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# Honduras Safer Municipalities Project: Impact Evaluation of the Temporary Jobs Program for at-Risk Youth

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Endline Evaluation Report

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<sup>1</sup>IPA IRB protocol: 15411; the study was registered at the AEA RCT Registry: AEARCTR-0000803.

## 2 Executive Summary

### 2.1 Overview

**This report describes the lives of youth living in high-violence communities in Honduras and provides initial results from an impact evaluation (IE) of a labor market readiness program intended to improve labor market outcomes and reduce violence perpetration and victimization.** The Temporary Jobs Program for At-Risk Youth (PGET, from its Spanish name) was offered to youth aged 18-30 who were not currently in education, training, or participating consistently in the labor market. The program was implemented as part of the Safer Municipalities Project with financial and technical support from the World Bank.

**Honduras consistently ranks among the most violent countries in the world, as measured by the homicide rate.** Latin America and the Caribbean is the most violent region in the world, and Honduras is extreme even by regional standards. In 2021, for example, Honduras was the fourth most violent country in the world, behind only Jamaica, South Africa, and St. Lucia. The overwhelming majority of homicide victims and perpetrators are adolescents and young adults living in marginalized urban communities. In addition to lives lost, the pernicious effects of violence influence the social, economic, and health outcomes of entire populations. Youth in high-violence contexts have limited human, social, and physical capital which constrains their ability to participate in, and their expected returns to, legal labor market activity.

**A common policy response to youth unemployment and associated negative outcomes is to provide skills training, but such programs have shown disappointing impacts in terms of crime and violence reduction, especially relative to program costs. There is, however, growing evidence on the importance of interventions targeting “soft” skills and personality traits among adolescents and young adults.** Emerging evidence on cognitive development during adolescence and early adulthood suggests that more holistic programming, that also addresses mental health and cognitive biases, may be more effective in improving life outcomes.

**PGET aimed to prepare youth aged 18 to 30 years for participation in the local labor market and to facilitate their access to high-quality, formal sector jobs. The program was designed based on evidence and included four components:** (1) technical/vocational and soft skills training, (2) group-based cognitive behavioral therapy (CBT), (3) a temporary job, and (4) income support. Each component targeted specific risk and protective factors: lack of human capital, mental and behavioral biases, signaling to potential employers, and opportunity cost. The most innovative component was the group-based CBT.

**The program was implemented as a single-arm Randomized Controlled Trial (RCT) to study the program’s impacts on the life trajectories of at-risk youth, with a focus on their labor market and life outcomes and participation in and exposure to violence and crime.** Eligible youth that signed up for the program were randomly assigned to either receive a place in the program (*treatment group*) or not (*control group*). Randomization was carried out through public lotteries in each of the municipalities included in the Safer Municipalities Project: La Ceiba, Choloma, and El Progreso.

**The analysis in this report is based on dedicated baseline and endline surveys.** Baseline data was collected between March and June, 2018. PGET was implemented from May to August, 2018. Follow-up data collection started in March 2022 and has proceeded in waves. Some data collection activities are still pending due to the fragile nature of project communities and difficulty in tracking highly mobile respondents. Additional data on credit history and use was recently obtained from Equifax, and will be incorporated in subsequent analyses.

## 2.2 Baseline results

**The baseline survey confirms that youth who sought to participate in PGET and who are part of our study sample were largely disconnected from schooling and from the labor market.** Youth wanted to be working but faced several obstacles in finding a good job including a lack of opportunities, limited access to finance, and lack of skills, and many believed they would need to emigrate from Honduras to find desired job opportunities.

**Youth also faced mental health challenges including exposure to traumatic events – involving, for example serious injury, death threats, or sexual violence – and exhibited symptoms of post-traumatic stress disorder (PTSD) and depression.** Anger, a key symptom of PTSD which is linked to anti-social behaviors including violence, was a regular feature of youth’s lives at baseline. Though surveyed youth rejected violence and aggression as tools to resolve conflict, an important minority justified resorting to violence when provoked.

**Youth in our sample lived in close-knit communities and had a marked distrust of outsiders and institutions.** Much of their time was spent at home and on home-based work such as home repair, food preparation, and caring for family. However, relationships with parental figures (mothers, fathers, or their surrogates) were characterized by difficulty communicating and frequent quarrelling, and fathers (especially biological fathers) were, in many cases, absent. Importantly, youth in our sample spent an important proportion of their time on tasks intended to better their future, such as training or looking for employment.

**Violence and crime were regular features of youth’s lives, with nearly half reporting that they or someone in their family had been a victim of theft, robbery, or extortion in the past 12 months.** Robberies were often conducted with a firearm. Only a very small portion of youth admitted to taking part in such acts as perpetrators, however. For those that did, the motivation appeared to be social/identity concerns rather than income. Drug use was limited, but alcohol consumption was more frequent and, for a small minority, this interfered with daily life and had led to legal problems.

**Despite the challenges faced by youth in our study sample, they were optimistic about the future.** Youth expected to marry and largely believed that they would achieve their desired job by the time they were 35. While youth reported moderate current life satisfaction, they expected to be very satisfied in the future.

**The baseline survey results validate the design features selected for PGET.** The results confirm the importance of improving youth’s job prospects and suggest that additional education and skills training

are prerequisites for doing so. However, the fact that nearly half of our sample presented important mental health problems in terms of the incidence and severity of PTSD and depression highlights that interventions targeting mental health and behavioral problems are also important.

### 2.3 Impact Evaluation Results

**Four to five years after PGET was implemented, we find evidence that the program increased economic activity and the quality of labor market engagement for program participants.** Compared to the control group, PGET participants are 16% (11 percentage points, or pp) more likely to either have had a job or looked for work in the recent past, 42% ( 10 pp) more likely to be formally employed, and 114% (4 pp) more likely to be self-employed or to own a business. These findings suggest that PGET was effective in reducing barriers to potentially higher quality formal salaried and self-employment jobs.

**Consistent with reported intentions at baseline, we observe high rates of geographic mobility in our study sample.** In particular, absent PGET (i.e., in the control group), over a quarter of youth had moved out of their municipality and, of these, nearly one in three had migrated abroad. PGET reduced the likelihood of participants leaving their municipality by 32.5% (9.1 pp). The decline in out-migration by PGET participants is driven by a decline in movements to other municipalities in Honduras. We do not detect a statistically significant impact of the program on migration abroad.

**Participating in PGET did not change attitudes towards justifying antisocial behavior, nor are PGET participants and their families significantly less likely to report being the victim of crime.** Victimization remains common, with 23% and 12% of control group youth reporting that they, or a family member, had been robbed or extorted, respectively, in the 12 months preceding the survey. Location may play a role in explaining overall victimization patterns and the scale of the program is unlikely to lead to general equilibrium effects.

**The results of the program on perpetration are more nuanced.** We estimate a large reduction in self-reported crime perpetration, but this estimate is not statistically significant at conventional levels. Under reporting is a concern for this outcome and, given low incidence in the control group, a larger sample size would have been required to precisely estimate even treatment effects of policy-relevant magnitudes.

**PGET did not significantly decrease reported use of alcohol and drugs.** Under reporting may again play a role, with just 10% of the control group reporting consumption of alcohol or drugs once per month in the 12 months prior to the survey. We identify a 3.3pp decline in alcohol-drug use linked to PGET participation, but this effect is not statistically significant.

**The program led to meaningful reductions in intimate partner violence.** We observe high rates of intimate partner violence (IPV) in our study sample, with 34% of control group respondents who are in a relationship reporting either physical or emotional abuse in the 30 days preceding the follow-up survey. For PGET participants, the overall incidence of IPV decreases by 40.2% (14 pp). This includes the virtual elimination of being forced to have sex. These results suggest that PGET may have endowed participants with the skills to sort into healthier relationships and/or moderate impulsive and abusive behavior. Indi-

rectly, improved labor market prospects may also offer additional protection against intra-household conflicts.

**Participation in PGET increased self-efficacy and reduced the incidence of mild depression.**

We observe a large and significant increase in self-efficacy of 0.23 standard deviations. Also, the program reduced the incidence of mild depression among participants by 45% (6.9 pp).

## 2.4 Conclusions

**The preliminary analysis in this report suggests that PGET, a three-month program, achieved meaningful results that were sustained for at least four to five years.** The program's IE finds evidence of improved outcomes in the labor market, suggestive evidence of reduced participation in violence and crime, reduced intimate partner violence, including the virtual elimination of sexual violence, and improved subjective well-being and mental health. While still preliminary and subject to further analysis, these meaningful results suggest important promise in PGET-like programs for improving labor market and life outcomes of youth living in high-violence, fragile urban communities.

**PGET was an ambitious and innovative pilot program.** The Project Implementation Unit within the Government of Honduras should be credited with leveraging the international evidence existing at the time of project implementation and, in particular, incorporating the innovative group-based CBT component which explicitly targeted mental health and sought to equip youth with mental and behavioral tools needed to constructively deal with the daily challenges they face. The program impacts on subjective well-being and mental health point to improvements in these outcomes. Considering also the reductions in IPV, the improvements in labor market participation, and the suggestive (albeit statistically insignificant) reductions in perpetration, the findings suggest that PGET may have played a role in expanding youth's skills and resilience to cope with and manage behavioral and social risk factors present in their communities. However, the scale of the program may not have been sufficient to alter the social environment, particularly as shaped by the presence of gangs, which remain pervasive.

**Moreover, the results of this analysis offer an important counterargument to the often-held view of at-risk youth as delinquent or, in the Honduran context, *mareros* or gang-members.** While acknowledging the very real challenges related to gangs and violence in these communities, the results of this study are an important reminder that, behind the headlines and anecdotes, many youth are working to better their futures despite the difficult family and community circumstances that they have grown up in. This demonstrates the importance of using policy and development finance to promote effective solutions to support youth, their families, and communities. Developing targeted and effective interventions to arrest cycles of poverty and violence must remain a priority.



### 3 Introduction

**Latin America and the Caribbean is the most violent region in the world, as measured by the homicide rate.** Honduras is extreme even by regional standards: in 2021, for example, Honduras ranked fourth in the world, with a rate of 38 homicides per 100,000 population, behind only Jamaica (52), South Africa (42) and St. Lucia (39).<sup>2</sup> This far exceeds the World Health Organization’s threshold for conflict, which is 30 homicides per 100,000 population. Cycles of volatile growth, inequality, and high levels of crime and violence create a vicious cycle that constrains poverty reduction.

**Beyond the direct cost to human lives, criminality and violence impose an economic and social tax.** The cost to firms in Honduras, for example, is estimated to be 16% of sales (Hernandez Ore et al., 2015). Violence is concentrated among youth and younger adults: according to the Honduras National Observatory, 60.4% of homicide victims in 2019 were between 20 and 39 years old (Instituto Universitario en Democracia Paz y Seguridad, 2021). Youth also have limited access to the labor market, with nearly a third neither in education, employment, nor training.<sup>3</sup> Violence, criminality, and limited economic opportunities also contribute to high rates of migration. According to the 2023 National Survey on Migration and Remittances, 24.3% of Hondurans had migrated internally and 17.7% of households had at least one member that had emigrated abroad (International Organization for Migration, 2023). Near 1 million Hondurans have the intention to migrate in the next 12 months, corresponding to 13.8% of the population aged 15 and above, and around 420,000 have initiated actions or plans to migrate.

**The overwhelming majority of homicide victims and perpetrators are adolescents and young adults living in marginalized urban neighborhoods.** Offending and victimization tend to increase dramatically during the teen years before declining in the late 20s. This pattern of perpetration and victimization also holds for other forms of violence. In addition to lives lost, the pernicious effects of violence influence the social, economic, and health outcomes of entire populations (Chioda, 2017). Effectively preventing violence has proven extremely challenging and efforts to improve the life outcomes of disadvantaged youth have not been very successful in either developed or developing countries. The social conditions most often discussed as drivers of negative adolescent outcomes are difficult to alter, and their consequences challenging to overcome. Furthermore, high-risk youth in fragile/violent contexts may have a comparative advantage in violence: low human, social, and physical capital act as constraints on youths’ expected returns in legal labor markets, a particular concern when potential earnings in the illegal market are high. The need for policies which can effectively improve the labor market prospects of at-risk youth and prevent violence is consequently reflected in World Bank Group strategy for Honduras.

**The study described in this report evaluates the Honduras Temporary Jobs Program for At-risk Youth, a training and labor market readiness program intended to improve labor market outcomes and reduce violence perpetration and victimization.** The program was implemented as part of the Safer Municipalities Project, which was implemented with financial and technical support from the World Bank. In Honduras, homicides are highly concentrated in specific urban areas and, within these, in specific neighborhoods and streets. The Safer Municipalities Project was implemented in three

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<sup>2</sup>Statistics are from the World Bank’s World Development Indicators, based on 2021 data from the UN Office of Drugs and Crime’s International Homicide Statistics Database.

<sup>3</sup>ILO. 27.9% in 2022

high-violence neighborhoods in three of the most violent municipalities in Honduras: La Ceiba, El Progreso and Choloma.<sup>4</sup> Violent gangs are present throughout Honduras, including in the study municipalities and neighborhoods, and routinely conduct extortion, death threats, and other criminal activities, with costs borne also by other residents.<sup>5</sup>

**A common policy response to youth unemployment and associated negative outcomes is to provide skills training, but such programs have shown disappointing impacts in terms of crime and violence reduction, especially relative to program costs (Blattman and Ralston, 2015).** However, few job programs measure the impact on antisocial behavior, especially in developing countries. Schochet et al. (2008b) show that the opportunity cost of illegal activities increases as productive activities are made available to program participants in the US, and Blattman et al. (2014) draw similar conclusions from a program in Uganda. Intensive residential and non-residential programs in the US that target at-risk youth show some promise and appear to achieve their positive impacts through human capital accumulation and increased high school completion (Schochet et al., 2008; Raphael, 2010). However, gains seem to be mostly concentrated among older, lower-risk individuals.

**There is growing evidence on the importance of interventions targeting “soft” skills and personality traits among adolescents and young adults.** Furthermore, a large body of evidence links risky behavior and decisions – including participation in violence – to cognitive biases, impulsivity, and other automatic responses that are shaped by factors such as poverty and existing levels of violence. Recent evidence highlights the potential of employing elements of cognitive behavioral therapy (CBT), which encourages deliberate reflection (“thinking slow”) on whether automatic thoughts (“thinking fast”) and resulting behaviors are adequate for a given situation or whether this situation can be construed differently. Heller et al. (2017) describe a set of RCTs in which disadvantaged youth in Chicago were provided with non-academic support aimed at teaching soft skills through a program developed by the local non-profit Youth Guidance, and Blattman et al. (2017) study the impact of a CBT-like program for Liberian criminally-engaged men developed and implemented by the local non-profit Network for Empowerment and Progressive Initiatives (NEPI). In both cases, short run reductions in crime and violence were dramatic (up to 50%), but these impacts were no longer present in the medium run (12-months and 18-months post-intervention, respectively, in Liberia and Chicago). Importantly, both of these programs were developed over 10-15 years and evolved organically to include elements of CBT.

## 4 Intervention and Study Design

### 4.1 The Temporary Jobs Program for At-risk Youth

The Honduras Temporary Jobs Program for At-risk youth (PGET, from *Programa de Generación de Empleos Temporales*) was a training and labor market readiness program implemented as part of the World Bank-assisted Honduras Safer Municipalities Project. The program was implemented in La Ceiba, Choloma, and El Progreso municipalities. In each of these, the program tar-

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<sup>4</sup>The project was thus implemented in a total of 9 neighborhoods.

<sup>5</sup>For example, in 2016 and 2017, more than 1,900 people fled their homes due to gang activities, according to Honduran human rights officials.

geted three neighborhoods (or *colonias*).<sup>6 7</sup> PGET sought to enhance the employability of its participants and to reduce crime and violence. The program and the Impact Evaluation (IE) described in this report were designed and implemented through a collaboration between the Government of Honduras, the World Bank, the University of California at Berkeley, and the University of Illinois at Chicago.<sup>8</sup>

PGET aimed to prepare youth aged 18 to 30 years for participation in the local labor market and to facilitate their access to high-quality, formal sector jobs. Approximately 85% of the eligible participants were between 18-25 years old.<sup>9</sup> The program targeted youth who (i) had not been enrolled in an educational institution for at least one year and who (ii) were at most weakly attached to the labor market, defined as having worked less than 10 hours per week during the month prior to program registration. PGET was implemented by a Honduran NGO, *Fundación Integral para el Desarrollo de Honduras (FIPADEH)*, contracted by the government. Youth were recruited through a campaign carried out in the project areas with information on PGET distributed through community leaders, local staff of the Safer Municipalities Project, and information flyers (see Figure 1). The campaign ran from February to April, 2018. The program started on May 11 and ran for three months, to August 3, 2018. The estimated cost per participant was USD 698, including a USD 445 grant paid to participants conditional on their participation in the program.

Figure 1: Recruitment campaign materials developed with support from the research team



<sup>6</sup>These were Melgar 1, Melgar 2, and Danto in La Ceiba; 11 de Abril, Ceden, and Infop in Choloma; and Fatima, Policarpo, and Palermo in El Progreso.

<sup>7</sup>While all study municipalities are characterized by high levels of violence, they vary in their economic profiles: La Ceiba is a coastal tourist destination, Choloma is an industrial center with several textile assembly plants and other *maquilas*, and El Progreso is a commercial center.

<sup>8</sup>Technical and operational assistance for the implementation of the cognitive behavioral therapy component of PGET, described below, was provided by Johns Hopkins University and the Medical University of South Carolina, under contract to the World Bank.

<sup>9</sup>Initially, the program was meant to serve youth age 18 to 25, but community pressure and the need to meet operational recruitment deadlines led to the decision to expand the age range.

**PGET included the following components: technical, vocational and soft skills training, group-based cognitive behavioral therapy (CBT), a temporary job, and income support.** Each component targeted risk and protective factors: lack of human capital, mental and behavioral biases, signaling to potential employers, and opportunity cost. All four components could impact both the subjective and objective costs of engaging in crime by improving youths’ opportunities in the legal job market and decreasing anti-social behaviors often linked to criminality. The most innovative component was the group-based CBT. The components are described in further detail below.

#### **4.1.1 PGET Component 1: Technical, Vocational, and Soft Skills Training**

**PGET’s training component aimed to increase human capital through training in practical skills valued in the local labor market.** When possible, the practical skills training matched youths’ preferences.<sup>10</sup> PGET was also designed to include a well-structured soft skills component, including professional conduct and work ethic (e.g., timeliness, reliability, use of appropriate workplace language, and ability to work with others), and fostered the development of complementary personality traits such as grit, perseverance, conscientiousness, and ambition. The content of PGET soft skills training is summarized in Table 1. Notably, soft skills training also extended beyond modules oriented toward labor market preparedness by incorporating lessons on effective communication and reflection, conflict resolution strategies, self-efficacy, and violence prevention. On average, each youth received three hours of technical/vocational training and two hours of soft skills training per week for the duration of the program.

#### **4.1.2 PGET Component 2: Cognitive Behavioral Therapy**

**Existing evidence suggests that technical/vocational training - whether alone or complemented with classroom-based soft skills instruction - is not likely to produce lasting changes in behaviors or life outcomes among youth and that its benefits, if any, tend to be concentrated among lower risk individuals.** However, studies of programs in Chicago and Liberia targeting at-risk youth and incorporating CBT-type approaches show promise in terms of their effectiveness to alter noxious behavioral trajectories. These programs were implemented by NGOs and grew over time to incorporate elements of CBT (see [Heller et al., 2017](#), and [Blattman et al., 2017](#), for details on the programs in Chicago and Liberia, respectively). CBT explicitly addresses mental and behavioral biases, conflict resolution strategies, problem-solving, and violence and aggression moderation. It is a type of therapy designed to tackle negative automatic responses and biases and to encourage metacognition, or “thinking about thinking”. This entails deliberate reflection (“thinking slow”) on whether automatic thoughts (“thinking fast”) and behaviors are adequate for the situation one is facing or whether situations can be construed differently ([Kahneman, 2011](#)).

**Based on this evidence, PGET included a novel group-based cognitive behavioral therapy (CBT) element, “Thinking for Success” (in Spanish, *Pensar Para el Exito*).** An important innovation under the project is therefore the intentional integration of CBT in a government-run training program.

**The CBT component built on work by clinical psychologists who adapted their work to the Honduran context.** It incorporated three distinctive features relevant to delivering CBT in low-capacity

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<sup>10</sup>Practical skills training domains also included modules on savings and financial education, business plan development, and job application processes.

**Table 1:** PGET Skills Training Modules, including Violence Prevention and Cognitive Behavioral Therapy

Blocks	Training Topics	Hours
First Block	<b>Topic: Induction Process</b> 1. Knowing “Mi Proyecto” or ”My Project” (Scope and Objectives) 2. Preparing for Work, Leadership, and Teamwork 3. Organization for Work and rules 4. The Commitment Sheet 5. Reflection Dialogues, Effective Communication 6. General Framework of Human Rights	8 Hours
	<b>Topic: Conflict Resolution and Management</b> 1. Learning to Live Without Violence 2. Learning Alternative Methods for Conflict Resolution 3. Growing in Values and Improving Self-esteem	
Second Block	<b>Topic: Urban and Environmental Upgrading</b> 1. My Neighborhood, a Safe Place (CPTED) 2. Green Spaces: Long Lungs for us and our Cities 3. Water: Valuable and Scarce Resource 4. Solid Waste: Problems and Benefits (Recycling)	8 Hours
	<b>Skills for the Labor Market</b>	
Third Block	<b>Topic: Entrepreneurship</b> 1. Savings and Financial Education 2. Developing a Business Plan	8 Hours
	<b>Topic: Job Placement</b> 1. How to Identify Job Opportunities 2. Job Interviews 3. Personal Presentation 4. How to write a CV	
CEPREV Module <a href="#">link</a>	1. Differences Between Authoritarian and Democratic Families 2. How Machismo Affects Men 3. Self-esteem: Loving Who I Am	16 Hours
CBT: Thinking for Success	1. Standard Sessions 2. Maintenance Sessions	44 Hours
<b>Total</b>		<b>84 Hours</b>

contexts and at scale. First, the design of “Thinking for Success” was based on *rigorous experimental evidence*, in particular on a recent trans-diagnostic method developed and tested in low- and middle-income contexts with trauma- and torture-affected populations (e.g., in Iraq, on the Thailand-Burma border, and in Zambia; Murray et al., 2014).<sup>11</sup> Second, CBT was delivered via an *apprenticeship model with lay counselors*. In this model, local staff are trained in the delivery of CBT and then mentored over time by experienced professionals, building local capacity and laying the foundation for scale-up. This method of delivery is itself an innovation and may be essential to such an intervention’s scalability and sustainability in contexts with scarce skilled mental health workforce, which applies to many local-income settings. Third, the PGET CBT component was *highly contextualized* and tailored to address issues prevalent in participants’ lives and communities, with modules targeting (i) interpersonal violence, aggression, and self-control; (ii) problem solving; (iii) conflict resolution; and (iv) risky behavior relating to sex, drugs, and domestic/intrafamilial violence.

<sup>11</sup>Murray and her team designed and supported the implementation of Thinking for Success.

CBT groups normally met twice a week over a period of 12 weeks for a total of 22 sessions, with each session lasting 2 hours. The first 16 sessions introduced a model to “Think in a Different Way” (TDW) followed by sessions dedicated to each of the target issues. These topics were then reviewed in the final six “maintenance” sessions. The CBT lesson plan is summarized in Table 2. Between sessions, youth were encouraged to practice the new learnt skills and reinforce behaviors discussed during the group sessions.

**Table 2:** “Thinking for Success” CBT Lesson Plan

CBT, Regular Sessions: Lesson Plan	
1. Introduction/Encouraging Participation	9. Safety – introduction, violence as example
2. TDW1: Introduction	10. Safety – violence and aggression
3. TDW1 review, TDW2 introduction	11. TDW2 – use with violence and aggression
4. TDW2: introduction of another skill, focus on violence	12. Substance Use (SU) prevention
5. TDW2: introduction of another skill, focus on job search/finding	13. Substance use prevention
6. TDW2: Introduction of another skill, focus on relationships (risky sexual bx, gangs)	14. Substance use prevention
7. Problem solving (PS) : introduction, conflict resolution focus	15. TDW2 – use with SU thoughts
8. Problem solving: conflict resolution, job seeking	16. TDW and PS – use with future life planning
CBT, Maintenance Sessions: Lesson Plan	
1. TDW – review of skill and practice with group thoughts	4. Substance use prevention – review and practice
2. TDW – focus on specific topics of group	5. Safety review and practice
3. Problem Solving (PS) – review and practice	6. TDW: focus on specific topics of need, future planning

**Note:** Think in a Different Way (TDW), also known as the CBT cognitive triangle, is at the core of CBT. It serves as pedagogical tool to illustrate the interrelationship between thoughts, emotions, and behaviors. The model helps individuals understand how their thoughts influence their feelings and behaviors, and how changing their thoughts can lead to changes in feelings and behaviors. The cognitive triangle helps individuals recognize automatic patterns in their thinking and behavior, providing a framework for altering some of their biases and hyperactivity.

#### 4.1.3 PGET Component 3: Temporary Jobs

PGET’s temporary jobs component was intended to provide youth with the opportunity for hands-on practice of the technical and soft skills learned through the program, and as a signal to potential employers. Participating youth worked 8 hours per week for the duration of the program. Jobs were provided directly by the Safer Municipalities Project and focused on local public works and community services such as painting or cleaning public spaces.

#### 4.1.4 PGET Component 4: Cash Grant

PGET’s last component was a cash grant. This had three purposes: (i) to incentivize enrollment and participation in the program; (ii) to alleviate immediate economic constraints and thus, temporarily prevent economically-motivated violence or crimes; and (iii) to possibly facilitate investments in entrepreneurship or goods that are pre-requisites to access specific jobs (uniforms, transportation, etc.). A total of LPS 10,500 (approximately USD 445 at the time) was to be paid to participants in three equal installments upon completion of each month of training.

## 4.2 Study Design and implementation

PGET was implemented as a single-arm randomized controlled trial (RCT) to study the program’s impacts on the life trajectories of at-risk youth, with a focus on their labor market and life outcomes and participation in and exposure to violence and crime. As described above, youth that were not currently enrolled in an education or training institution nor working more than ten hours per week were eligible to apply, with information on the program disseminated through an information campaign in the months preceding the start of the program.<sup>12</sup> Youth that applied to the program were screened for eligibility and, subsequently, were contacted to verify their continued interest in the program. Through this process, 697 youth were identified as eligible and interested across the nine project neighborhoods.

**The 697 youth who were identified as eligible and interested were then randomly assigned to either the treatment or control group, with randomization being stratified by neighborhood/*barrio* and gender.** Within each municipality, places in the program were assigned in proportion to the neighborhood’s number of eligible youth (proportional allocation). Of the 697 youth that entered the lottery, 344 were randomly assigned a place in the program (treatment group) and 353 were not (control group). 64.2% (221) of youth assigned to the treatment group actually participated in the program. The main reason treatment-group youth opted out was related to income-generating opportunities that materialized between random assignment (April 17, 2018) and the start of the program (May 11, 2018).<sup>13</sup>

**Random assignment was conducted through public lotteries held in each municipality.** Public lotteries maximize transparency and can help build trust in the process and avoid potential accusations of favoritism, resentment, or conflict by those assigned to the control group. The lotteries were conducted successfully and without issues. Table 3 below describes the results of the randomization. Table B.1 in the appendix documents that the randomization was successful. In each row, we regress the referenced outcome on an indicator for treatment assignment, while controlling for neighborhood fixed effects. We combine over 50 baseline covariates into a total of 35 measures related to study participant demographics, access to education and the labor market, mental health, and other behaviors/future expectations. Three of the estimated coefficients are statistically significant at the 10% confidence level, consistent with what would be expected under the null hypothesis that baseline outcomes do not differ as a function of treatment status. The F-test on the joint null hypothesis has an associated *p-value* of 0.608, again consistent with balance on the basis of treatment status.

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<sup>12</sup>The information campaign ran from February to April, 2018. The program started in May.

<sup>13</sup>As described below, we estimate the impacts of PGET using an intent-to-treat (ITT) specification, which captures the impact of offering the PGET to youth assigned to the treatment group regardless of actual take up.

**Table 3:** Baseline: Treatment Assignment by Gender and Municipality

	Treatment			Control		
	Female	Male	Total	Female	Male	Total
La Ceiba	81	54	135	79	47	126
Choloma	54	34	88	75	35	110
El Progreso	73	48	121	75	42	117
<b>Total</b>	208	136	344	229	124	353

## 5 Data

**The analyses presented in this report draw from dedicated surveys of study participants.** Survey data includes a baseline and a five-year follow-up. Furthermore, in Q1 of 2024 we obtained access to historical credit records for 94% of our study participants. The team plans to expand the analysis to include these data.

**This section provides an overview of the data used in this report.** Baseline data were collected between March 19 and June 7, 2018. The follow-up survey started in March, 2022, and has proceeded in waves. At the time of writing this report, some follow-up data collection is still pending. The team has funds to carry out some additional data collection until the end of June 2024. We also hope to raise additional funds to continue beyond the end of the fiscal year. The additional data will be incorporated in subsequent revisions of this report. Details on the data collection process as well as on the historical credit records data can be found in Appendix A.

**The survey instruments were designed to capture a comprehensive overview of socioeconomic characteristics of each youth and their household and to collect detailed information on youth’s participation in the labor market, mental health, personality traits, and attitudes towards and direct experience with crime and violence.** The surveys included traditional economic indicators and complementary measures of emotional well-being, current aspirations and future outlook, and validated psychological measures for depression and post-traumatic stress disorder. Additional standardized psychological tests were used to measure personality dimensions of youth such as self-esteem, grit, and self-control. For some personality traits (i.e., grit, self-control), we collected data on both the youth’s self-reported level of the trait as well as their observed level of a trait as determined through games played with real monetary payouts. In order to gain a better understanding of each youth’s perception and experience with crime, we collected data on victimization and perpetration of different types of crime (i.e., extortion, theft, and robbery) and on attitudes towards violence. We also asked youth about their involvement with substance abuse – both drugs and alcohol – and potential negative effects, such as being arrested or having problems with family or at work. To study trust, we collected data on youth’s perceptions of the trustworthiness and fairness of people and institutions, and we employed various trust games. Due to the sensitive nature of some of the topics covered, youth were offered the option of self-administering certain sections of the survey.

**The youth baseline survey response rate was relatively high, with 83.7% of targeted youth**



**completing the survey.** In the treatment group (i.e., youth assigned to PGET), 88.7% of youth completed the survey (this increases to 98.2% for youth who then went on to participate in the program). In the control group, 78.7% of youth completed the survey. The completion rate for the household head surveys is lower. In the treatment group, 62.7% of household heads were surveyed (this rises to 70.1% for the households of youth who eventually went on to participate in the program). For youth in the control group, 53.7% of household heads were surveyed. The lower rate achieved is driven by La Ceiba, where zero standalone household head surveys were completed.<sup>14</sup>

**The design of the follow-up survey closely mirrored the baseline survey.** A key difference was the introduction of a module related to intimate partner violence.

**A series of challenges affected the endline data collection and contributed to significant attrition.** Details are summarized in Appendix A. As of May 2024, we have collected data for only 41.8% of those assigned to the control group and for 55.4% of those assigned to the treatment group. The difference in the attrition rate as a function of treatment status is statistically significant at the 1% confidence level. Differential attrition raises concerns about endogenous sample selection at the time of follow up.

To further explore concerns about attrition, in Table B.3 we report a complete set of balance checks for the follow-up sample. On most dimensions in the estimation sample, treatment and control groups are balanced: of the 35 baseline variables considered, only weekly earning is significant at the 5% level. The *p-value* on the test of the joint null hypothesis that characteristics of those in the treatment group are the same as characteristics of those in the control group is equal to 0.300. However, attrition is in part explained by baseline covariates (e.g., respondents who are higher SES, more positive in their life outlook, more conscientious, less interested in moving abroad, non-single, and female are less likely to attrit) and as such controlling for them in our specifications is paramount and the richness of our baseline is an asset. To attenuate attrition-related identification concerns:

1. We compute Double/Debiased Machine Learning (DML, Chernozhukov et al., 2018) estimates that are intended to address concerns related to sample selection/imbalance. This is further described in Section 7.
2. In addition, we collected information on additional outcome indicators including youth migration status and administrative data on credit records. The former is available for 91.5% of the sample and the latter is available for 94.5% of the sample. Treatment and control groups are well-balanced within the subsamples with available migration and credit reports data (see Tables B.2 and B.4), which is unsurprising given that the treatment and control groups are balanced in the full sample of baseline survey respondents and coverage in the migration data and the administrative credit data are high (we cannot reject equality of coverage rates as a function of treatment status in either the migration data or the administrative credit data).
3. As mentioned earlier, we also plan to continue data collection efforts to improve completion rates.
4. Future analysis will also address possible selective attrition, by reporting “Lee Bounds” estimates (Lee,

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<sup>14</sup>This is at least in part due to a contractual dispute between the survey firm and their surveyors in La Ceiba, which cut short the time of survey implementation.

2009) and/or Semenova (2023)'s better Lee bounds, that use random forests to sharpen bounds with covariates.

## 6 Baseline Survey: A Glimpse into the Lives of Youth at Risk

**This section presents results from the baseline survey, collected in 2018, and describes the lives of youth living in high-violence communities in Honduras.** The baseline survey collected data for 594 youth from the three Safer Municipalities Project municipalities. 63.1% of surveyed youth were female and 36.2% were male. The majority of the surveyed youth (85.5%) were aged 25 or less, matching the life cycle period in which youth are generally most at risk of both victimization and perpetration of violence, crime, and other anti-social behavior.<sup>15</sup> The narrative in this section draws from the impact evaluation baseline report.

### 6.1 Education and Employment

**One in ten youth stated that they were enrolled in school at the time of the baseline survey.** Program eligibility required youth not to be currently enrolled in school and our data confirms this to be largely the case: only 11.6% of respondents report being registered to attend classes in an educational facility.

**On average, at baseline, study participants had completed 9.4 years of schooling, similar to the average years of schooling for urban youth in Honduras as a whole (9.5 years).**<sup>16</sup> For youth in our sample, the modal level of schooling attended was upper secondary (*Ciclo Diversificado*); however, only 33.3% of the sample report completing secondary education and 0.7% report completing tertiary education. Despite the significant dropout rate, 48.2% of males and 43.4% of females not enrolled in school planned to re-enroll in the coming year.

**Youth in our sample were largely disconnected from the labor market, as expected based on program targeting.** Only 20.5% of men and 8.8% of women reported being employed at the time of the survey, while the overall employment rate of Honduran youth aged 17-30 was 58.3%.

**Most youth in the sample had limited and short-term work experience.** 54.0% of respondents report not having worked for income in the past 6 months. For 53.2% of those who were employed during the past six months preceding the survey in a job that they were no longer doing at the time of the survey, employment lasted three months or less.

**Youth reported that they would like to be working and were actively looking for work.** Two-thirds of youth would have liked to be salary employed; 19.0% expressed interest in self-employment (i.e., owning own business); and 14.0% would have preferred to return to school. Of those not employed at the time of the survey, 80.6% had looked for work in Honduras and 30.8% had tried to start a business or income-generating activity in the three months preceding the survey. Among those looking for work, 75.1% had done so by visiting potential workplaces, and 9.2% had sought help from acquaintances or relatives.

<sup>15</sup>The target age range for our survey was based on the population targeted by PGET, i.e., 18 to 30 years old.

<sup>16</sup>All nationally representative statistics in this section are computed with 2017 data from the Socio-Economic Database for Latin America and the Caribbean, SEDLAC, unless otherwise indicated.

Among women that were not actively seeking work, the most frequently cited reason for not doing so (mentioned by 30.8% of respondents in this category) was not having anyone to care for their young children, the elderly, or the sick.

**Even among the 13.1% of youth employed at baseline, labor force attachment was low quality, intermittent, and earnings were low.** The modal respondent reported working 10 hours in the last week at their main job and nearly all (89.7%) of those employed at the time of the baseline survey noted only one income-generating activity. For this same subsample, average weekly salary from the main source of employment was USD 44.20 for men and USD 24.40 for women. These earnings were comparable to the national average for Honduran youth. However, youth in our sample were significantly less likely to be full-time employed.

**Youth employment in our study sample was informal.** Of those working at the time of the survey, only 19.2% of respondents worked under a contract (compared to 43.1% of all employed Honduran youth in the same age range). This finding is consistent with high rates of labor market informality among Honduran youth (Fawcett, 2012). Within the study sample, most employment (71.8%) was in small firms (with five or fewer employees). Women’s employment was particularly concentrated in the personal, social, and community services. Most respondents (77.3%) found their jobs through connections to either family or friends.

**Considering the quality of labor market participation for youth in our sample, it is not surprising that they were dissatisfied with their employment.** At the time of the survey, two-thirds of those employed were searching for a new job with the hope that alternative employment may improve their income, working conditions, and/or provide work that better matches their skills and training.

**Lack of opportunities, access to finance, and lack of skills were the main obstacles to improved employment options.** Nearly all those surveyed cited at least one obstacle, though this was not surprising given the target population. 92.4% of our sample stated that a lack of job opportunities was a major hurdle to finding employment. Women reported being relatively more constrained by both a lack of access to finance/capital (79.5% of women vs. 69.4% of men) and a lack of required skills/qualifications (58.4% of women vs. 43.4% of men).

**Transport and perceived discrimination were also mentioned as factors explaining youth unemployment.** Roughly one-third of the sample stated that lack of transport had been a constraint to finding a good job (37.0% of women and 30.6% of men), and some cited discrimination due to neighborhood of residence (27.4%). Unsurprisingly, the experience of men and women differed most with regards to gender discrimination, with 24.5% of women citing this issue as compared to 11.0% of men. Youth also appeared to be generally unwilling or uninterested in traveling far from their homes for work, which may have compounded these challenges. 73.1% of youth stated they would like compensation greater than USD 2.07 for an additional hour of commuting. By comparison, the minimum daily wage in Honduras at the time of the baseline survey was between USD 8.50 and USD 12.13, depending on size of firm and industry (according to [wageindicator.org](http://wageindicator.org), 2018). This is equivalent to USD 1.06 – 1.52 per hour, assuming an eight-hour workday.

## 6.2 Aspirations and Life Satisfaction

**Family is the most important factor shaping youth’s beliefs, values, desires, and behaviors.** 94.1% of the sample stated that their family heavily influenced their personal beliefs, values, desires, and behaviors, whereas only 37.9% cited their teachers as influences (the corresponding proportion for friends was 23.6%). Closeness with families is also captured by the fact that 62.5% of our sample who grew up with at least one parental figure continued to live with them and 77.3% of those who no longer lived with their parents did live with them until they were at least 18 years old. Of the youth who were not married at the time of the survey (96.0% of our sample), 59.4% expecte to be married within the next five years. This is true for both men and women.

**One out of every two youth wanted to move abroad permanently.** This was higher for men (59.8%) than for women (48.8%). 11.0% of youth that were not employed at the time of the survey had looked for work in another country or prepared to cross the border. This high demonstrated desire to move abroad in an environment characterized by widespread crime and violence is consistent with previous evidence on the multi-faceted determinants of migration propensity (see for instance, [Orozco-Aleman and Gonzalez-Lozano, 2018](#)). The high level of demand for international migration may be rationally driven by limited labor market prospects at home and also helps to explain the divergence observed between current and expected future life satisfaction (discussed below).<sup>17</sup>

**About one third of youth were very worried about their lives.** When asked if they were worried about certain aspects of their lives, 23% of men and 35% of women reported being either very worried or extremely worried. Youth in our sample reported moderate current life satisfaction but appeared extremely optimistic and possibly overconfident about the future. On average, youth were moderately satisfied with their current life (6.4/10, with a modal response for current life satisfaction of 5/10). However, youth expected that their life satisfaction would significantly increase within five years, with an average anticipated future life satisfaction of 9.3.

## 6.3 Time Use

**Youth devoted a considerable amount of time to the home.** Youth reported spending 47.8% of their time on home-based work like home repair and food preparation, caring for family, and leisure with family. Women reported spending more of their time in the home compared to men (54.4% and 36.4%, respectively). Men reported spending more time on things like school/training, looking for work, or leisure activities outside of the home.

**A quarter of youth’s time was dedicated to productive tasks outside their home to better their future, such as undertaking school or work-related activities or looking for employment and/or opportunities for human capital upgrading.** Spending time with friends and helping others

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<sup>17</sup>Indeed, recent evidence supports the belief that migration to the U.S. is associated with high levels of socioeconomic mobility (see, for instance, Abramitzky et al., 2019). Of the youth in our baseline survey stating that they would prefer to emigrate permanently, 52.8% cited the US as their preferred designation while 31.5% cited Spain. Migration may also be particularly attractive given the limited family support available to youth in the study setting. We calculate that average household income was approximately USD 160 per month. Moreover, migration offers a potential path to significantly improving household circumstances: within the 30.4% of households that received remittances, the average monthly amount received was over 50% of the average monthly household income calculated on the full sample.

outside their family were also prominent features of a typical day. 18.1% of time was spent on leisure with friends or alone (with men spending more time on leisure than women), and 6.7% was spent volunteering to help people outside of the family.

## 6.4 Family Relations

**A third of our sample reported experiencing a detached parenting style growing up.** 29.0% of youth were indifferent or disagreed with the notion that caregivers were warm and loving towards them when they were aged 6 to 10 years. Additionally, 32.9% of our sample recalled being left home alone from ages 6-10, and 10.9% of the sample report that this occurred more often than once a month.

**Nearly half of surveyed youth reported experiencing corporal punishment.** Only 7.5% of our sample reported not being hit by their parents, 63.7% were last hit when they were 15 years old or younger, and 24.6% were last hit between the ages of 15 and 20. Girls appeared to be less exposed to corporal punishment: 8.9% of female respondents reported never being hit by their parents (compared to 5.0% of males) and they were also less likely to have been hit when they were 15 years old or younger (85.2%) compared to males (93.6%).

**98.0% and 81.0% of youth reported, respectively, that mother and father figures were present while they were growing up.** Maternal and paternal figures (mothers and fathers, hereafter) were therefore absent for 2.0% and 19.0% of youth, respectively. In 39.3% of households where a father figure was not present, the household received remittances from abroad, which hints at the possibility that the absent father figure may have been working abroad and sending back remittances.

**Parental roles, especially that of fathers, were often played by relatives.** While 80.5% of our sample stated they were raised by their mother (biological, step, or adoptive), for 17.3% of youth a female relative (grandmother, aunt, sister, etc.) fulfilled this role. In contrast, only 65.5% of youth stated they were raised by their father (biological, step, or adoptive), with relatives (grandfathers, uncles, brothers, etc.) stepping into this role in 15.2% of cases.

**50% of youth reported having a strained relationship with their mother and father, characterized by difficulty communicating and/or frequent quarreling.** 24.3% and 12.8% of youth, respectively, reported that they quarrel with their mother or father at least once a month. Around half of youth reported having a strained relationship (defined by difficulty communicating and/or frequent quarreling) with their mother (54.6%) and father (47.5%). Though communications with parental figures were frequent, they were not always easy, nor did they focus on topics of interest/importance to youth. Communications with mothers appeared to be both more frequent and of better quality (in terms of ease), though they featured a higher rate of quarrelling.

**In contrast, household heads reported having a close relationship and frequent communication with youth and also reported less frequent quarreling.** 92.2% of household heads felt that they had an extremely close or very close relationship with household youth and 92.8% of household heads reported communicating with youth almost every day. Quarreling with household youth was reported to happen a few times a year or never by 76.1% of household heads.

**Household heads described youth as farsighted, hardworking, and cautious.** 72.9% of household heads stated that their household’s youth planned or thought about the future very often or often. Similarly, 80.7% and 75.3% of household heads, respectively, reported that the youth in question very often or often worked hard and never or rarely acted on impulse.

## 6.5 Mental Health

**Youth in Safer Municipalities Project communities were often exposed to traumatic experiences with long term mental health consequences, as captured by measures of either depression or post-traumatic stress disorder.** 56.4% of surveyed youth reported having experienced a traumatic experience, which in most of the cases (81.2%) involved serious injury, death threats, and/or sexual violence. It should be noted that these figures likely represent a lower bound on the incidence of traumatic experience because of unease in reporting such events, especially by the population targeted in our survey who may be reluctant to appear vulnerable. Events that involve interpersonal violence give rise to PTSD more often than events such as motor vehicle accidents and natural disasters (Yehuda et al., 2015). Importantly, psychological trauma follows a dose-response relationship: the experience of more severe and recent violence brings about more severe symptoms of trauma (Medecins sans frontieres, 2010; Mollica and Lavelle, 1988). In other words, repeated exposure to violence increases the likelihood and severity of mental health diseases.

**31.3% of youth in our sample exhibited symptoms of borderline or severe post-traumatic stress disorder (PTSD).** This is more than four times the lifetime prevalence of PTSD in the US population. Severe PTSD is comparable to symptoms that are experienced by US veterans of the wars in Iraq and Afghanistan. Not surprisingly, the fraction of youth recording borderline or severe PTSD increases to 41.8% (17.9% with moderate PTSD and 23.9% with severe PTSD) once we restrict our attention to youth who also reported having experienced a traumatic event.

**Like the experience of traumatic events, symptoms of PTSD are likely to be underreported and so these figures may represent a lower bound.** To fully grasp the importance of these statistics and better understand how PTSD symptoms may lead to disruption of regular behaviors and activities, it is worthwhile to note that youth who recorded borderline or severe PTSD scores must have reported moderate or higher symptoms in three of the following four categories: (1) intrusion symptoms (traumatic event is persistently re-experienced); (2) avoidance (persistence effortful avoidance of distressing trauma-related stimuli after the event); (3) negative alterations in cognition and mood; and (4) trauma-related arousal and reactivity that began or worsened after the trauma.

**The psychological and biological response to a traumatic event is determined by the characteristics of both the event and the person involved.** PTSD can influence a person’s subjective interpretation of the event, which is also influenced by the person’s previous experiences and other risk factors. PTSD often leads to depletion of coping resources and strategies resulting in further social, interpersonal, or occupational disruption (Yehuda et al., 2015). In particular, hyperarousal is a specific cluster of symptoms associated with PTSD, which entails an abnormally heightened state of anxiety that occurs whenever there is a possible trigger (or, simply put, a state of “fight or flight”). Anger, irritability, mistrust, and hypervigilance are typical traits associated with hyperarousal.

**Anger is a key predictor of volatility, risk-taking behavior, and confrontation and was persistent among youth in the sample.** Youth systematically reported that anger was a feature of their lives: 29.1% either agreed or strongly agreed with the statement that they felt angry most of the day and 23.6% agreed or strongly agreed that they had been in a physical fight because they were angry (this increases to 36.1% when we restrict our attention to men only). In addition, 35.5% reported being mean to someone when they were angry. As noted above, anger is one of the chief symptoms of PTSD and is also directly linked to antisocial behavior (Lerner et al., 2015). These figures suggest that, for an important portion of the sample, violence is an automatic response to provocations and to fights erupting, especially if anger is present and frames their state of mind (ibid.).

**Exposure to violence and trauma also may also lead to clinical depression and 23.1% of youth in our sample reported symptoms consistent with borderline or more severe clinical depression.** A meaningful fraction of youth (6.4%) were in the severe and extreme depression categories, which requires specialized treatment. These figures are based on a standard psychological test for depression, not on in-person professional diagnoses, and so under-reporting as in the case of experience with trauma or symptoms of PTSD should be expected. While depression is not a risk factor for violent behavior per se, it is a clear measure of well-being and of the ability to live a productive and meaningful life (depression is an obstacle to human capital accumulation, whether through educational investments or skills upgrading).

**In summary, nearly half of our sample presented important mental health problems in terms of incidence and severity of PTSD and depression.** 42.9% of youth exhibited symptoms consistent with either borderline or more severe depression and/or borderline or more severe PTSD. This statistic alone is quite sobering and has important implications for policy design and for expectations of this population’s educational and economic performance.

**These results underscore the importance of soft skills and mental health interventions for this population group.** The cognitive and emotional tax imposed by violence is significant and will further compromise the ability of youth to stay in school, hold a stable job, and live stable, healthy, and productive lives.

## 6.6 Trust

**Youth in our sample lived in close-knit communities with a marked distrust of outsiders and trust closely linked to affinity.** Youth in our sample placed the highest degree of trust in their family, with 61.9% of youth stating that they trusted their family “quite a lot” or “a great deal”. With respect to people outside their neighborhood, only 6.7% of youth stated that they trusted them. This is nearly the same as the percent of youth (6.9%) who stated they trusted people within their own neighborhood, indicating that personal relations and familiarity – not only geographic proximity – weigh heavily in determining trust.

**Responses to the baseline survey social networks module corroborate the finding that trust and bonds in our study sample are not heavily determined by geographic proximity.** The baseline survey collected information on each youth’s social network in the context of eight scenarios. Youth were asked to list the main persons they would reach out to for (1) advice for a job; (2) borrowing or lending

a small amount of money; (3) spending free time; (4) help solving a problem with drugs or sex; (5) help if they are angry or upset because of a situation where they were disrespected; (6) if they feel threatened; (7) advice on a personal problem, a problem at work, or for a medical emergency; and (8) friends from school or university. When looking at distinct members (nodes) of each youth's social network across the eight scenarios, on average, 72.8% were individuals living in the same municipality, of which 61.3% lived in the same neighborhood as the surveyed youth. In 7 of the 8 scenarios, youth listed family members (immediate or extended) around half (from 53.2% to 61.6%) of the time. The one exception is friends from school or university, where only 8.3% of the nodes are family members.

**Women tended to be less trusting than men.** 57.9% of female youth reported having trust in their family compared 68.9% of male youth. 74.7% of women also reported distrust towards people from their own neighborhood, whereas the corresponding rate for men was 57.5%.

**Overall, youth had low trust in institutions.** Youth were more likely to distrust the media (68.7% distrust; 5.1% trust), business owners (63.6% distrust; 8.6% trust), banks (44.4% distrust; 21.6% trust), and NGOs (39.1% distrust; 23.6% trust). However, the church (27.8% distrust; 46.6% trust) and educational institutions (26.1% distrust; 38.2% trust) were viewed relatively favorably. As with trust in people, women tended to express relatively greater distrust of institutions.

## 6.7 Crime, Violence, and Risky Behaviors

### 6.7.1 Attitudes Towards Violence and Victimization and Perpetration of Crime and Violence

**Youth more readily justified the use of violence or criminal behavior in response to threats to the community than in response to personal hardship and economic needs.** 26.3% of youth reported that “people from the neighborhood have the right to go after strangers who have caused trouble in the neighborhood (by stealing, intimidating, threatening, etc.) in order to get revenge”. On the other hand, only 9.4% of our sample believed keeping some money to help family before returning a lost wallet to its rightful owner was justified; 9.1% stated it was justified to temporarily take money from an employer with the plan to return it later; and 7.6% agreed it was justified to help others in a low-resource community by taking from richer individuals.

**Violence and aggression were often rejected as effective ways to resolve conflicts/issues, but a third of the sample consistently justifies recurring to violence when provoked.** Nearly all youth (90.6%) did not condone using violence to solve problems. However, 33.7% of youth believed it was acceptable to hit someone back who hit them first and this hypothetical value-statement is also matched by self-reported behavior: 51.6% of men and 33.9% of women reported that they had hit someone back when they were hit first. 19.5% of youth believed that once in a fight, their reputation would be hurt if they backed off as they would appear cowardly and 28.3% of youth felt that, if a fight erupted, they would be powerless to stop it.

### 6.7.2 Victimization and Perpetration of Crime and Violence

Nearly half (42.4%) of youth reported that they or someone in their family had been a victim of theft, robbery (considered violent offense), and/or extortion in the past 12 months. The



victimization rate for robbery/extortion in the 12 months preceding the survey was 36.9% and in 54.2% of these cases a firearm was used (the victimization rate for extortion was 8.9% and firearms were used in 28.3% of these cases). These rates are consistent with the fraction of Honduran citizens (about 58%) who reported being worried about becoming the victim of a crime in the 2017 *Latinobarometro* opinion survey, with 36% stating that they were always or almost always concerned about this eventuality.

**5.2% of youth in the sample admitted to participating in theft, robbery (violent offense), and/or extortion.** This statistic likely underestimates the true extent of perpetration of these crimes, though it is consistent with the stylized fact that a small fraction of offenders – between 5% and 15% - is responsible for over 75% of crimes and aggressive behaviors (see [Chioda, 2017](#), and citations therein).

**Social and identity concerns, rather than income gains, appeared to be main motives behind criminal activity.** For youth who admitted to involvement in criminal activities, these did not seem to lead to important economic gains. On average, over the 12 months preceding the baseline survey, youth reported to have earned an average of about LPS 800 (USD 32.56) from these activities; however, the median earning is much lower, at LPS L50 (USD 2.00). 38.7% of youth reported no earnings which indicates that they were present but that they did not benefit economically from the act, corroborating the social and identity motives underlying some of these activities.

### 6.7.3 Alcohol and Drugs

**34.0% of our sample reported that they had consumed alcohol in the past year, with a small minority reporting heavy consumption.** Of youth that had consumed alcohol in the past year, 40.5% reported only having 1-2 drinks on average each time they drank, 36.1% reported having 3-5 drinks, and 21.0% stated they drank 5 or more drinks each time. Almost symmetrically, 20.0% of those who have consumed alcohol in the past 12 months reported that alcohol consumption had interfered with their responsibilities at work or school or caused problems with their family, friends, or people at work or school. 6.3% of youth who drink reported having had legal problems – such as being arrested for disturbing the peace or for driving under the influence of alcohol – at least once in the year preceding the survey due to alcohol use. Note that our measures of alcohol use and drug use (next paragraph) are self-reported, so they are likely to suffer from non-classical measurement error, and, as such, underestimate incidences of risky behaviors.

**88.7% of youth in our sample reported that they had never used drugs.** This is in sharp contrast with the narrative that emerged from focus groups with different population groups within study communities during early stages of the Safer Municipalities Project and with the perceptions of project staff, who indicated drug use and drug addiction to be major problems for youth. For those who did report drug use in 12 months preceding the baseline survey, the drugs used most often were marijuana (9.8%) and cocaine (2.5%). 6.6% and 2.2% of youth, respectively, report buying and selling drugs.

## 6.8 Conclusions from the Baseline Survey

**The Safer Municipalities Project baseline survey’s perspective on the lives of at-risk youth in high violence communities in Honduras offers guidance for policies and programs targeting this vulnerable group.** The results confirm the importance of improving youth’s job prospects and suggest

that additional education and skills training are prerequisites for doing so. However, the fact that nearly half of our sample presented important mental health problems in terms of the incidence and severity of PTSD and depression highlights that interventions targeting mental health and behavioral problems are a clear priority for improving labor market and economic outcomes and for preventing, and recovering from, violence. Developing and testing such interventions is a necessity and may be a prerequisite for an important proportion of youth to achieve their labor market potential.

## 7 Preliminary PGET Impact Evaluation Results

**In this section, we summarize methodological details underlying our empirical strategy for the PGET IE and present initial evidence on the effects of participating in PGET on key outcomes.** The key outcomes relate to (1) economic activity, (2) migration, (3) crime and violence, including intimate partner violence (IPV), and (4) subjective well-being and mental health. The main body of this report provides a narrative of the results, with tables in the appendix.

**The findings presented here are preliminary.** The research team intends to deepen the analysis in the coming months, and the report will subsequently be updated.

### 7.1 Estimation Details

#### 7.1.1 Estimation Strategy

**The identification of programmatic impacts relies on random assignment.** For parsimony and for a cleaner interpretation of the results, we present intent-to-treat (ITT) estimates, which capture the impact of offering the PGET training regardless of actual take-up.<sup>18</sup>

Our main estimating equation for the ITTs is:

$$y_i = g(T_i, X_i) + \varepsilon_i \quad (1)$$

where  $y_i$  denotes outcome  $y$  for youth  $i$ ;  $T_i$  corresponds to the assignment of treatment for youth  $i$ ;  $X_i$  is a vector of baseline characteristics; and  $g(\cdot)$  is an unknown function, which is a nuisance parameter. Therefore, adopting potential outcome notation, for a given outcome, the parameter of interest is given by:

$$ITT = \beta = E[g(T = 1, X) - g(T = 0, X)] \quad (2)$$

**Our preferred estimates rely on a Double/Debiased Machine Learning (DML) framework** (Chernozhukov et al., 2018). This leverages Neyman-orthogonal scores and yields valid estimation and inference for parameters of interest in the presence of a high-dimensional and potentially nonlinear nuisance parameter. DML ITTs and standard errors are estimated using an interactive model in which treatment

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<sup>18</sup>Local Average Treatment Effect (LATE) estimates of the effect of treatment on the treated using initial random assignment as an instrument are proportional to ITT estimates under a monotonicity assumption (no defiers). That is,  $LATE = ITT/\pi_c$ , where  $\pi_c$  is the fraction of compliers.

dummies are not additively separable.<sup>19</sup> DML controls for imbalances in observable characteristics, which is critical given that we observe high rates of attrition (and evidence of differential attrition) for a subset of outcomes constructed based on the follow-up survey, which was conducted four to five years after baseline.

In addition to DML estimates, for completeness, all the tables also present a second panel with OLS results. One- and two-sided *p-values* are also reported. Details on the variable construction can be found in Appendix G.

### 7.1.2 Index Measures: Anderson (2008)

**For a subset of baseline covariates and outcomes of interest, we construct summary indices.** To do so, we follow Anderson (2008). Each index is a standardized weighted average of a group of variables, with weights corresponding to the inverse of the covariance matrix of the normalized variables. This approach increases efficiency by ensuring that highly correlated indicators receive less weight than uncorrelated indicators. Intuitively, uncorrelated indicators, which represent “new” information, receive more weight (Schwab et al., 2020). The index also permits us to test the single hypothesis of whether the program had no impact on the index, as opposed to testing multiple related hypotheses separately.

## 7.2 Economic Activity

**PGET increased economic activity and quality of labor market engagement for program participants** (see Table D.1a). Within the control group, a substantial majority of study participants (69%) are economically active at the time of our follow up survey, but only 24% work in the formal sector and self-employment is quite rare (the self-employment rate is under 4%). PGET participants are 11 percentage points (pp), or 16%, more likely to either have had a job in the most recent six months (prior to the survey) or to have looked for a job in the past three months; 10 pp (42%) more likely to be formally employed; and 4 pp (114%) more likely to be self-employed or to own a business.<sup>20</sup> Business and labor market outcomes are defined as the joint outcome of owning a business (working for someone else) and the outcome under consideration. Estimates for outcomes that are conditional on employment status (e.g., defined only for entrepreneurs and/or wage workers) would be biased and inconsistent, since they would result from conditioning on an outcome that is endogenous to treatment. **These findings suggest that PGET may have been effective in reducing barriers to potentially higher quality formal salaried and self-employment jobs.**

However, PGET’s impacts on hours worked and earnings for the main economic activity are not statistically significant. The data on hours worked and earnings are quite noisy,<sup>21</sup> and as such the small sample size may not be sufficient to detect meaningful impact. In fact, we would need to observe effect sizes of approximately 28% and 37% for hours worked and earnings, respectively, to achieve statistical significance

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<sup>19</sup>DML estimates rely on  $K$ -fold cross-fitting (in our case  $K = 5$ ) to minimize overfitting. In finite samples, the dependence of the estimator on the particular split creates an additional source of variation. Following Chernozhukov et al. (2018), to incorporate a measure of this additional source of variation in the estimates and their standard errors, the estimation step is repeated  $S = 100$  times. Sample medians of the estimates and median standard errors obtained across the  $S$  replications/splits are reported.

<sup>20</sup>Each of these results is statistically significant at the 5% or 10% level based on one-sided hypothesis tests against the null that treatment failed to improve employment outcomes.

<sup>21</sup>The analysis in this report is based on raw data that has not been cleaned or winsorized. Further, the current specifications do not allow us to account for the significant mass of “zeros”, which would be better handled by Poisson models.

in our sample. We detect effect size of 10% and 6%, respectively, which could be particularly meaningful in labor markets with limited labor demand.

### 7.3 Migration

Although differential attrition is a concern for outcomes based on follow-up survey data, migration data is available for 91.5% of the study sample and we cannot reject that the rate of missing migration outcomes for treatment versus control group study participants is equal. While we employ one-sided hypothesis testing for all other sets of outcomes, the net impact of treatment on migration is ambiguous: increased employment opportunities may reduce out-migration, while improved earnings may alternatively relax those credit constraints that limit migration in the first place.

**We observe high rates of geographic mobility in our study sample.** As shown in Table D.2a, in the control group, over 40% of the sample had left their baseline neighborhood/locality by the time of the follow-up survey and over one quarter had moved out of their municipality at baseline. Of those that had left their neighborhood, 54% (22% of the control group as a whole) remained within Honduras and 30% (12.8% of the control group as a whole) moved abroad (see Table D.3a).<sup>22</sup> **In other words, absent PGET, over one in ten youths migrated abroad.**

**PGET participants are less likely to have left their municipality and/or *colonia*/neighborhood** Specifically, they are 6.5 pp (15%) less likely to have left their neighborhood, and 9.1 pp (32.5%) less likely to have left their municipality; however, only the latter is statistically significant at 5% (see Table D.2a). The decline in out-migration by PGET participants is driven in particular by a decline in movements to other municipalities within Honduras. PGET reduces the likelihood of such relocation by 4.7pp (57%). We do not detect a statistically significant impact of the program on migration abroad.

### 7.4 Crime, Violence, and Substance Use

#### 7.4.1 Social Norms, Victimization, and Perpetration,

**Participating in PGET did not alter attitudes towards justifying antisocial behavior.** The outcome of interest is captured by a summary index comprised of five yes/no questions soliciting youths' views as to whether violence could be justified in different scenarios. These are seeking revenge on outsiders that have committed an act of violence or crime in the youths' neighborhood; seeking revenge on someone trying to steal a friend's girlfriend or boyfriend; stealing from a rich neighbor to help a poorer one; keeping money that is found in a wallet which includes the owner's ID card; and stealing from one's work to help out one's family.

**Turning our attention to youth's experience and involvement in antisocial behavior, we have to highlight that under-reporting is very likely due to social norms and safety concerns associated with reporting and open discussion about crime and violence in this context.** Table E.1a presents the results for aggregate measures: the crime perpetration index is based on self-reported engagement in robbery, extortion, theft, drug sales, or drug purchases; the victimization index is based on own and family's experience of robbery and extortion.

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<sup>22</sup>We do not know the destination of the remaining 16% (7% of the control group as a whole) that had left their locality.

**PGET participants and their families are not significantly less likely to report being the victim of crime (robbery/extortion).** As shown in Table E.1a, the point estimate is small and not statistically significant. Location may play a role in explaining victimization patterns and the scale of the program is unlikely to lead to general equilibrium effects. Victimization remains common: at follow-up, 23% of control group participants were robbed (or had a family member who was robbed) and 12% reported that either they or their family had been extorted in the 12 months before the survey. These figures are much lower than those reported at baseline, when 42.4% of our sample reported that they or someone in their family had been a victim of theft, robbery (a violent offense), and/or extortion. Lower reported incidence at follow-up may reflect changes in reporting due to changing local circumstances/trust, or may reflect out-migration (and resultant attrition) on the basis of baseline crime and violence exposure.

**The impacts of the program on perpetration are more nuanced.** The estimated effect of the program is large in magnitude (0.20 SD) albeit insignificant at conventional levels (with a *p-value* of 0.17, see Table E.1a). At most 2% of youth in the control group report engaging in any of the illegal activities captured by the index in the 12 months prior to the survey. In the presence of low incidence, large sample sizes are required to precisely estimate even treatment effects of policy-relevant magnitudes.

#### 7.4.2 Substance Use: Alcohol and Drugs

**PGET also did not appear to decrease reported use of alcohol and drugs.** Under reporting may again play a role in this context. In the control group, only 10% report consuming alcohol or drugs at least once per month in the 12 months prior to the survey (see Table E.2a). While we identify a 3.3 pp decline in alcohol/drug use in connection to PGET participation, this effect is not statistically significant. We also construct an aggregate index to capture use of alcohol, marijuana or other drugs in the last year, and the frequency of use. We do not find a significant impact of the program on the alcohol/drug consumption index.

### 7.5 Intimate Partner Violence (IPV)

**The program led to meaningful reduction in intimate partner violence.** While the results are extremely promising we have to highlight that the sample size is further reduced to only those in a relationship at the time of the survey.

**We observe high rates of intimate partner violence in the study sample.** In the control group 34% report either physical or emotional abuse in the 30 days preceding the survey (see Tables E.3a and E.4a). Focusing first on measures related to emotional abuse, 24% of control group participants have argued with their partner, 20% have been humiliated by their partner, and 4.4% have been threatened by their partner. Regarding physical violence, 5.8% of control group respondents have been physically hurt by their partner, and 4.3% have been forced to engage in sexual activity with their partner.

**The program led to a large 14 pp (40.2%) reduction in the overall incidence of IPV.** It also led to 0.42 SD decline in the IPV Anderson (2008) index. The latter combines the different emotional and physical measures (see Table E.3a). Both of these results are statistically significant at conventional levels.<sup>23</sup>

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<sup>23</sup>These are standard measures in the IPV literature and we follow a “gatekeeper strategy” as outlined in Haushofer et al. (2019), by first considering effects of the program on a set of index variables, and then exploring those indices in more detail.

**The aggregate results are explained by a reduction in emotional, physical, and sexual violence** (see Table E.4a). Most notably, PGET led to reductions in reporting being humiliated/belittled by the partner (decrease of 17.5 pp, or 89%) and having arguments (decrease of 11.3 pp, or 47%).<sup>24</sup> We also observe a statistically significant reduction in forced sex (a decrease of ~100%). The magnitudes of the estimated effects on being threatened or physically hurt by one’s partner also suggest that these forms of IPV are virtually eliminated for PGET participants, though the effects are imprecisely estimated and thus not statistically significant.

**These results suggest that PGET may have endowed participants with the skills to sort into healthier relationships and/or moderate impulsive and abusive behavior; indirectly, improved labor market prospects may offer additional protection against intra-household conflicts.**

## 7.6 Subjective Well-Being and Mental Health

Our data feature a rich set of skills, personality traits, mental health, and subjective well-being assessments, including task-based measures. We present here the results for a parsimonious set of outcomes.

### 7.6.1 Self-Efficacy

**Participation in PGET resulted in increased self-efficacy.** Self-efficacy refers to the extent to which an individual is in control of aspects of his or her life and how empowered he or she feels to implement actions directed towards a plan. Self-efficacy has been reported to reduce the impact of stress on symptoms of depression and anxiety. We rely on [Schwarzer and Jerusalem \(1995\)](#)’s 10-item scale, which is designed for the general adult population, including adolescents. In contrast to other scales that were designed to assess optimism, this scale was developed to capture personal agency, i.e., the belief that one’s actions are responsible for successful outcomes. **We observe a large and statistically significant increase in self-efficacy of 0.24 SD** (see Table F.1a).

### 7.6.2 Mental Health: PTSD and Depression

**The project targeted areas characterized by high levels of exposure to trauma and mental illness.**<sup>25</sup> At baseline 56.4% of youth reported having previously experienced trauma and 31.3% exhibited symptoms of borderline or severe post-traumatic stress disorder (PTSD; see table F.1a). At the 4/5-year follow-up, overall levels of exposure to trauma remained extremely high (50.7% in the control group; see column 4), while the incidence of provisional PTSD declined (relative to the baseline) to 19.4% in the control group (column 6). We do not observe evidence of reductions in PTSD due to PGET.

To put these figures into perspective, according to the [U.S. National Center for PTSD](#), about 6% of the U.S. population will have PTSD at some point in their lives and 5% have PTSD in any given year, in stark contrast with our incidence figure. The course of PTSD varies: some people recover within 6 months, others have symptoms that last for 1 year or longer, which could explain the improvement relative to the baseline rate. However, people with PTSD are more vulnerable and often have co- and re-occurring conditions, such

<sup>24</sup>These effects are significant at the 1% and 10% levels, respectively.

<sup>25</sup>We relied on 10-item Beck Depression Inventory-II (BDI-II) to measure depression ([Beck et al., 1996](#)) and the PTSD checklist for DSM-5 (PCL-5) to assess PTSD ([Yehuda et al., 2015](#)).

as depression, substance use, or one or more anxiety disorders.

**PGET was effective in reducing the incidence of mild depression.** As shown in column 3 of Table F.1a, at follow-up the incidence of mild depression was 15.5% in the control group. For PGET participants, this decreased by a statistically significant 6.9 pp (45%).

## 8 Conclusions

**The preliminary analysis in this report suggests that PGET, a three-month program, achieved meaningful results that were sustained for at least four to five years.** The program's IE finds evidence of improved outcomes in the labor market, suggestive evidence of reduced participation in violence and crime, reduced intimate partner violence, including the virtual elimination of sexual violence, and improved subjective well-being and mental health. While still preliminary and subject to further analysis, these meaningful results suggest important promise in PGET-like programs for improving labor market and life outcomes of youth living in high-violence, fragile urban communities.

**PGET was an ambitious and innovative pilot program.** The Project Implementation Unit within the Government of Honduras should be credited with leveraging the international evidence existing at the time of project implementation and, in particular, incorporating the innovative group-based CBT component which explicitly targeted mental health and sought to equip youth with mental and behavioral tools needed to constructively deal with the daily challenges they face. The program impacts on subjective well-being and mental health point to improvements in these outcomes. Considering also the reductions in IPV, the improvements in labor market participation, and the suggestive (albeit statistically insignificant) reductions in perpetration, the findings suggest that PGET may have played a role in expanding youth's skills and resilience to cope with and manage behavioral and social risk factors present in their communities. However, the scale of the program may not have been sufficient to alter the social environment, particularly as shaped by the presence of gangs, which remain pervasive.

**Moreover, the results of this analysis offer an important counterargument to the often-held view of at-risk youth as delinquent or, in the Honduran context, *mareros* or gang-members.** While acknowledging the very real challenges related to gangs and violence in these communities, the results of this study are an important reminder that, behind the headlines and anecdotes, many youth are working to better their futures despite the difficult family and community circumstances that they have grown up in. This demonstrates the importance of using policy and development finance to promote effective solutions to support youth, their families, and communities. Developing targeted and effective interventions to arrest cycles of poverty and violence must remain a priority.

## A Appendix: Data Collection

### A.1 Baseline Survey

A Honduran firm, CONFIE, under contract with the Government of Honduras and with technical assistance and supervision from the World Bank, was responsible for data collection activities.<sup>26</sup>

**83.7% of the original study sample completed the baseline survey.** In the treatment group (i.e., youth assigned to PGET), 88.7% of youth completed the survey.<sup>27</sup> The control group completion rate was 78.7%. The percentage of collected household head surveys is lower.<sup>28</sup> In the treatment group, 62.7% of household heads were surveyed.<sup>29</sup> For youth in the control group, 53.7% of household heads were surveyed. The lower completion rate achieved is driven by La Ceiba, where no standalone household head surveys were completed.<sup>30</sup> The research team implemented a series of strict quality control measures during survey implementation, including high-frequency data checks, survey audits, and in-field supervision by the World Bank’s Field Coordinator. Through these various quality control channels, near-daily feedback was provided to CONFIE regarding the progress and quality of data collection activities.

### A.2 Follow-up Survey

Follow-up data collection faced many challenges causing substantial delays.<sup>31</sup> Recruiting a qualified survey firm able to collect sensitive data with a sufficient quality standard in fragile communities was extremely difficult. Key factors are summarized below.

1. **Data collection capacity.** After two unsuccessful competitive recruitment processes, Innovations for Poverty Action (IPA), an NGO specializing in RCTs with demonstrated capacity in the region, was contracted.<sup>32</sup>
2. **Natural disasters and Pandemic.** Data collection was finally set to begin in March 2020, which coincided with the onset of the COVID-19 pandemic, and additional delays were caused by natural disasters and election-related unrest.
3. **Tracking: medium run and context.** Tracking study participants 5 years after baseline is typically challenging, but the context and general distrust regarding divulging personal information, including

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<sup>26</sup>CONFIE’s field team included an overall Field Manager and, in each municipality, a Field Coordinator and a team of about ten enumerators. CONFIE’s field team underwent two rounds of training, in February and March 2018, conducted separately in each municipality. The second training was added following concerns by the research team that the first training was insufficient to provide CONFIE field teams with enough proficiency in the survey tools and procedures. Training was closely supported by the World Bank team, with the Bank directly addressing CONFIE’s observed capacity constraints. This included the complete development of training manuals, enumerator field guides, and specific training presentations. It also included close participation in the training, leading certain sessions, and providing ongoing feedback to CONFIE’s management. The training process was also directly supported by Safer Municipalities Project staff. Additional field tests were carried out as part of each training session.

<sup>27</sup>The completion rate for those who participated in the program is 98.2%.

<sup>28</sup>At baseline, data was collected from youth and from the head of their household. When youth identified as the head of their household (34.5% of cases), they were administered both surveys.

<sup>29</sup>(This rises to 70.1% for the households of youth who eventually when on to participate in the program.)

<sup>30</sup>In La Ceiba, 58 household head surveys were completed, covering only targeted youth who were also the heads of their households. This is due to the data collection firm’s failure to resolve a contractual dispute with their field team in La Ceiba, which cut short the time of survey implementation.

<sup>31</sup>It is worth mentioning that stipends due to youth that participated in PGET were not paid by the Safer Municipalities Project until May 2019, nine months after the conclusion of the program. This led to significant tension and animosity, which did not allow for a short term follow-up.

<sup>32</sup>The competitive recruitment processes failed to identify a data collection firm with the right capacity and experience to conduct the assignment.



their location, to outsiders made tracking study participants all the more arduous. Traditional data collection approaches that leverage large teams and minimize time in the field were not applicable. Smaller teams focused first on building relationships with the community, then collecting data second, were critical. However, many of our partners were resistant to this approach.

Strong mistrust of outsiders and the design of our follow-up survey, which included several sensitive topics and two task based activities, made it necessary to collect the surveys face-to-face. Before resuming in-person data collection, a phone tracking survey to update contact information for study participants was supposed to take place in late 2020. However, in November 2020, Honduras was severely hit by two major hurricanes, Eta and Iota, which affected the study areas. The phone tracking survey was then carried out between January 12 and February 20, 2021. Updated contact information was successfully collected for 65% of our original study sample.

The team had hoped to complete the first follow-up by November 2021, ahead of the general elections. During the training/piloting phase, it became apparent that the recruited enumerators did not possess the right set of skills to effectively conduct digital surveys nor manage the sensitive nature of the survey.<sup>33</sup> A new effort to recruit a more qualified set of field officers was undertaken. A new surge in COVID-19 cases related to the Omicron variant delayed the start of data collection until March 18, 2022.<sup>34</sup>

**The first phase of the follow-up data collection was completed in October 2022** reaching 36% of the original sample. Tracking of youth was a significant challenge.

**In November 2022, the research team developed and successfully tested alternative strategies** to improve recontact and completion rates. The pilot was implemented in the municipality of El Progreso. These strategies, approved by the IRB, included working with a smaller and highly qualified team, outreach via email or social media, offering an incentive to neighbors or relatives to offer valid contact information for respondents, and an expanded reliance on community leaders to access the areas and to gather information about youth's whereabouts. **A second phase of data collection took place from March to July, 2023.**

**A final phase of data collection, following another protracted contracting process for Insight, previously IPA's sub-contractor, began in January 2024. However, this was suspended after just one week in the field, due to a security incident.** On January 18, 2024, Insight's team, failing to adhere to safety recommendations from community leaders, entered the Danto neighborhood in La Ceiba. The team was robbed, and some of their valuables were stolen, including printed sheets with study participants' names, phone numbers, and addresses for that neighborhood. Thankfully, the team was safe. However, personal information for 106 youth in La Ceiba were stolen (prior to this incidence, the research team did not know of the practice of field teams carrying printed personal information). Insight's field staffs were very likely targeted because they were "external" to the community and failing to adhere to community leaders' recommendations. Subsequent investigations did not reveal any direct link with the study.

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<sup>33</sup>The local partner, Insight (IPA sub-contractor), held two training sessions for enumerators in September and October 2021 and launched a pilot to assess enumerators' relevant knowledge.

<sup>34</sup>At the beginning of 2022, we were advised by the World Bank's Honduras Country Management Unit to postpone field activities until the situation had stabilized.

All data collection was immediately paused and the incident was reported to our IRB and to the World Bank’s Data Privacy Office. Follow-up actions, including the notification of affected youth, were implemented as agreed, including in collaboration with community leaders who continue to provide advice throughout the process. Unfortunately, it became apparent that some of Insight’s data protocols and securities practices did not meet our standards and we had to end our collaboration with the firm. We are currently finalizing the recruitment of another data collection partner in an attempt to obtain as much additional data as possible.

### A.3 Equifax: Credit Data

Equifax collects and maintains data on individuals’ and businesses’ credit histories, loan records, payment behaviors, and other relevant financial information. These data are used to generate credit reports and scores that help financial institutions, employers, and other entities make informed decisions regarding lending, employment, and rental applications. Equifax records feature individuals with active credit products, or who have applied for them. Savings/checking accounts and certificates of deposit do not generate an Equifax record.

Equifax receives information from four distinct types institutions: (1) traditional financial institutions (e.g., banks, credit unions, microfinance institutions, covering 95% of the banking market in Honduras), (2) credit card companies, (3) issuers of consumer credit (e.g., retailers, schools, gas stations, hospitals, and any retailer that offers sales on credit), and (4) telecoms and utilities.

We have access to data spanning the five-year period from December 2018 to November 2023. 94.5% of the study participants were found in the Equifax data (659 out of the original 697 sample). In addition to credit scores, which are proxies for default behavior, we observe information on all accounts including account age, number of active creditors, active credit products, active loans, monthly payments due, the number of days past due in the current month, and within the last two years.

## B Tables: Balance Tables

**Table B.1:** Baseline Balance Table

	Control	PGET	<i>p-value</i>
	Mean	Mean	PGET vs Control
<b>Demographics and indexes</b>			
Age at baseline	22.774	22.388	0.163
Female	0.651	0.619	0.490
Single	0.622	0.671	0.230
Household Head	0.360	0.404	0.224
Has 1 or more children	0.447	0.427	0.683
HH Income/Wealth Index	-0.047	0.042	0.245
HHH SES/Compositions Index	0.012	-0.011	0.699
Risky Behaviour Index	0.001	-0.001	0.958
Upbringing Index	-0.075	0.067	0.064*
HHH SES/Market Labor Index	0.024	-0.021	0.575
<b>Access to education and labor market</b>			
Currently enrolled in school	0.120	0.124	0.978
Planning to enroll in school	0.538	0.557	0.760
Max Educ: Pre-basica or Basica schooling	0.309	0.254	0.186
Max Educ: Diversificado/Ciclo Comun	0.640	0.717	0.059*
Maximum Educ: Tertiary	0.040	0.023	0.194
Has a Job	0.124	0.137	0.721
Has only 1 job	0.113	0.124	0.779
Formal Job (w/ contract)	0.018	0.029	0.364
Weekly earnings (lps)	141.091	242.997	0.193
<b>Expectations</b>			
Wishes to permanently move abroad	0.560	0.528	0.452
Expects to be married/have a partner in 5 years	0.702	0.664	0.377
Life perception	6.571	6.489	0.616
Life perception in 5 years	9.247	9.277	0.774
<b>Mental Health and Skills</b>			
Depression (BDI)	11.484	11.322	0.811
Experienced a traumatic event	14.458	15.059	0.706
PTSD (PCL5)	3.474	3.498	0.629
Grit	57.527	57.831	0.618
Impulsivity - Barratt	2.487	2.567	0.479
Intelligence, Raven's matrices	0.553	0.635	0.057*
Big5: Neuroticism	11.960	11.684	0.401
Big5: Extroversion	11.560	11.495	0.824
Big5: Openness	16.425	15.990	0.166
Big5: Agreeable	15.938	15.674	0.361
Big5: Conscientious	16.364	16.029	0.320
Observations	275	307	
F-test of joint significance (F-stat)			0.915
F-test, number of observations			582
F-test-pvalue			0.608

**Table B.2:** Migration Balance Table

	Control	PGET	<i>p-value</i>
	Mean	Mean	PGET vs Control
<b>Demographics and indexes</b>			
Age at baseline	22.719	22.395	0.201
Female	0.651	0.599	0.233
Single	0.698	0.700	0.961
Household Head	0.280	0.363	0.017**
Has 1 or more children	0.355	0.375	0.573
HH Income/Wealth Index	-0.053	0.010	0.357
HHH SES/Compositions Index	-0.009	0.001	0.914
Risky Behaviour Index	-0.031	-0.024	0.929
Upbringing Index	-0.052	0.092	0.036**
HHH SES/Market Labor Index	-0.018	-0.030	0.871
<b>Access to education and labor market</b>			
Currently enrolled in school	0.090	0.114	0.438
Planning to enroll in school	0.632	0.603	0.355
Max Educ: Pre-basica or Basica schooling	0.240	0.230	0.974
Max Educ: Diversificado/Ciclo Comun	0.723	0.744	0.674
Maximum Educ: Tertiary	0.028	0.022	0.572
Has a Job	0.097	0.126	0.279
Has only 1 job	0.090	0.114	0.403
Formal Job (w/ contract)	0.016	0.025	0.339
Weekly earnings (lps)	113.707	225.868	0.102
<b>Expectations</b>			
Wishes to permanently move abroad	0.664	0.577	0.024**
Expects to be married/have a partner in 5 years	0.763	0.700	0.086*
Life perception	6.682	6.530	0.392
Life perception in 5 years	9.402	9.312	0.370
<b>Mental Health and Skills</b>			
Depression (BDI)	10.972	11.085	0.998
Experienced a traumatic event	13.766	14.625	0.579
PTSD (PCL5)	3.471	3.486	0.711
Grit	57.533	57.956	0.512
Impulsivity - Barratt	2.421	2.580	0.231
Intelligence, Raven's matrices	0.642	0.675	0.474
Big5: Neuroticism	11.988	11.700	0.322
Big5: Extroversion	11.692	11.530	0.509
Big5: Openness	16.517	16.063	0.097*
Big5: Agreeable	15.885	15.789	0.723
Big5: Conscientious	16.430	16.147	0.302
Observations	321	317	
F-test of joint significance (F-stat)			1.211
F-test, number of observations			638
F-test-pvalue			0.195

**Table B.3:** Follow-Up Balance Table

	Control	PGET	<i>p-value</i>
	Mean	Mean	PGET vs Control
<b>Demographics and indexes</b>			
Age at baseline	22.880	22.518	0.246
Female	0.684	0.637	0.542
Single	0.626	0.689	0.352
Household Head	0.342	0.347	0.390
Has 1 or more children	0.413	0.405	0.885
HH Income/Wealth Index	-0.006	0.019	0.757
HHH SES/Compositions Index	-0.020	0.064	0.894
Risky Behaviour Index	-0.013	0.013	0.764
Upbringing Index	-0.039	-0.002	0.338
HHH SES/Market Labor Index	0.077	-0.024	0.396
<b>Access to education and labor market</b>			
Currently enrolled in school	0.090	0.142	0.551
Planning to enroll in school	0.561	0.600	0.938
Max Educ: Pre-basica or Basica schooling	0.290	0.226	0.411
Max Educ: Diversificado/Ciclo Comun	0.671	0.747	0.250
Maximum Educ: Tertiary	0.019	0.026	0.803
Has a Job	0.103	0.137	0.621
Has only 1 job	0.097	0.126	0.761
Formal Job (w/ contract)	0.006	0.026	0.175
Weekly earnings (lps)	78.710	310.132	0.033**
<b>Expectations</b>			
Wishes to permanently move abroad	0.613	0.537	0.113
Expects to be married/have a partner in 5 years	0.735	0.679	0.384
Life perception	6.768	6.674	0.741
Life perception in 5 years	9.374	9.311	0.833
<b>Mental Health and Skills</b>			
Depression (BDI)	11.994	11.632	0.508
Experienced a traumatic event	14.677	15.700	0.907
PTSD (PCL5)	3.445	3.465	0.697
Grit	58.735	58.353	0.747
Impulsivity - Barratt	2.374	2.521	0.169
Intelligence, Raven's matrices	0.594	0.663	0.310
Big5: Neuroticism	11.948	11.584	0.314
Big5: Extroversion	11.542	11.379	0.643
Big5: Openness	16.445	16.079	0.389
Big5: Agreeable	15.755	15.705	0.931
Big5: Conscientious	16.561	16.213	0.458
Observations	155	190	
F-test of joint significance (F-stat)			1.122
F-test, number of observations			345
F-test-pvalue			0.300

**Table B.4:** Equifax Balance Table

	Control	PGET	<i>p-value</i>
	Mean	Mean	PGET vs Control
<b>Demographics and indexes</b>			
Age at baseline	22.832	22.542	0.243
Female	0.657	0.612	0.293
Single	0.702	0.703	0.975
Household Head	0.289	0.361	0.038**
Has 1 or more children	0.367	0.376	0.805
HH Income/Wealth Index	-0.048	0.020	0.315
HHH SES/Compositions Index	0.019	0.008	0.748
Risky Behaviour Index	-0.049	-0.062	0.822
Upbringing Index	-0.053	0.057	0.084*
HHH SES/Market Labor Index	-0.006	-0.033	0.747
<b>Access to education and labor market</b>			
Currently enrolled in school	0.090	0.113	0.397
Planning to enroll in school	0.630	0.612	0.532
Max Educ: Pre-basica or Basica schooling	0.235	0.226	0.933
Max Educ: Diversificado/Ciclo Comun	0.723	0.749	0.518
Maximum Educ: Tertiary	0.033	0.021	0.300
Has a Job	0.093	0.125	0.212
Has only 1 job	0.087	0.116	0.254
Formal Job (w/ contract)	0.015	0.028	0.231
Weekly earnings (lps)	103.012	212.844	0.088*
<b>Expectations</b>			
Wishes to permanently move abroad	0.657	0.575	0.031**
Expects to be married/have a partner in 5 years	0.756	0.706	0.144
Life perception	6.660	6.602	0.775
Life perception in 5 years	9.404	9.358	0.628
<b>Mental Health and Skills</b>			
Depression (BDI)	10.934	11.031	0.983
Experienced a traumatic event	13.678	14.520	0.552
PTSD (PCL5)	3.480	3.497	0.653
Grit	57.280	57.630	0.569
Impulsivity - Barratt	2.413	2.471	0.660
Intelligence, Raven's matrices	0.645	0.667	0.673
Big5: Neuroticism	11.958	11.703	0.365
Big5: Extroversion	11.660	11.535	0.622
Big5: Openness	16.605	16.193	0.140
Big5: Agreeable	16.012	15.810	0.441
Big5: Conscientious	16.434	16.144	0.338
Observations	332	327	
F-test of joint significance (F-stat)			0.978
F-test, number of observations			659
F-test-pvalue			0.506

## C Tables: Attrition Tables



**Table C.1:** Migration Attrition Table

	(1)		(2)	
	$\beta$	se	$\beta$	se
PGET	0.010	(0.017)	0.013	(0.016)
<b>Demographics and indexes</b>				
Age at baseline			0.007**	(0.004)
Female			0.011	(0.021)
Single			-0.005	(0.020)
Household Head			0.021	(0.021)
Has 1 or more children			0.015	(0.024)
HH Income/Wealth Index			-0.011	(0.008)
HHH SES/Compositions Index			0.017*	(0.010)
Risky Behaviour Index			-0.026**	(0.013)
Upbringing Index			-0.012	(0.008)
HHH SES/Market Labor Index			-0.002	(0.008)
<b>Access to education and labor market</b>				
Currently enrolled in school			-0.035	(0.033)
Planning to enroll in school			0.003	(0.018)
Max Educ: Pre-basica or Basica schooling			0.078	(0.187)
Max Educ: Diversificado/Ciclo Comun			0.101	(0.186)
Maximum Educ: Tertiary			0.084	(0.187)
Has a Job			-0.183	(0.135)
Has only 1 job			0.198	(0.141)
Formal Job (w/ contract)			0.048	(0.040)
Weekly earnings (lps)			-0.005	(0.017)
<b>Expectations</b>				
Wishes to permanently move abroad			-0.005	(0.017)
Expects to be married/have a partner in 5 years			-0.023	(0.018)
Life perception			0.009**	(0.004)
Life perception in 5 years			-0.011	(0.007)
<b>Mental Health and Skills</b>				
Depression (BDI)			0.001	(0.001)
Experienced a traumatic event			-0.035**	(0.016)
PTSD (PCL5)			-0.000	(0.001)
Grit			-0.021	(0.019)
Impulsivity - Barratt			0.001	(0.001)
Intelligence, Raven's matrices			0.001	(0.006)
Big5: Neuroticism			-0.001	(0.002)
Big5: Extroversion			0.000	(0.003)
Big5: Openness			0.002	(0.004)
Big5: Agreeable			0.006	(0.004)
Big5: Conscientious			0.001	(0.004)
<b>Youth's Residency at baseline</b>				
Municipality: Choloma			-0.023	(0.032)
Municipality: El Progreso			-0.089**	(0.041)
Ceiba-Neighborhood Melgar 1			-0.018	(0.030)
Ceiba-Neighborhood Melgar 2			-0.002	(0.021)
Choloma-Neighborhood Ceden			-0.047	(0.051)
Choloma-Neighborhood Infop			-0.040	(0.046)
El Progreso-Neighborhood Policarpo			0.057	(0.050)
El Progreso-Neighborhood Palermo			0.044	(0.043)
Constant	0.941***	(0.013)	0.670***	(0.258)
Observations	697		697	

**Table C.2:** Follow-Up Attrition Table

	(1)		(2)	
	$\beta$	se	$\beta$	se
PGET	0.113***	(0.038)	0.114***	(0.038)
<b>Demographics and indexes</b>				
Age at baseline			0.006	(0.006)
Female			0.093**	(0.044)
Single			-0.089*	(0.049)
Household Head			-0.065	(0.049)
Has 1 or more children			-0.004	(0.051)
HH Income/Wealth Index			-0.004	(0.022)
HHH SES/Compositions Index			0.062**	(0.031)
Risky Behaviour Index			-0.005	(0.024)
Upbringing Index			-0.032	(0.022)
HHH SES/Market Labor Index			0.026	(0.022)
<b>Access to education and labor market</b>				
Currently enrolled in school			0.007	(0.074)
Planning to enroll in school			-0.031	(0.044)
Max Educ: Pre-basica or Basica schooling			0.062	(0.193)
Max Educ: Diversificado/Ciclo Comun			0.025	(0.194)
Maximum Educ: Tertiary			-0.111	(0.247)
Has a Job			-0.106	(0.193)
Has only 1 job			0.178	(0.196)
Formal Job (w/ contract)			-0.176	(0.156)
Weekly earnings (lps)			0.000	(0.000)
<b>Expectations</b>				
Wishes to permanently move abroad			-0.069*	(0.040)
Expects to be married/have a partner in 5 years			-0.044	(0.046)
Life perception			0.027***	(0.010)
Life perception in 5 years			-0.021	(0.020)
<b>Mental Health and Skills</b>				
Depression (BDI)			0.004	(0.003)
Experienced a traumatic event			-0.047	(0.045)
PTSD (PCL5)			0.002	(0.002)
Grit			-0.047	(0.045)
Impulsivity - Barratt			0.003	(0.003)
Intelligence, Raven's matrices			0.006	(0.013)
Big5: Neuroticism			-0.009	(0.006)
Big5: Extroversion			-0.002	(0.006)
Big5: Openness			-0.005	(0.006)
Big5: Agreeable			-0.006	(0.007)
Big5: Conscientious			0.018***	(0.007)
<b>Youth's Residency at baseline</b>				
Municipality: Choloma			0.330***	(0.073)
Municipality: El Progreso			0.353***	(0.082)
Ceiba-Neighborhood Melgar 1			0.304***	(0.083)
Ceiba-Neighborhood Melgar 2			0.211***	(0.062)
Choloma-Neighborhood Ceden			-0.133	(0.095)
Choloma-Neighborhood Infop			-0.180**	(0.080)
El Progreso-Neighborhood Policarpo			-0.046	(0.098)
El Progreso-Neighborhood Palermo			-0.168**	(0.082)
Constant	0.439***	(0.026)	0.182	(0.406)
Observations	697		697	

**Table C.3:** Equifax Attrition Table

	(1)		(2)	
	$\beta$	se	$\beta$	se
PGET	0.012	(0.021)	0.011	(0.022)
<b>Demographics and indexes</b>				
Age at baseline			0.000	(0.004)
Female			0.014	(0.027)
Single			-0.030	(0.026)
Household Head			-0.023	(0.030)
Has 1 or more children			-0.008	(0.030)
HH Income/Wealth Index			-0.020	(0.013)
HHH SES/Compositions Index			0.000	(0.019)
Risky Behaviour Index			-0.007	(0.011)
Upbringing Index			0.007	(0.012)
HHH SES/Market Labor Index			-0.007	(0.010)
<b>Access to education and labor market</b>				
Currently enrolled in school			0.011	(0.048)
Planning to enroll in school			-0.003	(0.024)
Max Educ: Pre-basica or Basica schooling			0.143	(0.172)
Max Educ: Diversificado/Ciclo Comun			0.163	(0.175)
Maximum Educ: Tertiary			0.136	(0.202)
Has a Job			-0.081	(0.153)
Has only 1 job			0.108	(0.154)
Formal Job (w/ contract)			-0.017	(0.090)
Weekly earnings (lps)			0.000	(0.000)
<b>Expectations</b>				
Wishes to permanently move abroad			-0.003	(0.023)
Expects to be married/have a partner in 5 years			-0.012	(0.027)
Life perception			0.009	(0.006)
Life perception in 5 years			-0.021**	(0.009)
<b>Mental Health and Skills</b>				
Depression (BDI)			0.000	(0.002)
Experienced a traumatic event			0.004	(0.024)
PTSD (PCL5)			0.000	(0.001)
Grit			-0.053*	(0.029)
Impulsivity - Barratt			0.001	(0.002)
Intelligence, Raven's matrices			0.019***	(0.007)
Big5: Neuroticism			0.000	(0.003)
Big5: Extroversion			0.001	(0.004)
Big5: Openness			-0.006	(0.004)
Big5: Agreeable			0.001	(0.004)
Big5: Conscientious			0.008*	(0.004)
<b>Youth's Residency at baseline</b>				
Municipality: Choloma			0.214***	(0.051)
Municipality: El Progreso			0.206***	(0.049)
Ceiba-Neighborhood Melgar 1			0.182***	(0.057)
Ceiba-Neighborhood Melgar 2			0.208***	(0.048)
Choloma-Neighborhood Ceden			-0.005	(0.042)
Choloma-Neighborhood Infop			-0.052	(0.045)
El Progreso-Neighborhood Policarpo			-0.018	(0.041)
El Progreso-Neighborhood Palermo			-0.005	(0.029)
Constant	0.909***	(0.015)	0.760***	(0.261)
Observations	697		697	

## D Tables: Economic Outcomes and Migration

**Table D.1:** Labor Market Participation

		(a) DML					
		(1)	(2)	(3)	(4)	(5)	(6)
		Economically Active	Formal Job (Main Activity)	Self-employed or Business Owner	Employee	Hours Worked (Average)	Monthly Earnings (Lps) Main Activity
<b>Treatment</b>	$\beta$	<b>0.109</b>	<b>0.103</b>	<b>0.044</b>	<b>0.064</b>	<b>0.351</b>	<b>305.445</b>
	<i>se</i>	0.060	0.063	0.033	0.068	0.615	1,028.065
	<i>p-value</i>	0.072	0.100	0.180	0.343	0.568	0.766
	<i>one-sided p-value</i>	0.035	0.051	0.091	0.173	0.284	0.383
Mean Control Group		0.690	0.243	0.0387	0.387	3.647	4,587
Observations		345	336	345	345	332	332
Controls		Yes	Yes	Yes	Yes	Yes	Yes
		(b) OLS					
		(1)	(2)	(3)	(4)	(5)	(6)
		Economically Active	Formal Job (Main Activity)	Self-employed or Business Owner	Employee	Hours Worked (Average)	Monthly Earnings (Lps) Main Activity
<b>Treatment</b>	$\beta$	<b>0.091</b>	<b>0.092</b>	<b>0.052</b>	<b>0.049</b>	<b>0.298</b>	<b>117.626</b>
	<i>se</i>	0.051	0.055	0.030	0.058	0.531	943.016
	<i>p-value</i>	0.074	0.097	0.081	0.400	0.576	0.901
	<i>one-sided p-value</i>	0.037	0.047	0.042	0.199	0.287	0.450
Mean Control Group		0.690	0.243	0.0387	0.400	3.647	4,587
Observations		345	336	345	345	332	332
Controls		Yes	Yes	Yes	Yes	Yes	Yes

**Note:** Panel (a) reports DML (K-fold=5, Splits=100) results; point estimates and standard errors across splits are calculated with the median method as in Chernozhukov et al. (2018). Panel (b) features OLS coefficients. The dependent variables in columns (1)- (4) are dichotomous. Economically Active implies that the respondent either had a job in the last 6 months, worked or looked for a job in the last 3 months. Outcomes in columns (2), (5), and (6) are not conditional on employment status. Estimates for outcomes that are conditional on employment status (e.g., defined only for entrepreneurs and/or wage workers) would be biased and inconsistent, since they would result from conditioning on an outcome that is endogenous to treatment.

**Table D.2:** Migration

<b>(a) DML</b>			
		(1)	(2)
(moved)		Left Barrio or Locality	Left Municipality
<b>Treatment</b>	$\beta$	<b>-0.065</b>	<b>-0.091</b>
	se	0.049	0.046
	<i>p-value</i>	0.185	0.048
	<i>one-sided p-value</i>	0.092	0.024
Mean Control Group		0.424	0.280
Observations		604	604
Controls		Yes	Yes

  

<b>(b) OLS</b>			
		(1)	(2)
(moved)		Left Barrio or Locality	Left Municipality
<b>Treatment</b>	$\beta$	<b>-0.073</b>	<b>-0.092</b>
	se	0.039	0.035
	<i>p-value</i>	0.063	0.009
	<i>one-sided p-value</i>	0.031	0.004
Mean Control Group		0.424	0.280
Observations		604	604
Controls		Yes	Yes

**Note:** Panel (a) reports DML (K-fold=5, Splits=100) results; point estimates and standard errors across splits are calculated with the median method as in [Chernozhukov et al. \(2018\)](#). Panel (b) features OLS estimates. The dependent variables in the tables are dummy variables capturing migration status.

**Table D.3:** Migration: Destination

(a) DML						
		(1)	(2)	(3)	(4)	(5)
(moved where)		Different Municipality	Abroad	Moved No Additional Info	Relocated within Honduras	Same Muni Different Barrio
<b>Treatment</b>	$\beta$	<b>-0.047</b>	<b>-0.016</b>	<b>-0.031</b>	<b>-0.026</b>	<b>0.025</b>
	se	0.030	0.038	0.021	0.043	0.038
	<i>p-value</i>	0.116	0.662	0.139	0.542	0.507
	<i>one-sided p-value</i>	0.059	0.337	0.070	0.273	0.745
Mean Control Group		0.0822	0.128	0.0691	0.227	0.145
Observations		604	604	604	604	604
Controls		Yes	Yes	Yes	Yes	Yes
(b) OLS						
		(1)	(2)	(3)	(4)	(5)
(moved where)		Different municipality	Abroad	Moved No Additional Info	Relocated within Honduras	Same Muni Different Barrio
<b>Treatment</b>	$\beta$	<b>-0.041</b>	<b>-0.017</b>	<b>-0.034</b>	<b>-0.022</b>	<b>0.019</b>
	se	0.021	0.028	0.018	0.034	0.030
	<i>p-value</i>	0.052	0.541	0.056	0.523	0.538
	<i>one-sided p-value</i>	0.025	0.272	0.029	0.259	0.737
Mean Control Group		0.0822	0.128	0.0691	0.227	0.145
Observations		604	604	604	604	604
Controls		Yes	Yes	Yes	Yes	Yes

**Note:** Panel (a) reports DML (K-fold=5, Splits=100) results; point estimates and standard errors across splits are calculated with the median method as in [Chernozhukov et al. \(2018\)](#). Panel (b) features OLS estimates. Dependent variables in the tables are dummy variables capturing migration status.

## E Tables: Victimization, Perpetration, IPV

**Table E.1:** Antisocial Behavior: Victimization and Perpetration

		(a) DML				
		(1)	(2)	(3)	(4)	(5)
		Norms CV Justification	Perpetration Index	Victimization Index	Robbed in last 12m	Extorted in last 12m
<b>Treatment</b>	$\beta$	<b>0.187</b>	<b>-0.196</b>	<b>-0.044</b>	<b>0.022</b>	<b>-0.039</b>
	<i>se</i>	0.195	0.209	0.139	0.057	0.044
	<i>p-value</i>	0.336	0.348	0.754	0.702	0.379
	<i>one-sided p-value</i>	0.831	0.174	0.376	0.650	0.188
Mean Control Group		0	0	0	0.230	0.119
Observations		343	345	338	331	335
Controls		Yes	Yes	Yes	Yes	Yes

  

		(b) OLS				
		(1)	(2)	(3)	(4)	(5)
		Norms CV Justification	Perpetration Index	Victimization Index	Robbed in last 12m	Extorted in last 12m
<b>Treatment</b>	$\beta$	<b>0.272</b>	<b>-0.065</b>	<b>-0.128</b>	<b>-0.0004</b>	<b>-0.056</b>
	<i>se</i>	0.125	0.103	0.121	0.050	0.037
	<i>p-value</i>	0.031	0.531	0.291	0.993	0.134
	<i>one-sided p-value</i>	0.985	0.265	0.145	0.497	0.066
Mean Control Group		0	0	0	0.230	0.119
Observations		343	345	338	331	335
Controls		Yes	Yes	Yes	Yes	Yes

**Note:** Panel (a) features DML (K-fold=5, Splits=100) results. Point estimates and standard errors across splits are calculated with the median method as in Chernozhukov et al. (2018). Panel (b) presents OLS estimates. The dependent variables in columns (1)–(3) are Anderson (2008) indexes. Outcomes in columns (4) and (5) correspond to indicators as to whether the respondent or their family were victims of extortion/robbery.

**Table E.2:** Substance Use: Alcohol and Drugs

(a) DML			
		(1)	(2)
		Consumes alcohol/drugs once/twice monthly	Drug/alcohol consumption Index
<b>Treatment</b>	$\beta$	<b>-0.033</b>	<b>0.021</b>
	<i>se</i>	0.039	0.131
	<i>p-value</i>	0.400	0.875
	<i>one-sided p-value</i>	0.199	0.564
Mean Control Group		0.105	0
Observations		337	337
Controls		Yes	Yes

  

(b) OLS			
		(1)	(2)
		Consumes alcohol/drugs once/twice monthly	Drug/alcohol consumption Index
<b>Treatment</b>	$\beta$	<b>-0.041</b>	<b>-0.034</b>
	<i>se</i>	0.035	0.113
	<i>p-value</i>	0.245	0.767
	<i>one-sided p-value</i>	0.122	0.383
Mean Control Group		0.105	0
Observations		337	337
Controls		Yes	Yes

**Note:** Panel (a) features DML (K-fold=5, Splits=100) results; point estimates and standard errors across splits are calculated with the median method as in [Chernozhukov et al. \(2018\)](#). Panel (b) presents OLS estimates. The dependent variable in column (1) is a dummy variable for substance use; outcome in column (2) is an [Anderson \(2008\)](#) index.



**Table E.3:** Intimate Partner Violence (IPV): Two Aggregate Measures

(a) DML			
		(1)	(2)
		Any IPV Incidence	IPV Index
<b>Treatment</b>	$\beta$	<b>-0.136</b>	<b>-0.420</b>
	<i>se</i>	0.094	0.184
	<i>p-value</i>	0.147	0.022
	<i>one-sided p-value</i>	0.074	0.011
Mean Control Group		0.338	0
Observations		145	145
Controls		Yes	Yes

  

(b) OLS			
		(1)	(2)
		Any IPV Incidence	IPV Index
<b>Treatment</b>	$\beta$	<b>-0.167</b>	<b>-0.363</b>
	<i>se</i>	0.088	0.160
	<i>p-value</i>	0.062	0.026
	<i>one-sided p-value</i>	0.030	0.012
Mean Control Group		0.338	0
Observations		145	145
Controls		Yes	Yes

**Note:** Panel (a) present DML results (K-fold=5, Splits=100); point estimates and standard errors across splits are calculated with the median method as in [Chernozhukov et al. \(2018\)](#). Panel (b) features OLS estimates. The dependent variable in columns (1) is a dummy variable that captures any IPV index. Outcome in column (2) is an [Anderson \(2008\)](#) index.

**Table E.4:** Intimate Partner Violence (IPV): Individual Components

		(a) DML				
		(1)	(2)	(3)	(4)	(5)
		Argued w/ partner (emotional)	Humiliated by partner (emotional)	Threatened by partner (emotional)	Hurt by partner (physical)	Forced sex by partner (sexual)
<b>Treatment</b>	$\beta$	<b>-0.113</b>	<b>-0.175</b>	<b>-0.044</b>	<b>-0.057</b>	<b>-0.058</b>
	<i>se</i>	0.086	0.065	0.042	0.056	0.041
	<i>p-value</i>	0.192	0.007	0.302	0.309	0.155
	<i>one-sided p-value</i>	0.094	0.004	0.147	0.154	0.079
Mean Control Group		0.239	0.197	0.0435	0.0580	0.0429
Observations		144	144	139	140	141
Controls		Yes	Yes	Yes	Yes	Yes

  

		(b) OLS				
		(1)	(2)	(3)	(4)	(5)
		Argued w/ partner (emotional)	Humiliated by partner (emotional)	Threatened by partner (emotional)	Hurt by partner (physical)	Forced sex by partner (sexual)
<b>Treatment</b>	$\beta$	<b>-0.116</b>	<b>-0.146</b>	<b>-0.019</b>	<b>-0.013</b>	<b>-0.046</b>
	<i>se</i>	0.086	0.065	0.027	0.043	0.032
	<i>p-value</i>	0.179	0.027	0.483	0.767	0.158
	<i>one-sided p-value</i>	0.088	0.012	0.240	0.383	0.077
Mean Control Group		0.239	0.197	0.0435	0.0580	0.0429
Observations		144	144	139	140	141
Controls		Yes	Yes	Yes	Yes	Yes

**Note:** Panel (a) presents DML (K-fold=5, Splits=100) results; point estimates and standard errors across splits are calculated with the median method as in Chernozhukov et al. (2018). Panel (b) features OLS results. All outcomes are dummy variables that capture the incidence of each IPV dimension.

## F Tables: Well-Being and Mental Health

**Table F.1:** Well Being and Mental Health

		(a) DML					
		(1)	(2)	(3)	(4)	(5)	(6)
		Self-Efficacy	Depression BDI II	Mild Depression	Traumatic Experience	PSTD Score PCL-5	Provisional PTSD Diagnosis
<b>Treatment</b>	$\beta$	<b>0.242</b>	<b>-0.116</b>	<b>-0.069</b>	<b>0.029</b>	<b>0.029</b>	<b>-0.000</b>
	<i>se</i>	0.133	0.145	0.047	0.072	0.132	0.058
	<i>p-value</i>	0.068	0.424	0.138	0.689	0.828	0.999
	<i>one-sided p-value</i>	0.034	0.212	0.071	0.656	0.587	0.500
Mean Control Group		0	0	0.155	0.507	0	0.194
Observations		345	345	345	319	345	345
Controls		Yes	Yes	Yes	Yes	Yes	Yes

  

		(b) OLS					
		(1)	(2)	(3)	(4)	(5)	(6)
		Self-Efficacy	Depression BDI II	Mild Depression	Traumatic Experience	PSTD Score PCL-5	Provisional PTSD Diagnosis
<b>Treatment</b>	$\beta$	<b>0.120</b>	<b>-0.032</b>	<b>-0.051</b>	<b>0.026</b>	<b>-0.048</b>	<b>-0.030</b>
	<i>se</i>	0.106	0.119	0.042	0.062	0.113	0.048
	<i>p-value</i>	0.258	0.788	0.224	0.677	0.673	0.537
	<i>one-sided p-value</i>	0.129	0.394	0.112	0.663	0.335	0.266
Mean Control Group		0	0	0.155	0.507	0	0.194
Observations		345	345	345	319	345	345
Controls		Yes	Yes	Yes	Yes	Yes	Yes

**Note:** Panel (a) features on DML (K-fold=5, Splits=100) results; point estimates and standard errors across splits are calculated with the median method as in [Chernozhukov et al. \(2018\)](#). Panel (b) presents OLS estimates. Psychological scale scores in columns (1), (2) and (5) are expressed as z-scores.

## G Outcomes Definition

**Table G.1:** Economic Outcomes, Definitions

Variable	Definition
Economically Active	Indicator for whether youth currently had a job in the last 6 months of the survey or searched for work in the last three months
Formal job (main activity)	Indicator for whether the youth reported having a contract for their main job in the last 6 months of the survey. Non-conditional on being employed
Self Employed/Business Owner	Indicator for whether the respondent report being either self-employed or business owner in the context of his main economic activity
Employee	Indicator for whether the respondent reports being an employee in the context of his main economic activity. A wage worker can work for the private or public sector, as domestic service, or as a cooperative member
Average Number of hours worked	Average number of hours worked per day
Monthly Earnings, main activity	Monthly earnings for their main economic activity (in Lempiras)

**Table G.2:** Migration Outcomes, Definitions

Variable	Definition
Left Barrio/Locality	Respondent left their neighborhood of residence at baseline
Left Municipality	Respondent left their municipality of residence at baseline
Different Municipality	Respondent moved to a different municipality in Honduras
Abroad	Youth relocated abroad
Relocated within Honduras	Youth relocated to a new barrio or municipality in Honduras
Moved no Additional Info	Respondent no longer resides in the “baseline” neighborhood, but their location details are not known

**Table G.3: Crime and Violence and IPV Outcomes, Definitions**

Variable	Definition
CV Justification Index	<p>Anderson (2008) index combining respondent's agreement/disagreement with each of the following statements:</p> <ol style="list-style-type: none"> <li>1. Justified for people in the neighborhood to seek revenge against other people who cause problems</li> <li>2. Join a group to confront someone who is trying to steal friend's girlfriend</li> <li>3. Take from a wealthier neighbor's home to help others in the community</li> <li>4. Take money from a found wallet to help family before returning it</li> <li>5. Borrow money from workplace's cash register to help family</li> </ol> <p>Higher values indicate more favorable views on use of crime and violence.</p>
Perpetration Index	<p>Anderson (2008) index combining the following items:</p> <ol style="list-style-type: none"> <li>1. Robbed, Theft or extorted in the last 12 months</li> <li>2. Bought Drugs in the last 12 months</li> <li>3. Sold drugs in the last 12 months</li> </ol> <p>Higher values indicate greater involvement in antisocial behaviors.</p>
Victimization Index	<p>Anderson (2008) index combining the following items:</p> <ol style="list-style-type: none"> <li>1. Robbed at least 1 time in the last 12 months</li> <li>2. Extorted in the last 12 months</li> </ol> <p>Higher values indicate greater victimization.</p>
Substance Use Index	<p>Anderson (2008) index combining the following items:</p> <ol style="list-style-type: none"> <li>1. Consumed alcohol in the last 12 months</li> <li>2. Consumed Marijuana in the last 12 months</li> <li>3. Consumed alcohol or drugs at least once or twice in a month</li> </ol> <p>Higher values are associated with greater substance use.</p>
Any IPV Incidence	<p>Indicator for whether the respondent, in the 30 days prior to the survey, experienced any of the following:</p> <ol style="list-style-type: none"> <li>1. Sometimes or frequently argued with partner</li> <li>2. <i>If male</i>, humiliated or belittled their partner; <i>if female</i>, humiliated or belittled by their partner</li> <li>3. <i>If male</i>, threatened to hurt their partner or anyone close to their partner; <i>if female</i>, threatened to be hurt by their partner. Includes threats of physical abuse</li> <li>4. <i>If male</i>, humiliated or belittled their partner; <i>if female</i>, humiliated or belittled by their partner</li> <li>5. <i>If male</i>, ever hit, slapped, kicked, or physically hurt their partner; <i>if female</i>, ever hit, slapped, kicked, or physically hurt by their partner</li> <li>6. <i>If male</i>, ever forced their partner to have sex; <i>if female</i>, ever forced to have sex by their partner</li> </ol>
IPV Index	<p>The components for the Anderson (2008) index are the items above. Higher values implies more severe intimate partner violence.</p>

**Table G.4:** Well Being and Mental Health Outcomes, Definitions

<b>Variable</b>	<b>Definition</b>
Self Efficacy	General Self-Efficacy Scale (GSE), <a href="#">Schwarzer and Jerusalem (1995)</a>
Depression (BDI-II)	10-item Beck Depression Inventory (BDI-II), <a href="#">Beck et al. (1996)</a>
Mild Depression	Based on the BDI score. Indicator if youth has mild depression based on the BDI score is between 14 and 19.
Traumatic Event	PCL5- Screening: indicator for whether the respondent experienced very stressful experiences involving death (actual or threatened), serious injury or sexual violence. Event could have happened directly to the respondent, something they witnessed, or something that happened to a family member or close friend
PCL-5 (z-score)	The PCL-5 is a 20-item measure that assesses symptoms of PTSD, <a href="#">Yehuda et al. (2015)</a>
Provisional PTSD	Indicator based on the PCL5/DSM-5 diagnostic rule of provisional PTSD, <a href="#">Yehuda et al. (2015)</a>

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