Happiness, Ideology and Crime in Argentine Cities

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Abstract[*]

This paper uses self-reported data on victimization, subjective well being and ideology for a panel of individuals living in six Argentine cities. While no relationship is found between happiness and victimization experiences, a correlation is documented, however, between victimization experience and changes in ideological positions. Specifically, individuals who are the victims of crime are subsequently more likely than non-victims to state that inequality is high in Argentina and that the appropriate measure to reduce crime is to become less punitive (demanding lower penalties for the same crime).

1. Introduction

> [It] does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our courage, nor our wisdom, nor our devotion to our country. It measures everything, in short, except that which makes life worthwhile …..
>
> Senator Robert Kennedy on GDP[1]

Traditional economics focuses on the role of material forces in generating utility and assigns a relatively small role to ideological beliefs, assuming there is no reason for such beliefs to differ too much from reality or across people. Economists studying the costs of crime have built on these assumptions to derive significant direct and indirect costs of crime, which include low levels of human capital, destruction of property, investment in private security, and distortion of individual behavior, among others. In this project we provide an alternative approach to the evaluation of the costs of crime, which complements previous work. We study how crime victimization affects measures of well-being and the average beliefs of victims regarding a broad range of issues. The focus on happiness is a strategy that (under several assumptions) yields one direct measure of the costs of crime, and the focus on beliefs is important in models where beliefs affect policies (and other voter demands). Note that in these models, policies themselves might in turn affect beliefs.[2] Thus, the mechanism we study has a feedback channel (from beliefs to policies that reinforce the original beliefs) which might lead to multiple equilibria.[3]

Our focus on a direct measure of welfare allows us to take a broader view on the welfare costs of crime and assume that utility is not affected just by income. Indeed, careful examination of most formulations in economics show that the assumed utility functions include a term for leisure and, where finite horizons are used, they imply that factors that threaten the security of life reduce utility. This means that even the narrowest definitions of utility allow for non-material terms such as crime to affect utility. Such a broad view takes us closer to the arguments made in debates surrounding the appropriateness of using GDP as an indicator of development. In 1973 William Nordhaus and James Tobin famously asked *"Is Growth Obsolete?"* Their answer was a partial yes. They argued in favor of making adjustments to GNP so that some value was given to leisure and household work and some costs to urbanization. They then constructed what they called a *Measure of Economic Welfare* for the American economy and observed that it

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[1] Cited in Mankiw (1999).

[2] Beliefs are typically defined as the combination of the available information with a set of more stable individual values (that condition the acceptance/rejection of particular arguments). See Zaller (1991) for a recent discussion.

[3] For work on the institutional foundations of capitalism and how beliefs shape institutions, see Piketty (1995).

grew like GNP over the period under study, albeit more slowly. The Kennedy quotation at the beginning of the paper shows the enormous appeal that this logic has, well beyond economists. Indeed, a variety of authors and organizations have advocated more comprehensive measures of well-being, capturing other elements of modern life besides income.[4]

One problem with this approach is that it is hard to compare the effects of these variables without making strong structural assumptions. For example, is an increase in crime of 1 percent "equivalent" to a 1 percent increase in income? Besides the attractiveness of symmetric treatment, there is little to be said in its defense. Yet, this is what it is implied by unweighted aggregation, which is often the norm. In this project we tackle this issue, for the specific case of crime, using happiness data. Indeed, one way to read the happiness literature is as offering some guidance on the weights to be used in the aggregation of the variables used in the quality of life literature.

Specifically, our approach to study these questions relies on using a variant of the happiness data analyzed by Easterlin (1974). These consist of the answers given by hundreds of thousands of people, across many countries and years, to a simple well-being question such as *"On the whole, are you satisfied with the life you lead?"* Such data have been used extensively in psychology research, where it is argued that the data pass a series of what are sometimes called validation exercises (see, for example, Kahneman, Diener and Schwartz, 1999). Perhaps the most convincing of these, consist of showing that happiness data correlate well with variables that are associated with physical manifestations of true internal happiness, such as smiling or electronic readings of the part of the brain that governs positive emotions (see below for more on validation). Although subjective data has been used extensively in some fields in economics, such as contingent valuation studies, happiness data require only a minimum of information processing and understanding of the workings of the economy (see Diamond and Hausman, 1994, for a criticism of the kind of subjective data used in contingent valuation studies).

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[4] There are many such indicators of welfare. Perhaps the most famous of these is the Human Development Index in the Human Development Report produced by the United Nations. Considerable impetus to develop a national environmental indicator set occurred following the 1989 G-7 Economic Summit Leaders' request to the OECD to develop indicators in the context of improved decision-making. Canada is one of the most advanced in this sense, after passing the Well-Being Measurement Act (Bill C-268) with the purpose of developing and regularly publishing measures to indicate *"the economic, social and environmental well-being of people, communities and ecosystems in Canada."* Its key provisions require a Standing Committee of the House of Commons to *"receive input from the public through submissions and public hearings"* so that they can identify *"the broad societal values on which the set of indicators should be based."* See also the discussion in Dasgupta (2000). Nordhaus (2002) is a recent proposal on how to incorporate improvements in health status.

The issue of crime has received relatively little attention in the happiness literature in economics.[5] Alesina, Di Tella and MacCulloch (2004), in a study of inequality and beliefs, includes a crime rate variable in happiness regressions which compare the effect of inequality on happiness across Europe and America. Using individual-level data from the US General Social Survey (1972-1994), they show for the US sample that there is a negative, albeit insignificant, relationship between the murder rate and reported happiness scores. Di Tella and MacCulloch (2008) estimate a negative correlation between happiness and the crime rate in a panel of European countries for the period 1975-97. Michalos and Zumbo (2000) report a negative correlation between being the victim of crime and life satisfaction. The closest to our project is an interesting and more detailed recent study by Powdthavee (2005), which exploits cross-sectional evidence and finds that individuals who have been victimized in South Africa are significantly less happy. He finds, however, that the welfare costs of criminal victimization fall with crime levels. Cohen (2008) studies crime and life satisfaction and reaches similar conclusions. See Frey and Stutzer (2002), Di Tella and MacCulloch (2006) and Kahneman and Krueger (2006) for reviews.

The second focus of our paper, beyond the direct welfare costs of crime, is the impact of crime on beliefs. Our interest in beliefs arises from the possibility that crime may change people's belief about how the economy works, and this, in turn, might lead voter preferences to change. To see the importance of this issue, note that an unanswered question in political economy is why the public's beliefs are so anti-market, resulting in so much resistance to pro-market policies. Indeed, capitalism does not flow to poor countries, as documented in Di Tella and MacCulloch (2002). This phenomenon is particularly intense in Latin America (see Lora, Panizza and Quispe-Agnoli, 2004). Several hypotheses have been considered in the literature. For example, perceptions of corruption may influence market attitudes, as explored in the fairness model of Di Tella and MacCulloch (2002). In this view, the backlash against markets occurs because reforms are perceived to involve corruption, and such acts invite retribution by voters in the form of taxes and government regulation. A second hypothesis is that reforms create winners and losers, and the latter may outnumber the former for some periods of time. If voters are shortsighted, they may withdraw their support. Przeworski (1991), for example, makes a

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[5] Psychologists have shown that victims of crime suffer from a variety of mental disorders, including anxiety and depression (see, for example, Norris and Kaniasty, 1992, and the references cited therein).

related argument (see also Earle and Gehlbach, 2003, who show that those who benefited from the voucher privatization program in the Czech Republic were more likely to support market reforms). Alternatively, even the winners may dislike the reforms if they have a taste for equality. Finally, Lora and Olivera (2005) show that voters dislike policy switches. They show that voters are more tolerant of privatizations and tax reforms when they do not run counter to pre-electoral campaign announcements. Stokes (2001) presents substantial evidence consistent with this statement. An interesting question is why pro-market reforms cannot be announced during the campaigns, something that takes us back to the question of why is capitalism so unpopular in the region to begin with.

Given our interest in beliefs, one reason to be interested in crime in Latin America is that anti-market sentiment and views have traditionally been accompanied by relatively insecure environments. The large increases in crime that accompanied the pro-market reforms of the 1990s might have affected beliefs. Furthermore, the increases in crime were unevenly spread, disproportionately hitting the poor (see Di Tella, Galiani and Schargrodsky, forthcoming 2010).[6] To the extent that voters associate pro-market reforms with crime increases, it is then unsurprising that voters reject markets. More importantly, Di Tella, Donna and MacCulloch (2008) have analyzed the relationship between crime and ideological beliefs in Latin America using cross-sectional data and they find that more crime is correlated with a left-wing view of the world (in economic matters). For example, people who were victimized also report believing that the distribution of income is unfair, self-place on the left of the political spectrum or disagree with the idea that privatizations have been good for the country. Although the correlation survives the inclusion of two different sets of controls for individual income (one self-reported and the other constructed by the interviewer), as well as a set of standard controls, the possibility of bias arising from unobserved heterogeneity cannot reasonably be ignored until a proper individual panel is used. In this paper, we attempt to tackle this issue by collecting our own data to study these questions in more detail, in a sample that allows for the inclusion of individual fixed effects. Given that we design our own questionnaire, we also included a question on desired punitiveness (an individual answer to a question on the appropriate punishment for a criminal). An auxiliary hypothesis we can test is whether people's experience of victimization

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[6] For empirical work on ideological beliefs and property in Latin America see also Di Tella, Galiani and Schargrodsky (2007).

affects overall beliefs or only in specific domains. Specifically, we can test whether victimization makes people more punitive without affecting their beliefs on economic matters, or if it moves people's ideology in a bundle. The possibility of bundling is important in the literature discussing the nature of political beliefs, which is vast (see, for example, de Tocqueville's *Democracy in America* and Lipset, 1979, *inter alia)*. The discussion, for example, in Rokeach (1973) considers the possibility that beliefs are part of individual traits (and therefore, the possibility that certain economic beliefs consistently associate with certain political beliefs).

The organization of the paper is as follows. Section 2 describes the problem of crime in Latin America. Section 3 discusses the use of subjective data in economics. In Section 4 we present our estimation methodology. The crime, happiness, and ideology data are described in Section 5. Section 6 reports the results, and Section 7 summarizes our conclusions.

2. Crime in Latin America

Crime levels are extraordinarily high in Latin America. The regional homicide rate, for example, more than doubles the world average. Latinbarometer (2004) reports that one third of the interviewees or their family members have suffered a crime during the last year. As Table 1 shows, crime is widespread throughout the region. In addition to its high level, crime has increased significantly during the 1990s (Fajnzylber, Lederman and Loayza, 2002a). In the last decade, the homicide rate grew 336 percent in Colombia, 300 percent in Argentina and 379 percent in Peru (Prillaman, 2003). Opinion polls show that 90 of respondents consider crime to be a severe problem, and 76 percent consider their country to be less safe than in the previous year.

These crime levels induce significant direct and indirect costs in terms of human capital, destruction of property, health expenditures, reduction in work productivity, provision of public and private security, investment deterrence, reduced tourism, increased insurance costs, and several distortions in citizens' behavior. Londoño, Gaviria, and Guerrero (1999), for example, estimate the costs of violence in Latin America at 14.2 percent of GDP. Burki and Perry (1998) consider that income would be 25 percent higher if the region had crime rates similar to the rest of the world. Prillaman (2003) points out that crime may be undermining democracy in the region, as support for democratic institutions weakens with higher crime levels.

Di Tella, Galiani and Schargrodsky (forthcoming 2010) study how crime affects different income groups. They have to confront the obvious difficulty that crime-avoiding activities vary across income groups. Thus, a lower victimization rate in one group may not reflect a lower burden of crime, but rather a higher investment in avoiding crime. A second difficulty is that, typically, only a small fraction of the population is victimized, so that empirical tests often lack the statistical power to detect differences across groups. In their study, Di Tella, Galiani and Schargrodsky take advantage of a dramatic increase in crime rates in Argentina during the late 1990s to document how the increase in victimization experienced by the poor is larger than the increase endured by the rich. The difference appears large: low-income people have experienced increases in victimization rates that are almost 50 percent higher than those suffered by high-income people. Second, for home robberies, where the rich can protect themselves (by hiring private security, for example), they find significantly larger increases in victimization rates amongst the poor. In contrast, for robberies on the street, where the rich can only mimic the poor, we find similar increases in victimization for both income groups. Third, they document direct evidence of pecuniary and non-pecuniary protection activities by both the rich and poor, ranging from the avoidance of dark places to the hiring of private security.

Unfortunately, the data available for research on crime in Latin America are relatively poor, and there is accordingly little prior work in the area. This is somewhat paradoxical given the general agreement about the significant costs of crime amongst policymakers and the public in the region.[7]

3. Well-Being Data

The use of subjective data implies a departure from traditional economics, where individual preferences are inferred by choice, not some vague notion of how people say they feel or what they say they want. The principle could be summarized by the dictum "watch what I do, not what I say" and is made explicit in the work on revealed preference (Samuelson, 1948). A relatively recent development is the interest in data on people's opinions regarding some variable of interest. Perhaps the most convincing work deals with the taste for redistribution (see Luttmer,

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[7] Some few exceptions are Gaviria and Pagés (1999), Gaviria (2000), the IDB Research Network Projectand the resulting papers collected by Londoño, Gaviria and Guerrero (2000), the papers by Fajnzylber, Lederman and Loayza (1998, 2002a, and 2002b), Di Tella and Schargrodsky (2004), and the articles collected by Di Tella, Edwards and Schargrodsky (forthcoming 2010).

2001, and Alesina and La Ferrara, 2005) and the study of motivation (Frey, Oberholzer-Gee and Eichenberger, 1996). This approach relies on the individual's ability to formulate an opinion on the topic being asked. For example, if they are asked about cuts in the welfare state they are assumed to be able to form an intelligent opinion on the subject that incorporates all the relevant information, such as the tax gains and insurance losses that arise or any improvements in the unemployment rate that can occur. In fact, the use of this kind of data for valuation of the environment has been criticized precisely on these grounds (see, for example, Diamond and Hausman, 1994).

An approach that reduces the informational and computational burden on the individual is to simply ask them a well-being question and then correlate the answers with changes in the variable of interest. For example, in order to investigate the benefits of, say, the welfare state, the approach consists of asking individuals if they are happy and then see if this correlates with changes in some parameter measuring the generosity of the welfare state. This relies only on the ability of individuals to evaluate their own level of happiness with some precision. Psychologists who have worked with these data have provided an array of evidence showing that well-being data are correlated with physical reactions that are associated with true happiness. These include Pavot (1991) and Ekman, Davidson and Friesen (1990) who find that individuals reporting to be very happy tend to smile more (i.e., the duration of so-called "Duchenne smiles"). Shedler, Mayman and Manis (1993) show that happiness data are negatively correlated with heart rate and blood pressure measures of responses to stress, and Sutton and Davidson (1997) show that happiness data are positively correlated with electroencephalogram measures of prefrontal brain activity (the part of the brain that is associated with optimism and other positive states of mind). Lastly, average happiness levels within countries seem to be negatively correlated with suicide rates, an event that presumably expresses true internal unhappiness (see Di Tella, MacCulloch and Oswald, 2003).[8]

Konow and Earley (1999) discuss a number of other studies that are helpful in assessing the validity of well-being data, some of them based on correlating the data with other subjective data. Siedlitz, Wyer and Diener (1997), for example, show that happiness data correlate well with subject recall of positive life events. Diener (1984) and Sandvik, Diener and Siedlitz (1993)

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[8] Inglehart (1990) finds some evidence of a *positive* correlation looking at the cross-sectional evidence.

have shown that the data are correlated with reports of friends and family members on the subject's level of well-being.

A potential problem with all subjective data is framing, the fact that sometimes what appear to be similar questions elicit different answers depending on the way they are asked. The validation exercises described above seem to indicate that the framing problem with happiness data appears to be small. Furthermore, Fordyce (1988) shows that the different measures of well-being correlate well with one another, a finding that has also been later confirmed by Konow and Earley (1999) with experimental data, by Blanchflower and Oswald (2000) for data from the United Kingdom and the United States, and by Di Tella, MacCulloch and Oswald (2003) for data from 12 OECD countries.

The psychology literature has also considered the possibility that subjects are influenced by what they believe to be the socially desirable response when they answer surveys. If the social norm is to be happy, subjects may bias their response upwards. Since the first studies in the area, psychologists have found evidence pointing out that this concern may be exaggerated (e.g., Rorer, 1965, and Bradburn, 1969). Konow and Earley (1999) present experimental evidence showing that the Marlowe-Crowne measure of social desirability is uncorrelated with happiness data.

A different approach to study the validity of happiness data is taken in Di Tella, MacCulloch and Oswald (2003), who present micro-econometric happiness and life satisfaction regressions for 12 European countries and the United States. These regress the well-being answers on a set of personal characteristics, including age, sex, education, employment status, income, and marital status. They show that these equations share a similar structure across countries, an unlikely event if the data contained no information.

Following Easterlin's 1974 paper, showing that happiness was essentially flat in the presence of rising income in post-war America, a small happiness literature has emerged in economics.[9] The literature on the relationship between income and happiness includes Winkelman and Winkelman (1998), who use individual panel data for Germany, Di Tella, MacCulloch and Oswald (2003), who look at the evidence across a panel of 12 OECD countries, and Gardner and Oswald (2001), who use data on lottery winners. Happiness data have also been

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[9] Argyle (1987), chapter 5, discusses the vast psychological literature on income and happiness. For references to the large literature on subjective well-being in psychology and political science, the reader is referred to Kahneman *et al* (1999), Diener and Suh (2000), Veenhoven (1988), Inglehart (1990), Lane (2002), *inter alia*.

used to investigate a number of other outstanding issues in economics, including the costs of becoming unemployed (Clark and Oswald, 1994), the role of democratic institutions (Frey and Stutzer, 2000), the structure of individual preferences (Konow and Earley, 1999), the inflation-unemployment trade-off (Di Tella, MacCulloch and Oswald, 2001), macroeconomic volatility (Wolfers, 2002), entrepreneurship (Blanchflower and Oswald, 1998), the environment (Chapter 11 in van Praag and Ferrer-i-Carbonell, 2004), partisan versus opportunistic models (Di Tella and MacCulloch, 2005), inequality (Alesina, Di Tella and MacCulloch, 2004; Graham and Pettinato, 2002), public policy on addiction (Gruber and Mullainathan, 2002) and the role of social norms and social capital (Luttmer, 2005; Stutzer and Lalive, 2001; Helliwell, 2002).

4. Methodology

The goal of this paper is to study the effect on happiness and ideology of becoming a victim of a crime. In principle, this impact could be analyzed running the following regression model:

$$Happiness_i / Beliefs_i = \alpha + \beta Crime_i + \gamma X_i + \varepsilon_i, \qquad (1)$$

where $Happiness_i$ or $Beliefs_i$ are measures of personal satisfaction or ideological beliefs of individual i, $Crime_i$ indicates whether the individual or her/his household members have been victimized, X_i is a vector of controls, and ε_i is the error term.

A direct problem with this specification is that omitted factors could be correlated with both crime victimization and happiness or ideology. For example, different socioeconomic groups may simultaneously reach different satisfaction levels, possess different political ideas, and be exposed to different victimization rates or be able to hire differential levels of self-protection measures. A significantly superior specification is given by the model:

$$Happiness_{it} / Beliefs_{it} = \alpha + \beta Crime_{it} + \gamma X_{it} + \eta_i + \mu_t + \varepsilon_{it}, \qquad (2)$$

where now in a panel specification $Happiness_{it}$ or $Beliefs_{it}$ are measures of personal satisfaction of individual i in period t, X_{it} is a vector of controls, including time effects or city-time effects, η_i is an individual fixed effect, and μ_t is a time fixed effect. It is certainly possible that omitted variables could jointly determine happiness and victimization levels, but most of the omitted factors we could think of will be fixed over time. Therefore, a panel specification that

incorporates individual fixed effects allows us to better identify the causal effect of becoming victim of a crime on quality of life and ideological beliefs.

5. Crime, Happiness, and Ideology Data

As explained in the previous section, the identification of the happiness and ideology effects of crime victimization crucially requires a panel data structure. We exploit here five waves of a large victimization questionnaire run in six Argentine cities. The survey was run in November 2006, May 2007, November 2007, May 2008, and November 2008. It has an annual panel structure: 2,336 interviews of 1,168 households were performed (417 households were interviewed in November 2006 and re-interviewed in November 2007, 474 households were interviewed in May 2007 and re-interviewed in May 2008, and, finally, 277 households were interviewed in November 2007 and re-interviewed in November 2008). The surveys were conducted by telephone by the opinion poll company Poliarquia Consultores SA using the C13 CATI system for Windows. The sample universe is composed of household heads or their spouses residing in the City of Buenos Aires, Great Buenos Aires, Córdoba, Mendoza, Tucumán and Rosario. In 13.5 percent of the cases, the person answering the second wave of the panel survey is not the same than the one answering the first wave, although we always confirm that the household has not changed. The total of 2,336 interviews was distributed as follows: City of Buenos Aires (230), Greater Buenos Aires (370), Córdoba (135), Rosario (152), Mendoza (130) and Tucumán (151). The population of these cities represents almost 45 percent of the total population of the country.

The survey first started by asking about victimization suffered by the respondent or her/his household members during the previous twelve months. Fortunately for this study, but unfortunately for Argentine society, the reported rates were very high: 34.5 percent for the City of Buenos Aires, 39.9 percent for the Greater Buenos Aires area, 37.6 percent for Córdoba, 38.5 percent for Rosario, 41.7 percent for Mendoza and 45.2 percent for Tucumán, giving an overall average of 39.3 percent.[10] For those households providing a positive response, a long set of precise questions about the exact type of crime were asked, including the use of violence, the type of crime, physical damage, amounts stolen, which member of the household was victimized, gender, etc. The survey also included a standard question on life satisfaction and some questions

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[10] These figures correspond to November 2006.

on ideological beliefs. Appendix 1 presents the (translated) survey questions and definitions of the variables, and Appendix 2 provides the summary statistics.

Table 2 shows the victimization level of the households included in our sample. More than 36 percent of our households have been a victim of a crime, and more than 19 percent of households have been a victim of a violent crime. Also, more than 19 households have been a victim of a non-violent crime (such as burglary, auto theft, motorcycle theft, larceny, fraud, or corruption). In the case of violent robbery, where we asked the respondent whether he or she was the crime victim or a household member, the respondent was the victim in about half of the violent crime cases. In addition, Appendix 3 describes crime victims by presenting summary statistics on the survey respondents.

6. Results

In Table 3, we explore the effect of crime victimization on our happiness measure. In the first column we consider the responses given by the household members who answered the survey, as the same person may not have answered both surveys.[11] In the second column, we restrict attention to the households where the same person answered both surveys (identified by gender and age). This restricts the number of households by 14 percent from 1,112 to 960 households. Each cell of the table shows the coefficient from a different regression where the same dependent variable, the happiness measure, is regressed to different victimization variables: general victimization, violent robbery, the number of violent robberies, whether the respondent was the household member who suffered the crime, the use of arms, personal threats and fights, homicide, sexual offenses, kidnappings and non-violent crimes (such as burglary, auto theft, motorcycle theft, larceny, fraud or corruption larceny). None of the coefficients are significant, showing a lack of response of our happiness measure to crime victimization. The only large coefficient is on homicides, but it remains statistically insignificant. See Di Tella, MacCulloch and Schargrodsky (2009).

We can speculate on different reasons for why our respondents do not report the expected well-being costs of being victimized. One possibility is that the survey instrument does not capture the suffering produced by crime victimization. Another alternative is that there are failures in recall biases and people do not answer properly the question on whether household

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[11] We only consider the cases where the same family lives in the house in both waves of the panel survey.

members have been victim of a crime only in the last 12 months. These reporting failures would hurt our identification strategy. It is also possible that the high crime levels in Argentina have reduced the impact of victimization on happiness. Similar results have been found by Graham and Chattopadhyay (2009) on Afghanistan, where individuals seem to adapt to high levels of corruption and crime by showing low well-being costs. Likewise, Powdthavee (2005) shows that the welfare costs of criminal victimization fall as crime levels increase in South Africa. In high-crime areas, people might come to expect being victimized, so that they may have already internalized those well-being costs, they might eventually find the experience less traumatic than expected, or they might suffer less stigmatization attached to being victimized. Our exercise is specifically designed for capturing individual victimization effects, without being able to capture (because of the necessary inclusion of time effects), the happiness impact of aggregate crime levels.[12]

In Table 4, we explore the effect of crime victimization on the inequality measure. This variable captures the view of respondents on inequality in the Argentine society. The structure of the table is exactly like of Table 3. In the first column we consider the responses given by any household member answering the survey, whereas in the second column, we restrict attention to the households where the same person answered both surveys. The results show that crime victims develop a significantly worse opinion of inequality in Argentina, i.e., they view society as more unequal after becoming victims of a crime.

In Table 5, we explore the effect of crime victimization on the variable that captures opinions of the necessary measures to address insecurity. This variable is based on a survey open question and takes the value of 1 for answers classified as *heavy-handed* (such as increasing the severity of punishment, disabling criminals, and capital punishment) and takes the value of 0 for policy measures aiming to reduce unemployment and inequality, reduce police corruption, and improve education.[13] We follow the same structure as in the previous tables, but as the dependent variable is a dummy variable, in columns 1 and 3 we use an OLS specification and in columns 2 and 4 a Logit specification. For the regressions where the same household member answered both panel surveys, we find that crime victims become more in favor of measures to improve inequality, employment and education. This might sound surprising, as we could expect crime

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[12] Our results are similar when city-specific time-effects are included, rather than general time-effects.
[13] "Heavy-handed" is a free translation of the Spanish phrase "*mano dura*," literally "tough hand."

victims to become more in favor of heavy-handed policies, but it is consistent with the result in the previous table showing that respondents perceive society as more unequal after crime victimization. We can hypothesize our crime victims suffer a sort of Stockholm syndrome, where they comprehend the unequal backgrounds of criminals and propose educational, employment, welfare, and police training programs, rather than more punitive policies.[14]

Using the same structure, we analyze in Table 6 the impact of crime victimization on respondents' opinion of whether juvenile criminals should be treated as adults. In Table 7 we analyze the effect of crime victimization on responses on the use of prison sentences for recidivist thieves. We find no effect of crime victimization on these opinion variables.

Again using the same presentation structure, we analyze in Table 8 the impact of crime victimization on respondents' opinion on meritocracy. The dependent variable captures respondents' answers on whether effort pays. For the regressions where the household respondent did not change, becoming a victim of a crime turns people towards the direction of thinking that effort does not pay. The effects, however, are not statistically significant.

In Tables 9 and 10, we further explore the robustness of our findings, focusing on the regressions on happiness and opinions on inequality, heavy-handed policies, and effort-pays, for the households where the household respondent did not change. In Table 9, we consider whether effects can vary by gender, age, and educational level. We also consider separately households who had not been victimized at the time of the baseline survey, for which the panel structure could more powerfully identify changes in crime victimization.[15] For happiness, column 1 shows that disaggregating the effects by groups does not change the previous finding of lack of significant results. The effects vary in sign and are not statistically significant for men, women, young, old, more educated, less educated, and for households who had not being victimized at the baseline survey.

For the opinions on inequality, the second column of Table 9 shows that, although all the groups consider the society to be more unequal after becoming a victim of a crime, the effects are statistically significant for the women and the old. In regard to support for heavy-handed

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[14] Stockholm syndrome is a psychological response argued to have been observed in abducted hostages, in which the hostage shows signs of loyalty to the hostage-taker. The syndrome is named after a famous bank robbery in Stockholm in 1973, in which the victims became emotionally attached to their captors, and defended them after freedom. The syndrome is an example of a defense mechanism of identification.

[15] Instead, for households that were victims of a crime in the first wave and not in the second, identification requires household to remember correctly the timing of the suffered crime.

policies, the third column shows that, although all groups favor more lenient measures after becoming a victim of a crime, the effects are statistically significant for women, the more educated, the young, and households who had not been victimized at the baseline survey.[16] In general, greater tolerance for criminals seems to come from groups who might consider themselves better off. Finally, the fourth column shows that effects on meritocratic beliefs fluctuate in sign and are not statistically significant.

In Table 10 we investigate, first for all the households and then for the households for which the respondent did not change, whether a standard (repeated) cross-section specification produces the same results. We find that the effect of crime victimization on inequality opinions remains significant. While the effect of crime victimization generally remains insignificant, it now becomes significant for homicides.

In Tables 11 and 12, we aim to compare the effect of crime victimization on happiness relative to the effect of other major household events, such a improving or worsening the family economic situation, or experiencing birth, death, divorce (or break-up), disease, marriage, etc. Crime victimization is expressed in changes in Table 11 and in levels in Table 12. For birth, death, divorce (or break-up), disease, marriage, our sample probably has little statistical power. In columns 1, 2, 6, and 7, the results show a negative and significant effect on happiness of worsening of the individual economic situation of the respondent and her/his children. The effect is asymmetric. Improvements in personal economic situation are not accompanied by a similarly positive and significant coefficient. Moreover, we continue to find in this alternative specification a lack of effect of crime victimization on the happiness variable.

Finally, in columns 3, 4, 5, 8, 9, and 10, we explore the effect on three alternative happiness variables: whether the respondent would like to enjoy more days like the previous day, whether he/she smiled in the previous day, and whether he/she was worried in the previous day. For the three variables we find, like for our main happiness measure, a significant effect of the worsening of the individual economic situation, but no effect of crime victimization.

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[16] Similar results are obtained under a Logit specification.

7. Conclusions

In this paper we take an alternative approach to study the costs of crime using subjective, "soft" data. It relies on two types of data: happiness and beliefs. Our interest in happiness data is justified because it provides a direct (albeit subjective) measure of welfare. And our interest in people's ideological beliefs is justified because a possible indirect cost of crime is that victimization might change people's view of how the world works (for example, how unfair the distribution of income is) and this might cause people to prefer different policies.

We implement a survey to elicit individual's response at two different points in time, allowing us to provide panel estimates of the crime-happiness and crime-beliefs correlations. Although we exhausted possible model specifications, our results find no evidence of a crime-happiness correlation; this coincides with previous findings in high-crime environments. On the other hand, we find a robust, positive correlation between crime victimization and beliefs that can be interpreted as being on the left of the political spectrum, such as the belief that the distribution of income is very unequal, or that criminals should not be too punished too severely.

A plausible interpretation of our findings on crime victimization and beliefs is as follows. Victimization makes the issue of crime salient to victims (but not as much to non-victims), and victims of crime take the view that the distribution of income in Argentina is more unequal than they had previously believed. In turn, people who believe that inequality is high take an understanding view and are more likely to think that an individual has decided to become a criminal out of need rather than malice. Individuals who provide their opinions on how to punish criminals that they believe are relatively kind (i.e., criminals that are not on the "mean" side) are unlikely to demand very tough sentences.

These empirical results are consistent with the theoretical model by Di Tella and Dubra (2008), where beliefs about the fairness of the distribution of income determine views on economic policies (i.e., tax rates), whereas here those beliefs determine opinions on judicial policies (i.e., penal sentences). If redistributive policies have hampered growth in Latin America, and the lack of growth is one of the reasons for the high crime levels, our findings could contribute one piece of the puzzle of understanding Latin America poverty traps: crime can encourage beliefs that promote policies that, in turn, reduce growth and foster crime.

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APPENDIX 1. Variable Definitions

Dependent Variables

Happiness: Satisfaction with life in general, in a scale from 0 (completely unsatisfied) to 10 (completely satisfied).

ΔHappiness: absolute variation of "**Happiness**" between two periods of time

Inequality Perceptions: In a scale from 0 to 10, where "0" stands for a society with a very uneven income distribution, where wealth is concentrated among a few and "10" stands for a very even income distribution, how would you characterize the Argentine society?

Heavy-handed: Dummy variable based on the open question: "According to you, what would be the best way to solve the problem of crime", and the spontaneous answers are classified into:

0	LOWER UNEMPLOYMENT RATE.
	MORE AND BETTER EDUCATION/MORE EDUCATION BUDGET.
	IMPROVE PRISONS.
	IMPROVE INCOME DISTRIBUTION/ LOWER SOCIAL INEQUALITY.
	MORE POLICE ON THE STREETS.
	END WITH POLICE CORRUPTION.
	IMPROVE POLICE TRAINING.
1	MORE SEVERE PUNISHMENTS/NEW SEVERE LAWS.
	IMPROVE THE JUDICIAL´S ARM PERFORMANCE
	LAW ENFORCEMENT / ENFORCEMENT OF CRIMINAL SENTENCES / IMPROVE CRIMINAL SENTENCING.
	DEATH PENALTY.

A residual category of "others" is excluded from the sample.

Juvenile Punishment: Dummy variable based on the question: "People have different beliefs about the punishment that juvenile delinquents deserve. Think for example of a young 15 year old that commits an armed robbery. What should his punishment be?" and the possible answers are:

0	HE SHOULD BE PUNISHED ACCORDING TO A JUVENILE-SPECIFIC REGIME, WHERE SENTENCES ARE LESS SEVERE THAN THE ONES FOR ADULTS.
	HE SHOULD BE HELD IN A YOUTH DETENTION CENTER UNTIL THE JUDGE ORDERS HIS RELEASE.
	HE SHOULD BE RELEASED.
1	HE SHOULD BE JUDGED AS AN ADULT.

Imprisonment Punishment: Dummy variable based on the question "People have different beliefs about punishment that delinquents deserve. Think for example a 20 year old who is found guilty of robbery for the second time. This time he has stolen a TV set. What should his punishment be?" and the possible values are:

0	FINE.
	COMMUNITY SERVICE.
	PROBATION.
1	PRISON.

Meritocratic Beliefs: in general, do you think that people that work hard end up in economic terms…

1	MUCH BETTER THAN THOSE WHO DO NOT WORK AS HARD.
	BETTER THAN THOSE WHO DO NOT WORK AS HARD.
	A LITTLE BETTER THAN THOSE WHO DO NOT WORK AS HARD.
0	THE SAME AS THOSE WHO DO NOT WORK AS HARD.
	WORSE THAN THOSE WHO DO NOT WORK AS HARD.

Laughed yesterday: Dummy variable based on the question "Did you laugh a lot yesterday?" This variable is only available in a cross-section.

Worried yesterday: Dummy variable based on the question "Were you worried yesterday?" This variable is only available in a cross-section.

More days like yesterday: Dummy variable bases on the question "Would you like to have more days as the one you had yesterday?" This variable is only available in a cross-section.

Independent Variables

Victim of a crime: Dummy variable based on the question "In the last 12 months, have you or any member of your cohabitating family been victim of a crime such as robbery, theft, injuries, threats, kidnapping, murder, fraud, vandalism, corruption, or sexual offenses? Please take your time. Do not consider relatives who don't live in your home. (Spontaneous response) ".

Δ**Victim of a crime**: This variable reflects the absolute variation of "**Victim of a crime"** between two periods of time.

Victim of a violent robbery: Dummy variable that considers the spontaneous response of robbery with violence, based on the question "In the last 12 months, have you or any member of your family been victim of a crime such as robbery with violence, theft, injuries, threats, kidnapping, murder, fraud, vandalism, corruption, or sexual offenses?"

Number of violent robberies: This variable measures the number of times the members of a house suffered a violent robbery in the 12 months prior to the survey.

Respondent victim of a violent crime: Dummy variable reflecting whether the interviewed himself/herself was the household member who suffered a violent robbery in the 12 months prior to the survey.

Victim of crime with the use of arms: Dummy variable reflecting whether the interviewed suffered a violent armed robbery in the 12 months prior to the survey.

Victim of injuries or threats: Dummy variable that considers the spontaneous response of injuries or threats, based on the question "In the last 12 months, have you or any member of your family been victim of a crime such as robbery, theft, injuries, threats, kidnapping, murder, fraud, vandalism, corruption, or sexual offenses?"

Victim of homicide: This variable is based on the direct question about murder in the 12 months prior to the survey.

Victim of sexual offense: This variable is based on the direct question about sexual offense in the 12 months prior to the survey.

Victim of kidnapping: This variable is based on the direct question about kidnapping in the 12 months prior to the survey.

Victim of a burglary, auto theft, motorcycle theft, larceny, fraud or corruption: This variable is based on the direct question about burglary, auto theft, motorcycle theft, larceny, fraud or corruption in the 12 months prior to the survey.

Death of relative: Dummy variable based on the question "In the last 12 months, have you experienced the loss of someone you love?" This variable is only available in a cross-section.

Disease of relative: Dummy variable based on the question "In the last 12 months, did you, or a son, or daughter, or a spouse or a grandchild of yours suffer a serious disease (that did not suffer before)?" This variable is only available in a cross-section.

Married / partnered: Dummy variable based on the question "In the last 12 months, did you get married or move in with someone or start dating someone?" This variable is only available in a cross-section.

Break-up: Dummy variable based on the question "In the last 12 months, did you get divorced or separated?" This variable is only available in a cross-section.

Widowed: Dummy variable based on the question "In the last 12 months, did you widow? This variable is only available in a cross-section.

Child married / partnered: Dummy variable based on the question "In the last 12 months, did an adult children of yours get married or move in with someone or start dating someone?" This variable is only available in a cross-section.

Child break-up: Dummy variable based on the question "In the last 12 months, did adult children of yours get divorced or separated?" This variable is only available in a cross-section.

Improved economic situation: Dummy variable based on the question "In the last 12 months, did you and/or your spouse get a job or improved your economic situation significantly?" This variable is only available in a cross-section.

Worsened economic situation: Dummy variable based on the question "In the last 12 months, did you and/or your spouse lose your job or worsen your economic situation significantly?" This variable is only available in a cross-section.

Child improved economic situation: Dummy variable based on the question "In the last 12 months, did your children improve their economic situation significantly?" This variable is only available in a cross-section.

Child worsened economic situation: Dummy variable based on the question "In the last 12 months, did your children worsen their economic situation significantly?" This variable is only available in a cross-section.

Child birth: Dummy variable based on the question "In the last 12 months, did your have a child?" This variable is only available in a cross-section.

Grandchild birth: Dummy variable based on the question "In the last 12 months, did your have a grandchild?" This variable is only available in a cross-section.

APPENDIX 2. Summary Statistics (for same household respondent sample)

Variable	Obs	Mean	Std. Dev.	Min	Max
Happiness	1973	7.78	1.74	0	10
ΔHappiness	734	0.09	1.87	-9	10
Inequality Perceptions	1,937	3.59	2.36	0	10
Heavy-handed	1,474	0.25	0.44	0	1
Juvenile Punishments	1,792	0.49	0.50	0	1
Imprisonment Punishment	1,750	0.57	0.49	0	1
Meritocratic beliefs	1,832	0.75	0.44	0	1
Laughed yesterday	754	0.57	0.50	0	1
Worried yesterday	769	0.44	0.50	0	1
More days like yesterday	749	0.69	0.46	0	1
Victim of a crime	2,021	0.36	0.48	0	1
ΔVictim of a crime	769	-0.06	0.06	-1	1
Victim of a violent robbery	2,021	0.20	0.40	0	1
Number of violent robberies	2,021	0.29	0.66	0	10
Respondent victim of a violent crime	2,021	0.09	0.28	0	1
Victim of crime with the use of arms	2,021	0.05	0.22	0	1
Victim of injuries or threats	2,021	0.01	0.11	0	1
Victim of homicide	2,021	0.00	0.05	0	1
Victim of sexual offense	2,021	0.02	0.15	0	1
Victim of kidnapping	2,021	0.01	0.08	0	1
Victim of a burglary, auto theft, motorcycle theft, larceny, fraud or corruption	2,021	0.19	0.39	0	1
Death of relative	773	0.27	0.44	0	1
Disease of relative	773	0.17	0.37	0	1
Married / partnered	770	0.02	0.13	0	1
Break-up	770	0.03	0.17	0	1
Widowed	770	0.02	0.12	0	1
Child married / partnered	769	0.06	0.24	0	1
Child break-up	769	0.04	0.21	0	1
Improved economic situation	773	0.15	0.36	0	1
Worsened economic situation	773	0.20	0.40	0	1
Child improved economic situation	658	0.16	0.37	0	1
Child worsened economic situation	658	0.08	0.27	0	1
Child birth	773	0.03	0.17	0	1
Grandchild birth	773	0.12	0.33	0	1

Note: Only for households where the same respondent answered both surveys.

APPENDIX 3. Survey Respondents' Characteristics

	Mean	
	Any household respondent	Same household respondent
Household Head	63.0%	62.8%
Male	31.8%	31.9%
Respondent victim of a violent crime	8.3%	8.6%
Respondent victim of theft	9.8%	9.5%
Age	52.4	52.1
HH lives with a partner (married or unmarried)	57%	57%
Number of people in the household	3.7	3.8
Number of people in the household below 18 years old	1.0	1.0
Respondent partner's age	50.8	50.5
Argentine Household Head	95.2%	94.9%
Education of HH (years)	15.0	15.0
Education of HH's partner (years)	14.8	14.8
Unemployed HH	4.6%	4.7%

Table 1.
Percentage of Households that Have Been Victims of a crime in the last year

	Victimized	Not Victimized	Sample Size
Argentina	42	57	1,200
Bolivia	36	63	1,200
Brazil	36	63	1,200
Colombia	30	68	1,200
Costa Rica	33	67	1,004
Chile	34	66	1,200
Ecuador	34	65	1,200
El Salvador	40	60	1,008
Guatemala	37	62	1,006
Honduras	32	67	1,006
Mexico	64	36	1,200
Nicaragua	32	67	1,010
Panama	25	72	1,004
Paraguay	41	59	6,00
Peru	37	63	1,200
Uruguay	29	71	1,200
Venezuela	47	52	1,200
Total	37	62	18,638

Source: Latinobarómetro (2004).

Table 2. Frequency of Crime Victimization

	Frequency	
	Any household respondent	Same household respondent
Household member victim of a crime	36.1%	36.3%
Household member victim of a violent robbery	19.6%	19.9%
Respondent victim of a violent robbery	8.3%	8.6%
Household member victim of crime with use of arms	4.8%	5.0%
Household member victim of injuries and threats	1.4%	1.3%
Household member victim of homicide	0.3%	0.3%
Household member victim of sexual offense	2.1%	2.3%
Household member victim of kidnapping	0.7%	0.7%
Household member victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	19.3%	19.2%

Note: In the first column we consider responses from any household member. In the second column, we only consider households where the same respondent answered both surveys.

Table 3. Crime Victimization and Happiness

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Independent Variable	Any household respondent (1)	Same household respondent (2)
Victim of a crime	-0.01	0.05
	(0.09)	(0.10)
Victim of a violent robbery	-0.04	-0.00
	(0.11)	(0.12)
Number of violent robberies	0.01	0.04
	(0.06)	(0.07)
Respondent victim of a violent crime	-0.07	0.02
	(0.18)	(0.19)
Victim of crime with the use of arms	-0.19	-0.04
	(0.26)	(0.26)
Victim of injuries or threats	0.19	0.20
	(0.29)	(0.34)
Victim of homicide	-2.01	-2.02
	(1.84)	(1.84)
Victim of sexual offense	-0.49	-0.42
	(0.32)	(0.34)
Victim of kidnapping	0.12	-0.02
	(0.48)	(0.52)
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	-0.10 (0.10)	-0.05 (0.11)
Observations	2,224	1,920
Number of households	1,112	960

Notes: All columns present OLS regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. In column (1) we consider responses from any household member. In column (2) we only consider households where the same respondent answered both surveys. Appendix 1 presents the variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 4.Crime Victimization and Inequality Perceptions

Independent Variable	Any household respondent (1)	Same household respondent (2)
Victim of a crime	-0.27*	-0.36**
	(0.15)	(0.15)
Victim of a violent robbery	-0.17	-0.24
	(0.17)	(0.17)
Number of violent robberies	-0.06	-0.09
	(0.09)	(0.10)
Respondent victim of a violent crime	0.13	0.04
	(0.25)	(0.26)
Victim of crime with the use of arms	-0.21	-0.05
	(0.26)	(0.26)
Victim of injuries or threats	0.41	0.63
	(0.53)	(0.52)
Victim of homicide	0.50	0.54
	(1.58)	(1.59)
Victim of sexual offense	-0.24	-0.10
	(0.49)	(0.51)
Victim of kidnapping	-1.34**	-1.27**
	(0.55)	(0.62)
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	-0.36**	-0.44**
	(0.16)	(0.18)
Observations	2,140	1,846
Number of households	1,070	923

Notes: All columns present OLS regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. In column (1) we consider responses from any household member. In column (2) we only consider households where the same respondent answered both surveys. Appendix 1 presents the variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 5. Crime Victimization and Support for Heavy-Handed Policies

Independent Variable	Any household respondent		Same household respondent	
	(1)	(2)	(3)	(4)
Victim of a crime	-0.04	-0.41	-0.07**	-0.85**
	(0.03)	(0.30)	(0.03)	(0.38)
Victim of a violent robbery	0.05	0.35	0.03	0.20
	(0.04)	(0.31)	(0.04)	(0.33)
Number of violent robberies	0.03*	0.28	0.03	0.22
	(0.02)	(0.17)	(0.03)	(0.17)
Respondent victim of a violent crime	-0.02	-0.22	-0.02	-0.21
	(0.05)	(0.49)	(0.06)	(0.49)
Victim of crime with the use of arms	0.01	0.07	0.01	0.09
	(0.07)	(0.61)	(0.08)	(0.61)
Victim of injuries or threats	-0.05		-0.29**	
	(0.04)		(0.14)	
Victim of homicide	-0.05		-0.03	
	(0.04)		(0.03)	
Victim of sexual offense	-0.14*	-1.36	-0.11	-1.22
	(0.08)	(1.11)	(0.08)	(1.14)
Victim of kidnapping	0.02	0.47	0.00	0.42
	(0.17)	(1.44)	(0.21)	(1.43)
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	-0.07*	-0.57*	-0.10**	-0.82**
	(0.04)	(0.30)	(0.04)	(0.35)
Observations	1,294	290	1,104	238
Number of households	647	145	552	119

Notes: Columns (1) and (3) present OLS regressions with households fixed effects. Columns (2) and (4) present Logit regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. In columns (1) and (2) we consider responses from any household member. In columns (3) and (4) we only consider households where the same respondent answered both surveys. The number of observations in the Logit regressions is reduced when households fixed effects predict success or failure with certainty. Some Logit regressions cannot be run for this reason. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 6.
Crime Victimization and Support for Juvenile Punishment

Independent Variable	Any household respondent		Same household respondent	
	(1)	(2)	(3)	(4)
Victim of a crime	0.01	0.04	0.01	0.01
	(0.03)	(0.22)	(0.03)	(0.25)
Victim of a violent robbery	-0.02	-0.17	-0.04	-0.33
	(0.03)	(0.26)	(0.03)	(0.29)
Number of violent robberies	-0.01	-0.04	-0.01	-0.04
	(0.02)	(0.12)	(0.02)	(0.14)
Respondent victim of a violent crime	0.03	0.14	0.02	0.09
	(0.05)	(0.36)	(0.05)	(0.40)
Victim of crime with the use of arms	0.03	0.11	0.02	-0.05
	(0.06)	(0.53)	(0.06)	(0.61)
Victim of injuries or threats	0.11	0.97	0.19**	
	(0.08)	(1.19)	(0.08)	
Victim of homicide	-0.20		-0.20	
	(0.17)		(0.17)	
Victim of sexual offense	-0.08	-0.67	-0.09	-0.68
	(0.08)	(0.73)	(0.08)	(0.75)
Victim of kidnapping	-0.15		-0.08	
	(0.09)		(0.08)	
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	0.04	0.24	0.05*	0.41
	(0.03)	(0.24)	(0.03)	(0.28)
Observations	1,876	528	1,618	448
Number of households	938	264	809	224

Notes: Columns (1) and (3) present OLS regressions with households fixed effects. Columns (2) and (4) present Logit regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. In columns (1) and (2) we consider responses from any household member. In columns (3) and (4) we only consider households where the same respondent answered both surveys. The number of observations in the Logit regressions is reduced when households fixed effects predict success or failure with certainty. Some Logit regressions cannot be run for this reason. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 7.
Crime Victimization and Support for Incarceration as Punishment

Independent Variables	Any household respondent		Same household respondent	
	(1)	(2)	(3)	(4)
Victim of a crime	-0.02	-0.17	-0.03	-0.23
	(0.03)	(0.22)	(0.03)	(0.24)
Victim of a violent robbery	-0.03	-0.20	-0.03	-0.22
	(0.03)	(0.24)	(0.04)	(0.25)
Number of violent robberies	-0.02	-0.18	-0.01	-0.09
	(0.02)	(0.14)	(0.02)	(0.17)
Respondent victim of a violent crime	-0.00	-0.01	0 .00	0.02
	(0.49)	(0.38)	(0.05)	(0.41)
Victim of crime with the use of arms	0.02	0.12	0.00	0.02
	(0.07)	(0.49)	(0.07)	(0.50)
Victim of injuries or threats	-0.14	-1.37	-0.14	-1.37
	0.10	1.12	0.102	1.12
Victim of homicide	-0.20		-0.20	
	(0.18)		(0.18)	
Victim of sexual offense	-0.03	-0.21	-0.03	-0.19
	(0.08)	(0.68)	(0.09)	(0.68)
Victim of kidnapping	-0.00	-0.02	0.00	0.08
	(0.13)	(1.42)	(0.14)	(1.42)
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	-0.01	-0.06	-0.02	-0.14
	(0.03)	(0.24)	(0.04)	(0.25)
Observations	1,766	490	1,552	424
Number of households	883	245	776	212

Notes: Columns (1) and (3) present OLS regressions with households fixed effects. Columns (2) and (4) present Logit regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. In columns (1) and (2) we consider responses from any household member. In columns (3) and (4) we only consider households where the same respondent answered both surveys. The number of observations in the Logit regressions is reduced when households fixed effects predict success or failure with certainty. Some Logit regressions cannot be run for this reason. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 8.
Crime Victimization and Meritocratic Beliefs

Independent Variables	Any household respondent		Same household respondent	
	(1)	(2)	(3)	(4)
Victim of a crime	0.00	0.04	-0.01	-0.06
	(0.03)	(0.21)	(0.03)	(0.24)
Victim of a violent robbery	0.05*	0.44*	0.04	0.30
	(0.03)	(0.25)	(0.03)	(0.27)
Number of violent robberies	0.03**	0.32**	0.04*	0.32*
	(0.02)	(0.15)	(0.02)	(0.18)
Respondent victim of a violent crime	0.06	0.38	0.05	0.30
	(0.05)	(0.34)	(0.05)	(0.35)
Victim of crime with the use of arms	0.05	0.37	0.04	0.27
	(0.06)	(0.50)	(0.07)	(0.51)
Victim of injuries or threats	-0.04	-0.76	0.01	-0.06
	(0.08)	(1.24)	(0.08)	(1.43)
Victim of homicide	-0.24	-0.58	0.24	-0.59
	(0.42)	(1.23)	(0.42)	(1.23)
Victim of sexual offense	-0.03	-0.67	-0.08	-0.67
	(0.07)	(0.71)	(0.07)	(0.71)
Victim of kidnapping	0.25		0.26	
	(0.11)		(0.12)	
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	-0.04	-0.32	-0.05	-0.35
	(0.03)	(0.24)	(0.03)	(0.26)
Observations	1932	532	1658	468
Number of households	966	266	829	234

Notes: Columns (1) and (3) present OLS regressions with households fixed effects. Columns (2) and (4) present Logit regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. In columns (1) and (2) we consider responses from any household member. In columns (3) and (4) we only consider households where the same respondent answered both surveys. The number of observations in the Logit regressions is reduced when households fixed effects predict success or failure with certainty. Some Logit regressions cannot be run for this reason. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 9. Crime Victimization, Happiness and Beliefs by Group

	Happiness (1)	Inequality Perceptions (2)	Heavy-handed (3)	Meritocratic Beliefs (4)
Men				
Victim of a crime	0.20	-0.03	-0.04	0.03
	(0.16)	(0.22)	(0.05)	(0.05)
Observations	614	596	370	512
Number of households	307	298	185	256
Women				
Victim of a crime	-0.01	-0.51**	-0.08**	-0.03
	(0.12)	(0.20)	(0.04)	(0.04)
Observations	1306	1250	734	1146
Number of households	653	625	367	573
Educated				
Victim of a crime	-0.04	-0.11	-0.11**	0.03
	(0.13)	(0.19)	(0.05)	(0.05)
Observations	857	867	528	724
Number of households	467	471	284	396
Less Educated				
Victim of a crime	0.24	-0.42	-0.04	-0.05
	(0.17)	(0.28)	(0.05)	(0.05)
Observations	1056	972	573	927
Number of households	568	525	306	499
Young				
Victim of a crime	-0.11	-0.24	-0.10**	0.01
	(0.13)	(0.21)	(0.04)	(0.04)
Observations	882	858	549	776
Number of households	451	439	280	396
Old				
Victim of a crime	0.22	-0.48**	-0.01	-0.03
	(0.15)	(0.23)	(0.05)	(0.04)
Observations	984	937	522	838
Number of households	503	479	266	428
Non Victim in baseline survey				
Victim of a crime	-0.09	-0.39	-0.11**	0.00
	(0.16)	(0.26)	(0.06)	(0.05)
Observations	1,150	1,098	644	1,000
Number of households	575	549	322	500

Notes: All columns present OLS regressions with households fixed effects. Each cell presents the coefficient on the independent variable from a different regression that also includes time-fixed effects. We only consider households where the same respondent answered both surveys. The group *Less Educated* consists of those respondents that reported high school as their maximum level of education. The group *Educated* consists of those respondents that reached tertiary or university levels of education. The group *Young* consists of those respondents that reported having 50 years or less. The group *Non Victim in baseline survey* consists of those respondents that reported their household members not having suffered a crime in the 12 months prior to the survey. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 10. Crime Victimization, Happiness and Beliefs: Cross-Sectional Results

Independent Variables	Any household respondent				Same household respondent			
	Happiness	Inequality Perceptions	Heavy-handed	Meritocratic beliefs	Happiness	Inequality Perceptions	Heavy-handed	Meritocratic beliefs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Victim of a crime	-0.04	-0.28***	0.03	-0.02	-0.02	-0.27**	0.02	-0.03
	(0.08)	(0.11)	(0.03)	(0.02)	(0.08)	(0.11)	(0.03)	(0.02)
Victim of a violent robbery	-0.10	-0.34***	0.05	0.00	-0.07	-0.36***	0.04	0.00
	(0.09)	(0.13)	(0.03)	(0.02)	(0.10)	(0.14)	(0.03)	(0.03)
Number of violent robberies	-0.01	-0.11*	0.03	0.00	0.00	-0.13	0.03*	0.00
	(0.05)	(0.07)	(0.02)	(0.01)	(0.06)	(0.08)	(0.02)	(0.02)
Respondent victim of a violent crime	-0.11	-0.08	0.03	-0.04	-0.05	-0.15	0.04	-0.05
	(0.15)	(0.18)	(0.04)	(0.04)	(0.15)	(0.19)	(0.05)	(0.04)
Victim of crime with the use of arms	0.07	0.10	0.05	-0.05	0.19	0.22	0.07	-0.07
	(0.19)	(0.19)	(0.05)	(0.05)	(0.19)	(0.19)	(0.06)	(0.05)
Victim of injuries or threats	0.08	0.17	0.07	-0.04	0.17	0.44	0.02	-0.04
	(0.30)	(0.51)	(0.12)	(0.09)	(0.32)	(0.54)	(0.14)	(0.10)
Victim of homicide	-2.78**	0.12	0.05	-0.25	-2.79**	0.12	0.06	-0.24
	(1.15)	(0.83)	(0.27)	(0.26)	(1.15)	(0.84)	(0.27)	(0.26)
Victim of sexual offense	-0.46	-0.30	-0.20***	-0.00	-0.38	-0.24	-0.19***	-0.01
	(0.29)	(0.30)	(0.05)	(0.07)	(0.30)	(0.30)	(0.05)	(0.07)
Victim of kidnapping	0.13	-0.64	0.11	0.11	-0.10	-0.52	0.06	0.18**
	(0.39)	(0.53)	(0.16)	(0.10)	(0.41)	(0.57)	(0.17)	(0.08)
Victim of burglary, auto theft, motorcycle theft, larceny, fraud or corruption	-0.09	-0.14	0.01	-0.01	-0.07	-0.13	-0.01	-0.01
	(0.09)	(0.12)	(0.03)	(0.02)	(0.01)	(0.13)	(0.03)	(0.03)
Observations	2,224	2,140	1,294	1,932	1,920	1,846	1,104	1,658

Notes: All columns present repeated OLS cross sectional regressions without household fixed effects. Each cell presents the coefficient on the independent variable from a different regression. In columns (1) to (4) we consider responses from any household member. In columns (5) to (8) we only consider households where the same respondent answered both surveys. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 11. Crime Victimization, Happiness and Personal Shocks

Independent Variables:	ΔHappiness (1)	Happiness (2)	Laughed yesterday (3)	More days like yesterday (4)	Worried yesterday (5)	ΔHappiness (6)	Happiness (7)	Laughed yesterday (8)	More days like yesterday (9)	Worried yesterday (10)
Δ Victim of a crime	0.09	0.08	0.05	0.04	-0.03	0.1	0.05	0.04	0.03	-0.03
	(0.13)	(0.11)	(0.03)	(0.03)	(0.03)	(0.13)	(0.11)	(0.03)	(0.03)	(0.03)
Death of relative	0.08	0.21	-0.01	-0.06	0.04					
	(0.17)	(0.15)	(0.05)	(0.04)	(0.04)					
Disease of relative	0.08	-0.12	0.01	-0.01	0.03					
	(0.20)	(0.19)	(0.05)	(0.05)	(0.05)					
Married / partnered	0.00	-0.23	0.08	0.03	0.05					
	(0.63)	(0.57)	(0.18)	(0.16)	(0.16)					
Break-up	0.07	-0.42	-0.08	-0.06	0.00					
	(0.45)	(0.41)	(0.12)	(0.11)	(0.12)					
Widowed	-0.11	-0.14	-0.10	-0.27*	0.03					
	(0.60)	(0.52)	(0.15)	(0.14)	(0.15)					
Child married / partnered	-0.26	-0.37	0.03	0.02	0.11					
	(0.29)	(0.26)	(0.08)	(0.07)	(0.07)					
Child break-up	-0.26	-0.46	-0.05	-0.04	0.19*					
	(0.39)	(0.35)	(0.10)	(0.10)	(0.10)					
Improved economic situation	-0.01	0.18	-0.02	0.01	-0.05	0.01	0.22	-0.02	0.02	-0.06
	(0.23)	(0.21)	(0.06)	(0.06)	(0.06)	(0.22)	(0.20)	(0.06)	(0.06)	(0.06)
Worsened economic situation	-0.13	-0.60***	-0.07	-0.12**	0.22***	-0.15	-0.61***	-0.07	-0.12**	0.21***
	(0.20)	(0.18)	(0.05)	(0.05)	(0.05)	(0.20)	(0.18)	(0.05)	(0.05)	(0.05)
Child improved economic situation	0.22	0.07	0.02	0.02	0.04	0.18	0.04	0.00	0.00	0.05
	(0.22)	(0.20)	(0.06)	(0.05)	(0.06)	(0.22)	(0.19)	(0.06)	(0.05)	(0.05)
Child worsened economic situation	-0.46	-0.65**	-0.20**	-0.19**	0.19**	-0.42	-0.75***	-0.22***	-0.20***	0.23***
	(0.30)	(0.27)	(0.08)	(0.07)	(0.08)	(0.29)	(0.26)	(0.08)	(0.07)	(0.07)
Child birth	0.62	0.66	0.15	0.10	-0.13					
	(0.49)	(0.44)	(0.13)	(0.12)	(0.13)					
Grandchild birth	-0.02	0.08	0.02	0.03	-0.04					
	(0.22)	(0.19)	(0.06)	(0.05)	(0.06)					
Observations	618	636	635	633	647	623	642	641	639	653

Notes: We only consider households where the same respondent answered both surveys. We only consider answers from the second survey wave. The difference between Table 11 and 11 is that the former has Δ *Victim of a Crime* as one of the independent variables and the latter has *Victim of a Crime* instead. Each column presents the coefficients on the independent variables from a different OLS regression. Appendix 1 presents variables definitions. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.

Table 12. Crime Victimization, Happiness and Personal Shocks

Independent Variables:	ΔHappiness (1)	Happiness (2)	Laughed yesterday (3)	More days like yesterday (4)	Worried yesterday (5)	ΔHappiness (6)	Happiness (7)	Laughed yesterday (8)	More days like yesterday (9)	Worried yesterday (10)
Victim of a crime	-0.19 (0.16)	0.04 (0.14)	0.07 (0.04)	0.03 (0.04)	0.05 (0.04)	-0.15 (0.16)	0.01 (0.14)	0.06 (0.04)	0.03 (0.04)	0.05 (0.04)
Death of relative	0.08 (0.17)	0.20 (0.15)	-0.02 (0.05)	-0.06 (0.04)	0.04 (0.04)					
Disease of relative	0.13 (0.21)	-0.09 (0.19)	0.00 (0.05)	-0.00 (0.05)	0.02 (0.05)					
Married / partnered	-0.05 (0.63)	-0.24 (0.57)	0.10 (0.18)	0.03 (0.16)	0.06 (0.17)					
Break-up	0.07 (0.45)	-0.47 (0.40)	-0.09 (0.12)	-0.07 (0.11)	0.01 (0.12)					
Widowed	-0.18 (0.60)	-0.14 (0.51)	-0.12 (0.15)	-0.21 (0.14)	0.10 (0.15)					
Child married / partnered	-0.29 (0.29)	-0.39 (0.26)	0.02 (0.08)	0.01 (0.07)	0.12 (0.07)					
Child break-up	-0.27 (0.39)	-0.36 (0.34)	-0.03 (0.10)	-0.03 (0.09)	0.17* (0.10)					
Improved economic situation	0.05 (0.23)	0.17 (0.21)	-0.03 (0.06)	0.01 (0.06)	-0.06 (0.06)	0.06 (0.22)	0.22 (0.20)	-0.02 (0.06)	0.02 (0.06)	-0.08 (0.06)
Worsened economic situation	-0.13 (0.20)	-0.61*** (0.18)	-0.08 (0.05)	-0.12** (0.05)	0.22*** (0.05)	-0.14 (0.20)	-0.62*** (0.18)	-0.08 (0.05)	-0.12** (0.05)	0.21*** (0.05)
Child improved economic situation	0.19 (0.22)	0.09 (0.19)	0.02 (0.06)	0.02 (0.05)	0.04 (0.06)	0.16 (0.22)	0.05 (0.19)	0.01 (0.06)	0.00 (0.05)	0.05 (0.05)
Child worsened economic situation	-0.47 (0.30)	-0.66** (0.27)	-0.20** (0.08)	-0.19*** (0.07)	0.19** (0.08)	-0.41 (0.29)	-0.75*** (0.26)	-0.22*** (0.08)	-0.20*** (0.07)	0.23*** (0.07)
Child Birth	0.57 (0.49)	0.66 (0.44)	0.15 (0.13)	0.09 (0.12)	-0.12 (0.13)					
Grandchild Birth	-0.05 (0.22)	0.11 (0.19)	0.02 (0.06)	0.03 (0.05)	-0.04 (0.06)					
Observations	618	638	637	635	649	623	644	643	641	655

Notes: We only consider households where the same respondent answered both surveys. We only consider answers from the second survey wave. The difference between Table 11 and 12 is that the former has Δ *Victim of a Crime* as one of the independent variables and the latter has *Victim of a Crime* instead. Each column presents the coefficients on the independent variables from a different OLS regression. Appendix 1 presents the definition of the variables. Standard errors in parentheses. * Significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level.