by a significant cattle theft and school break-in in the district of Chota, in the region of Cajamarca. Subsequently, peasants organized night-watches at local schools and community patrols to protect their areas, identify potential thieves, and bring them to the authorities.

⁴Northern Peru is known for having optimal conditions for cattle raising, particularly for dairy and beef production.

⁵A member of a peasant round.

istry (Sunarp), with an unofficial estimate of 6,236 active rounds across Peru based on the 2018 Municipal Registry.

In 1978, the first Northern Peasant Rounds Congress was held, where representatives discussed various aspects of the rounds. Topics included their role within the peasant movement, collaboration with local authorities, relationship with governments, the need for a legal framework, the consolidation of the *rondero* identity, and the formulation of statutes. They also set broader objectives beyond security, such as ensuring quality education and health, upholding human rights, enhancing access to justice, addressing agrarian issues (e.g., new agricultural techniques, community involvement in cattle management, and tackling weather challenges), and promoting fair treatment of peasants [Ramirez 1987, 2001]. The importance of these goals is reflected in the frequent use of the term “rights” in their Annual Congress Reports from 1978 to 1982, occurring 216 times.

2.1.1 Expansion of Peasant Rounds

The peasants were actively working towards their own expansion from the beginning. In 1978, shortly after the first round emerged, established rounds formed a committee to facilitate the creation and consolidation of new rounds, ensuring the preservation of their bottom-up nature during expansion. Two additional factors facilitated the expansion of peasant rounds. First, market integration and kinship networks played a crucial role. Weekend markets (*ferias*) allowed farmers to both sell products and share information about the rounds. This market infrastructure complemented the Andean concept of reciprocity (*Ayni*), which was particularly strong within kinship networks.⁶ Together, they facilitated efficient dissemination of information about the peasants rounds. Second, support from respected local peasant figures, particularly local lieutenant governors⁷, was important. Although their official power was limited⁸, their endorsement in areas where they were well-known helped disseminate information and lend credibility to the initiative.

Household support for peasant rounds primarily stemmed from their effectiveness in protecting family economic activities and resources. The rounds’ independence from political and administrative figures bolstered their credibility, especially given the state’s ineffectiveness in providing safety, justice, and accountability.⁹ Qualitative evidence suggests that peasant rounds led to the

⁶The concept of reciprocity, known as *Ayni* in the Andean Economic System, predates colonial times and remains significant in Andean culture today. This practice involves a non-monetary exchange of goods and services, which can be either symmetrical or asymmetrical depending on the benefits received by each party. More than just an economic transaction, *Ayni* was considered a social relationship. Although the concept has evolved since colonial times, it continues to play an important role in Andean society.

⁷Appointed by the subprefect. This administrative figure no longer exists in Peru.

⁸These figures typically helped to organize meetings on communal issues such as trail maintenance and ditch cleaning.

⁹The organized electorate represented by the peasant rounds could have led to politicization, potentially affecting attention and investments to these communities. In their early years, left-wing parties saw them as potential sources of support but were unsuccessful in capturing or influencing their formation. As a result, the northern peasant rounds operated independently of formal political party structures, prioritizing local community needs over national party

emergence of a new collective identity and enhanced sense of citizenship among participants and the entire community [Starn 1991, 1993; Degregori et al. 1996].¹⁰ This sense of ownership was reflected in cultural expressions, such as songs and celebrations commemorating the founding of local peasant rounds. In some communities, these celebrations became more important than traditional religious festivals, demonstrating the rounds' integration into the local socioeconomic fabric.

The legal recognition and definition of peasant rounds evolved over time. Initially recognized in 1986 under Law 24571, their functions and scope were not clearly defined. The 1993 Constitution granted them constitutional status in Article 149, which included a scope of community jurisdiction, though functions remained ambiguous. A more comprehensive framework emerged in 2003 with the introduction of the Law of Rural Rounds (Law 27908), which encouraged nationwide registration of rounds.

2.2 Criminality, Pro-Social Behavior, and Peasant Rounds

In this section, I present a conceptual framework to understand how exposure to peasant rounds during childhood may influence long-term behavioral outcomes, particularly regarding criminality and pro-social behavior. I explore the mechanisms through which the peasant rounds might shape individual development and discuss why their effects are likely most pronounced during early childhood.

2.2.1 Peasant Rounds and Criminality

Peasant rounds, initially formed to combat cattle rustling, focus on collective problem-solving, civic responsibility, and non-violent conflict resolution. As documented by Starn [1991], Starn [1993], and Degregori et al. [1996], these institutions foster a strong sense of community and promote active participation in activities beyond security provision. They encourage property protection and mutual respect for livestock, potentially leading to a broader appreciation for others' resources, crucial elements for each family's economic stability and well-being. Consequently, the collective nature of decision-making and problem-solving within peasant round communities could equip individuals with negotiation, mediation, and peaceful dispute resolution skills, potentially reducing the likelihood of resorting to criminal or violent means to address grievances or achieve goals. These values and norms are significant as they could increase the perceived cost of engaging in criminal activities.

Peasant rounds may significantly influence criminal behavior through various channels. Individual decisions to commit crimes are often shaped by social connectedness. Peasant rounds

alignments, which was crucial to their identity and legitimacy [Gitlitz and Rojas 1983, 1985].

¹⁰Starn [1991, 1993] and Degregori et al. [1996] conducted several interviews with peasant round participants throughout the 1980s and early 1990s. Most of the interviewees reported an increased sense of belonging. One participant stated that they *"learned to hold their heads high and become citizens"*, while another stated that they *"we no longer have to take off our hats and bow our heads before every authority."*

could influence criminal behavior by enforcing coexistence norms and enhancing the chances of identifying criminals, thereby encouraging parents to be more vigilant and engaged in their children's activities. However, this effect might not persist if an individual relocates to an area with high crime rates or large criminal opportunities. This suggests that while the social control mechanisms provided by peasant rounds can influence criminal behavior, they may not fully account for their potential overall impact on criminal behavior.

Another potential way in which peasant rounds could shape adult crime engagement is by influencing beliefs regarding antisocial behavior. Key elements of peasant rounds include the importance of community engagement, active participation, and the pursuit of recognition from local authorities. These elements are crucial in building internalized and normalized norms that persist with each individual, applying universally and enhancing cross-type connectedness. This internalization of norms could influence crime decisions even when residing in areas without peasant rounds, suggesting that the effect extends beyond mere social control to a deeper shaping of individual values and beliefs. The durability of these internalized norms becomes particularly significant when individuals relocate. While relocation can alter one's norms and beliefs, especially as social connections weaken over time, the norms instilled by peasant rounds may prove more resilient. Unlike cognitive skills, which can adapt to new job markets, behaviors and norms shaped by exposure to peasant rounds may have a more enduring impact.

2.2.2 Childhood and Criminality

The impact of peasant rounds on adult crime and conflict engagement is likely most pronounced during childhood, particularly before age 10 or 11. This critical period is when children are most receptive to the formation of lasting social norms, values, and behaviors that could shape future behavior (e.g., Eisenberg [1982], Calkins and Keane [2009], Eisenberg et al. [2015], Bašić et al. [2020], Abeler et al. [2024]). The age-crime curve theory suggests criminal behavior typically peaks during late adolescence and steadily declines thereafter [Hirschi and Gottfredson 1983]. Childhood exposure to peasant rounds may potentially alter this trajectory by shaping individual preferences and decision-making processes during these formative years, effectively "flattening" the age-crime curve. This early instillation of strong community values and civic responsibility could reduce the likelihood of criminal behavior, even during the typically high-risk late adolescent years and early adulthood.

In Peru, the transition from primary to secondary education, around age 10-11, marks a significant change in the social environments of children. As children spend more time away from family influence and become more susceptible to peer pressure, early exposure to peasant rounds could be crucial. The strong foundation of community values and civic responsibility developed during the primary school years could serve as a buffer against negative influences, potentially reducing future criminal or conflict-related activities later in life. ¹¹

¹¹This analysis assumes that the children's household environments do not perpetuate antisocial norms or attitudes encouraging such behavior. Research on the impact of having incarcerated parents during childhood yields mixed re-

While exposure during teenage and adult years, when crime engagement typically peaks, could have some impact, evidence suggests interventions to shape antisocial behavior and noncognitive skills are most effective during childhood. Adult antisocial behavior often stems from earlier experiences, making childhood the key period for prevention and intervention. Programs such as cognitive behavioral therapy, social skills training, and the IGNITE program have been shown to successfully change attitudes and reduce recidivism in high-risk adults involved in crime and violence (e.g., [Blattman et al. \[2017\]](#), [Blattman et al. \[2023\]](#), [Alsan et al. \[2024\]](#)). However, most evidence highlights the importance of childhood in the development of antisocial behavior and overall non-cognitive skills which later affect adult behavior (e.g., [Cunha et al. \[2010\]](#), [Rosales-Rueda \[2018\]](#), [Sviatschi \[2022\]](#), [Pacheco and Wagner \[2023\]](#)).

In conclusion, the timing of peasant round exposure, coinciding with critical developmental stages and preceding major educational transitions, explains why their effects on crime and conflict engagement could be particularly pronounced during childhood. This aligns with current research on social norm formation and community influence on long-term behavior.

2.2.3 Prosocial Behavior and Peasant Rounds

Evidence suggests that social capital first arises and then decreases with age [[Glaeser et al. 2002](#); [Chetty et al. 2022](#)]. This pattern is often attributed to forming pro-social behavior, norms, and accumulating social capital during childhood. Exposure to positive social influences and community cohesiveness during the formative years can shape individual preferences and decision-making, potentially deterring criminal tendencies and supporting non-violent responses [[Sampson and Laub 1993](#)].

Social capital refers to the networks, relationships, and norms that enable cooperation and mutual benefit among individuals and groups [[Coleman 1988](#); [Putnam 2000](#)]. It takes various forms, including social networks, collective action, and the cultivation and integration of values and norms. While social networks have long been the primary focus of social capital, their influence could potentially extend far beyond immediate connections. The impact of social networks lies in their ability to shape values and norms that persist even when individuals are no longer active within those networks. These norms and values are the ones actively encouraging the engagement with new social networks which is crucial for development.

Research highlights the importance of childhood experiences in shaping human capital, social capital, and criminal behavior (e.g., [Hoynes et al. \[2016\]](#), [Rosales-Rueda \[2018\]](#), [Sviatschi \[2022\]](#), [Barr et al. \[2022\]](#)). Exposure to a social structure and institutions that enhance cohesion and reinforce social norms can therefore affect pro-social behavior and decision-making by increasing social capital and the opportunity cost of antisocial behavior. I argue that the effects associated with exposure to peasant rounds are more pronounced during childhood years.

sults. Some studies indicate a significantly negative impact on children's future development (e.g., [Dobbie et al. \[2019\]](#)), while others find no effect or even positive outcomes (e.g., [Bhuller et al. \[2018\]](#), [Norris et al. \[2021\]](#)). Additionally, evidence suggests that child maltreatment can have long-lasting effects on future criminal behavior (e.g., [Currie and Tekin \[2012\]](#)).

Two potential reasons could drive this result. First, research consistently highlights the crucial role of early childhood in shaping pro-social preferences and cohesion. Evidence indicates that the foundation for altruism, fairness, and other pro-social behaviors is laid before the age of 12 (e.g., [Harbaugh et al. \[2002\]](#) [Fehr et al. \[2008\]](#), [Almas et al. \[2011\]](#), [Bauer et al. \[2014\]](#)). [Bauer et al. \[2014\]](#) found that children become significantly less selfish, less spiteful, and more altruistic during the primary school years (7-12 years), suggesting a critical period for developing pro-social norms. During this critical developmental period, social structures based on collective action and community engagement, such as peasant rounds, could play a crucial role in building social capital and encouraging positive social interaction. These structures could reinforce pro-social behavior and discourage the development of criminal tendencies by promoting shared norms, values, and cooperation. Peasant rounds could provide children with early experiences of civic engagement and responsibility, fostering a strong sense of community belonging and shared purpose. These early experiences may have lasting effects on an individual's social behavior and attitudes towards crime.

Although social capital can have negative effects, such as reinforcing exclusionary practices, fostering antisocial behavior (e.g., gangs), or limiting individual freedoms [[Portes 1998](#); [Calamunci and Frattini 2023](#)], peasant rounds may possess particular characteristics that could significantly deter antisocial behavior in adulthood among those exposed during key developmental ages. The specific norms, values, and social connections fostered by these community-led structures during childhood could be crucial in promoting long-term pro-social behavior and mitigating potential negative outcomes associated with social capital formation.

The impact of collective action can vary significantly depending on the context and whether the structure is bottom-up or top-down. Peasant rounds represent a bottom-up, community-led approach to formation and decision-making. They actively seek engagement with local authorities, to bring them information about their needs and requests and active response, aiming to bridge the gap between citizens and public services, thereby empowering individuals as rights-bearers. In addition, they coordinate continuously with other nearby communities, which fosters a strong sense of belonging and enhances the importance of connecting with others. This approach could not only strengthen the community but also promote respect and the benefits of interacting with the State and other communities. In contrast, top-down social structures, where an external actor (e.g., state, non-state, or private entities) leads the formation and makes the decisions, even when it could still enhance cohesiveness, they might fail to build the same level of deep engagement and sense of trust in others. This distinction is important as social communities—defined by children's interactions during their upbringing—are key units for effecting change [[Chetty et al. 2024](#)]. The bottom-up nature of peasant rounds could therefore be particularly effective in shaping long-term social outcomes by influencing these critical childhood interactions and fostering a strong sense of community from an early age.

Second, in Peru, primary education ends in grade 6, typically when children are between 10 and 11 years old. After primary school, students transition to secondary school, where they expe-

rience greater freedoms and more interactions with peers. This transition marks a significant shift in the social environment of students, especially in rural areas. Approximately 84% of students in these areas walk to school, with journeys ranging from 30 minutes to 3 hours. During this transition, children go from spending an average of 4 to 5 hours at school to 8 to 9 hours, leading to less family time and more peer influence.

The formation of social capital, a crucial factor in pro-social behavior, is influenced by household dynamics and community relations [Coleman 1988; Putnam 2000]. Early childhood experiences within the family form the basis for social capital, which then extends through larger social networks during middle childhood. The bottom-up nature of peasant rounds and the initial goal of reducing cattle rustling (*abigeato*) could influence families' attitudes towards their children. Families might become more involved with their children to prevent them from engaging in crime. Additionally, exposure to a tight-knit community and collective tasks might shape children's attitudes toward the community and property, normalizing behaviors that enhance cohesion and support pro-social attitudes.

The relationship between early exposure to community-based institutions and the development of pro-social norms has become a focal point in understanding civic behavior and crime prevention. Recent theoretical work by Gelfand et al. [2024] and Fergusson et al. [2024] has formalized the relationship between social norms, social equilibria, and their potential for societal improvement.

Exposure to community-based institutions during formative years likely fosters stronger pro-social norms, enhanced social capital, and a greater sense of civic responsibility. This early exposure shapes decision-making processes, increases the perceived costs of engaging in criminal activities, and strengthens bonds to conventional society. The collective problem-solving approach of peasant rounds, for instance, may equip individuals with non-violent conflict resolution skills, potentially reducing their propensity for criminal behavior. These childhood experiences, when internalized, create lasting behavioral patterns that can deter involvement in criminal activities and insurgent groups in adulthood. If this behavior holds even when individuals relocate to areas without peasant rounds, it could suggest a deep-rooted impact on personal values and social norms.

3 Data

This paper uses six main data sets that provide variation across districts and cohorts at different levels of aggregation for a variety of outcomes related to crime, conflict, and social capital. For the first dataset, I construct a unique dataset used to create the main treatment variable using the district and year of the formation of peasant rounds across Peru. The second data set is the incarceration data. This data allows me to explore whether individuals exposed to peasant rounds during childhood are less likely to engage in criminal activities, in insurgency, rebellion, and terrorism as adults. The conflict data allows me to explore whether those exposed to peasant rounds

during childhood exposure are less likely to be victims of violence and human rights abuses in the context of armed conflict as adults. The household and individual-level data provide information on social capital outcomes, including behavior, norms, and attitudes. These datasets enable me to explore whether childhood exposure to peasant rounds shapes antisocial behavior in adulthood. Finally, the census data is a digitized dataset used to identify the districts' characteristics before the formation of peasant rounds in 1976. This dataset allows me to characterize the districts and build a matched control group for the treatment.

3.1 Peasant Rounds Data

I create a unique dataset that compiles the formation and expansion of peasant rounds in Peru from 1976 to 1983. The dataset uses the district and year of formation as variables, compiling a district-year-level panel that tracks their emergence over time.¹² This dataset is primarily based on comprehensive qualitative research from [Starn \[1991\]](#), [Starn \[1993\]](#), and [Degregori et al. \[1996\]](#), which includes interviews and maps showing the districts where these community-led organizations emerged between 1976 and 1990. Additionally, I digitize archival records from the First Peasant Rounds Congress in 1978 and the Annual Peasant Rounds Congresses from 1980 to 1985. These records, available through the Peruvian National Archives System and Princeton University Library's "Latin American Ephemera Digitized Microfilm" collection, provide detailed information on the expansion of peasant rounds.¹³

The data compiled includes a total of 3,282 peasant rounds in 53 districts in six regions. The data includes the number of peasant rounds in each district by year. The peasant rounds data is aggregated by year and district of formation, creating a panel for each district and year to track their presence over time and space.

Figure 1 shows the identified peasant rounds distribution over the districts across in Peru from 1976 to 1982. Most rounds were concentrated in the northeastern region of the country. The district of Chota in the Cajamarca region was the birthplace of the first peasant round. This structure later spread to other northern regions, including Piura, Lambayeque, La Libertad, San Martin, and Tumbes. My analysis focuses on peasant rounds established up to 1982. The years 1983-1984 marked a pivotal period in Peru, characterized by escalating armed conflict and the state's sponsorship of self-defense committees as a counterinsurgency measure. To isolate the impact of bottom-up social structures and avoid the influence of top-down organized groups, I exclusively explore the effects of peasant rounds formed between 1976 and 1982 since these have a bottom-up nature.

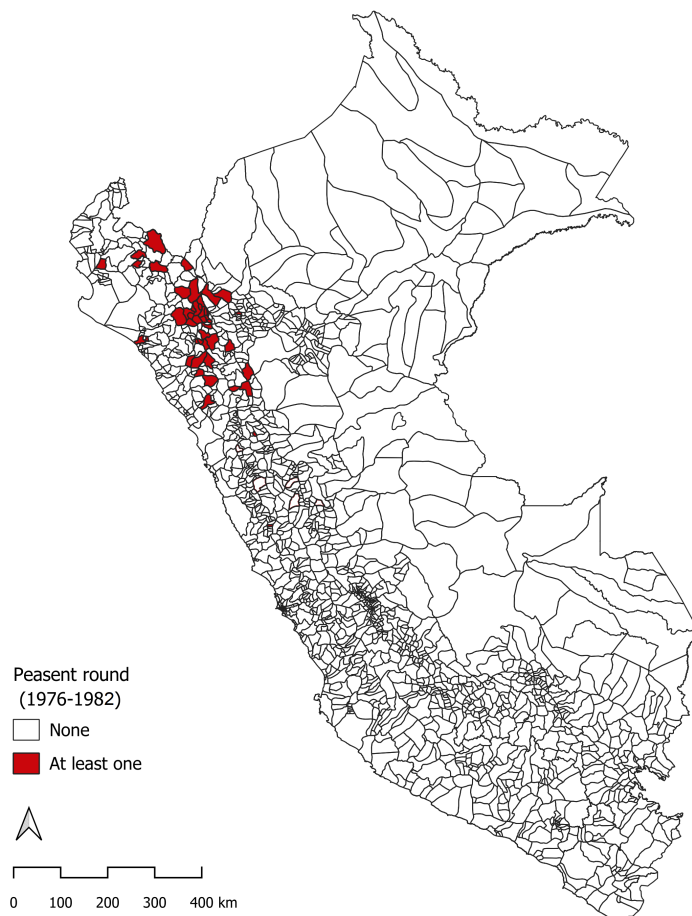
Furthermore, to rule out the possibility that the results are driven by endogenous factors that may affect the outcome of interest, I obtained georeferenced data on land suitability and climato-

¹²The number of districts in Peru by 2024 is 1,823. This number has varied over time, although the changes have been limited. As part of constructing this dataset, I track the formation of new districts and potential changes in the codes that identify each district over time to ensure the correct matching of birth districts.

¹³Princeton University Library and Princeton's Digital Repository have the collection "Latin American Ephemera Digitized Microfilm" which includes the agrarian issues in Peru collection from 1955 to 1987.

logical conditions from the FAO's Global Agroecological Zones (GAEZ), the National System of Environmental Information from the Ministry of Environment (MoE), and the Copernicus Climate Data. I develop a cattle raising suitability index using a model that integrates climate data and soil characteristics. I later use this index as an instrumental variable robustness check to examine the formation of peasant rounds.

Figure 1: Peasant Rounds 1976-1982



Note. The map shows the districts with at least one peasant round organized between 1976 and 1982. These districts are located in the regions of Cajamarca, Piura, Lambayeque, San Martín, and Tumbes. All of them are located in the north of Peru. I identified a total of 53 districts with peasant rounds.

3.2 Incarceration Data

To examine whether children exposed to peasant rounds are less likely to engage in crime as adults, I use data from the Peruvian Penitentiary Census of 2016 on the universe of individuals in prison in 2016. The data allow me to track cohorts that were and were not exposed to peasant rounds during different group ages across all districts. I exploit variation in place of birth and

date of birth to explore how childhood exposure to a bottom-up social structure affects criminal behavior later in life. The census contains information on prisoners' backgrounds including social and family environments.

The dataset comprises records of 76,180 individuals incarcerated in Peru during 2016, ranging in age from 18 to 90. It includes detailed information such as their exact district and date of birth, education level, type of crime committed, year of arrest, main occupation prior to imprisonment, and the latest place of residence before sentencing, among other individual-level variables. Notably, approximately 59% of the incarcerated population did not complete secondary school, and around 44% had no participation in any public or private healthcare program before their imprisonment.

From this sample, I kept the individuals born in Peru. The final sample contains 74,286 individuals. I collapse these into the year and district of birth level. On average, there are 3.2 offenders for cohort-district-of-birth cell.

From this dataset, I construct the number of crimes by type, cohort, and district of birth. Cohorts in districts that do not appear in the incarceration data take the value of zero, which means that there is no one in prison from that cohort in that specific district. I construct incarceration rates by dividing the number of offenders by the number of people born per district and cohort. On average, there are 3.7 offenders per 1,000 people. Panel A of Table A.2 shows the summary statistics of the incarceration data.

3.3 Conflict Data

In order to explore whether those exposed to peasant rounds during childhood are less likely to be victims of human rights abuses, I use data on the universe of individual victims of the internal armed conflict from 1980 to 2002 in Peru from the Truth and Reconciliation Commission.¹⁴ This dataset allows me to track differences in human rights abuses between cohort and districts. I exploit variation in the place of birth and date of birth to explore how childhood exposure to peasant rounds affects victimization later in life.

The dataset includes detailed information on killings, disappearances, and violent acts (e.g. torture, recruitment, arrests, sexual abuse) of individuals in Peru. The data contains information on their exact district and date of birth, district where the person was last seen, age at the time of the event, gender, the perpetrator, among other variables.

From the conflict data, I kept individuals with complete information on district and year of birth. The final sample includes AA,AAA individual registries. I collapse these to the cohort and place of birth level.

From this dataset, I construct the number of extra-judicial killings, disappearances, and violent acts by cohort and district of birth. Cohorts in districts that do not appear in the conflict data

¹⁴ According to the Truth and Reconciliation Commission, there is an estimated total of 70,000 deaths, assassinations, torture, disappearances, displacement, and other types of human rights violations carried out by the State, the Shining Path, and the Revolutionary Movement Tupac Amaru.

take the value of zero, which means that there is no victim from that cohort in that specific district. I construct the deaths, disappearances, and acts of violence rates by dividing the number of offenders by the number of people born per district and cohort.

3.4 Household and Individual Data

I examine the effects of exposure during childhood to peasant rounds on prosocial behavior and norms, using household and individual-level data from the Latin American Barometer and the Peruvian National Household Survey (ENAHO).

3.4.1 LAPOP Data

To explore whether individuals exposed to peasant rounds during childhood are more likely to show more prosocial behavior, I use cross-sectional available data from the Latin American Public Opinion Project (LAPOP) from rounds conducted between 2012 and 2021, which include geocoded data on district of birth. The final sample consists of 10,206 individual observations across district years.¹⁵ Panel B of Table A.2 shows the summary statistics.

The LAPOP data include questions on community, political and social attitudes for people 18 years and older.¹⁶ The dataset allows me to build five indices that capture different aspects of social capital through fourteen questions. The first index is the Community Engagement and Participation Index, which includes questions regarding individual engagement and participation with community-oriented groups, voluntary work, views on solving problems within the community, and being an active member in community administrative tasks. The second is the Democratic Views and Political Participation Index. This index includes questions about individual participation in political groups, views toward democracy, voting behavior, and support for non-democratic acts such as coups¹⁷, support for the right to protest, and participating in protests. The third index is the Interpersonal Trust Index, which is defined by self-reported trust in members of the community. The following index is the Views of Others Outside Community. This index is based on questions about trusting a person you did not know before and having new neighbors who came from outside the community. Lastly, the fifth index is the Use of Violence as a Public Policy. This index includes questions about individual views on the death penalty, justifying police brutality, and justifying the community taking justice into their own hands.¹⁸

There are two main limitations with this data that are worth discussing. First, there may be a reporting bias in the different social capital measures. Respondents could provide socially acceptable or favorable answers. However, this is unlikely to be problematic since there is no reason to

¹⁵The sample includes 1,500 observations from the 2012 round, 1,500 from the 2014 round, 2,647 from the 2017 round, 1,521 from the 2019 round, and 3,038 from the 2021 round.

¹⁶Certain questions in LAPOP are not consistently available across all survey rounds. As a result, the number of observations may vary depending on the questions of interest.

¹⁷Among the non-democratic acts, I include whether a person agrees with the executive's power to dissolve the Supreme Court of Justice and supports a coup as a solution to social problems such as corruption and crime.

¹⁸For a more detailed explanation of the construction of indices, see Appendix A

believe that the bias magnitude differs between exposed and non-exposed individuals.

3.4.2 National Household Survey

To complement the aforementioned data and further explore the impact of exposure to peasant rounds during childhood on adult prosocial behavior, I draw on household survey data from the 1998 Peruvian National Household Survey (ENAHO) and the ENAHO series from 2010 to 2019.

First, I use the 1998 ENAHO to explore whether the effects on social capital persist when individuals relocate to districts without peasant rounds, leveraging the 1997 El Niño Phenomenon as an exogenous weather shock. This 1998 dataset is important as it includes detailed sections on weather shocks and internal migration. The migration data encompass reasons for relocation, including whether the move was due to El Niño, the destination, and the year of relocation. Through this dataset, I aim to determine the long-term effects of social structures and study whether these effects stem from social control or the development of norms and prosocial behavior during childhood.

Second, the ENAHO cross-sectional dataset from 2010 to 2019 is relevant as it encompasses a wide array of information on trust in institutions, democratic attitudes, societal attitudes toward corruption, and participation in both community and political activities. By using this data to construct five indices, and despite differing questions from the Lapop data, the comprehensive national representation provided by Enaho enables robust validation of social capital findings derived from Lapop, thereby reducing potential reporting bias issues. The final sample consists of 138,059 individual observations.¹⁹ Table A.2 shows the summary statistics of the main variables using household data.

The first index is the Mistrust and Democracy Index. The index includes questions regarding mistrust towards local, regional, and national institutions, and the belief as to whether democracy is important or useful. The second index is the Voting and Corruption Index includes questions that capture individuals's views on the importance of voting and whether a person was asked and paid a bribe for the use of a public service. The third index is the Community Participation Index. This index includes questions about participation and involvement with local organizations, such as neighborhood associations, religious groups, and education-oriented groups, including those who engage with authorities. The following index is the Parental Participation Index. This index includes questions about participation and involvement in mothers' groups and the local school parents' committee (APAFAs).²⁰ The last index is the Political Participation Index. This index captures whether a person participates in a political group or party.

¹⁹The number of observations for outcomes built with this household data varies depending on the module in which the question was asked and the rate of non-response. It is worth noting that specific modules (e.g. the governance module) only target the head of the household.

²⁰Under Law 8628, APAFAs are nonprofit organizations comprised of individuals. They possess a legal status under private law and can be registered in Public Registries. The Civil Code and the General Law of Education regulate APAFAs, specifically with regard to their organization and operation. APAFAs serve as a platform for parents to actively participate in their children's educational journey

Nationwide, about 15% believe that a non-democratic government is justified under certain circumstances. Moreover, about 25% of adults actively participate as members of APAFA, and 26% engage in community work.

3.5 Census Data

I digitized the 1961 and 1972 Peruvian Census Regional Books to characterize districts before the formation of peasant rounds in 1976 and create a precise matched control group for the treatment.²¹ I construct a comprehensive pre-treatment district year-level dataset.

These Census data provide granular data on household and population characteristics at the province and district levels. I complement this data from the 1973 Peruvian Annual Statistics Books, which provided district-level information on local infrastructure. This pre-peasant rounds dataset enables me to characterize districts based on various geographic, demographic, and socioeconomic attributes before the formation of peasant rounds. I use the Census data to carry out a robust matching procedure to identify suitable control districts that were statistically similar to the treated districts before the peasant round formation. I further use this data to conduct balance tests to assess whether the observable characteristics remained statistically similar after the matching procedure.

4 Empirical Strategy

4.1 Effects on Criminal Paths and Conflict Engagement

In this section, I present the identification strategy to estimate the causal effect of exposure to a bottom-up social structure on long-term development outcomes. Specifically, I assess the impact of exposure to peasant rounds during children’s critical formative ages on adult incarceration and conflict engagement rates. The identification strategy leverages variation in exposure to peasant rounds across districts and year of birth. I construct a complete history of peasant-round exposure for every individual included in the incarceration and conflict data, which allows me to construct a district-cohort panel.²² This empirical strategy exploits the combined variation in the spatial presence of peasant rounds and the ages at which exposure occurred among different birth cohorts, allowing for a Difference-in-Differences (DiD) strategy.

One potential limitation is the imprecise measurement of individual exposure to peasant rounds within districts. While I can identify or approximate when the first peasant round started in a given district, multiple communities within a district may have formed a peasant round at different times. This means that some individuals may be incorrectly classified as exposed when they

²¹I digitize all books using Optical Character Recognition (OCR) and text analysis. I used the ABBYY FineReader program to help with the optical character recognition process to convert the scanned books into searchable documents and later extracted the tables.

²²This allows me to compute the district-cohort rates of incarceration and conflict victimization. I use the same approach to calculate the rates by type of crime—including terrorism and insurgency activities—juvenile incarceration, and migration status.

were not. This could lead to measurement error. However, as discussed in Section 2, integrated markets facilitated spillovers between communities. Therefore, even if a peasant round had not yet formed in a specific community, families might have begun engaging with the concept through interactions with neighboring communities. This possibility of early indirect exposure may help mitigate the measurement error concern. Moreover, the potential measurement error is likely to result in attenuation bias. As a result, my estimates may be conservative lower bounds of the true effects.

Furthermore, a potential threat to this identification strategy is pre-existing differences in district characteristics before 1976, which might be correlated with the presence of peasant rounds. To address this potential concern, and on the basis of previous research, I use a matching procedure to pair similar districts based on observable characteristics recorded before the formation of peasant rounds. I use a double-lasso to create a matched control group for the treated districts based on records from the 1961, 1972, and 1981 Peruvian Censuses, along with geographical data, to reduce pre-treatment imbalances that could impact the validity of the parallel trends assumption. Tables A.3 and A.4 show the balance checks for the treated districts and matched control districts showing that these are statistically similar. Figure A.2 shows a map highlighting the treated and matched control districts. As a result, I use a combined, Matching Difference-in-Differences strategy [Goldschmidt and Schmieder 2017; Aneja and Xu 2021; Adams-Prassl et al. 2023]. By further interacting this spatial variation with cohort-level variation in ages of exposure, I assess whether being exposed to peasant rounds at critical ages has a long-term effect on the development outcomes of adults who were born in districts with peasant rounds.

Based on previous research on the age-crime curve and the accumulation of prosocial norms discussed in Section 2.2, I begin by exploring which cohorts could have been affected the most. For this analysis, I estimate the following equation:

$$Y_{dc} = \sum_k \beta_k ExposureAge(k)_{d,c} + \alpha_d + \delta_c + \gamma_d c + \epsilon_{dc} \quad (1)$$

$Y_{d,c}$ is the outcome of interest and d indexes the district of birth and c the birth year. The variable of interest is $ExposureAge(k)_{d,c} = PeasantRoundYear_d \times AgeGroupExposure_c$, which is a dummy variable that interacts a dummy variable of being born in a district with a peasant round formed between 1976 and 1982 and a dummy variable of having a specific age range between 1976 and 1982: $k = 30+, 25 - 30, 17 - 24, 11 - 16, 6 - 10, 1 - 5$, and $BornAfter - 0$. The main outcome of interest $Y_{d,c}$ is the propensity for crime of individuals born in district d in year c conditional on the number of individuals born in that district year. The term δ_c indicates year of birth fixed effects and controls for unobserved time-invariant effects. The term α_d indicates district of birth fixed effects and controls for unobserved time-invariant characteristics of the districts that may be correlated with both childhood and exposure and future incarceration. Control variables at the district of birth level are not available for all years of birth. Therefore, to control for potential changes in unobserved variables across districts of birth, I include district-cohort linear trends,

$\gamma_d C$. This term allows me to isolate the deviation in the outcome from the long-run trend in a given district of birth.

After this analysis, I assess whether exposure during childhood, at ages 10 years old or younger, has a long-term impact on adults who were born in districts with peasant rounds. Equation 2 presents the baseline specification:

$$Y_{d,c} = \beta ExposureAgeLess0to10_{d,c} + \sum_k \beta_k Age(k)_{d,c} + \alpha_d + \delta_c + \gamma_d C + \epsilon_{d,c} \quad (2)$$

The variable of interest is $ExposureAgeLess0to10_{d,c} = PeasantRoundYear_d \times Ages10orLess_c$, which is an interaction between a dummy variable of being born in a district with a peasant round formed between 1976 and 1982 and a dummy variable of having 10 years or less between 1976 and 1982. The set of control variables $Age(k)_{d,c}$ is exposure to peasant rounds at other ages where $k = 30+, 25 - 30, 17 - 24$, and $11 - 16$. The same equation and data structure are applied for other outcomes of interest such as crime propensity by type of crime, insurgency and terrorism propensity, and conflict-related abuses. The parameter of interest is β , the effect of being exposed to peasant rounds formed between 1976 and 1982 at ages 10 or younger, which is identified from variation in the presence of rounds between districts and birth cohorts. Therefore, the matched control group is composed of otherwise similar individuals born in the same district but in a different year or born in a different district from the matched pool districts but belonging to the same cohort.

4.2 Effects Beyond Future Criminality and Conflict-Engagement

In order to explore the mechanisms behind the relationship between peasant rounds and future criminality and conflict-engagement, I exploit repeated cross-sectional data at the individual and household level. This allows me to explore potential mechanisms, particularly the impact of social capital. I examine social behavior beyond just networks and explore the lasting effects on social capital even after people relocate. I distinguish between bonding social capital (network cohesiveness) and bridging social capital (cross-type connectedness), as these components can have distinct impacts on social outcomes [Chetty et al. 2022]. Bonding social capital influences adherence to community norms, while bridging social capital facilitates broader opportunities and may affect decisions about crime or conflict engagement.²³ In this context, I assess whether exposure to peasant rounds before age 10 has long-term impacts on pro-social behavior and attitudes of adults born in districts with these institutions.

I estimate equation 3 presents the baseline specification:

²³Bridging social capital plays a critical role in preventing conflict engagement by fostering cooperation and social cohesion, though it may not completely prevent conflict [Baylis et al. 2018; Jennings and Sanchez-Pages 2017; Moscona et al. 2018].

$$Y_{i,d,c} = \beta ExposureAgeLess0to10_{i,d,c} + \sum_k \beta_k Age(k)_{d,c} + \alpha_d + \delta_c + \gamma_d C + \omega_m + \epsilon_{i,d,c} \quad (3)$$

$Y_{i,d,c}$ is the outcome of interest defined at the individual or household level where d indexes the district of birth, c the birth year, and i the person or household. The term ω_m indicates the year of survey fixed effects and controls for specific year effects. The remaining terms are the same as those defined for the Equation 2. Similar to Equation 2, the parameter of interest is β , the effect of being exposed to a peasant round at ages 10 or less, which is identified from the variation in peasant round formation across districts and birth cohorts. The matched control group is composed of otherwise similar individuals born in the same district but in a different year or born in a different district from the matched pool districts but belonging to the same cohort.

4.3 Effects on A More Aggregated Level

In addition to the main analysis, I used district-level data to evaluate the potential impacts of peasant rounds on district-level outcomes such as social capital and local government decisions. This approach relies on variations across districts since it is not connected to exposure to peasant rounds at different ages. However, it offers insight into broader institutional impacts. One limitation is that the comparison between districts is cross-sectional. To address biases, I used a previous matching procedure based on observable characteristics, ensuring statistical similarity between treatment and matched control districts.²⁴

For this analysis, I estimate the following specification:

$$Y_{d,c} = \beta TreatedDistrict_d + \alpha_d + \mu_c + \gamma_d c + X_{d,a} + \epsilon_{d,c} \quad (4)$$

where $Y_{d,c}$ is the outcome of interest at the district and year level (e.g. the district-assigned budget from 2015 to 2022). The $TreatedDistrict_{d,c}$ identifies whether the district is home to peasant rounds formed between 1976 and 1982 or not. The term α_d represents district fixed effects and μ_c represents year fixed effects. To control for potential changes across districts, district-specific year trends, γ_{dc} , are included.

5 Results

In this section, I present evidence that childhood exposure to peasant rounds significantly reduces the likelihood of engaging in criminal activities and insurgent behavior later in life. The analysis focuses on two main sets of findings. First, individuals exposed to peasant rounds during their formative years, particularly those under ten years old, are significantly less likely to be

²⁴Moreover, as the analysis is based on purely cross-sectional data, the assumptions needed are a bit stronger. However, applying cross-sectional estimates to the equations 2 and 3 yields results similar to this equation. Therefore, the results obtained from the purely cross-sectional data seem to be reliable

incarcerated as adults. This effect demonstrates persistence, lasting even when these individuals relocate to areas characterized by higher crime rates and lacking peasant round structures. Second, peasant rounds seem to deter engagement with violent non-state groups, including insurgents, terrorists, and rebels. Childhood exposure significantly mitigates the risk of adult participation in criminal activities associated with these groups. Both findings are robust across several robustness checks.

To explain the underlying mechanisms driving these effects, I explore different potential pathways, with a particular emphasis on the formation of social capital during developmental years. I provide evidence that childhood exposure to peasant rounds leads to enduring prosocial behavior and beliefs as adults. This extends to democratic values and attitudes towards violence. I find that childhood exposure to peasant rounds not only fosters interpersonal trust (bonding social capital), but also facilitates the development of cross-type connectedness in adulthood (bridging social capital). This dual impact on social capital is particularly important, as bridging social capital is typically more challenging to cultivate. I demonstrate that these effects are not primarily attributable to changes in economic development, migration patterns, state capacity, or education. Furthermore, by examining an exogenous migration shock, I provide evidence that individuals exposed to peasant rounds during childhood carry their prosocial norms and attitudes with them when relocating. This section concludes with additional insights into the long-term effects of exposure to a top-down social structure, offering information into the contrasting impacts of top-down versus bottom-up social structure on future criminality and social capital development.

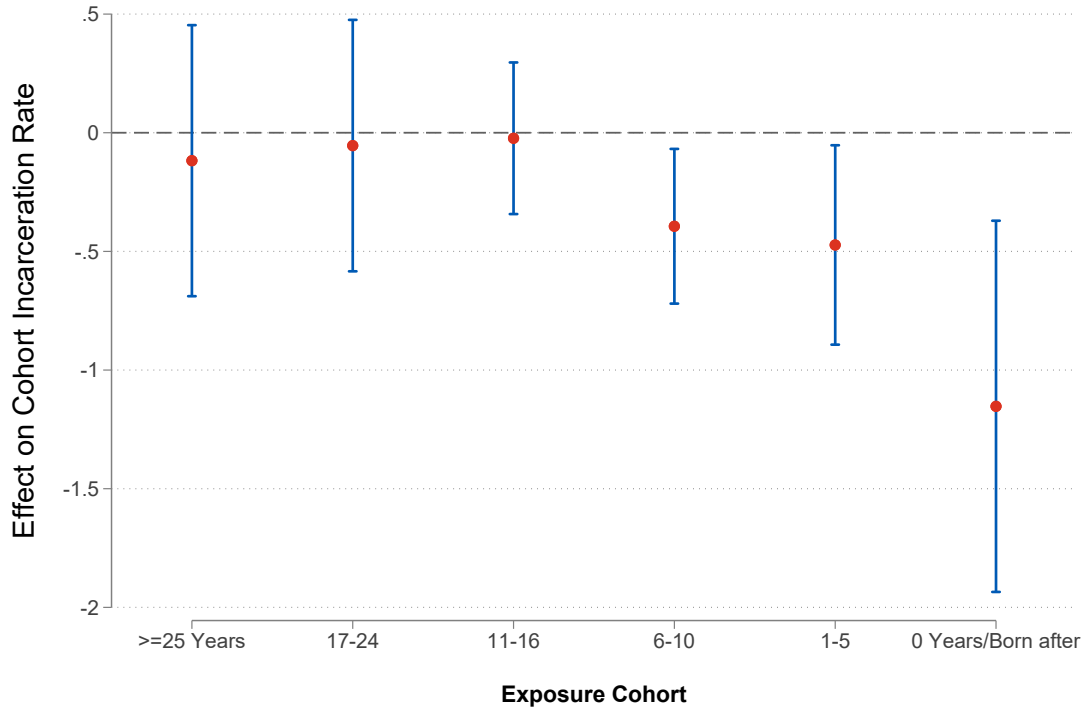
5.1 The Long-Term Effects of Peasant Rounds on Development

5.1.1 Do Peasant Rounds Shape Future Criminality?

I begin by estimating the effects of exposure to peasant rounds at different ages on incarceration rates. The dependent variable is the number of individuals incarcerated per 1,000 population for each birth cohort and district. As shown in Figure 3, the largest effects are for those born after the peasant rounds were well established. However, significant and smaller effects persist for cohorts exposed during childhood and pre-adolescence including those aged 10 and younger at exposure. These critical age groups, representing primary school ages and earlier years, highlight the lasting impacts of early-life exposure to non-state social structures on later-life criminality and institutional interactions that shape individuals' social behavior.

Table 1 presents the estimates from equation 2. Columns (1)-(2) show that exposure to peasant rounds at age 10 or younger results in a statistically significant reduction in subsequent criminal propensity. In particular, column (2), using the matched district sample, indicates that such exposure during relevant ages reduces by 0.64 percentage points the probability of incarceration for individuals born in peasant-round districts. This reduction corresponds to a 14% decrease in the likelihood of incarceration for an individual who was born in a district with peasant rounds and was exposed to them at 10 years old or younger. Column (3) breaks down exposure into age bins

Figure 2: Incarceration rate effects by cohorts



Note. This graph plots the coefficients obtained from a regression of the incarceration rate on the interaction between the exposure to a peasant round in the district of birth and year of birth at different group ages. The regressions control for the district of birth, district time trends, and cohort fixed effects. The Y-axis shows the estimated coefficients on the interaction term and the X-axis shows the ages. Incarceration data comes from administrative records in the Instituto Nacional Penitenciario in Peru for the year 2016. The confidence intervals are at 95%. Standard errors are clustered at the district of birth level.

and includes the different bins in the same regression. In line with Figure 3: exposure at critical ages of 10 or under significantly decreases future criminal behavior. For example, exposure between ages 6-10 and 0-5 reduces adult criminality by 0.4 and 0.5 percentage points, respectively, representing around a 9% and an 11% decrease compared to the sample mean probability. And, being born after rounds were well established reduces the likelihood of adult incarceration by 1.2 p.p., which corresponds to a 26% decrease. More importantly, exposure beyond age 10 does not have any statistically significant impact on the likelihood of adult incarceration. This cohort analysis provides compelling evidence that the results cannot be attributed to pre-existing crime trends in districts where peasant rounds emerged.

One potential limitation of the incarceration data is the inability to observe individuals who entered and exited prison before the start of the sample period. This could bias the results if such individuals are unevenly distributed across treatment and control groups. To address this concern, column (4) of Table 1 follows the approach used in Sviatschi [2022] and uses sentence length in months, as the dependent variable. The insignificant estimates suggest that conditioning the sample on current incarceration status serves as a reasonable proxy for the total number of

convicted individuals in a given year, mitigating concerns about sample selection bias.

Table 1: Criminal Behavior

	(1) Crime	(2) Crime	(3) Crime	(4) Sentence Length
<i>ExposureAgeLess0to10_{d,c}</i>	-0.327* (0.191)	-0.646** (0.297)		-9.338 (6.125)
<i>ExposureAgeLess0to0_{d,c}</i>			-1.153*** (0.396)	
<i>ExposureAge1to5_{d,c}</i>			-0.473** (0.213)	
<i>ExposureAge6to10_{d,c}</i>			-0.394** (0.165)	
<i>ExposureAge11to16_{d,c}</i>			-0.023 (0.162)	
<i>ExposureAge17to24_{d,c}</i>			-0.054 (0.269)	
<i>ExposureAge25to30_{d,c}</i>			-0.118 (0.289)	
<i>ExposureAge31to35_{d,c}</i>			-0.437 (0.360)	
Observations	71,322	13,256	13,256	13,256
Dep. var. mean	3.891	4.507	4.507	133.90
Magnitude of the effect	-8.41%	-14.33%	-14.33%	-6.98%
Sample	All	Matched	Matched	Matched
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. **Note.** In columns (1) to (3), *ExposureAgeLess0to10_{d,c}* refers to the interaction between the peasant rounds' presence in the district year of birth and having less than 10 years old at the time of exposure. Column (4) shows the results across different cohorts. Column (3) shows the results for the sentence length in months outcome. *Crime* is the propensity to crime of a given district-cohort. The sample is at the district and year of birth level.

More criminality related outcomes. Beyond overall incarceration, the available data allows me to study the effects of childhood exposure to peasant rounds on juvenile detention and recidivism. Recidivism is defined as two distinct outcomes: one capturing a sentence without jail time, and the other involving a sentence with jail time. Due to the nature of the data, information on recidivism and juvenile incarceration is derived from a preselected sample of individuals who are already in prison. Therefore, for the analysis, I calculate the rates of recidivism and juvenile incarceration by aggregating the individuals reporting such experiences into the year and district of birth level.

In Table 2, I show that such exposure significantly reduces the likelihood of juvenile incarceration and recidivism (jail time) by 0.08 p.p. and 0.2 p.p., respectively. These represent a reduction of 21.7% and 31.4% of the sample mean probability, respectively. For recidivism, the dependent variable is the number of currently incarcerated individuals with a previous sentence per 1,000 district birth cohort population. For juvenile detention, it is the number of incarcerated individuals that spent time in a juvenile correctional facility per 1,000 district birth cohort population. The results suggest that exposure to a bottom-up social structure during key formative years could diminish engagement in persistent criminal behavior from an early age, with lasting impacts on reoffending tendencies in adulthood.

All these findings provide evidence on how exposure to community-led institutions during childhood could affect long-term trajectories of institutional interactions and criminal behavior.

Table 2: Criminal Behavior: Juvenile Incarceration and Recidivism

	(1) Recidivism [No jail time]	(2) Recidivism [No jail time]	(3) Recidivism [Jail time]	(4) Recidivism [Jail time]	(5) Juvenile Incarceration	(6) Juvenile Incarceration
<i>ExposureAgeLess0to10_{d.c}</i>	-0.142*** (0.049)	-0.202*** (0.063)	-0.150*** (0.057)	-0.190*** (0.062)	-0.060*** (0.020)	-0.079** (0.031)
Observations	71,322	13,256	71,322	13,256	71,322	13,256
Dep. var. mean	0.585	0.652	0.579	0.606	0.352	0.365
Magnitude of the effect	-24.28%	-31.05%	-25.89%	-31.38%	-16.94%	-21.69%
District of birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Sample	All	Matched	All	Matched	All	Matched

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *PeasantRounds_{d.c}* refers to the interaction between the peasant rounds' presence in the district year of birth and having less than 10 years old at the time of exposure. *Recidivism* the propensity to re-offend a crime (without spending time in jail) of a given district-cohort, *Recidivism* the propensity to re-offend a crime (spending time in jail) of a given district-cohort, and *Juvenile incarceration* is the propensity of having spend time at a juvenile correctional facility of incarcerated individuals from a given district-cohort.

Types of crimes. While I find a substantial decrease in overall future criminality, a pertinent question is whether this effect is concentrated among certain offense types. Disaggregating by crime category reveals that childhood exposure to peasant rounds significantly reduces property and drug-related offenses such as robbery, theft, and drug trafficking (see Table 3). I find a statistically significant decrease of 0.2 p.p. in engagement with drug-related crimes and a decrease of 0.5 p.p. in engagement with robberies and thefts. I do not find significant effects on extreme violent crimes such as homicide or sexual offenses. These patterns suggest that the decline in adult criminality is driven by a reduction in economically motivated property crimes. The presence of an informal non-violent institution during formative years may instill an underlying sense of social responsibility and consideration of communal impacts that deter property crimes. In contrast, the null effects for violent offenses could suggest that such childhood exposure may be less effective in countering the most extreme forms of anti-social behavior rooted in individualistic motivations.

Table 3: Criminal Behavior: Types of Crimes

	(1) Drugs	(2) Sexual Crime	(3) Homicide	(4) Robberies
<i>ExposureAgeLess0to10_{d,c}</i>	-0.181** (0.073)	-0.037 (0.068)	0.007 (0.045)	-0.574** (0.243)
Observations	13,256	13,256	13,256	13,256
Dep. var. mean	0.62	0.60	0.42	1.81
Magnitude of the effect	-29.19%	-6.17%	1.67%	-31.71%
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Note. *PeasantRounds_{d,c}* refers to the interaction between the peasant rounds' presence in the district year of birth and having less than 10 years old at the time of exposure. *Crime* is the propensity to crime of a given district-cohort. The sample is at the district and year of birth level. The sample consists of the matched districts sample.

Robustness Checks. Table A.5 in the Appendix presents a series of additional analyses and robustness checks. Columns (1)-(4) account for potential confounds by controlling for sentence length, age at incarceration, department-by-year fixed effects, and year of arrest fixed effects, respectively. A potential identification concern is that the analysis assumes that the formation and expansion of peasant rounds is exogenous. While the background section provided detailed evidence suggesting that this was indeed the case, I further explore this by exploiting exogenous variation in land suitability and climatological conditions for pastoral farming. I construct an instrument that identifies districts with the required geographical and ecological attributes for viable pastoral farming – a necessary condition for peasant-round emergence. Two formal test, the Kleibergen and Paap F statistic confirm the instrument's strength (see Table A.6).

Moreover, to support the validity of the instrumental variable, I conduct different tests to provide evidence for the exclusion restriction. I began by exploring potential alternative channels through which the instrument might affect crime engagement. Table A.7 presents the estimates from the reduced form (i.e., the pastoral farming on the outcomes of interest using the equation 3). I find no significant effects. Column (1) presents the results for Municipal Tax Collection. Despite the potential impact of the farming industry on the local economy and tax-paying capacity, no significant effects on taxes were found. Columns (2) and (3) present the results for Municipal Assigned Revenues and Municipal Expenses, the first one represents the municipality income assigned by the Central government, while the second one is the amount spent from this income. I also find no significant effects. Column (4) shows the results for Canon Transfers. Since 2001, these transfers have been redistributed not only within the district where the extraction occurred but also between the province and region. The transfers, or even the solely presence of private companies, could affect safety provision in the districts. In districts with legal mining, there may also be illegal mining, which could impact crime rates in those areas. Therefore, the suitability

of land for cattle farming could either complement or discourage mining activities, affecting the Canon transfers. I also find no significant effects. Lastly, in columns (5) and (6), I explore the results for Municipal investments in local police force and social campaigns. As pastoral farming often requires a high degree of community cooperation, it is possible that these areas might have been more prompt to self-provide public services or have a higher demand for the needed services which could affect the development of these areas largely affecting criminality in these spaces. I find no significant effects. Second, as I do not have available pre-treatment outcomes, I exploit the different cohorts to perform a placebo test on the incarceration rates including those born up to 10 years before the formation of peasant rounds. I find no significant relationship between the instrument and crime. While these tests cannot definitively prove the exclusion restriction holds, they provide suggestive evidence in support of the identification strategy.

5.1.2 Do Peasant Rounds Affect Engagement with Conflict?

Beyond criminal behavior, I explore how childhood exposure to peasant rounds influenced future engagement with and support for non-state armed groups, such as insurgents and terrorist organizations. This influence could be translated into a reduction of the power and violence capabilities of these groups. Peasant rounds may have promoted community safety, awareness of basic rights, and a sense of unity. Beyond their immediate presence, these fostered senses of community and awareness may have shaped perceptions in ways that deter later involvement with rebel and violent groups by fostering norms that discourage extralegal violence.

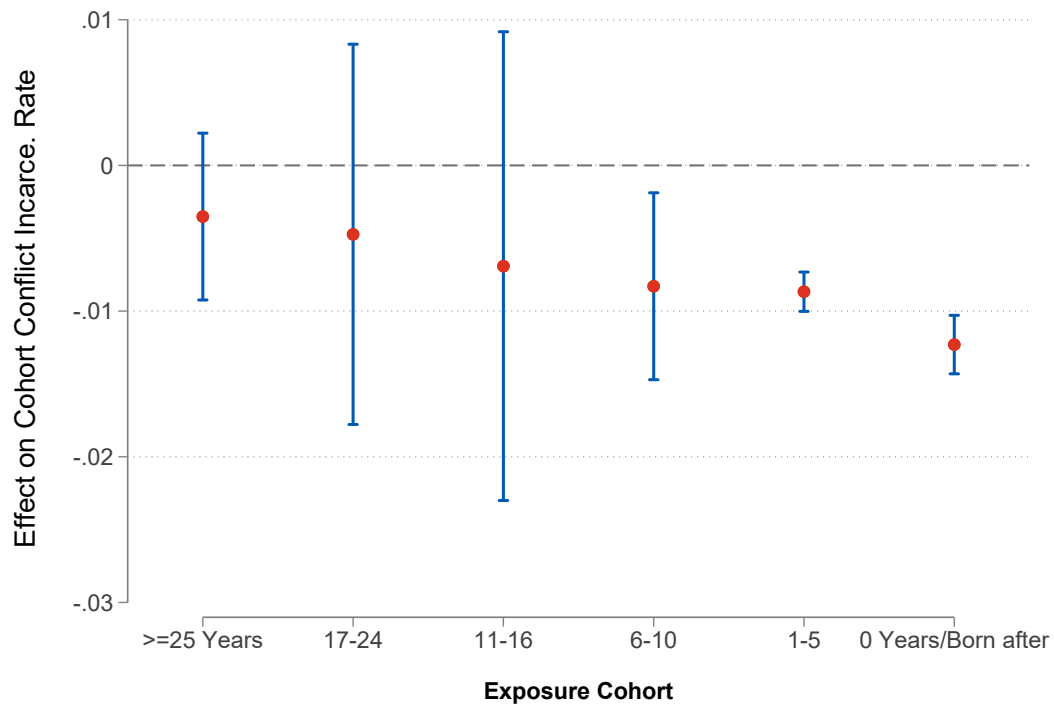
However, peasant rounds organized and expanded alongside the rise of Peru's terrorist groups such as the Shining Path and other Latin American armed movements. In this regard, these well-organized bottom-up social structures could have served as valuable recruitment platforms and resource bases for violent non-state actors to exploit, with the community-oriented foundations inadvertently facilitating mobilization and garnering support for anti-government forces.

These contrasting viewpoints motivate examining how childhood institutional exposure impacted future armed group engagement proclivity, shedding light on whether peasant rounds transferred pro-social citizenry norms or inadvertently aided descent into civil conflict.

Similar to the analysis of crime, I began by estimating the effects of exposure to peasant rounds at different ages on terrorism and disobedience rates, including insurgency and rebellion. As shown in Figure 3, the largest effects are observed among those born after the peasant rounds were well-established, and these effects persist, although smaller, up to the age of 10. I then explored the impact of childhood exposure to peasant rounds on overall conflict-related crimes.

As shown in Table 4, exposure to peasant rounds at age 10 or less leads to a statistically significant reduction in subsequent criminal propensity associated with terrorism activity and insurgency. I find a significant decrease of 0.01 p.p. in the likelihood of incarceration due to a crime associated with terrorism or insurgency. This represents a reduction of 36% of the mean probability of the sample. A potential concern is that these effects may be driven by the timing of terrorism-related arrests, which were concentrated before the 2000s, mechanically making

Figure 3: Conflict-Related Incarceration rate effects by cohorts



Note. This graph plots the coefficients obtained from a regression of the incarceration rate on the interaction between the exposure to a peasant round in the district of birth and year of birth at different group ages. The regressions control for the district of birth, district time trends, and cohort fixed effects. The Y-axis shows the estimated coefficients on the interaction term and the X-axis shows the ages. Incarceration data comes from administrative records in the Instituto Nacional Penitenciario in Peru for the year 2016. The confidence intervals are at 95%. Standard errors are clustered at the district of birth level.

younger generations less likely to be apprehended. To address this, I employ two strategies. First, I include year-of-sentencing fixed effects to directly account for any secular trends in terrorism prosecution over time. Second, I split the sample into those sentenced before and after 2000, finding that the effects persist significantly in both subsamples (columns 4 and 5). These results alleviate concerns about arrest timing patterns confounding the estimates. The results also show that childhood exposure to peasant rounds had a lasting deterrent effect on the proclivity towards terrorist and rebel group affiliations that extend beyond the peak years of armed conflict.

These findings show how bottom-up social structures such as peasant rounds can undermine the “winning hearts and minds” strategies of insurgent groups, thus hindering their expansion and their ability to gain public support. This structure appears to act as a barrier that limits the entry and influence of non-state armed actors in disputed areas.

Table 4: Criminal Behavior: Terrorism and Insurgency

	(1) Terrorism and insurgen.	(2) Terrorism and insurgen.	(3) Terrorism and insurgen. [Year-Sent FE]	(4) Terrorism and insurgen. [≤ 2000]	(5) Terrorism and insurgen. [> 2000]
<i>ExposureAgeLess0to10_{d.c}</i>	-0.008*** (0.001)	-0.007* (0.004)	-0.005* (0.003)	-0.008** (0.004)	-0.003* (0.002)
Observations	71,322	13,256	13,256	13,256	13,256
Dep. var. mean	0.022	0.022	0.022	0.023	0.019
Magnitude of the effect	-36.37%	-31.82%	-22.73%	-34.78%	-15.79%
District of birth FE	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes
Sample	All	Matched	Matched	Matched	Matched

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note** *Terrorism and insurgency* is the propensity to commit a crime related to terrorism, insurgency, rebellion, or disobedience of incarcerated individuals from a given district-cohort. The sample consists of the matched districts sample.

Conflict-related Abuses. The finding that childhood exposure to peasant rounds deters future engagement in terrorism and rebellion has important implications. Bottom-up structures could reduce the influence and violent capabilities of non-state armed groups in affected areas by discouraging people from joining these groups and disrupting the patterns of recruitment and civilian victimization that fuel civil conflicts.

As shown in Table 5, being exposed to peasant rounds during key developmental years significantly reduces the likelihood of experiencing human rights abuses and violent victimization caused by the internal armed conflict later in life. This means that individuals who were exposed to peasant rounds during childhood are less likely to be affected by forced disappearances, extrajudicial killings, and other violent acts such as torture, sexual abuse, kidnappings, injuries, and detentions carried out by terrorists, rebel groups, and the government. I find a significant 0.4% decrease in the likelihood of experiencing disappearances, a 2.6% decrease in the likelihood of being a victim of extrajudicial killings, and a 3.7% decrease in the likelihood of experiencing violent acts based on the sample mean probability.

Furthermore, I examine whether the effect persists in areas with high conflict, specifically those that experienced conflict before 1984, the period when public appearances and attacks by insurgency groups began in Peru. As shown in Table 3, column (3), the effects on disappearances and extrajudicial killings are significant, representing decreases of 1.6% and 4.5%, respectively. Furthermore, the significant effect observed for acts of violence remains consistent even in highly conflictive areas.

These additional results in high conflict areas further highlight the resilience fostered by childhood exposure to peasant rounds. Peasant rounds could instill a sense of community and collective responsibility, which helps individuals develop coping mechanisms and resistance strategies against violence and coercion. This community-driven approach is likely effective in mitigating

the influence of non-state armed groups and reducing the overall impact of the conflict on civilian populations, even in regions that have historically experienced high levels of violence and instability.

Table 5: Conflict-related Abuses and Victimization

	(1) [All]	(2) [Matched]	(3) [High [Conflict.]
A. Disappearances			
<i>ExposureAgeLess0to10_{d.c}</i>	-0.011*** (0.003)	-0.004* (0.002)	-0.017** (0.001)
Observations	90,615	11,592	8,515
Dep. var. mean	1.111	1.111	1.132
Magnitude of the effect	-0.87%	-0.36%	-1.55%
B. Extranjudicial Killings			
<i>ExposureAgeLess0to10_{d.c}</i>	-0.036*** (0.010)	-0.027* (0.015)	-0.113** (0.044)
Observations	90,631	9,000	8,518
Dep. var. mean	1.043	1.043	2.519
Magnitude of the effect	-2.97%	-2.62%	-4.50%
C. Violent Acts			
<i>ExposureAgeLess0to10_{d.c}</i>	-0.037** (0.015)	-0.094** (0.046)	-0.097* (0.051)
Observations	88,521	11,024	8,516
Dep. var. mean	2.147	2.554	3.157
Magnitude of the effect	-1.71%	-3.67%	-3.09%
District of birth FE	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *Disappeared*: the propensity to disappear during the internal armed conflict and post-conflict period (1980-2000) of a given district cohort; *Extra-judicial killings*: the propensity to being extra-judicially killed during the internal armed conflict and post-conflict period (1980-2000) of a given district cohort; *Violent acts*: the propensity to being a victim of a violent act (torture, recruitment, sexual abuse) during the internal armed conflict and post-conflict period (1980-2000) of a given district cohort. The sample consists of the matched districts sample.

Robustness Checks. Table 4 in the Appendix presents a series of additional analyses and robustness checks. Columns (1)-(4) account for potential confounds by controlling for sentence length, year of sentence, age at incarceration, department-by-year fixed effects, and year of arrest fixed effects, respectively. All results seem to be robust and consistent with the main findings.

Table 6: Terrorism Criminal behavior: Robustness Checks

	(1) Conflict [Year-Sent FE]	(2) Conflict [Sent. Lng.]	(3) Conflict [Age at Inc.]	(4) Conflict [Depa×Year FE]	(5) Conflict [YearArrest FE]
<i>ExpAgesLess0to10_{d,c}</i>	-0.005* (0.003)	-0.009* (0.005)	-0.009* (0.005)	-0.011* (0.006)	-0.003* (0.002)
Observations	13,256	13,256	13,256	13,256	13,256
Dep. var. mean	0.022	0.022	0.022	0.021	0.022
Magnitude of the effect	-22.73%	-40.91%	-40.89%	-52.38%	-13.64%
District of birth FE	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes
Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Note. <i>ExposureAgesLess0to10_{d,c}</i> refers to the interaction between the presence of peasant rounds in the district year of birth and having less than 10 years old at the time of exposure. <i>Crime</i> is the propensity to crime of a given district-cohort. The sample is at the district and year of birth level. The sample consists of the matched districts sample.					

5.2 Mechanisms Behind the Deterrence of Crime and Conflict Engagement

To unpack the underlying mechanisms, I examine potential channels through which childhood exposure to peasant rounds affects long-term outcomes. I explore three potential channels: governance and state capacity, human capital accumulation, and social capital formation.

The findings highlight the critical role of the formation of social capital due to childhood exposure to peasant rounds. We explore four potential mechanisms through which social capital could have reduced adult criminality: improved access to the labor market, enhanced social norms and shame mechanisms, the development of prosocial behaviors, and altered criminal opportunities. Although disentangling the precise channels is challenging, evidence suggests that the formation of social capital during key developmental ages of exposure crowded out the development and accumulation of criminal capital and antisocial tendencies, including involvement with insurgent groups, and fostered pro-social capital centered on institutional trust, cooperation, and non-violent citizenship.

The age of exposure is a key part of the analysis. Drawing on developmental psychology literature, I focus on the critical window before age 11—particularly between 6-11 years—for the development of pro-social preferences. During this formative period, research shows decreases in selfishness and spite, coupled with increases in altruism. The results suggest that exposure to cooperative norms and other-regarding behavior during this stage plays a significant role in shaping long-term outcomes. Importantly, these effects were found consistently across cohorts exposed at 10 years old or younger, indicating the results are unlikely to be driven by pre-existing differences in social capital between the treated and matched control districts.

The development of social capital involves the acquisition of social skills, values, and behavioral patterns, which can influence individuals' trajectories away from criminality. However, certain aspects of social capital could also have the potential to facilitate criminal activities by strengthening networks within organized crime groups. Therefore, I explore multiple dimensions

of social capital to provide a more comprehensive understanding of its impact on adult outcomes.

5.2.1 Social Capital Formation: How Does Social Capital Lead to Less Criminality in the Future?

A. Shaming, Social Control, and Enforced Norms. Closely tied to the criminal landscape, the initial role of the peasant rounds as patrols in a way enforced norms, which later could have been translated into social control and shaming to those ones who were not following the rules. Then, if the exposure to rounds mainly shape future criminality through shame and social control, it is possible to expect that once a person leaves the area this could behave differently as there is no social structure monitoring them or imposing their norms. However, as seen in Table 14 this is not the case, on the contrary, even after relocating to new areas, childhood exposure to peasant rounds still decreases future criminal paths. Although I cannot rule out that the feeling of being observed somehow last over the time and shapes individuals behavior, these results suggest that there might be something else that could be affecting the results.

Another potential mechanism through which peasant rounds might have influenced future criminality is the enforcement of social norms, leading to increased social control and the use of shaming for rule-breakers. If this were the primary channel, one would expect the effect to diminish once individuals leave the area of direct round influence, as the immediate social structure monitoring and enforcing norms would no longer be present. However, as shown in Table 14, the crime-reducing effect of childhood exposure to peasant rounds persists even after relocation to new areas. The size of the effect of childhood exposure among those who relocated is almost the same one—represents a 9.4% reduction in the likelihood of future crime engagement—as those who remained in the peasant rounds districts. This finding suggests that the impact of peasant rounds extends beyond local social control or shame-based deterrence. While I cannot entirely rule out internalized feelings of being observed that persist over time, these results point to a more fundamental transformation in individual behavior and decision-making. Furthermore, this finding is consistent with the evidence that early institutional experiences can shape long-term preferences and behaviors in ways that extend beyond the immediate context of the institution itself.

B. Pro-Social Norms Behavior To explore the mechanism of social capital, I construct five indices that capture different dimensions of social capital. These include indices on community engagement and participation, democratic values and citizen engagement, interpersonal trust, trust toward out-groups, and views on using violence for public policy goals. These indices represent both bonding social capital (within communities) and bridging social capital (across communities). Table 7 presents the results for each index. I find a large and positive significant effect on the different dimensions of social capital. In particular, cohorts who were 10 years old or younger at the time of exposure to peasant rounds show a positive effect on both bonding and bridging social capital. This finding is relevant as collective action institutions can sometimes increase exclusionary bonding ties at the expense of bridging linkages across groups. However, peasant rounds appear to have fostered an expansive form of social capital that strengthened localized commu-

nity bonds while simultaneously promoting broader cross-cutting networks and trust. I find a significant increase of 0.3 standard deviations (sd) on the interpersonal Trust index, and a 0.06 sd. increase in the Trust Towards Outsiders index. Furthermore, cohorts exposed to peasant rounds during childhood exhibit significantly higher levels of democratic values and participation (i.e., attending protests, expressing support for protests as a means of political expression, lack of support for undemocratic transitions like coups, and more active engagement with political parties). I find a 0.5 sd. increase in this index.

A potential concern is whether the collective action facilitated by peasant rounds could inadvertently foster violent antisocial capital, especially given their initial focus on community security provision. This raises the possibility that tighter social bonds formed through these institutions may have aligned individuals more closely with extralegal, coercive methods. However, the results in column (5) of Table 7 directly contradict this view –exposure to peasant rounds during the critical childhood ages significantly reduces approval of using violence to achieve public policy objectives as adults.²⁵

Table 7: Social Capital Indices

	(1) Interper. Trust		(2) Views of others outside comm.		(3) Citiz. Behavior and Eng.		(4) Democ. Views and Pol. Part.		(5) Use of Viol Pub. Pol.	
<i>ExposureAgeLess0to10_{d,c}</i>	0.290** (0.117)	0.290** (0.134)	0.059** (0.022)	0.061* (0.030)	0.387*** (0.117)	0.329* (0.168)	0.516*** (0.165)	0.494** (0.190)	-1.443*** (0.530)	-1.399** (0.575)
Observations	3,017	815	1,030	271	4,131	1,115	8,011	2,048	2,019	607
Dep. var. mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
District of birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample	All	Matched	All	Matched	All	Matched	All	Matched	All	Matched

Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. **Note.** The variables are built using the LAPOP Survey. All indexes are rescaled such that the control group mean is 0 and the standard deviation is 1. *Interpersonal Trust* based on questions about trusting the community members. *Views of others outside the community* is based on questions about trusting someone you did not know before and having new neighbors from outside the community. *Citizens Behavior and Eng.* is based on questions that capture the individuals' engagement and participation with community-oriented groups, voluntary work, views on solving problems within the community, and being an active member in community budgeting. *Political views and part.* based on questions regarding individuals' participation in political organizations and democratic beliefs. *Use of Viol. as a Pub. Policy* based on questions regarding the death penalty, justifying the use of police extra force, and justifying the community taking justice with their own hands.

Cohort Analysis. As shown in Table A.10, the impacts on social capital are most significant for the youngest cohorts and those born after a peasant round was introduced. Although there is some variability in the social capital indices, the overall trend shows that the strongest effects are for cohorts aged 10 or younger during their exposure window. This age pattern is consistent with developmental psychology literature, which emphasizes the importance of early childhood, especially ages 6-11, in developing pro-social preferences and behaviors. These findings suggest that social capital formation during early childhood may help explain the effects of peasant rounds on later-life criminality and anti-social behaviors, such as affiliations with armed groups. Those

²⁵I further explore this hypothesis by using contemporary lynching data. I plotted georeferenced lynchings from 2010 to 2022 in Peru next to the districts with historical peasant rounds. As seen in Figure A.3, there is little to no overlap between these areas, with lynchings occurring primarily in regions without historical peasant round presence.

exposed at the youngest ages show the highest social capital returns, which may lead to reduced tendencies for lawbreaking, human rights abuses, and conflict involvement in adulthood.

Ties to Property Crime. As shown in Table 3, childhood exposure to peasant rounds significantly reduces the propensity for property and drug-related offenses in adulthood. These results align with evidence linking social capital to decreased property crime. Although much existing literature focuses on short-term effects from increased social cohesion, informal social control, or reputational concerns, the norms and patterns learned in childhood can have a lasting impact on behavior, resulting in lower crime rates later in life. The findings also align with the age-crime curve theory, which indicates criminal behavior peaks during adolescence and early adulthood before steadily declining. Building robust social capital in early life, before reaching these high-risk years, seems crucial to counteract crime-promoting influences in adolescent peer networks, steering individuals away from criminal paths as they enter adulthood.

Robustness Checks. While these findings are promising, it is important to address potential biases related to the limited scope of the dataset, which excludes the least populated areas of Peru. To mitigate this concern, I conducted a robustness check using the National Household Surveys, which provide a nationwide representative sample. These surveys were used to construct social capital indices, similar although not the exact ones as the ones constructed with the LAPOP data, as outlined in Table 7.²⁶ Consistent with earlier findings, the results presented in Tables 8 and 9 show that exposure to peasant rounds during childhood enhances social capital associated with trust in institutions, the importance of democracy, views on the value of voting, involvement in corruption (i.e., paying bribes), community participation, engagement with parental associations, and political involvement in adulthood. Furthermore, additional robustness checks were provided to account for potential confounds by controlling for age at interview, department-by-year fixed effects, and district-of-residence fixed effects.

²⁶Although the exact indices from Table 7 could not be replicated due to differences in survey questions, I build related indices.

Table 8: Social Capital Indices: Mistrust on institutions, democracy, and corruption

	(1) Mistrust and Democracy	(2) Mistrust and Democracy	(3) Voting and Corruption	(4) Voting and Corruption
<i>ExposureAgeLess0to10_{d,c}</i>	-0.082** (0.039)	-0.076* (0.042)	-0.702* (0.387)	-0.986** (0.434)
Observations	410,144	108,638	32,013	8,518
Dep. var. mean	0.00	0.00	0.00	0.00
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes
Sample	All	Matched	All	Matched

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** All indexes are rescaled such that the control group mean is 0 and the standard deviation is 1. *St. Mistrust and democracy:* The index is based on questions that capture individuals' mistrust of local, regional, and national institutions and whether democracy is not important/useful; *Sd. Voting and Corruption:* The index is based on questions that capture individuals' views on the value of voting (voting doesn't matter) and whether they were asked and paid a bribe for the use of a public service.

Table 9: Social Capital Indices: Community and political engagement

	(1) Commun. Part.	(2) Commun. Part.	(3) Parental Part.	(4) Parental Part.	(5) Political Part.	(6) Political Part.
<i>ExposureAgeLess0to10_{d,c}</i>	0.465** (0.194)	0.389* (0.220)	0.866** (0.343)	0.762** (0.385)	0.028* (0.017)	0.033* (0.018)
Observations	97,935	25,275	97,935	25,275	97,935	25,275
Dep. var. mean	0.00	0.00	0.00	0.00	0.00	0.00
District of birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Sample	All	Matched	All	Matched	All	Matched

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** All indexes are rescaled such that the control group mean is 0 and the standard deviation is 1. *Sd. Comm. Par.:* The index is based on questions that capture individual participation in community-oriented groups, including those who engage with authorities.; *Sd. Parent Participation:* The index is based on questions that capture individuals' participation in groups such as mothers' groups and parents' associations; *Sd. Pol. Part.:* The index captures whether a person participates in a political group or party.

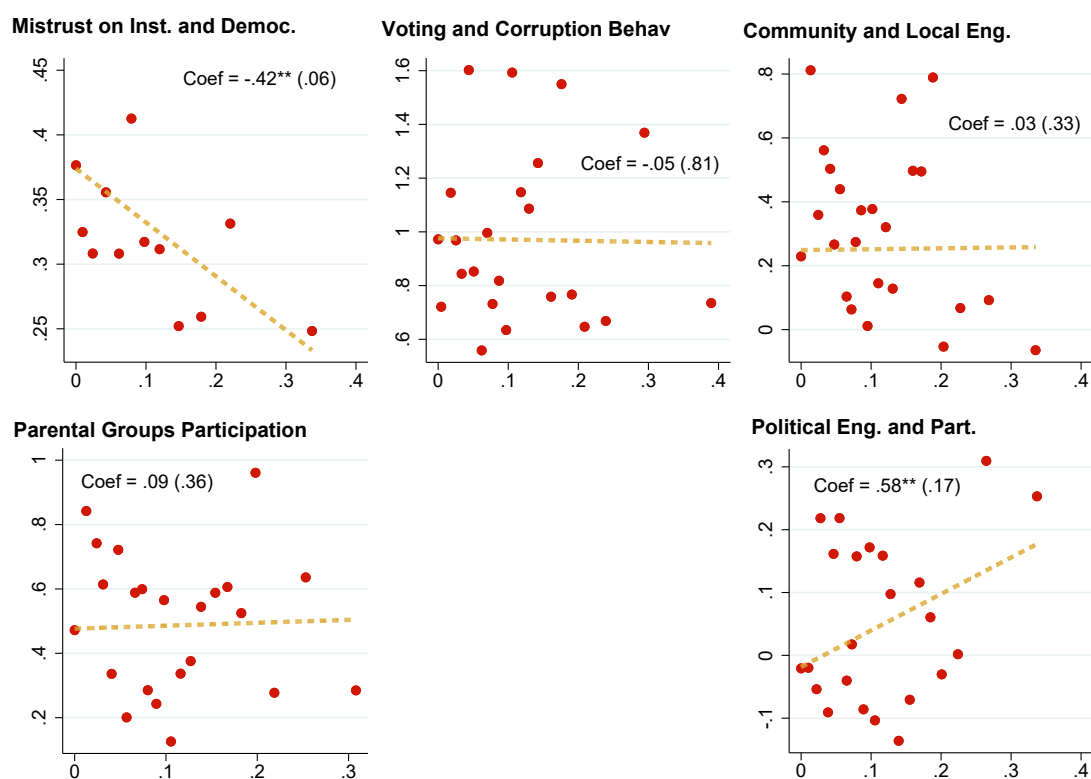
B.1. Social Capital and a Migration Shock: El Niño Weather Shock. To further explore the social capital mechanism, I use an exogenous weather shock, the severe 1997-1998 El Niño event, to examine whether individuals transmit accumulated social capital to new locations upon forced migration. This particularly strong climate pattern triggered destructive flooding, loss of life, forced displacement, and billions in damages across Peru. Leveraging the 1998 household survey data, I identify districts that experienced a large influx of migrants from areas with pre-existing

peasant rounds due to El Niño, but did not have peasant rounds locally.²⁷

Spillover Effects. The empirical strategy defines treatment as districts receiving the highest inflows of forced migrants originating from peasant round areas (see Figure 5). The underlying hypothesis is that social capital developed through exposure in the peasant round could potentially travel with individuals and generate spillover effects in resettlement locales. While limitations in observing individual migrations exist, this analysis provides suggestive evidence of social capital transmission and its impacts in new contexts.

The results indicate that the host of El Niño migrants from peasant rounds significantly increases local social capital related to institutional trust, democratic values, and political engagement (see Table 10). There are also positive, though statistically insignificant, effects on parental involvement and anticorruption norms. These findings align with the hypothesis that childhood exposure to local institutions imparts lasting civic values and participatory habits that are readily transferable upon relocation.

Figure 4: Spillover Effects: El Niño Migration Intensity vs. Social Capital Index



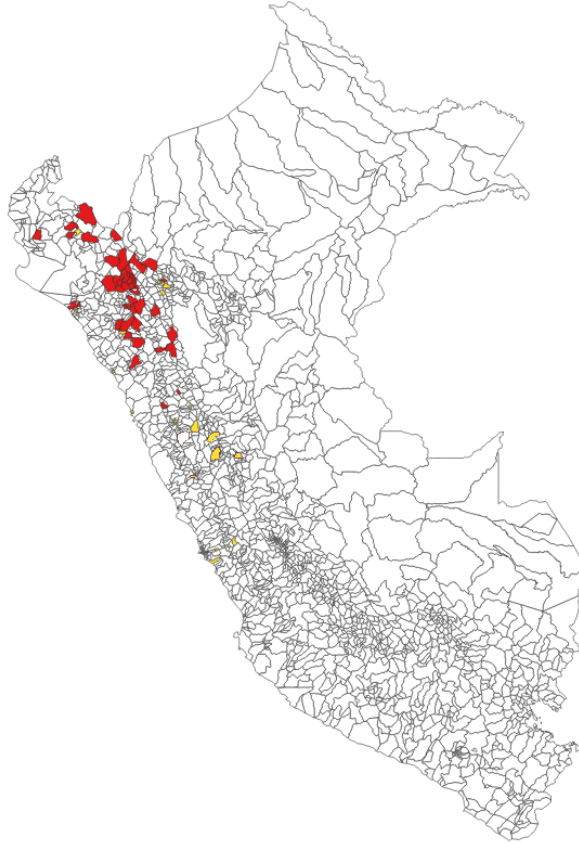
²⁷The 1998 Household Survey includes a special module on the El Niño shock. This module identifies individuals who migrated due to the shock, the districts in which they moved, and the districts in which they were born and lived before migrating. This module was unique to the 1998 survey. However, there is no social capital module for 1998. As a result, I can only identify the districts that received migrants and later compare the social capital in those districts to others that did not have peasant rounds.

Table 10: Social Capital Indices: Migration Shock

	(1) Mistrust and Demo.	(2) Voting and Corrup.	(3) Commun. Par.	(4) Parental Par.	(5) Political Par.
<i>HostDistricts_{d,c}</i>	-0.046** (0.022)	-0.025 (0.087)	0.169 (0.359)	0.016 (0.150)	0.029** (0.013)
Observations	35,755	2,647	7,021	7,021	7,021
Dep. var. mean	0.00	0.00	0.00	0.00	0.00
District of birth FE	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes

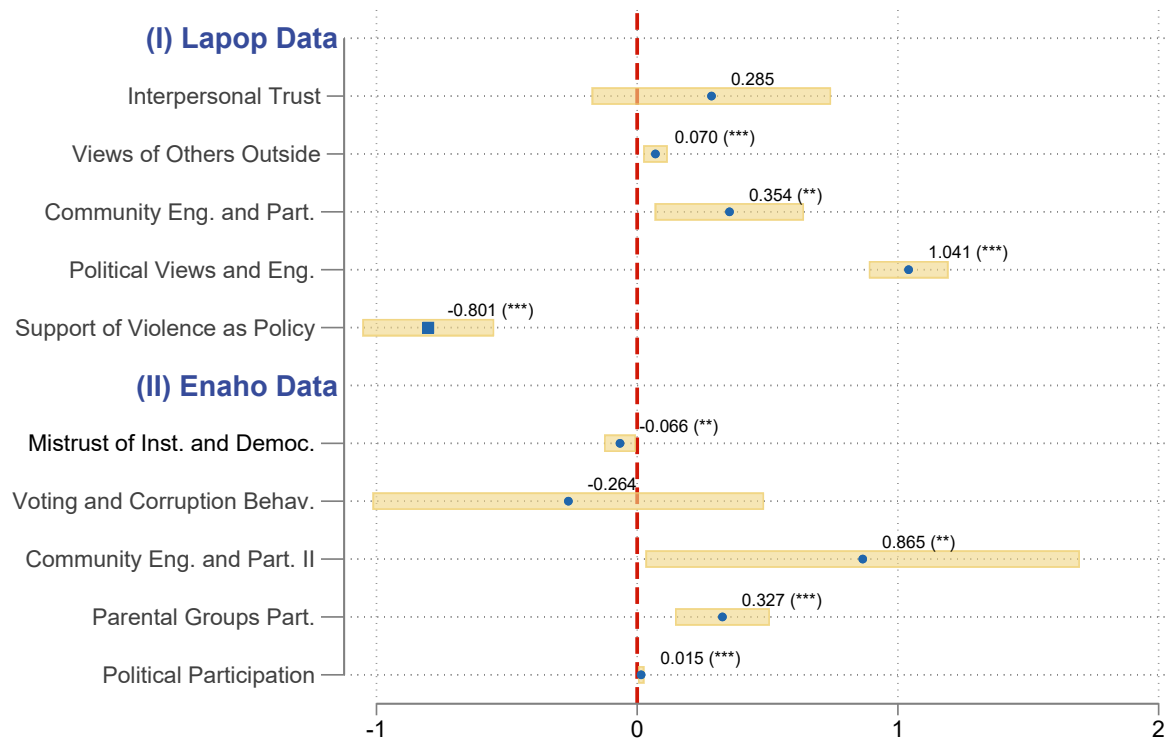
Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** All indexes are rescaled such that the control group mean is 0 and the standard deviation is 1. *St. Mistrust and democracy:* The index is based on questions that capture the mistrust of individuals in local, regional, and national institutions and whether democracy is not important/useful; *Sd. Voting and Corruption:* The index is based on questions that capture individuals' views on the value of voting (voting doesn't matter) and whether they were asked and paid a bribe for the use of a public service. *Sd. Comm. Par.:* The index is based on questions that capture individual participation in community-oriented groups, including those who engage with authorities.; *Sd. Parent Participation:* The index is based on questions that capture the participation of individuals in groups such as mothers' groups and parents' associations; *Sd. Pol. Part.:* The index captures whether a person participates in a political group or party. The sample consists of the matched sample.

Figure 5: Host Districts from El Niño Shock



Persistent Effects. Similar to the analysis of persistent effects on criminality after relocation caused by an extreme weather shock, I explore whether the effects persist when it comes to prosocial behavior. As shows in Figure 6, the effects on social capital remain significant, across most indicators, even after relocation to new areas without peasant rounds.

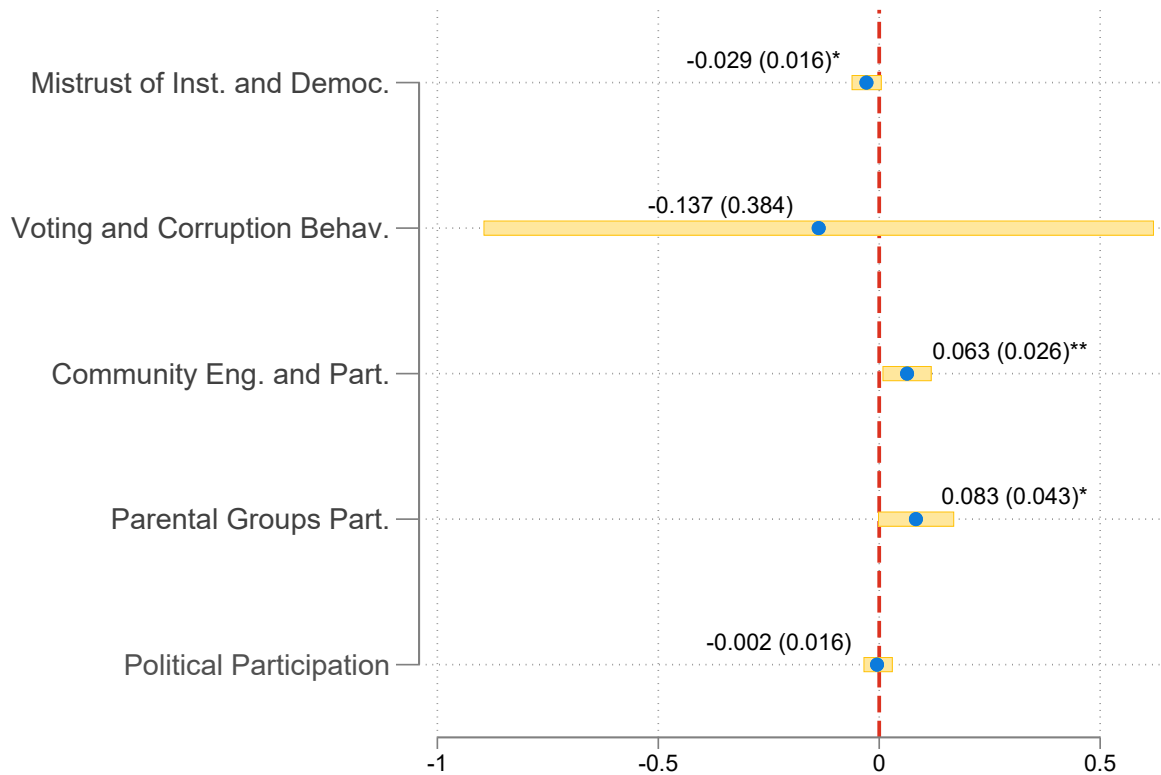
Figure 6: Persistent Effects After Relocation



Note: * $p < .1$, ** $p < .05$, *** $p < .01$

Across Generation Effects. Using the National Household Panel Data, I tracked individuals who weren't directly exposed to peasant rounds but whose parents were. This involved identifying those born and residing in areas without the peasant round social structure, using birth and migration records for accuracy. This setup allows for the creation of a treatment variable marking individuals with at least one parent exposed to peasant rounds. Figure 7 highlights the intergenerational effects. These include decreased mistrust in institutions and democracy, increased community and parental involvement, and a positive impact on political participation. Although not statistically significant, the data suggests negative correlations for voting and corruption behavior, indicating a lesser inclination toward corrupt practices and a stronger belief in the importance of voting.

Figure 7: Intergenerational Effects



B.2. Top-Down Social Structure: Self-Defense Committees. A potential concern is that the effects on long-term development—on criminal paths and social capital—could have been achieved through participation in any other form of collective or community action. Therefore, to determine whether the effects associated with childhood exposure to peasant rounds are due to their bottom-up nature or merely participation in any local social structure, I examine an alternative institution in Peru: state-sponsored Self-Defense Committees.²⁸ In particular, I examine childhood exposure to this social structure that emerged top-down in response to the internal armed conflict.²⁹ Although peasant rounds emerged organically as social structures in the community, Peru's Armed Forces organized, trained, and armed self-defense committees to provide community security against terrorist threats during internal armed conflict. Both institutions, however, involved significant civilian participation in local governance and security

Effects on Crime Behavior. Table 11 shows that, unlike peasant rounds, childhood exposure to self-defense committees significantly increases later-life criminal behavior by 0.2 p.p., representing

²⁸Appendix C includes a detailed section that describes the Self-Defense Committees, formation context, and available data for this analysis. It also briefly describes the internal armed conflict in Peru.

²⁹It is important to mention that, while there were top-down self-defense committees formed in response to the armed conflict, there were also bottom-up (or at least initially bottom-up) committees, as examined by Schubiger [2021]. For this analysis, I excluded the areas with identified bottom-up self-defense committees.

a 7% increase relative to the sample mean. While no significant effects on recidivism are observed, I find a statistically significant increase in juvenile incarceration. This 0.02 p.p. effect, equivalent to a 1.2% increase relative to the sample mean, suggests that childhood exposure to self-defense committees may accelerate entry into criminal activities.³⁰

Table 11: Criminal behavior

	(1) Crime	(2) Recidivism [no jail time]	(3) Recidivism [jail time]	(4) Juvenile incarcer.
<i>ExposureAgeLess0to10_{d,c}</i>	0.174*** (0.048)	0.001 (0.009)	-0.007 (0.009)	0.022*** (0.005)
Observations	114,443	114,443	114,443	114,443
Dep. var. mean	2.594	1.780	1.796	1.826
Magnitude of the effect	6.72%	0.05%	-0.38%	1.20%
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note** These results follow the equation 2 specification. Instead of using the treatment variable defined as childhood exposure to the peasant rounds formed between 1976 and 1982, I use the following treatment variable: *childhood exposure to the self-defense groups formed between 1983 and 1994*. *Crime* is the propensity to crime of a given district-cohort, *Recidivism 1* the propensity to re-offend a crime (without spending time in jail) of a given district-cohort, *Recidivism* the propensity to re-offend a crime (spending time in jail) of a given district-cohort, and *Juvenile incarceration* is the propensity of having spend time at a juvenile correctional facility of incarcerated individuals from a given district-cohort.

Effects on Social Capital. As shown in Table 12, similar to peasant rounds, childhood exposure to self-defense committees appears to foster bonding social capital through tightening community engagement and interpersonal trust during adulthood. However, in contrast to the effects of peasant rounds, childhood exposure to self-defense committees significantly decreases bridging social capital—the type that facilitates social mobility, trust, and cooperation across group boundaries.

The different effects could stem from how these institutions formed. Peasant rounds emerged naturally from communities, while self-defense committees were imposed by the state. This autonomy in formation seems key to creating lasting positive effects on behavior and development outcomes such as future criminality. The results provide suggestive evidence that grassroots insti-

³⁰One potential concern is that these results might be driven by the violence associated with the armed conflict. To address this concern, I exploit data on the rollout of the Emergency Decrees during the armed conflict and the Truth and Reconciliation Commission. This allows me to identify the districts with Self-Defense Committees not as a direct response to the presence of a terrorist group, but as a preventive method. As part of the analysis, I also exclude districts with the highest number of conflict-related deaths and disappearances. While this may not entirely eliminate the concern, it does lead to more reliable results. Without the exclusion of these districts, I find statistically significant and larger effects across the different outcomes.

tutions, more than just group participation, could play an important role in building social capital that improves both local cooperation and broader social interactions.

These findings align with research on collective action in conflict zones, where institutions often prioritize in-group solidarity as trust becomes scarce and outsiders are seen as threats. While self-defense committees strengthened local bonds, they eroded broader trust crucial for inter-group cooperation and social mobility. In contrast, peasant rounds fostered both local and wider social connections, highlighting how institutional design shapes the nature and scope of social capital formation.

Table 12: Social Capital Indices

	(1) Interper. Trust	(2) View of others outside comm.	(3) Comm. Eng. and Part.	(4) Political Views and Part.	(5) Use of viol. Pub. Pol.
<i>ExposureAgeLess0to10_{d,c}</i>	0.080*** (0.017)	-0.209** (0.105)	0.313*** (0.116)	-0.408* (0.210)	0.313 (0.285)
Observations	7,581	1,139	914	2,749	1,128
District of birth FE	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** These results follow the equation 3 specification. Instead of using the treatment variable defined as childhood exposure to the peasant rounds formed between 1976 and 1982, I use the following treatment variable: *childhood exposure to the self-defense groups formed between 1983 and 1994*. The outcome variables are built using the LAPOP Survey. All indexes are rescaled such that the control group mean is 0 and the standard deviation is 1. *Comm. Eng. and Part* The index is based on questions that capture the individuals' engagement and participation with community-oriented groups, voluntary work, views on solving problems within the community, and being an active member in community budgeting. *Political views and part.* based on questions regarding individuals' participation in political organizations and democratic beliefs. *Interpersonal Trust* based on questions about trusting the members of the community. *Views of others outside the community* based on questions about trusting a person that you didn't know before and having new neighbors (foreign neighbors) from outside the community. *Use of Viol. as a Pub. Policy* based on questions regarding the death penalty, justifying the use of police extra force, and justifying the community taking justice with their own hands.

C. Criminal Opportunities Due to their initial function of reducing livestock thievery, peasant rounds could have shaped the criminal landscape among its areas of influence. Then, the shaping of the criminal landscape should be explored as a potential mechanism behind the results. Moreover, the varying crime opportunities across areas or differential adult experiences, rather than childhood exposure, can also explain the effects in crime as adults.

However, I face data limitations to explore the short-term effects of rounds on crime as there is no available and comprehensive historical crime data for the 1970s-1990s in Peru. Therefore, I employ two strategies. First, I use contemporary incarceration data and police hotspot information to determine whether individuals exposed to peasant rounds during childhood exhibit different criminal behaviors as adults when they relocate to high-crime opportunity areas such as capital cities, crime hotspots, and coca-suitable districts. Second, I provide descriptive insights into the short-term crime landscape, focusing primarily on violent deaths, following the formation of

peasant rounds based on historical National Police records.

To carry out this analysis, I estimate equation 2, focusing on individuals who were exposed to peasant rounds as children but lived in districts without peasant rounds as adults. Specifically, I divide the sample into those born in peasant round districts whose last residence was still within those districts and those whose last residence was outside these areas.

As shown in Table 14, I find a statistically significant reduction in future criminal behavior both among individuals who remained in peasant round districts and those who migrated to non-peasant round areas, including high-crime opportunity zones. This persistent effect suggests that childhood exposure to peasant rounds reduces criminal engagement even when individuals face substantially higher criminal opportunities later in life. If peasant rounds merely altered the local criminal landscape, we would expect differential responses to new criminal environments. Instead, the consistent effect across varied adult contexts points to a different mechanism shaping individual behavior beyond changes in criminal opportunities.

Furthermore, column (1) in Table 14 demonstrates that even when moving to non-peasant round areas with substantial crime opportunities, the effect remains significant, equivalent to a 6% decrease in the likelihood of incarceration. This finding suggests that childhood exposure influences adult criminality, even in the absence of continued exposure to bottom-up non-state social structures in adulthood and irrespective of the crime opportunity landscape.

Table 13: Criminal Behavior: Criminal Opportunities

	(1) Crime [Non-PR High Crime]	(2) Crime [Non-PR High Crime]	(3) Crime [Non- Rounds]	(4) Crime [Peasant Rounds]
<i>ExposureAgeLess0to10_{d.c}</i>	-0.496** (0.200)	-0.387** (0.167)	-0.379** (0.180)	-0.324** (0.151)
Observations	71,322	13,256	13,256	13,256
Dep. var. mean	6.138	4.036	3.108	2.838
Magnitude of the effect	-8.08%	-9.59%	-12.19%	-11.42%
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *PeasantRounds_{d.c}* refers to the interaction between the peasant rounds' presence in the district year of birth and having less than 10 years old at the time of exposure. Column (1) represents a sample of individuals whose latest place of residence is within an area with high crime rates and without peasant rounds. *Crime* is the propensity to crime of a given district-cohort. Column (2) represents a sample of individuals born in a peasant rounds district whose last residence before incarceration was in a different district. Column (3) represents a sample where the birth district and the latest district of residence remained the same or were both districts with peasant rounds. The sample is at the district and year of birth level.

Second, Appendix B shows a descriptive analysis of the crime landscape, measured as violent deaths, before and after the peasant rounds formation. Although the analysis is at the province level, due to data availability, it shows that, on average, matched control districts had statistically similar violent deaths before rounds. This trend remains similar right after the formation of

rounds, although peasant-rounds seem to have fewer violent deaths this difference is not statistically significant.

These findings suggest that While I cannot definitively rule out short-term impacts on local criminal opportunities, the enduring effects across diverse adult settings suggest that there is another potential explanation behind the effects on crime and conflict-support behavior as adults.

Table 14: Criminal Behavior: Migration and Weather Shock

	(1) Crime [All]	(2) Crime [Matched]	(3) Crime [Matched]
<i>ExposureAgeLess0to10_{d.c}</i>	-1.662* (1.001)	-1.351* (0.770)	-0.970** (0.410)
Observations	71,322	13,256	13,256
Dep. var. mean	3.891	4.507	2.834
Magnitude of the effect	-42.72%	-29.98%	-34.23%
District of birth FE	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *PeasantRounds_{d.c}* refers to the interaction between the peasant rounds' presence in the district year of birth and having less than 10 years old at the time of exposure. Column (1) represents a sample of individuals whose latest place of residence is within an area with high crime rates and without peasant rounds. *Crime* is the propensity to crime of a given district-cohort. Column (2) represents a sample of individuals born in a peasant rounds district whose last residence before incarceration was in a different district. Column (3) represents a sample where the birth district and the latest district of residence remained the same or were both districts with peasant rounds. The sample is at the district and year of birth level.

D. Access to Jobs. As social capital is closely tied to social networks, community collective action could have shaped local interconnectedness. This tighter social fabric could, in turn, influence access to employment opportunities. Following the specification in equation 2 and an instrumental variables approach, I explore potential effects on employment (see Table A.9). The results show that while childhood exposure to peasant rounds modestly increases job access rates, it does not lead to increases in formal employment in adulthood.

5.2.2 Other Potential Mechanisms: Are There Other Potential Mechanisms in which Peasant Rounds Could Have Affect Criminality in the Future?

A. State Capacity As peasant rounds expanded their functions, they increasingly engaged with actors outside their immediate communities, gradually building relationships with local author-

ities and governments. This evolution raises the possibility that enhanced state capacity and increased public investment in districts with peasant rounds could be driving the observed outcomes. To explore this potential mechanism, I assess whether districts with historical peasant round presence exhibit higher contemporary state capacity, measured through local revenues, expenditure, and investment. Using the specification in equation 4, Table A.8 shows that exposure to historical peasant rounds has no significant effect on these measures of state capacity when compared to the matched control group. While I cannot definitively rule out impacts on other dimensions of state capacity (e.g., quality of public service provision, local infrastructure, or law enforcement effectiveness), the available data on local public financial management suggest that enhanced state capacity is unlikely to be the primary factor explaining the effects of childhood exposure to peasant rounds on future development.

B. Human Capital Given the well-established role of education in deterring criminal behavior, I explore human capital accumulation as another potential mechanism through which peasant rounds might have affected long-term outcomes. Peasant rounds could have influenced educational attainment in two ways. First, their engagement with external actors might have expanded access to education by facilitating school construction or reducing fears about sending children to schools outside the community. Second, the vigilance function of peasant rounds could have shaped parental engagement, as increased community monitoring may have made parents more attentive to their children’s behavior and more inclined to prioritize schooling.

To test this mechanism, I examine the impact of childhood exposure to peasant rounds on educational attainment. I find no significant effects on the likelihood of pursuing higher education or completing high school (see Table A.9). The result suggests that human capital accumulation, at least as measured by formal educational attainment, is unlikely to be the primary channel driving the observed reductions in criminal behavior.

6 Conclusion

This paper examines the long-term effects of childhood exposure to grassroots, non-state social structures on adult criminal behavior and conflict engagement in Peru. By exploiting the plausibly exogenous timing and location of peasant round formation and employing a difference-in-differences identification strategy, I find that exposure to these decentralized institutions at ages 10 and under significantly reduces the propensity to engage in criminal activities and participate in conflict-related violence later in life. The effects are concentrated among property and drug-related crimes and persist even for individuals who migrated to areas with higher crime opportunities and no peasant rounds as adults. The analysis reveals that the accumulation of pro-social capital during critical developmental stages is the primary mechanism driving these effects, with exposure to peasant rounds associated with positive and significant impacts on both bonding and bridging social capital.

These findings have important implications for policy. They demonstrate the potential for community-driven social structures to serve as institutional complements to formal state apparatuses in fragile contexts, particularly where the state's capacity to provide security, justice, and accountability is constrained. Policymakers should consider encouraging and facilitating the development of grassroots organizations as a means to accumulate social capital and deter criminal behavior. Moreover, these results underscore the importance of early childhood interventions in shaping long-term social preferences and behavioral patterns. Allocating resources to programs that cultivate social capital and promote positive community engagement during critical developmental windows could yield substantial returns in terms of reduced criminality and conflict involvement in adulthood.

While this paper presents robust evidence on the long-term impacts of exposure to bottom-up social structures, there are several avenues for future research. First, further investigation into the specific mechanisms through which social capital formation influences criminal behavior and conflict engagement could help optimize policy interventions. Second, exploring potential heterogeneity in effects across different types of grassroots organizations and institutional contexts could provide a more nuanced understanding of the conditions under which bottom-up governance structures are most effective. Finally, examining the interplay and complementarities between formal state institutions and grassroots organizations in shaping economic development outcomes could offer valuable insights into the optimal balance between top-down and bottom-up approaches to governance in fragile environments.

References

- Abeler, J., Falk, A., and Kosse, F. (2024). Malleability of preferences for honesty. *The Economic Journal*, page ueae044.
- Adams-Prassl, A., Huttunen, K., Nix, E., and Zhang, N. (2023). Violence against Women at Work*. *The Quarterly Journal of Economics*, 139(2):937–991.
- Aizer, A. and Doyle, J. J. (2015). Juvenile incarceration, human capital, and future crime: Evidence from randomly assigned judges. *Quarterly Journal of Economics*, 130.
- Alesina, A. and Ferrara, E. L. (2002). Who trusts others? *Journal of Public Economics*, 85.
- Allen, R. C. (1996). Socioeconomic conditions and property crime: A comprehensive review and test of the professional literature. *American Journal of Economics and Sociology*, 55.
- Almas, A. N., Phillips, D. A., Henderson, H. A., Hane, A. A., Degnan, K. A., Moas, O. L., and Fox, N. A. (2011). The relations between infant negative reactivity, non-maternal childcare, and children’s interactions with familiar and unfamiliar peers. *Social Development*, 20(4):718–740.
- Almond, D., Currie, J., and Duque, V. (2018). Childhood circumstances and adult outcomes: Act ii. *Journal of Economic Literature*, 56.
- Alsan, M., Barnett, A. M., Hull, P., and Yang, C. (2024). “something works” in u.s. jails: Misconduct and recidivism effects of the ignite program. Working Paper 32282, National Bureau of Economic Research.
- Anderson, D. M., Cesur, R., and Tekin, E. (2015). Youth depression and future criminal behavior. *Economic Inquiry*, 53.
- Aneja, A. and Xu, G. (2021). The Costs of Employment Segregation: Evidence from the Federal Government Under Woodrow Wilson*. *The Quarterly Journal of Economics*, 137(2):911–958.
- Attanasio, O., Cattan, S., and Meghir, C. (2022). Early childhood development, human capital, and poverty.
- Barr, A., Eggleston, J., and Smith, A. A. (2022). Investing in Infants: the Lasting Effects of Cash Transfers to New Families*. *The Quarterly Journal of Economics*, 137(4):2539–2583.
- Bauer, M., Chytilová, J., and Pertold-Gebicka, B. (2014). Parental background and other-regarding preferences in children. *Experimental Economics*, 17:24–46.
- Baylis, K., Gong, Y., and Wang, S. (2018). Bridging versus bonding social capital and the management of common pool resources. *Land Economics*, 94(4):pp. 614–631.
- Bašić, Z., Falk, A., and Kosse, F. (2020). The development of egalitarian norm enforcement in childhood and adolescence. *Journal of Economic Behavior Organization*, 179:667–680.
- Bhuller, M., Dahl, G. B., Loken, K. V., and Mogstad, M. (2018). Intergenerational effects of incarceration. *AEA Papers and Proceedings*, 108:234–40.
- Blattman, C., Chaskel, S., Jamison, J. C., and Sheridan, M. (2023). Cognitive behavioral therapy reduces crime and violence over ten years: Experimental evidence. *American Economic Review: Insights*, 5(4):527–45.
- Blattman, C., Jamison, J. C., and Sheridan, M. (2017). Reducing crime and violence: Experimental evidence from cognitive behavioral therapy in liberia. *American Economic Review*, 107(4):1165–1206.
- Buonanno, P. (2003). The socioeconomic determinants of crime. a review of the literature. Working Papers 63, University of Milano-Bicocca, Department of Economics.
- Buonanno, P., Ferrari, I., and Saia, A. (2024). All is not lost: Organized crime and social capital formation. *SSRN Electronic Journal*.
- Buonanno, P. and Montolio, D. (2008). Identifying the socio-economic and demographic determinants of crime across spanish provinces. *International Review of Law and Economics*, 28.

- Buonanno, P., Montolio, D., and Vanin, P. (2009). Does social capital reduce crime? *Journal of Law and Economics*, 52.
- Calamunci, F. M. and Frattini, F. F. (2023). When crime tears communities apart: Social capital and organised crime. *SSRN Electronic Journal*.
- Calkins, S. D. and Keane, S. P. (2009). Developmental origins of early antisocial behavior. *Development and Psychopathology*, 21(4):1095–1109.
- Case, A., Fertig, A., and Paxson, C. (2005). The lasting impact of childhood health and circumstance. *Journal of Health Economics*, 24.
- Cerulli, G., Ventura, M., and Baum, C. F. (2018). The economic determinants of crime: an approach through responsiveness scores. *Boston College Working Papers in Economics*.
- Chalfin, A. and McCrary, J. (2017). Criminal deterrence: A review of the literature.
- Chan, J. (2023). The long-run effects of childhood exposure to market access shocks: Evidence from the us railroad network expansion. *Explorations in Economic History*.
- Chetty, R., Dobbie, W. S., Goldman, B., Porter, S., and Yang, C. (2024). Changing opportunity: Sociological mechanisms underlying growing class gaps and shrinking race gaps in economic mobility. Working Paper 32697, National Bureau of Economic Research.
- Chetty, R., Jackson, M. O., Kuchler, T., Stroebe, J., Hendren, N., Fluegge, R. B., Gong, S., Gonzalez, F., Grondin, A., Jacob, M., Johnston, D., Koenen, M., Laguna-Muggenburg, E., Mudekereza, F., Rutter, T., Thor, N., Townsend, W., Zhang, R., Bailey, M., Barberá, P., Bhole, M., and Wernerfelt, N. (2022). Social capital i: measurement and associations with economic mobility. *Nature*, 608.
- Coleman, J. (1988). Social capital in the creation of human capital author. *The American Journal of Sociology*, 94.
- Cunha, F., Heckman, J. J., and Schennach, S. M. (2010). Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*, 78(3):883–931.
- Currie, J. and Tekin, E. (2012). Understanding the Cycle: Childhood Maltreatment and Future Crime. *Journal of Human Resources*, 47(2):509–549.
- Degregori, C. I., Coronel, J., del Pino, P., and Starn, O. (1996). *Las Rondas Campesinas y la Derrota de Sendero Luminoso*. Instituto de Estudios Peruanos.
- Dobbie, W., Gronqvist, H., Niknami, S., Palme, M., and Priks, M. (2019). The Intergenerational Effects of Parental Incarceration. *HKS Faculty Research Working Paper Series RWP19-031*.
- Easterly, W. (2008). Institutions: Top down or bottom up? volume 98.
- Eisenberg, N., editor (1982). *Copyright*. Developmental Psychology. Academic Press, San Diego.
- Eisenberg, N., Spinrad, T. L., and Knafo-Noam, A. (2015). *Prosocial Development*, chapter 15, pages 1–47. John Wiley Sons, Ltd.
- Fehr, E., Bernhard, H., and Rockenbach, B. (2008). Egalitarianism in young children. *Nature*, 454(7208):1079–1083.
- Fergusson, L., Guerra, J.-A., and Robinson, J. A. (2024). Anti-social norms. Working Paper 32717, National Bureau of Economic Research.
- Ferrara, E. L. (2003). Kin groups and reciprocity: A model of credit transactions in ghana. *American Economic Review*, 93.
- Frankenberg, E. D. T. (2017). Human capital and shocks: Evidence on education, health and nutrition. *NBER WORKING PAPER SERIES*, 110265.
- Gelfand, M. J., Gavrillets, S., and Nunn, N. (2024). Norm dynamics: Interdisciplinary perspectives on social norm emergence, persistence, and change. *Annual Review of Psychology*, 75(Volume 75, 2024):341–378.

- Gitlitz, J. S. and Rojas, T. (1983). Peasant vigilante committees in northern peru. *Journal of Latin American Studies*, 15(1):163–197.
- Gitlitz, J. S. and Rojas, T. (1985). Las rondas campesinas en cajamarca - peru. *Apuntes: Revista de Ciencias Sociales*.
- Glaeser, E. L., Laibson, D., and Sacerdote, B. (2002). An economic approach to social capital. *Economic Journal*, 112.
- Glaeser, E. L. and Sacerdote, B. (1999). Why is there more crime in cities? volume 107.
- Goldschmidt, D. and Schmieder, J. F. (2017). The Rise of Domestic Outsourcing and the Evolution of the German Wage Structure*. *The Quarterly Journal of Economics*, 132(3):1165–1217.
- Granovetter, M. (2005). The impact of social structure on economic outcomes. *Journal of Economic Perspectives*, 19.
- Harbaugh, W. T., Krause, K., and Liday, S. G. (2002). Bargaining by Children. University of Oregon Economics Department Working Papers 2002-04, University of Oregon Economics Department.
- Hill, P., Roberts, B. W., Grogger, J. T., Guryan, J., and Sixkiller, K. (2011). Decreasing delinquency, criminal behavior, and recidivism by intervening on psychological factors other than cognitive: A review of the intervention literature. *National Bureau of Economic Research*.
- Hirschi, T. and Gottfredson, M. (1983). Age and the explanation of crime. *American Journal of Sociology*, 89(3):552–584.
- Hoynes, H., Schanzenbach, D. W., and Almond, D. (2016). Long-run impacts of childhood access to the safety net. *American Economic Review*, 106(4):903–34.
- Imrohoroglu, A., Merlo, A., and Rupert, P. (2006). Understanding the determinants of crime. *Journal of Economics and Finance*, 30.
- Jennings, C. and Sanchez-Pages, S. (2017). Social capital, conflict and welfare. *Journal of Development Economics*, 124:157–167.
- Kawachi, I., Kennedy, B. P., and Wilkinson, R. G. (1999). Crime: Social disorganization and relative deprivation. *Social Science and Medicine*, 48.
- Lederman, D., Loayza, N., and Menéndez, A. M. (2002). Violent crime: Does social capital matter? *Economic Development and Cultural Change*, 50.
- Lin, N. (2001). *Social Capital: A Theory of Social Structure and Action*. Cambridge University Press.
- Machin, S., Marie, O., and Vujić, S. (2011). The crime reducing effect of education. *Economic Journal*, 121.
- Mann, H., Garcia-Rada, X., Hornuf, L., and Tafurt, J. (2016). What deters crime? comparing the effectiveness of legal, social, and internal sanctions across countries. *Frontiers in Psychology*, 7.
- Mark Billings, S. B. H. (2019). Schools, neighborhoods, and the long-run effect of crime-prone peers. *Nber Working Paper Series*.
- Martin, J. L. and Lee, M. (2015). *Social Structure*, pages 713–718. Elsevier.
- Metzler, M., Merrick, M. T., Klevens, J., Ports, K. A., and Ford, D. C. (2017). Adverse childhood experiences and life opportunities: Shifting the narrative. *Children and Youth Services Review*, 72.
- Moore, M. D. and Recker, N. L. (2016). Social capital, type of crime, and social control. *Crime and Delinquency*, 62.
- Moscona, J., Nunn, N., and Robinson, J. (2018). Kinship and conflict: Evidence from segmentary lineage societies in sub-saharan africa. *National Bureau of Economic Research*.

- Norris, S., Pecenco, M., and Weaver, J. (2021). The effects of parental and sibling incarceration: Evidence from ohio. *American Economic Review*, 111(9):2926–63.
- Nussio, E. and Clayton, G. (2024). Introducing the lynching in latin america (lyla) dataset. *Journal of Peace Research*, page 00223433231220275.
- Pacheco, J. and Wagner, N. (2023). Long-term impacts of an early childhood shock on human capital: Evidence from the 1999 economic crisis in ecuador. *Health Economics (United Kingdom)*.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24.
- Putnam, R. D. (2000). *Bowling Alone: America's Declining Social Capital*, pages 223–234. Palgrave Macmillan US, New York.
- Ramirez, A. (1987). *I Encuentro Nacional Rondas Campesinas*. Federación Nacional de Rondas Campesinas.
- Ramirez, A. (2001). *25 años de Rondas Campesinas*. Federación Departamental de Rondas Campesinas y Urbanas de Cajamarca.
- Reisch, M. and Guyet, D. (2007). *Communities as "Big Small Groups": Culture and Social Capital*.
- Rosales-Rueda, M. (2018). The impact of early life shocks on human capital formation: evidence from el niño floods in ecuador. *Journal of Health Economics*, 62.
- Rose, D. R. and Clear, T. R. (1998). Incarceration, social capital and crime: Implications for social disorganization theory. *Criminology*, 36.
- Sabatier, P. A. (1986). Top-down and bottom-up approaches to implementation research: A critical analysis and suggested synthesis. *Journal of Public Policy*, 6.
- Sampson, R. J. and Laub, J. H. (1993). Crime in the making: Pathways and turning points through life. *Crime & Delinquency*, 39(3):396–396.
- Schiman, J. C., Kaestner, R., and Sasso, A. T. L. (2017). Early childhood health shocks and adult wellbeing: Evidence from wartime britain.
- Schubiger, L. I. (2021). State violence and wartime civilian agency: Evidence from peru. *Journal of Politics*, 83.
- Schubiger, L. I. and Sulmont, D. (2021). 2. *Civil Wars and Their Consequences: The Peruvian Armed Conflict in Comparative Perspective*.
- Starn, O. (1991). Reflexiones sobre rondas campesinas, protesta rural y nuevos movimientos sociales.
- Starn, O. (1993). Hablan los ronderos: la búsqueda de la paz en los andes.
- Starn, O. (1999). *Nightwatch: The Politics of Protest in the Andes*. Duke University Press.
- Stuart, B. A. and Taylor, E. J. (2021). The effect of social connectedness on crime: Evidence from the great migration. *Review of Economics and Statistics*, 103.
- Sviatschi, M. M. (2022). Making a narco : Childhood exposure to illegal labor markets and criminal life paths. *Econometrica*, 90:1835–1878.
- Weiner, D. A., Lutz, B. F., and Ludwig, J. (2009). The effects of school desegregation on crime. *National Bureau of Economic Research Working Paper Series*, No. 15380.

Appendix

A Index Construction Procedure

This section describes the method used to construct outcome indices from individual survey questions.

1. Aggregation of Variables:

Outcome variables are aggregated into indices using a weighted average approach.

Each question within an index is given the same weight.

The aggregated value is normalized to have a mean of 0 and a standard deviation of 1.

2. Scale of Individual Variables:

Some variables are defined as binary, while others use either a four-point or a ten-point Likert scale.

Variables using a three- or more-point scale were converted to dummies based on the average response value.

3. Raw Index Calculation:

The raw index is the sum of all individual variables, each weighted equally.

The Community Engagement and Participation Index consists of five questions. Each question is scored on a scale 1-4. These scores are then transformed into binary values. The total sum ranges from 0-4, with higher scores indicating higher levels of engagement and participation.

The Democratic Views and Political Participation Index consists of six questions. Two questions scored on a scale of 1-4, two questions scored on a scale of 1-10, and the other two are binary variables. These scores are then transformed into binary values. The total sum ranges from 0-6, with higher scores indicating higher levels of democratic attitudes and participation.

The Interpersonal Trust Index consists of one question. The question is a four-point variable that captures whether the person trusts the member of his or her community (very much, a lot) or not (little, not at all).

The Views of Others Outside Community Index consists of two questions. Both questions scored on a scale 1-4. These scores are then transformed into binary values. The total sum ranges from 0-2, with higher scores indicating higher levels of trust.

The Use of Violence as a Public Policy Index consists of three questions. All questions are binary variables. The total sum ranges from 0-3, with higher scores indicating higher levels of use of violence.

4. Handling Missing Data:

If an observation has missing variables, the index is constructed using only non-missing items.

Non-missing variables are weighted appropriately, and the sum is normalized.

5. Index Calculation Formula:

Let:

S_{nm} = Sum of non-missing variables ($S = a \times w_a + b \times w_b + c \times w_c$)

W = Sum of weights for all variables ($W = w_a + w_b + w_c + w_d$)

N_{nm} = Sum of weights for non-missing variables ($N = w_a + w_b + w_c$)

The index is calculated as: $\text{Index} = S_{nm} \times (W/N_{nm})$

6. Final Scaling:

The weighted index is rescaled so that the control group has a mean of 0 and a standard deviation of 1.

B Complementary Evidence

B.1 The Short-Term Effects of Peasant Rounds on Crime

B.1.1 Violent Deaths Data

There is limited to non-available data regarding crime and police records before the 1990s. However, there are some available books on deaths and violent deaths at the province-level from the Peruvian Population Annual Statistics Books for 1971, 1976, and 1979. These books are particularly useful as they provide –although limited– data on violence before the formation and expansion of peasant rounds. An additional caveat is that the variable violent deaths also include accidents. However, these are the few available sources I found regarding violence before the 1980s.

I also use the 1989 Peruvian Population Annual Statistics Book which includes the number of violent deaths from the 1980s period. This data allows me to provide suggestive evidence on the potential short-term effect of the peasant rounds formation. Similar to the previous data, this is available at the province level. Data on crime and police records in Peru is scarce and limited before the 1990s. However, the Peruvian Population Annual Statistics Books from 1971, 1976, and 1979 provide some province-level data on deaths and violent deaths, which can serve as a proxy

for violence during that period. These books are particularly useful as they provide –although limited– data on violence before the formation of peasant rounds. It’s important to note that the variable “violent deaths” in these sources also includes accidents, which presents a caveat in interpreting the data. Nevertheless, these books represent the few available sources of violence in Peru before the 1980s.

To gain further insights into the potential short-term effects of the peasant rounds formation, the 1989 Peruvian Population Annual Statistics Book is used, which includes data on the number of violent deaths during the 1980s period. Similar to the 1970s books, this information is available at the province level.

In 1971, out of an average of 123 deaths, about 9.9% were recorded as violent deaths by the Ministry of Health. Meanwhile, in 1976—the year the peasant round was formed—out of an average of 124 deaths, almost 12% were considered violent deaths.

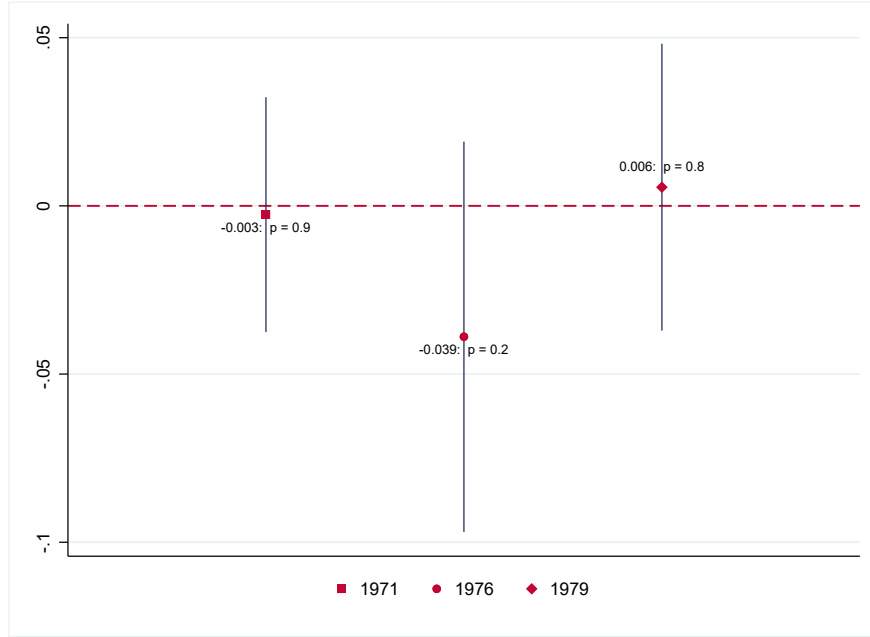
While acknowledging the limitations of the available data, these sources provide a valuable resource for providing suggestive evidence on the effects of peasant rounds and it also allows me to control for potential pre-trends in violence among the different districts.

B.1.2 Suggestive Evidence

While the main analysis focuses on identifying the causal effects of childhood exposure to peasant rounds on adult outcomes, this section presents complementary, suggestive evidence of their more immediate impacts on district-level violence. Due to limited historical data availability, I have used digitized province-level records from the Peruvian Annual Statistics Report (1971-1979) and Police Annual Report (1983-1989) to study short-term changes in violent deaths before and after peasant round formation. Although this supplementary analysis may not provide empirical evidence for causal inference, it can give us insights into whether districts with emerging peasant rounds showed different crime trends compared to other areas in the years before and immediately following their establishment. Furthermore, there might be potential concerns about omitted variable bias driven by pre-existing differences in baseline crime or conflict conditions across districts that could confound the estimated long-run impacts of childhood exposure. This analysis can reinforce the credibility of the parallel trends assumption underlying the primary difference-in-differences design by exploring whether peasant round presence predicts short-term deviations in violence patterns. It complements the set of geographic and socioeconomic controls used in the matched sampling procedure for the long-run analysis.

Figure A.1 suggests that there is no significant difference in the rate of violent deaths (number of violent deaths over the total number of deaths) between provinces with districts that have peasant rounds and those without them before the formation of these social structures. An important disclaimer is that besides including homicides, suicides, and conflict-related deaths, this variable also includes deaths caused by accidents.

Figure A.1: Violent deaths effects at the province level



Note. This graph plots the coefficients obtained from a regression of the violent death rate in the treated provinces. The Y-axis shows the estimated coefficients on the treatment variable and the X-axis shows the year. The confidence intervals are at 95%.

Moreover, Table A.1 provides suggestive evidence that provinces with districts forming peasant rounds had lower violent death rates than provinces without such groups. However, these differences are not statistically significant. This pattern remained consistent across the years examined, from 1983 to the late 1980s. Although the short-term impacts don't seem strong enough to reduce extreme forms of violence like homicides significantly, these findings suggest that peasant rounds may have a moderating influence on general criminal activity within the communities following their establishment.

Table A.1: Number of violent deaths

	(1) Before 1983	(2) Viol. Death 1983	(3) Viol. Death 1984	(4) Viol. Death 1985	(5) Viol. Death 1986	(6) Viol. Death 1987	(7) Viol. Death 1988	(8) Viol. Death 1989
<i>ProvinceTreated_{it}</i>	-0.103 (0.168)	-4.793 (5.845)	-9.569 (10.873)	-4.845 (6.310)	-5.358 (5.134)	-1.690 (1.683)	-4.121 (3.666)	-1.162 (1.507)
Observations	74	74	74	74	74	74	74	74
Dep. var. mean	3.000	34.750	61.667	31.222	26.667	16.333	23.900	6.813
Magnitude of the effect	-3.45%	-13.79%	-15.52%	-15.52%	-20.09%	-10.34%	-17.24%	-17.05%

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *Number of violent deaths* is the total number of deaths in a province categorized as violent, including accidents, suicides, homicides, deaths associated with crimes, among others. *ProvinceTreated* is a dummy variable that identifies the provinces with districts where peasant rounds were formed between 1976 and 1982, and 0 otherwise.

C More on the Self-Defense Committees

C.1 Context

The emergence of self-defense committees can be traced back to the 1980s, when they were developed as a response to the violence of the armed conflict involving the SL and state forces. In 1981, the government declared the first state of emergency in five provinces in central Peru as a preventive measure, placing them under political-military command. By 1983, the first self-defense committees began to organize to prevent, resist, and fight insurgents. In mid-1983 and 1984, the armed forces started training and arming civilians in emergency zones and nearby areas, formally organizing them into self-defense committees.

While the official year of incorporating these committees into the national counterinsurgency strategy was 1986, the restructuring of the Military Command in the first half of the 1980s led to the informal promotion and organization of self-defense committees. A new General, previously trained in the United States, was assigned to Ayacucho, the epicenter of the internal armed conflict. He began unofficially organizing committees in certain towns, providing them with weapons and firearms. Drawing from his training, he associated these committees with the Strategic Villages organized by the U.S. military in Vietnam and the Civilian Self-Defense Patrols in Guatemala.

These self-defense committees proliferated throughout different districts across south-central Peru, with their largest expansion occurring from 1988 to 1991. By the early 1990s, there were 4,205 officially recognized committees.

C.2 Self-Defense Committees data

Similar to the peasant rounds data, there is no available and comprehensive data on the formation and presence of self-defense committees. Therefore, I used four data sources, the Ministry of Defense (MoD) records, the 2014 Municipal Registry, TRC data, and [Degregori et al. \[1996\]](#), to identify and build a data set on the presence of Self-Defense Committees across Peru. The MoD records were derived from the Gorriti collection, which comprises official and unofficial materials and records on the Peruvian government's strategies to combat the Shining Path insurgency from the 1980s to 1994. These records shed light on the tactics employed, such as training and equipping civilians, as well as their organization into committees. In addition to the MoD records, I also use the 2014 Municipal Registry, TRC data, and [Degregori et al. \[1996\]](#) to identify and corroborate the presence of Self-Defense Committees across Peru.

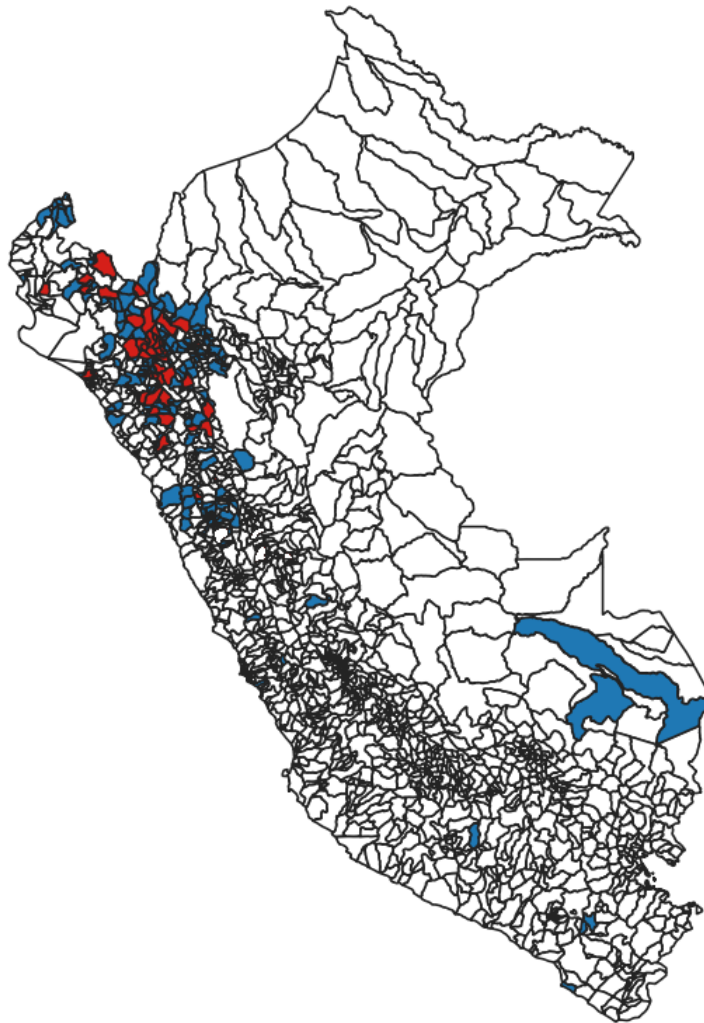
A total of 915 committees, specifically located in the regions of Ayacucho, Cusco, Huancavelica, and Junin, were granted a legal framework in the early 1990s as part of the national counterinsurgency strategy against terrorism and illicit drug trafficking. It is important to note that the emergence of the first Self-Defense Committees dates back as early as 1984. As mentioned before, to identify the presence of these committees, I rely on multiple sources, including the Municipal Registry, where local authorities report their existence. I also use the Registry to identify the districts with non-legal committees operating by comparing the districts host to the 915 legal

committees. This information serves to validate the regions identified in the MoD records and [Degregori et al. \[1996\]](#).

I use the committees' data to measure the exposure to a top-down structure on criminal paths as a placebo analysis for the exposure to peasant rounds. The self-defense committees were predominantly formed in areas heavily affected by the internal armed conflict, particularly in the Ayacucho region, as well as in regions declared under a State of Emergency and their surrounding areas.

D Figures

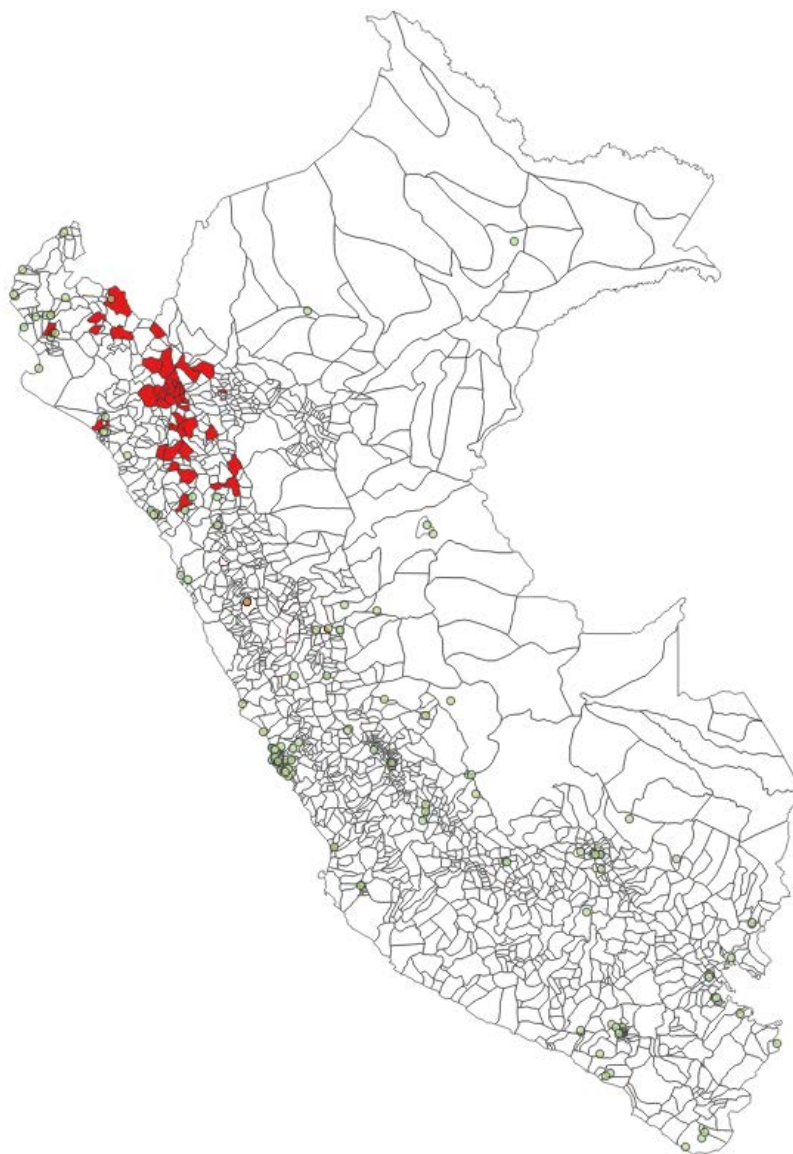
Figure A.2: Peasant Rounds 1976-1982:
Treated and Matched Control Districts



Note. The map shows in red the districts with at least one peasant round organized between 1976 and 1982. It identifies the matched control districts in blue. There is a total of 217 districts including treated and matched control ones.

Figure A.3: Contemporary Lynchings and Peasant Rounds 1976-1982:

[LYLA Dataset]



Note. The map shows in red the districts with at least one peasant round organized between 1976 and 1982. It shows in light green, the geocoded lynchings registered in the LYLA Dataset from 2010 to 2022 from ETH Zurich [[Nussio and Clayton 2024](#)].

E Descriptive statistics

Table A.2: Summary statistics

	Mean	SD
A. District-year of birth outcome variables		
Propensity to crime	3.89	11.33
Recidivism [probation]	10.61	12.98
Recidivism [prison time]	10.76.50	13.03
Juvenile incarceration	15.89	19.79
Drug-trafficking crimes	9.78	11.29
Sexual violence crimes	7.8	8.51
Homicides	11.29	12.57
Robberies	9.59	12.4
Terrorism and disobedience	1.20	0.00
Disappearances and killings	1.33	0.73
B. Individual-Household level outcome variables		
Primary and some HS	0.26	0.44
HS and some Higher education	0.38	0.48
Complete Higher education	0.20	0.40
Preference for a non-democratic government	0.15	0.35
Participacion	0.40	0.49
Participacion (education parents org.)	0.26	0.44
Community participation	0.26	0.44
Interpersonal trust	0.11	0.31
Support of democratic system	0.42	0.49
Attendance at Meetings of Community Improvement Group	0.15	0.36
Democratic beliefs (right to vote)	0.26	0.44
Democratic beliefs (right to protest)	0.34	0.47
Perceived future crime victimization	0.29	0.45
Agree with the dissolution of the Supreme Court of Justice	0.17	0.38
Executive is Justified in Closing Legislature	0.24	0.43
Coup is Justified when Corruption is High	0.55	0.49
Coup is Justified when Crime is High	0.50	0.50

F Balance

F.1 Full Sample

Table A.3: Balance of Districts

Variable	Control [<i>Not rounds</i>]	Treatment [<i>Rounds</i>]	Difference (T - C)	p-value (T - C)
% Illiterate (1972)	0.304	0.366	0.062	0.136
Population (log, 1972)	8.922	14.733	5.811	0.184
Employment (log, 1961)	2.756	3.379	0.623	0.034
% Land redistrib.	0.146	0.126	-0.020	0.665
Roads density (1973)	35.242	12.772	-22.469	0.096
% Rural area	0.663	0.643	-0.020	0.823
Qhapaq Nam lng.	0.039	0.032	-0.007	0.657
% Native Peasant Comm. (1976)	0.010	0.000	-0.010	0.589
% Dirt floor	0.707	0.850	0.143	0.010
% Catholic. (1981)	0.885	0.901	0.016	0.305
Private land Ha. (1961)	12.133	12.352	0.219	0.990
Slope	6.151	6.975	0.825	0.249
Altitude	1,830.139	2,041.250	211.111	0.403
Elevation	2,231.637	2,181.090	-50.548	0.856
% River area	0.074	0.080	0.005	0.694

Note: ***, **, and * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

F.2 Matched Sample

Table A.4: Balance of Districts

	Control [<i>Not rounds</i>]	Treatment [<i>Rounds</i>]	Difference (T - C)	p-value (T - C)
% Illiterate (1972)	0.332	0.366	0.035	0.144
Population (log, 1972)	15.329	14.733	-0.596	0.934
Employment (log, 1961)	3.281	3.379	0.098	0.762
% Land redistrib.	0.190	0.126	-0.064	0.214
Roads density (1973)	29.088	12.772	-16.315	0.052
% Rural area	0.662	0.643	-0.019	0.845
Qhapaq Nam lng.	0.032	0.032	0.000	0.984
% Native Peasant Comm. (1976)	0.015	0.000	-0.015	0.514
% Dirt floor	0.813	0.850	0.037	0.376
% Catholic. (1981)	0.884	0.901	0.017	0.180
Private land Ha. (1961)	10.176	12.352	2.176	0.626
Slope	6.365	6.975	0.610	0.369
Altitude	1,744.439	2,041.250	296.811	0.146
Elevation	2,104.785	2,181.090	76.304	0.737
% River area	0.076	0.080	0.004	0.792

Note: ***, **, and * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

G Main Outcomes

G.1 Robustness Checks

Table A.5: Criminal behavior: Robustness Checks

	(1) Crime [Sent. Lng.]	(2) Crime [Age at Inc.]	(3) Crime [Depa×Year FE]	(4) Crime [YearArrest FE]
<i>ExposureAgesLess0to10_{d,c}</i>	-0.718** (0.347)	-0.715* (0.378)	-0.790** (0.332)	-0.297* (0.160)
Observations	13,256	13,256	13,256	13,256
Dep. var. mean	4.741	4.741	4.741	4.741
Magnitude of the effect	-15.14%	-15.07%	-16.65%	-6.26%
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. **Note.** *ExposureAgesLess0to10_{d,c}* refers to the interaction between the presence of peasant rounds in the district year of birth and having less than 10 years old at the time of exposure. *Crime* is the propensity to crime of a given district-cohort. The sample is at the district and year of birth level. The sample consists of the matched districts sample.

Table A.6: Terrorism Criminal behavior: Robustness Checks

	(1) Crime [Sent. Lng.]	(2) Crime [Age at Inc.]	(3) Crime [Depa×Year FE]	(4) Crime [YearArrest FE]
<i>ExposureAgesLess0to10_{d,c}</i>	-0.009* (0.005)	-0.009* (0.005)	-0.011* (0.006)	-0.003* (0.002)
Observations	13,256	13,256	13,256	13,256
Dep. var. mean	0.022	0.022	0.021	0.022
Magnitude of the effect	-40.91%	-40.89%	-52.38%	-13.64%
District of birth FE	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. **Note.** *ExposureAgesLess0to10_{d,c}* refers to the interaction between the presence of peasant rounds in the district year of birth and having less than 10 years old at the time of exposure. *Crime* is the propensity to crime of a given district-cohort. The sample is at the district and year of birth level. The sample consists of the matched districts sample.

G.2 Instrumental Variables

Table A.7: Instrument Validity

	(1) Peasant Round [Matched Sample]	(2) Peasant Round [Full Sample]
<i>LandSuitability_{d,c}</i>	0.264*** (0.009)	0.263*** (0.008)
Kleibergen and Paap F stat	917.45	908.69
Montiel-Pflueger Test	917.45	908.69
Observations	13,256	71,322
District of birth FE	Yes	Yes
Year of birth FE	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *Land Suitability.* is a dummy variable that identifies the most suitable land and climate characteristics for the raising of cattle (i.e. cows, lambs, beef, and goats). Following the suitability characteristics outlined by the Ministry of Production in Peru, a dummy variable was created that captures 6 variables: weather, soil pH, ecological area, altitude, ruggedness, and slope.

Table A.8: Instrumental Variables: Exclusion Restriction

	(1) Municipal Collected Revenue	(2) Central Gov. Assigned Revenues	(3) Municipal Expenditure	(4) Canon Transfers	(5) Local Police [Serenazgo]	(6) Social Campaigns [Health]
<i>PastoralFarming_{d,c}</i>	-0.018 (0.071)	-0.082 (0.053)	-0.029 (0.082)	0.004 (0.066)	-0.073 (0.058)	-0.028 (0.040)
Observations	1,736	3,677	1,736	1,736	3,854	1,736
Number of districts	217	217	217	217	217	217
Dep. var. mean	0.00	0.00	0.00	0.00	0.00	0.64
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** *PastoralFarming_{d,c}* refers to a dummy variable that identifies whether the characteristics of the land and the climate are suitable for cattle raising. *Municipal collected revenue* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the total revenue collected by the Municipality for the period 2015 to 2022. *Central government assigned revenues* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the budgets assigned by the central government to each municipality for the period 2003 to 2019. *Municipal expenditure* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the effective budget spent by the municipality for each year between 2015 and 2022. *Canon transfers* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the total transfers associated with extractive activities to each municipality for each year between 2015 and 2022. *Local police* is a standardized variable with a mean of 0 and a standard deviation of 1. The variable represents the number of hired local police called *serenazgo* for each year between 2001 and 2020. They are not allowed to perform the duties of official police officers but instead, work as a support team. *Social campaigns*. It is a dummy variable that takes the value of 1 if the municipality implements health preventive campaigns for each year between 2014 and 2021.

G.3 Cohort Analysis: Social Capital

Table A.9: Cohort Effects on Social Capital

	(1) Interper. Trust	(2) View of others outside comm.	(3) Comm. Eng. and Part.	(4) Political Views and Part.	(5) Use of viol. Pub. Pol.
<i>Ages31to35_{d,c}</i>	0.010 (0.120)	0.016 (0.014)	0.014 (0.033)	0.033 (0.109)	-0.009 (0.011)
<i>Ages25to30_{d,c}</i>	0.016 (0.021)	0.015 (0.032)	0.023 (0.089)	0.111 (0.201)	-0.103 (0.107)
<i>Ages17to24_{d,c}</i>	0.037 (0.026)	0.029 (0.137)	0.058 (0.069)	0.123 (0.108)	-0.218 (0.211)
<i>Ages11to16_{d,c}</i>	0.041* (0.018)	0.033* (0.016)	0.064 (0.040)	0.172 (0.111)	-0.323 (0.203)
<i>Ages6to10_{d,c}</i>	0.082*** (0.022)	0.032* (0.012)	0.153*** (0.042)	0.203** (0.103)	-0.314*** (0.173)
<i>AgesLess1to5_{d,c}</i>	0.088*** (0.021)	0.087*** (0.025)	0.174** (0.078)	0.273*** (0.114)	-0.402* (0.211)
<i>AgeLess0to0_{d,c}</i>	0.110*** (0.042)	0.091** (0.045)	0.169** (0.086)	0.283*** (0.121)	-0.391*** (0.107)
Observations	3,017	1,030	4,131	8,011	2019
District of birth FE	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. **Note.** The outcome variables are built using the LAPOP Survey. All indexes are rescaled such that the control group mean is 0 and the standard deviation is 1. *Comm. Eng. and Part* The index is based on questions that capture the individuals' engagement and participation with community-oriented groups, voluntary work, views on solving problems within the community, and being an active member in community budgeting. *Political views and part.* based on questions regarding individuals' participation in political organizations and democratic beliefs. *Interpersonal Trust* based on questions about trusting the members of the community. *Views of others outside the community* based on questions about trusting a person that you didn't know before and having new neighbors (foreign neighbors) from outside the community. *Use of Viol. as a Pub. Policy* based on questions regarding the death penalty, justifying the use of police extra force, and justifying the community taking justice with their own hands.

H Potential Mechanisms

Table A.10: Potential Mechanism: State Capacity

	(1) Municipal Collected Revenue	(2) Central Gov. Assigned Revenues	(3) Municipal Expenditure	(4) Canon Transfers	(5) Local Police [Serenazgo]	(6) Social Campaigns [Health]
<i>ExposureAgesLess0to10_{d,c}</i>	-0.049 (0.203)	-0.082 (0.053)	-0.081 (0.237)	0.011 (0.183)	-0.200 (0.181)	-0.058 (0.081)
Observations	1,736	3,677	1,736	1,736	3,854	1,736
Number of districts	217	217	217	217	217	217
Dep. var. mean	0.00	0.00	0.00	0.00	0.00	0.64
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. **Note.** *ExposureAgesLess0to10_{d,c}* refers to the interaction between the presence of peasant rounds in the district year of birth and being less than 10 years old at the time of exposure. *Municipal collected revenue* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the total revenue collected by the Municipality for the period 2015 to 2022. *Central government assigned revenues* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the budgets assigned by the central government to each municipality for the period 2003 to 2019. *Municipal expenditure* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the effective budget spent by the municipality for each year between 2015 and 2022. *Canon transfers* is a standardized variable with a mean of 0 and a standard deviation of 1. This variable represents the total transfers associated with extractive activities to each municipality for each year between 2015 and 2022. *Local police* is a standardized variable with a mean of 0 and a standard deviation of 1. The variable represents the number of hired local police called *serenazgo* for each year between 2001 and 2020. They are not allowed to perform the duties of official police officers but instead, work as a support team. *Social campaigns*. It is a dummy variable that takes the value of 1 if the municipality implements health preventive campaigns for each year between 2014 and 2021.

Table A.11: Potential Mechanism: Access to Jobs and Human Capital

	(1) Labor Market [Had a job]	(2) Labor Market [Formal job]	(3) Human Capital [Complete HS]	(4) Human Capital [Higher Educ]	(5) State Capacity [Prov. of High Quality Water]
<i>ExposureAgeLess0to10_{d,c}</i>	0.028 (0.310)	0.013 (0.263)	-0.041 (0.208)	0.009 (0.136)	-0.048 (0.086)
Observations	137,426	137,426	153,596	153,596	157,579
Dep. var. mean	0.51	0.23	0.41	0.15	0.15
District of birth FE	Yes	Yes	Yes	Yes	Yes
Year of birth FE	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at district level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. **Note.** *ExposureAgeLess0to10_{d,c}* refers to the interaction between the presence of peasant rounds in the district year of birth and having less than 10 years old at the time of exposure. *Human capital: Complete HS* takes the value of 1 if the person completed high school. *Higher Education* takes the value of 1 if the person has some higher education, including technical education, and 0 otherwise. *Access to jobs: Having a job* takes the value of 1 if the person reports having had a job during the past week (does not include non-pay activities or household jobs) and 0 otherwise. *Formal job* takes the value of 1 if the person reported having a formal job (i.e., has signed a contract) and 0 otherwise. *State capacity: provision of high-quality water* takes the value of 1 if the water provision passes the quality test and 0 otherwise.

	(1) Interper. Trust	(2) Views of others outside comm.	(3) Citiz. Beh. and Eng.	(4) Demo. Views and Inst. Part.	(5) Use of Viol. Pub. Pol.
<i>ExpAgeLess0to10_{dc} × Shock_d</i>	0.285 (0.234)	0.070*** (0.024)	0.354** (0.146)	1.041*** (0.078)	-0.801*** (0.129)
Observations	3,017	1,030	4,131	8,011	2,019

	(1) Mistrust and Democ.	(2) Voting and Corrup.	(3) Commun. Part.	(4) Parent Group Part.	(5) Political Part.
<i>ExpAgeLess0to10_{dc} × Shock_d</i>	-0.066** (0.031)	-0.264 (0.383)	0.865** (0.425)	0.327*** (0.093)	0.015** (0.006)
Observations	410,144	32,013	97,935	97,935	97,935