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Differences in Rural Areas of Peru**

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Edutainment, Savings, and Generational Differences in Rural Areas of Peru

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Abstract

We wrote, produced, and implemented a randomized five-episode soap opera on financial inclusion targeted to women from poor, rural areas ravaged by terrorism in Peru. We go beyond measuring attitudes and perceptions but observe actual savings accounts using bank data. Older women, those who directly suffered from terrorist violence, respond very well and save more two years after the intervention. Younger women, unborn or too little during the terrorist period, do not show any variation in their behavior. Key mediators of our findings are more involvement in economic decisions, higher earnings, and less time spent in domestic chores.

Keywords: financial inclusion, trust, savings, soap operas, women, empowerment

JEL Classification Codes: O10, D80

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The standard disclaimer applies.

Introduction

It is widely accepted that “banking the unbanked” or increasing the participation in the formal financial sector in the developing world can serve as a gateway to a broader range of opportunities and help countries achieve development objectives. The problem is that increasing financial inclusion has proven rather difficult. One-third of adults in the world, representing nearly two billion people, are still not part of the formal financial system. Furthermore, the fact that almost two thirds of them are women makes the lack of financial inclusion an even more complex issue, as a significant gender gap significantly hinders women from being able to effectively control their financial lives and empower them (World Bank, 2022). This gap is even more acute in chronically neglected, poor, isolated, and violence-related traumatized rural areas, which are typical in the developing world (e.g., Banerjee et al., 2015; Gertler et al. 2016; Chong et al., 2020). It should be pointed out that bank account ownership does not necessarily mean bank account use. While banked individuals worldwide reach more than 70 percent of the eligible population, the number drops to less than 48 percent for developing countries once one takes into account the extent of inactive or “dormant” bank accounts (Dupas et al., 2018; Rhyne and Kelly, 2018).¹ However, there is some evidence that shows that people in developing countries have a latent demand for bank use, reflected on the fact that they typically have some monetary surplus that is employed in non-essential expenditures (Banerjee and Duflo, 2007). Still, many prefer to withdraw whatever bank funds they have, including their full government cash transfers, as soon as they are available in order to keep the funds in informal groups, livestock or even, literally, under the mattress (Karlan et al., 2014). In fact, there is a recognition that formal bank use may be increased even among the

¹ An example is India, where despite a recent government effort to increase financial inclusion, out of more than 200 million accounts opened in financial institutions, three quarters were still inactive years later (Agrawal, et al., 2018).

poor as long as some key factors can be addressed in particular, lack of trust, transaction costs, regulatory barriers, information and knowledge gaps, social constraints, and behavioral biases (Karlan et al., 2014). These factors appear to be very powerful barriers for individuals, male or female, to participate in the formal financial system.²

In recent years, edutainment and in particular, entertainment television, has proven particularly promising in helping change behaviour of the poor by constructing popular role models that can connect to traditionally excluded audiences.³ Entertainment television may help deal with several of the factors highlighted by Karlan et al. (2014) above, as this tool can help improve issues that lay at the intersection of lack of trust, informational gaps, and social constraints. In fact, research suggests that soap operas that contain a significant aspirational element and which is close to the everyday reality of the viewers may help change behavioral patterns. An important element is the persuasion effect across different settings along with closeness of the characters and story to the reality of the intended audience, while connecting positive practices to informational gaps, trust improvement, and social change. Closeness to the reality of the intended audience may be key to impact the self-image, which may be important to change corresponding attitudes (La Ferrara, 2016).⁴

We contribute to the literature by evaluating an edutainment field experiment where we create, produce, and show a five-episode soap opera in poor rural areas of the Peruvian Andes, and test whether empowerment, trust, and pro-savings messages can help improve economic decisions,

² Please, see: <https://www.cgap.org/topics/collections/womens-financial-inclusion>

³ La Ferrara (2015) defines edutainment, as the process of purposely designing and implementing a media message to both entertain and educate, to affect the audience's knowledge, attitudes, and behavior.

⁴ La Ferrara et. al., (2012) show a negative long-term impact of soap operas on fertility in Brazil; Kearney and Levine (2015) find a negative impact of a TV show on teenage births in the United States. Jensen and Oster (2009) find a positive causal link between television on women's empowerment in India. Banerjee, et al., (2015) find a link on risky sexual behavior, gender norms and domestic violence in Nigeria. Finally, Berg and Zia (2017) test the impact of messages related to debt management and gambling scripted in a soap opera in South Africa.

help interact confidently with banking institutions, and increase the use of financial services. We take very careful consideration of the soap opera design, including the characters, idiosyncrasies, storylines, and even language, so that they closely resemble the reality of the targeted audience. We organize viewing sessions in the individuals' villages and use the local public school or other village public building along with the help of previously trained facilitators, community leaders and program officials. The focus of our research are the recipients of the main Peruvian Conditional Cash Transfer (CCT), *Juntos*, which is targeted to households with incomes below the poverty line. *Juntos* provides a monthly subsidy of 100 Peruvian soles (around 35 U.S. dollars) disbursed every two months and deposited directly to individual savings accounts created at the Government-owned bank to the name of the female spouse of the head of the household. The reason for targeting this group is because while “banked by default”, the vast majority of recipients withdraw their transfers as soon as they receive them. In fact, mistrust in institutions is compounded with erosion of social capital due to pervasive institutional neglect and years-long terrorist violence.⁵

We find that there are substantial differences in our results depending on generational differences. In particular, we find that the older generation of women, those who are 40 years old or older and who suffered very significantly from terrorist violence and institutional neglect, are also the ones who clearly respond to pro-savings, trust and empowerment messages up to almost two years after the intervention, as they increase their savings account balances by about 6.2 percent with respect to the control group.

⁵ As extreme as these conditions may seem, they are not uncommon in developing countries (e.g., Cortez and Kim, 2012; Collier, 2006; Fiszbein and Schady, 2009).

The rest of the paper is organized as follows. Section 2 presents some basic Peruvian institutional background. Section 3 describes the process used to produce the soap. Section 4 presents the data and the methodological framework. Section 5 presents the results, and in Section 6 we conclude with a summary and discussion of results.

Institutional Context

Rural areas in Peru have long been neglected, which is reflected in today's structural lack of services, extremely poor infrastructure, and overall acute poverty. This can be traced to centuries old institutional arrangements dating back to the Spanish colonial period in the 1500s and, in particular, to the extensive forced mining labor system in effect in the country during most of its colonial period (Cole, 1985). This forced labor system persisted through its impacts on institutions including land tenure and provision of public goods. Large landowners were able employ these institutions in order to coerce labor or citizens in order to protect their property. As a result, today the associated districts show lower educational attainment, less integration, higher poverty rates and lower trust and social capital (Dell, 2010). There were several attempts to improve the situation in rural areas. The most important reform was carried out in the late 1960s by a military dictatorship and crystalized in the form of expropriation and land redistribution.⁶ For the most part, these land reform removed traditional, quasi-feudal landowners, and converted peasants into communal smallholders. However, there were important regional differences in the way that the land reform empowered peasants (Pozo-Vergnes, 2004). While in the coast, the expropriated land went to form cooperatives that were managed by peasants now transformed in full partners, the

⁶ During the 1960s fifty percent of the economically active population worked in agriculture, but one percent of landowners held 80 percent of the private land, whereas 83 percent of farmers held properties of 5 hectares or less, representing only 6 percent of private land. (Albertus, 2020)

communal associations in the highlands (SAIS) were for the most part managed by a group of state bureaucrats, that assumed the position of power previously owned by the *hacendados*.

Coincidentally, the end of the land reform in rural areas, including the decomposition of the SAIS promoted by the military dictatorship, is linked with the onset of a major terrorist insurgency in these same rural areas, which ended up killing an estimated 70,000 people (CVR, 2004).⁷ Most of this violence was carried out by the Shining Path, a terrorist organization that had its origins in poorest regions of the country, mainly located in the rural highlands of the Andes and was highly active during the early 1980s and early 1990s and was well-known by its brutality and cruelty. While it achieved nationwide presence it primarily operated in the poorest departments of the country, especially in the rural highlands of the departments of Ayacucho, Huancavelica, and Apurimac, where it ran unopposed.⁸ This organization pursued constant and repeated violent attacks, which included bombings, cold-blooded assassinations, and mass executions with the specific aim of turning rural inhabitants into allies in order to pursue Pol Pot-style revolution in the country. While the Shining Path was supposed to destroy the bourgeoisie of the country, their most brutal attacks were perpetrated on the very same people from rural areas that were supposed to provide the core support of their revolutionary endeavors. The reasons for this have to do with the land reform, as it increased the opportunity cost of supporting terrorism (Albertus, 2020). After a nearly ten-year run, the Peruvian government was finally able to capture the leader of the Shining Path in 1992, which spelled the beginning of the end to this terrorist organization.

⁷ Albertus (2020) and Dell (2010) argue that land reform may reduce civil conflict, so that the exclusion of vast rural areas in from land reform was another expression of neglect, lack of trust, and conflict (Plasencia, 2016).

⁸ The Shining Path originated in Ayacucho and moved towards the southern highlands during the seventies and eighties and to urban areas in the nineties (Fumerton, 2001). It should be mentioned that at the time there was also another major terrorist group, the Tupac Amaru Revolutionary Movement (MRTA).

The physical and psychological costs in the population were drastic including the loss of trust and the overall destruction of social capital (McClintock, 1984; Palmer, 1986). When the rule of law is weak, as was the general situation in the Peruvian highlands, asymmetries of social power and physical strength stymie the trust that makes towns productive (Ashraf et al., 2020). This was particularly true in the case of females, as most of the terrorist violence was inflicted by males, which meant that females became powerless and had to find ways to seek refuge, which isolated them, especially when the institutional protection faltered. In situations of anarchy, when one set of actors has more power than the other, as was the case between males and females during this period, the bargaining power of women without legal support decreases and translates to withdrawal from society as well as to a feeling powerlessness (Ashraf et al., 2020). Research shows that traumatic events can produce pervasive psychological stress and significant negative impacts on mental health (Schiff et al., 2012; Bleich et al., 2013; Pat-Horenczyk et al., 2007). Whereas violence, including terrorism may be viewed in the same vein as other traumatic events such as natural disasters, the particularity of the former is that in terrorism there tends to be a constant, repeated and pervasive threat of violence that may last for long periods of time and may end up negatively linked to mental health issues in a more pervasive manner than in the case of intense, but one-off violent episodes (Abadie and Gardeazabal, 2003; Bleich et al., 2003). In fact, plenty of evidence confirms that exposure to pervasive violence is highly correlated to post-traumatic stress, anxiety, and other depressive disorders (e.g., Tremblay et al., 2009; Kaplan et al., 2005; Gelkopf et al., 2018). Worse yet, the negative impact on mental health due to violence or the threat of violence appear to be directly linked to the destruction of trust and social capital due to the reduction in the individuals' optimism and hope including reduction in empowerment as well as on participation in networks (e.g., Martinez et al., 2019; Roychowdhury, 2021; Kim et al., 2012;

Schneider et al., 2011). The above is consistent with a well-known central goal of terrorism, which is to drive people apart and destroy social capital and trust. Interestingly, recent evidence shows that trust is mainly destroyed by the pervasive fear of constant, unpredictable future terrorist attacks even more so than by past terrorist attacks (Godefroidt and Langer, 2018) and they are also consistent with additional evidence that confirms that social capital is negatively and highly correlated with patterns of terrorist activity (e.g., Helfstein, 2014).

Intervention

We wrote, designed, and produced a five-episode soap opera that included embedded messages promoting positive attitudes and behaviors including trust in institutions, female economic and non-economic empowerment, and pro-savings messages with the overarching goal of contributing to the use of the formal bank accounts that the women that received that national conditional cash transfer program, *Juntos*, already had, but typically remained unused. In other words, our intervention sought to “bank the unbanked” women not only *de jure*, but also effectively, *de facto*. In order to do this, we embedded specific messages in each of the different episodes of our soap opera and made sure that they were both internally consistent within our intervention as well as externally consistent with the overall government strategy.

This endeavor would not have been possible without the significant help of a specialized team of experts with vast experience in the production of media material in developing countries, including techniques to best embed fiction with the type of messages that we sought to introduce in our soap opera. Furthermore, we also formed a consultative group of experts with whom we met regularly and whose members, mostly social scientists and high-level government officials, possessed extensive experience in the promotion of financial inclusion and were also very

knowledgeable in the characteristics that we decided should be crucial considerations in our geographical region of study, namely, areas of pervasive institutional neglect that were also deeply scarred as a result of terrorist violence.⁹

We titled our soap opera *Josefa*, the first name of the main character, a young woman that resembles an average resident of one of the targeted communities of the Peruvian southern highlands, one of the poorest, most neglected, and violence-scarred in the country. The overall theme was “classic soap opera” in the sense that the episodes deal with the daily emotional and economic struggles of the main character in order to provide for her family in the context of a love story filled with drama as well as emotional ups and downs, as in any typical soap opera. At the end, our main character, Josefa, does find economic success and personal happiness, while also finds some validation within her local community. While the overall context of the soap opera is one of trust in institutions, the specific messages embedded in the episodes are (i) precautionary savings are important, (ii) women can be empowered and independent and (iii) women can achieve their entrepreneurial dreams with support of financial institutions.¹⁰

After almost one year of story development, pre-production and casting, the shooting of *Josefa* was done during the third quarter of 2013 and the final, fully edited version of our five-episode soap opera was ready for viewing by mid-2014 and as such the viewing sessions were programmed throughout August of that year. We organized group viewing sessions in the localities where the beneficiaries reside in order to minimize travel distance from their homes and thus, facilitate and

⁹ The consultative group of experts was chaired by one of the co-authors (Martin Valdivia) and included high-level officials from both the Ministry of Social Inclusion (MIDIS) and *Juntos*, the government agency in charge of the national conditional cash transfer, as well as members of Proyecto Capital, our funding partner, Instituto de Estudios Peruanos, a nationally recognized Peruvian NGO.

¹⁰ A third objective, the importance of precautionary savings, mostly focuses on self-reported answers. Please, see Chong and Valdivia (2023).

maximize attendance. An important element in the organization of the weekly viewing sessions was that we implemented a standard protocol. We sent invitation cards to all women registered as beneficiaries in the National Conditional Cash Program *Juntos* in the treatment localities two weeks in advance through the community representative along with the program's local officer.¹¹ A reminder was sent two or three days before the first session. We also trained fourteen facilitators, which consisted of a two-day workshop to provide them with guidelines for facilitating the discussions after viewing each soap opera episode. They were all local residents who held degrees in the social sciences or communications, were fluent in Quechua, the predominant language, and had experience working in rural areas with women.¹² The facilitators were provided with a film projector, laptop, and speakers, which they used to show each episode, with the help from local authorities whom we previously identified and contacted prior to the intervention in order to secure a viewing space, typically the local school or health center, among others.¹³ The facilitators would greet attendees and proceed to show the soap opera episode. After the showing, they would engage the attendees with a brief discussion about the episode and its key pro-saving messages following a scripted pattern. Finally, they ended the viewing session with an invitation to return and watch the next soap opera episode.

We selected 150 eligible communities in four provinces in the department of Huancavelica, one of the poorest in the country.¹⁴ The villages were chosen based on population size, poverty level, access to electricity and financial infrastructure. In particular, the eligible villages had to

¹¹ In addition, the community representative (*madre lider*) was a highly respected woman from the community. The program's local officer (*gestor*) was a key resource, as this individual would help with all tasks related to logistics.

¹² Quechua is commonly spoken in these areas and dates from Inca times. The other official language in Peru is Spanish.

¹³ The soap opera trailer is here: <http://www.grade.org.pe/proyectos/mini-novelas-educacion-financiera-y-promocion-del-ahorro/>. The full soap opera episodes are available upon request.

¹⁴ The specific provinces intervened within the Department of Huancavelica are Tayacaja, Acobamba, Churcampa and Huancavelica.

have at least 150 households, access to electricity, and be served by the Conditional Cash Program *Juntos*, as well as receive their transfers through direct deposits to the National Bank account where the vast majority of women would make full withdrawals of their transfers every period, which for all practical purposes rendered their accounts dormant, a typical occurrence in many developing countries (Rhyne and Kelly, 2018). For obvious reasons, access to electricity in the village location where the soap was to be shown was a necessary condition for the intervention. The 150 eligible rural villages were randomly assigned to two treatment arms or a control group, fifty villages to each one. The first treatment group consisted of women invited to a viewing session. The second treatment group was similar, but also included a game with in-kind prizes for those who correctly answered questions on the characters, the storyline, and the pro-saving messages. The game was announced at the moment of the first invitation and reminded at every viewing session. Our aim was to understand if such an incentive would help increase attendance to the viewing sessions. Interestingly, the second treatment arm did not work as intended, as participants preferred that the value of the prizes be distributed among them all to which facilitators obliged.¹⁵ Since we found no difference in attendance rates, and such rates were actually very high in all five sessions, we decided to perform our analysis with the pooled sample of both treatment groups. In addition, the randomization was stratified by district.¹⁶ The 150 eligible villages involved 6383 female participants registered as beneficiaries of *Juntos*, where 4220 of them belonged to the 100

¹⁵ This was strongly preferred by the women even though the resulting amount to each would be very small.

¹⁶ Appendix 1 shows the geographical distribution of villages in each treatment group across the four provinces in Huancavelica that are part of the study. Huancavelica, along with neighboring Ayacucho and Apurimac, were the three Departments with the highest incidence of terrorist violence during the eighties during the eighties (CVR, 2004). Within our treated area (i) we excluded localities that received transfers via a physical carrier to keep full consistency in the intervention as well as (ii) localities prioritized by *Juntos* out of concern that proximity to the intervention may generate implicit overcompensation by *Juntos* in the control group for instance, via financial literacy interventions.

communities that were invited to the viewing sessions for *Josefa*, while 2163 beneficiaries in 50 villages were part of the control group.

Data and Empirical Strategy

We employ two key sources of information. First, we apply a household survey done around one year after the viewing sessions occurred. The household survey included a questionnaire that asked for socio-economic characteristics, perception, attitudes, and knowledge related to savings and credit transactions, as well as measures on vulnerability, trust, and empowerment. The survey was applied to a random sample of 2274 *Juntos* beneficiaries (an average of 15 per village), 147 community leaders and 33 program officials. Second, thanks to an agreement with Banco de la Nación (BN), a State-Owned Bank, and the Ministry of Social Inclusion (MIDIS), we were able to access to all the bank transactions records performed by women twelve months prior to the intervention (August 2014) and up to twenty-four months after it.¹⁷ The lack of a baseline survey conditions the econometric specification we use to estimate the effects of the treatment on financial attitudes, knowledge, trust, and female empowerment, as we cannot control for the level of such variables at baseline. Instead, we use the differences in treatment-control based on the randomly allocated intention to treat (ITT). We show the effects of the treatment, having been invited to the viewing sessions and pooling the two treatment groups, as mentioned above. The comparison between treatment and control groups allows us to estimate ITT impacts of being exposed to *Josefa*. We use the following specification:¹⁸

¹⁷ The support of the Financial Inclusion Unit of MIDIS was key to obtain access to this database. We signed a written agreement that included a detailed protocol in order to guarantee the confidentiality of the information. The protocol was very strictly followed and enforced.

¹⁸ As a robustness check, we also show differences-in-differences results using village fixed effects.

$$Y_{ijk1} = \alpha + \beta T_{jk} + \gamma X_{ijk0} + \delta_k + \varepsilon_{ijk} \quad (1)$$

where Y_{ijk1} denotes an outcome variable for a woman i residing in village j , of district k at time 1 (follow up), T_{jk} is a dummy variable that takes the value one if the woman resides in a village j , district k that was assigned to the viewing session of *Josefa*. X_{jk0} is the vector of stratifiers used in the randomization,¹⁹ δ_k is the district fixed effect and ε_{ijk} is the error term. Thus, β is the effect of basic training, and the error term is assumed to be uncorrelated across villages but not within them.²⁰

We confirm that the sample is balanced by age, level of education, ethnicity, distance to the district capital as well as level of terrorism-related violence in the end of the eighties and early nineties, although the control group shows a somewhat higher balances in BN savings accounts in the year prior to the intervention, which is statistically significant at ten percent. Our large sample of females helps us assess any behavioral change that may have occurred in terms of financial use, and in particular, savings patterns by analyzing individual financial records including all deposits and withdrawals of each of the participants one year prior to the intervention and up to two years after the viewing sessions were completed. We estimate the monthly treatment effects using the following specification:

$$Y_{ijt} = \alpha_t + \sum_{t=0}^T \gamma_t d_t + \sum_{t=0}^T \beta_t (d_t * T_i) + \delta_i + \varepsilon_{ij} \quad (2)$$

¹⁹ We generated 100 runs of the randomization and checked for balance at the locality level in access to education or health infrastructure and distance to the district capital. We chose run number 13, which balanced the three groups on the observables mentioned.

²⁰ While estimating (1), we include observations with missing data on the control variables, by assigning them a zero value and including a dummy equal to one for such observations with missing data. Attrition is not analyzed in this version considering that we had no baseline survey and non-response rates were minimal in the survey and no different between treatment and control groups.

where d_t is a monthly time indicator, with $t=0$ corresponding to September 2013, and T corresponds to July 2016. Y_{ijt} denotes balance accounts for a woman i in village j at time t , T_{jk} is a dummy variable that takes the value one if the woman belongs to village j in district k that was assigned to the viewing session of *Josefa*, δ_i is an individual fixed effects and ε_{ij} is the error term. Thus, β_t is the effect of basic training on a given month, and the error term is assumed to be uncorrelated across villages but not within them.

Findings

The first viewing session was very successful, as 75 percent of the invited individuals attended. This attendance pattern continued and even increased, reaching around 90 percent in the showing of the last episode. The above is consistent with the recollection of characters, the storyline, and pro-savings messages one year after the episodes were shown. On average, women in the treated localities recalled several important features of the soap opera, including the characters and the storyline. More importantly, they recalled the key pro-savings messages embedded in the soap opera messages including the importance of saving a share of one's income (74 percent), keeping savings in a safe place (37 percent) and keeping control of expenses (34 percent). As expected, we find no statistically significant differences between treatment and control groups in the twelve months prior to the intervention, a result fully consistent with our randomization strategy. This is shown in Table 1.²¹

As described above, our treated geographical area of study had been greatly impacted by deadly terrorist activities that began in the eighties and ended in the early nineties. A significant

²¹ In addition, please also see Appendix 2.

group of women did not experience such violent activities, as they were too young and even unborn during this period, which may be reflected in terms of perceptions, confidence and trust in institutions and may impact behavior differently from older women that did face such a period. This distinction is particularly important because unlike in previous work, we focus on individual savings as a purely objective measure of impact. In this context, we believe that it is reasonable to analyze our sample using two basic cohorts, one composed of women aged 40 and older, and the other composed of women aged 39 and younger.²² Our main findings are shown in Figure 1. Using Equation (2) we show the impacts of end-of-the-month savings balances that were monitored and tracked for each individual woman in both treatment and control groups between August 2013, twelve months before the first viewing session took place and July 2016, 24 months after the final viewing session was shown. We present three panels, one for the full sample and the other two according to generational group, as previously described. Also, dots in the figures indicate that the estimated impact is statistically significant at the ten percent level of confidence or higher. In addition, when observing post-treatment effects for the full sample in Panel (a) we find that the estimated impacts of end-of-the month savings balances, while generally positive, are mostly non statistically significant. Rather remarkably, however, the impact of our intervention is substantially different when generational cohorts are considered. This is shown in Panels (b) and (c) in Figure 1. We find that for the younger age cohort the end-of-the month point estimates are mostly negative, and in the vast majority of the cases the corresponding impacts post treatment are statistically insignificant at conventional levels. However, in the case of the older age cohort our findings are dramatically reversed. Not only are almost all our end-of-the-month point estimates positive, but they are also statistically significant in half of the number of tracked months after the

²² Our results do not change when we tested other sensible age cuts ranging from 35 to 45 years of age.

intervention was concluded. Furthermore, while in the first semester post treatment the impacts hover at around three dollars, by the third semester after treatment such savings balance reaches around five dollars. Along these lines, Table 2 corroborates our findings above by providing end-of-the month Average Treatment Effects 19 to 21 months as well as 22 to 24 months after the intervention. In particular, the table shows that the average savings balances peak during months 19 to 21 and is statistically significant for the older generation, only. Overall, for the control group the savings balances are around US 50 dollars, which translates to an implied estimated treatment effect of up to a ten percent increase in the savings balances for the older generation, only.²³

While our findings above may appear to be somewhat surprising, they are fully consistent with the institutional context. The older generation of women suffered greatly from years and years of terrorist violence and government neglect. As such, these women tend to be very distrusting of institutions, isolated and not particularly empowered or driven (Godefroidt and Langer, 2018; Helfstein, 2014). The intervention was effective on the older generational cohort, and they responded to pro-savings, trust and empowerment messages up to almost two years after the intervention. They increase their savings account balances by about 6.2 percent with respect to the control group. On the other hand, the younger generation of women, those who were little girls or even unborn during the years of terrorist violence and who have grown in the midst of two decades of stability, optimism and economic bonanza reflected in very significant rates of economic growth, were not impacted by the intervention when measured at conventional statistical levels.²⁴ This finding is, in fact, rather reasonable, as the younger cohort of women grew in a completely

²³ Interestingly, 22 to 24 months after the intervention the statistical significance for both generational cohorts is lost. Please, see Appendix 3, which provides detailed month-to-month ATE savings balance estimates including estimates by generational cohorts.

²⁴ Between 1990 and 2011 the annualized per-capita rate of growth of the country was 7.9 percent, the highest in Latin America and among the highest in the world (World Bank, 2023)

different environment than the older generation. Unlike the latter, the younger generation of women are already more trusting, empowered and entrepreneurial. They did not suffer from years of violence and instability and as such, the embedded messages in our soap opera do not capture their imagination and are thus, not reflected in variations in their savings behavior.

Admittedly, the observed effect on end-of-the-month savings balances may be the result of a delay in the withdrawal of the conditional cash transfer by individuals, rather than an actual increase in savings. We do not find any evidence to such regard when using an ANCOVA approach, the standard estimate for this purpose.²⁵ Table 3 shows that no coefficient is statistically significant regardless of generation cohort.

Exploring Mechanisms

As mentioned above, the messages embedded in the soap opera focus on three key themes: a precautionary savings motive, empowerment, and entrepreneurship. Whereas in previous work Chong and Valdivia (2022) show that soap operas do help change attitudes and perceptions regarding precautionary savings, the impact on the latter two have remained unexplored. Panel A in Table 4 shows the estimated average treatment effects for variables that are typically associated with female empowerment, including economic and non-economic decisions as well as time spent on domestic chores and productive activities. Economic decisions include occupation, credit, savings, and related choices. Non-Economic decisions relate to participation on household related choices that are not economic or financial, including those associated with fertility, health,

²⁵ When using a differences-in-differences estimator we find a slight increase in the number of days to withdraw the transfer (1.6 days). However, back-of-the envelope calculations show that the increase in days is not consistent with the observed increase in balances and further support the idea of additional savings.

education of the offspring. Interviewed women report about whether they make those decisions by themselves or whether they participate in such decisions and with whom. As shown in Panel A in Table 4 we find no statistically significant impact of our soap opera on non-economic decisions.²⁶ However, we do find a positive and statistically significant effect on economic decisions when measured one year after the last viewing session was shown. The effect is about 0.12 standard deviations. With respect to time allocation of the female beneficiary, we find that the signs of the corresponding coefficients are consistent with the messages of our soap opera, with more time allocated to productive activities and less time allocated to domestic chores. However, only the latter is statistically significant at conventional levels. Notice that since the control group tends to allocate 27 hours per week to domestic chores our results imply a reduction of 2.75 hours a week for these activities, a ten percent reduction. While this may be considered a small effect it does point to the right direction. In summary, our soap opera appears to have some impact on important female empowerment characteristics.

We also study whether our field experiment leads to some income effects. This is shown in Panel B also in Table 4. We find some evidence of causal impact of our soap opera on some income sources. In particular, we find an increase in the participation of non-agricultural sources namely, wage labor. Treated households increased their wage labor by 58 percent, from 23 dollars to 37 dollars per year. In addition, we also observe a decrease in the participation in agricultural activities, but the effect fails to be statistically significant at standard levels. Interestingly, it appears that our soap opera incentivizes our targeted population to work harder, albeit not in an

²⁶ We find that treatment is statistically insignificant on all the variables that compose our non-economic decisions variable, including those associated with reproductive rights, health and education of children, as well as self-reported life satisfaction.

entrepreneurial capacity. This might occur because of risk averse issues related to changing from wage labor to self-employment and also to the fact that making such a transition may take time.²⁷

Final Remarks

We randomized a short soap opera on financial inclusion and usage targeted to poor women from rural areas that had suffered from terrorism for many years. Whereas our soap opera was successful in terms of capturing interest, our goal goes beyond measuring attitudes and perceptions and we are able to monitor actual savings balances using bank data, something that to our knowledge, had not been done in the past. We find that the older cohort of women, those who directly suffered from terrorist violence, respond very well to our soap opera and show positive savings balances two years after the intervention. Younger women, unborn or too little during the period of terrorism, do not show any variation in behavior. Key mediators of our findings are more involvement in economic decisions, higher earnings, and less time spent in domestic chores.

²⁷ The above is consistent with the fact that we do not find any statistically significant impact on self-employed earnings. These results are not reported but are available upon request.

References

- Albertus, Michael. 2020. "Land Reform and Civil Conflict: Theory and Evidence from Peru." *American Journal of Political Science* 64 (2): 256-274, April.
- Ashraf, Nava, Alexia Delfino, and Edward Glaeser (2020) "Rule of Law and Female Entrepreneurship" NBER Working paper 26366, Cambridge MA.
- Banerjee, Abhijit, and Esther Duflo (2007) "The Economic Lives of the Poor," *Journal of Economic Perspectives*, 21,141–67
- Banerjee, Abhijit, Dean Karlan, and Johnathan Zinman (2015) "Six Randomized Evaluations of Microcredit: Introduction and Further Steps." *American Economic Journal: Applied Economics* 7 (1): 1–21.
- Berg, Gunhild; Bilal Zia (2017). "Harnessing Emotional Connections to Improve Financial Decisions: Evaluating the Impact of Financial Education in Mainstream Media". *Journal of the European Economic Association* 15 (5): 1025–1055, October 2017.
- Chong, A. and M. Valdivia (2022) "Soap Operas, Trust, and Pro-Savings Attitudes in Poor Rural Areas of Peru", Working Paper, Department of Economics, Georgia State University.
- Cole, J. (1985) *The Potosí Mita, 1573-1700: Compulsory Indian Labor in the Andes*, Stanford University Press, Palo Alto, CA.
- Collier, Paul (2006). "Economic Causes of Civil Conflict and Their Implications for Policy." In Crocker, Chester A., Fen Osler Hampson, and Pamela Aall ed., *Leashing the Dogs of War: Conflict Management in a Divided World*. Washington D.C.: United States Institute of Peace Press.
- Cortez, Ana Luiza and Namsuk Kim (2012) "Conflict and the Identification of the Least Developed Countries: Theoretical and Statistical Considerations", CDP Working Paper, Department of Economic and Social Affairs, United Nations.
- CVR -Comisión de la Verdad y Reconciliación, (2004) Informe Final. Lima, Peru. www.cverdad.org.pe/ifinal/.
- Dell, Melissa (2010) "The Persistent Effects of Peru's Mining Mita", *Econometrica*, 78, 6: 1863–1903
- DellaVigna, Stefano and Eliana La Ferrara (2015). "Economic and Social Impacts of the Media". *Handbook of Media Economics*, June.
- Dupas Pascaline, Dean Karlan, Jonathan Robinson, Diego Ubfal (2018) "Banking The Unbanked? Evidence from Three Countries." *American Economic Journal: Applied Economics* 10 (2): 257-97.
- Fiszbein, Ariel and Norbert Schady (2009) *Conditional Cash Transfers: Reducing Present and*

- Future Poverty, World Bank, Washington, DC.
- Fumerton, Mario (2001). “Rondas Campesinas in the Peruvian Civil War: Peasant Self-defence Organisations in Ayacucho”. *Bulletin of Latin American Research* 20 (4): 470-497.
- Gertler, Paul, Sebastian Galiani, Alberto Chong, and Ursula Aldana (2016) “Financial Inclusion for the Rural Poor: Measuring the Impact of Correspondent Banking Agents and Trust Workshops for Conditional Cash Transfer Beneficiaries”, Working Paper, Consultative Group to Assist the Poorest.
- Godefroidt, Amélie and Langer, Arnim. (2018) “How Fear Drives Us Apart: Explaining the Relationship between Terrorism and Social Trust. *Terrorism and Political Violence*”. 32. 10.1080/09546553.2018.1482829.
- Helfstein, Scott (2014) “Social Capital and Terrorism”, *Defence and Peace Economics*, 25:4, 363-380.
- International Labor Organization (2022) https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_159004.pdf
- Jensen, Robert and Emily Oster (2009). “The Power of TV: Cable Television and Women's Status in India”. *Quarterly Journal of Economics* 124 (3): 1057-1094.
- Karlan Dean, Aishwarya Ratan, and Jonathan Zinman (2014) “Savings by and for the Poor: A Research Review and Agenda”, *Review of Income and Wealth*, 60, 1: 36-78, DOI: 10.1111/roiw.12101
- Kearney, Melissa and P.B. Levine (2015). “Media Influences on Social Outcomes: The impact of MTVs 16 and Pregnant on Teen Childbearing”. *American Economic Review* 105 (12): 3597-3632.
- Kim, Seung-Sup, Yeonseung Chung, Melissa J. Perry, Ichiro Kawachi and S.V. Subramanian (2012) “Association between Interpersonal Trust, Reciprocity, and Depression in South Korea: A Prospective Analysis”, *PLoS ONE* 7(1).
- Kling, J. R., Liebman, J. B., & Katz, L. F. (2007). Experimental Analysis of Neighborhood Effects. *Econometrica*, 75(1), 83–119. <http://www.jstor.org/stable/4123109>
- La Ferrara, Eliana (2016). “Mass Media and Social Change: Can We Use Television to Fight Poverty”, *Journal of the European Economic Association*, 14, 4, 1: 791–827
- La Ferrara, Eliana, Alberto Chong, and Suzanne Duryea (2012). “Soap Operas and Fertility: Evidence From Brazil”. *American Economic Journal: Applied Economics* 4 (4): 1-31
- Martínez, Lina María, Daniela Estrada, Sergio I. Prada (2019) “Mental Health, Interpersonal Trust and Subjective Well-Being in a High Violence Context”, *Social Science and Medicine, Population Health*, 8:100423.
- McClintock, Cynthia. 1984. “Why Peasants Rebel: The Case of Peru’s Sendero Luminoso.” *World*

Politics 37(1): 48– 84.

Plasencia, Rommel (2016). “Comunidades Campesinas y Reforma Agraria en Huancavelica”.
Investigaciones Sociales 20 (36): 55-68.

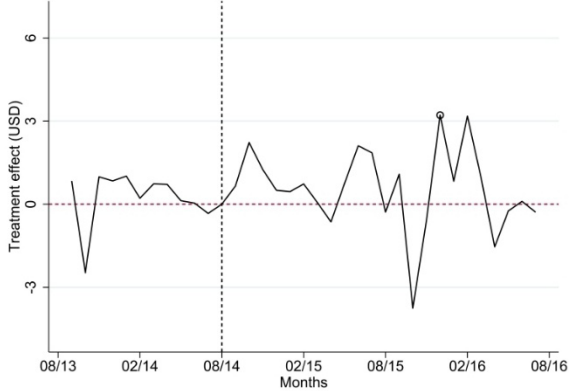
Roychowdhury, Punarjit (2021) “Too Unwell to Trust? The Effect of Mental Health on Social
Trust in Europe”, Economics & Human Biology, 42,101021

Schneider, Iris, Elly Konijn, Francesca Righetti and Caryl Rusbult (2011) “A Healthy Dose of
Trust: The Relationship Between Interpersonal Trust and Health”, Personal Relationships,
18: 668–676.

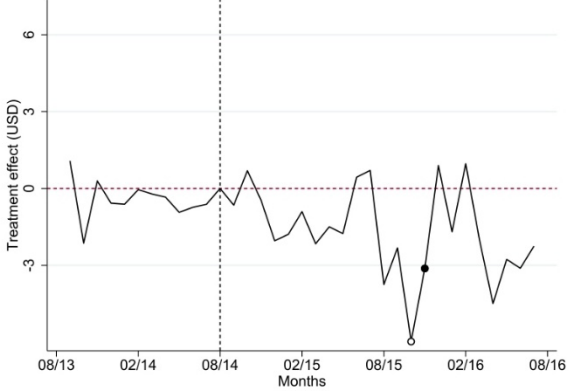
Tremblay, J., Pedersen, D. and Errázuriz, C. (2009) Assessing mental health outcomes of political
violence and civil unrest in Peru. International journal of social psychiatry, 55(5), pp.449-
463.

World Bank (2023) World Development Indicators, Washington, DC.

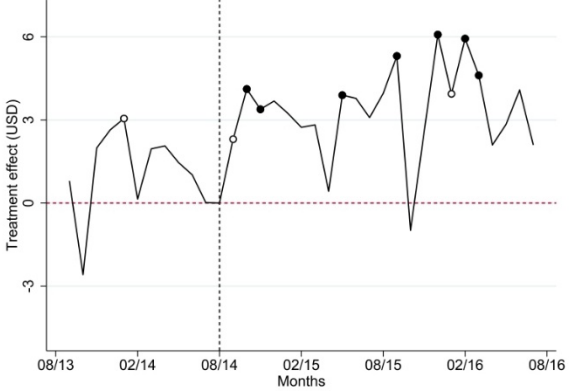
Figure 1. Treatment effects – End-of-the-Month Savings Account Balances



(a) Overall



(b) Younger



(c) Older

Notes: All amounts are expressed in US dollars using the average exchange rate from Aug2014 (month of intervention) and were winsorized at 1% level. All regressions include individual and time fixed effects. Double clustered standard errors at individual and village level in parentheses. Significance levels denoted by either a solid symbol (5%) or a hollow symbol (10%).

Table 1. Socio-Economic Characteristics at Baseline

	Control	T1	P-value (T-C)
Characteristics of the junto's beneficiaries			
Age	39.550 (0.215)	40.218 (0.401)	0.181
Educational attainment			
None	0.237 (0.029)	0.238 (0.019)	0.983
Primary education	0.590 (0.025)	0.573 (0.020)	0.584
Secondary education or more	0.173 (0.033)	0.189 (0.016)	0.523
Language most used at home (Quechua=1)	0.701 (0.093)	0.695 (0.082)	0.820
Financial variables			
Account balance Aug 2013 - Jul 2014 (US dollars) ¹	14.051 (1.738)	12.105 (1.287)	0.078
Village-level variables			
Distance to the district capital (kms)	48.148 (13.312)	46.292 (13.368)	0.732
Level of terrorist-related violence in district (=1 if high)	0.530 (0.215)	0.570 (0.197)	0.564

Notes: ¹ Winsorized means. Clustered standard errors at agency level in parentheses.

Table 2. End-of-Month Balance in Savings Accounts

	Control	ATE	By Generation		P-value Younger-Older
			Younger	Older	
19-21 months after intervention	47.557 (3.852)	1.083 (1.924)	-1.527 (2.267)	4.830** (2.135)	0.043
22-24 months after intervention	52.066 (4.187)	0.074 (1.832)	-2.403 (2.314)	3.006 (2.512)	0.060

Notes: All amounts are expressed in US dollars using the average exchange rate PEN/USD of August 2014 (month of the intervention) and are winsorized at the one percent level. All regressions include individual and time fixed effects. Double clustered standard errors at individual and agency level are in parentheses. Stars denote statistical significance levels based on unadjusted p-values (*ten percent; **percent; ***one percent).

Table 3. Number and Amount of Cash Withdrawals

	Control	ATE	By Generation		P-Value
			Younger	Older	Younger-Older
Days Until First Withdrawal					
6 months after intervention	14.030	-0.587	-0.337	-0.901	0.392
	(0.366)	(0.443)	(0.530)	(0.576)	
18 months after intervention	10.414	0.590	0.372	0.850	0.547
	(0.584)	(0.685)	(0.735)	(0.855)	
Amount of First Withdrawal (USD)					
6 months after intervention	70.653	0.113	-0.333	0.665	0.502
	(0.655)	(0.785)	(1.123)	(1.023)	
18 months after intervention	69.581	0.498	0.921	-0.041	0.360
	(0.499)	(0.616)	(0.716)	(0.908)	

Notes: Baseline values taken six months before the intervention. All currency amounts are expressed in US dollars using the average exchange rate PEN/USD of August 2014 (month of the intervention). All regressions include district fixed effects. Double clustered standard errors at community level in parentheses. After sixty days withdrawal amount is set to zero and time until withdrawal set to sixty days.

Table 4. Female Empowerment and Earnings

Panel A: Empowerment		
	Control Mean	ATE
Non-Economic Decisions	0.000	0.007
	(0.037)	(0.070)
Economic Decisions	0.000	0.125**§
	(0.037)	(0.061)
Hours per week on Productive Activities	36.266	0.386
	(0.672)	(1.339)
Hours per week on Domestic Chores	26.789	-2.759**§
	(0.508)	(1.316)
Panel B: Earnings		
Agricultural Wage Labor	115.856	-2.906
	(5.826)	(10.500)
Non-Agricultural Wage Labor	23.613	13.636**§
	(3.441)	(5.409)

Notes: We winsorized each category at one percent before constructing our variables. The variables “non-economic decisions” and “economic decisions” are standardized indices. All amounts are expressed in US dollars using the average exchange rate PEN/USD for August 2014 (month of intervention). All regressions include fixed effects for local coordinator, distance in kilometers to the district capital, number of health centers, schooling, and number of the Juntos conditional cash transfers beneficiaries on the village. Clustered standard errors at village level are in parentheses. (*) denotes significance levels (* ten percent, ** five percent, *** on percent) based on unadjusted p-values; (§) denotes significance levels (§ ten percent, §§ five percent, §§§ one percent) based on sharpened FDR q-values. We calculated q-values only for self-employed and wage sub-categories.

Appendix 1: Geographic Location of Intervention



Appendix 2: Socio-Economic Characteristics by Generational Cohort

	Younger		Older		P-values			
	Control	Treatment	Control	Treatment	(4-2)	(3-1)	(4-3)	(2-1)
	(1)	(2)	(3)	(4)				
Characteristics of the junto's beneficiaries								
Age	31.221 (0.309)	31.666 (0.265)	48.524 (0.267)	49.003 (0.223)	0.000	0.000	0.224	0.244
Educational attainment								
None	0.082 (0.020)	0.074 (0.014)	0.405 (0.046)	0.406 (0.035)	0.000	0.000	0.972	0.744
Primary education	0.650 (0.025)	0.604 (0.025)	0.525 (0.042)	0.541 (0.034)	0.014	0.000	0.611	0.126
Secondary education or more	0.268 (0.018)	0.322 (0.030)	0.070 (0.014)	0.053 (0.007)	0.000	0.000	0.472	0.016
Language most used at home (Quechua=1)	0.608 (0.023)	0.638 (0.095)	0.802 (0.089)	0.754 (0.072)	0.000	0.000	0.098	0.282
Financial variables								
Account balance Aug 2013 - Jul 2014 (US dollars) ¹	12.540 (0.514)	12.212 (0.899)	15.648 (2.256)	11.997 (1.824)	0.685	0.000	0.000	0.606
Village-level variables								
Distance to the district capital (kms)	49.124 (2.290)	47.359 (13.175)	47.096 (13.177)	45.195 (13.746)	0.363	0.539	0.515	0.534
Level of terrorist-related violence in district (=1 if high)	0.538 (0.025)	0.565 (0.199)	0.521 (0.216)	0.574 (0.197)	0.739	0.632	0.096	0.380

Notes: ¹Winsorized means. Clustered standard errors at agency level in parentheses.

Appendix 3: Detailed End-of-Month Account Balances

Months after intervention	Control	ATE	Younger	Older	P-value (1-2)
			(1)	(2)	
-11	-0.90 (0.76)	0.84 (0.99)	1.08 (1.45)	0.80 (1.67)	0.907
-10	10.05 (4.15)	-2.48 (4.72)	-2.13 (4.82)	-2.59 (5.13)	0.881
-9	-1.03 (0.78)	0.99 (1.14)	0.30 (1.62)	1.99 (1.54)	0.438
-8	0.83 (1.17)	0.84 (1.44)	-0.57 (1.87)	2.65 (1.91)	0.186
-7	-1.89 (0.87)	1.02 (1.07)	-0.61 (1.38)	3.05* (1.79)	0.114
-6	69.43 (3.85)	0.22 (4.84)	-0.04 (3.99)	0.14 (6.68)	0.969
-5	-0.34 (0.93)	0.73 (1.13)	-0.21 (1.22)	1.96 (1.66)	0.216
-4	-1.00 (0.93)	0.71 (1.12)	-0.34 (1.18)	2.06 (1.64)	0.160
-3	-0.65 (0.94)	0.13 (1.11)	-0.93 (1.27)	1.46 (1.48)	0.137
-2	-1.46 (0.87)	0.04 (1.02)	-0.74 (1.07)	1.02 (1.46)	0.233
-1	1.57 (0.49)	-0.33 (0.58)	-0.62 (0.60)	0.01 (0.79)	0.413
1	1.32 (0.75)	0.66 (0.95)	-0.65 (1.21)	2.31* (1.24)	0.057
2	65.15 (1.17)	2.23 (1.35)	0.69 (1.64)	4.12** (1.74)	0.091
3	0.60 (0.80)	1.25 (1.02)	-0.46 (1.28)	3.38** (1.56)	0.054
4	23.55 (2.84)	0.50 (3.82)	-2.04 (4.26)	3.68 (4.30)	0.141
5	2.03 (1.10)	0.45 (1.34)	-1.79 (1.72)	3.24 (2.04)	0.058
6	67.66 (1.16)	0.73 (1.39)	-0.91 (1.74)	2.73 (2.11)	0.171
7	0.97 (1.09)	0.06 (1.33)	-2.16 (1.50)	2.82 (2.09)	0.040
8	29.66 (3.29)	-0.64 (4.34)	-1.50 (4.41)	0.42 (5.02)	0.590
9	0.97 (0.94)	0.76 (1.24)	-1.76 (1.59)	3.90** (1.74)	0.013
10	52.23 (3.86)	2.11 (5.20)	0.44 (5.00)	3.78 (6.68)	0.522
11	7.75 (1.61)	1.86 (2.20)	0.71 (1.82)	3.08 (3.59)	0.475
12	36.73 (3.65)	-0.28 (4.46)	-3.75 (4.30)	3.96 (5.45)	0.041
13	0.48 (1.13)	1.08 (1.45)	-2.32 (1.45)	5.31** (2.41)	0.003
14	13.95 (2.65)	-3.75 (3.10)	-5.97* (3.17)	-0.99 (3.63)	0.070
15	0.06 (0.92)	-0.58 (1.17)	-3.12** (1.42)	2.57 (1.96)	0.022
16	5.62 (1.05)	3.22* (1.73)	0.90 (2.03)	6.08** (2.44)	0.064
17	-1.52 (0.86)	0.83 (1.11)	-1.69 (1.41)	3.94* (2.04)	0.034
18	8.28 (1.32)	3.18 (2.08)	0.97 (2.56)	5.94** (2.76)	0.131
19	-1.22 (0.74)	0.96 (1.07)	-1.99 (1.47)	4.61** (2.18)	0.027
20	30.33 (3.13)	-1.54 (4.05)	-4.49 (4.15)	2.09 (4.73)	0.065
21	0.50 (1.04)	-0.24 (1.32)	-2.77 (1.93)	2.84 (2.23)	0.084
22	40.42 (3.23)	0.10 (3.99)	-3.11 (4.34)	4.08 (4.47)	0.051
23	1.00 (0.96)	-0.29 (1.28)	-2.25 (1.85)	2.09 (2.11)	0.150

Notes: All amounts are expressed in US dollars using the average exchange rate PEN/USD of August 2014 (month of the intervention) and are winsorized at the one percent level. All regressions include individual and time fixed effects. Double clustered standard errors at individual and agency level are in parentheses. Stars denote statistical significance levels based on unadjusted p-values (*ten percent; **percent; ***one percent).