The Long-Term Effects of Crime: From Individual Concerns to Macroeconomic Consequences*

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Abstract

Crime shocks are frequent and disruptive, often heightening public concerns about violence and personal safety. Yet little is known about their potential long-term economic implications. This paper studies how historical exposure to crime shapes current perceptions of crime, and how these individual perceptions in turn affect the macroeconomic impacts of new crime shocks. Using cross-country survey data matched with historical crime records, we find that individuals historically exposed to high-crime years are more likely to prioritize fighting crime over other societal goals, such as maintaining a stable economy. This historical link is particularly strong among older and richer individuals, and among parents. Policies that strengthen fiscal positions and enhance the government's capacity to respond to crime shocks help mitigate the persistence of crime exposure. At the aggregate level, countries where crime concerns are more entrenched experience larger GDP declines in the aftermath of high-crime years, driven mainly by lower consumption, capital accumulation, and productivity, rather than changes in employment.

Keywords: Crime perceptions, lived experiences, macroeconomic costs of crime.
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1 Introduction

Crime shocks are frequent and disruptive, often imposing economic and social costs across households, firms, and governments. During the COVID-19 pandemic, for example, crime rose in many countries, intensifying public concerns about violence and personal security. These concerns were widespread across both advanced economies (AEs) and emerging market and developing economies (EMDEs). In the United States, the share of the population who views crime as a "very" or "extremely" serious issue peaked in 2023.[1] In Latin America, more than 20 percent of the population cited crime as the most important problem in 2024, with particularly high crime concerns in Costa Rica, Ecuador, Chile, and Uruguay.[2] While the short-run consequences of crime are well documented (Rozo 2018; Bisca et al. 2024), less is known about their lasting impacts, especially how they shape beliefs and affect long-run economic performance.

Against this backdrop, this paper investigates two questions. First, how does historical exposure to crime shape how people today perceive crime as a societal problem? At the individual level, we find that a one standard deviation increase in historical exposure to high crime raises crime concerns by about 6.3 percent. Second, do these perceptions influence how economies respond to new crime shocks? In other words, what are the long-run macroeconomic effects of lived crime experiences? We show that, in countries with entrenched crime concerns, real GDP falls between 1–2 percent in the aftermath of a high crime year. By contrast, in countries with systematically low crime concerns, crime shocks are not found to systematically affect economic activity.

To study how lived experiences shape individual perceptions of crime, we combine historical crime data on homicide rates with nearly 30 years of cross-country, individual-level survey data covering 60 advanced, emerging, and developing economies. We examine the different ways in which past exposure to years of high crime affect current concerns about crime, and how these links vary with individual characteristics and macroeconomic and institutional contexts. For each country and birth cohort (defined by year of birth), we construct a measure of historical exposure to high-crime years and relate it to individuals' current concerns about crime, captured by an index built from survey responses. Our empirical strategy exploits within-country, between-age-group/cohort variation in historical exposure to crime, and identification relies on cross-cohort parallel trends prior to exposure.[3]

We find that individuals who were exposed to high-crime years during earlier stages of life are more likely to express concern about crime today. This relationship is statistically significant: in the baseline specification, a one standard deviation increase in cohort-level exposure to past crime is associated with a 0.06 standard deviation increase in concern about crime; and economically meaningful: this corresponds to a 6.3 percent increase in crime concerns. Moreover, we show that individual characteristics shape the relationship between historical crime exposure and concerns about crime. Parents not only report higher concerns about crime on average, but also have concerns that are more sensitive to having experienced high crime in the past. Similarly, older and richer individuals are more responsive to historical crime events, pointing to the potential link between past crime exposure and perceived vulnerability. We also find that individuals with right-leaning political views are systematically linked to higher crime concerns and with a higher sensitivity of crime concerns to past crime exposure compared to individuals who self-identify as having centrist political views.

Country-level characteristics also affect the link between past crime exposure and crime concerns. Advanced economies display a higher pass-through from past crime events to crime concerns, presumably because the lower frequency of high crime events in these countries means these events can leave longer-lasting scars. Countries with lower debt levels and a stronger fiscal balance have a lower pass-through from past exposure to current crime concerns, arguably reflecting a better ability of governments to fight crime. By contrast, there is no evidence that current crime rates amplify the pass-through of past crime events on current crime concerns.

1. https://news.gallup.com/poll/652763/smaller-majorities-say-crime-serious-increasing.aspx
2. https://www.latinobarometro.org/latinobarometro-2024
3. As we elaborate below, the key assumption is that two individuals of a similar age in different countries differ in their views about crime (up to a constant) primarily due to differences in their exposure to high crime years.

Country characteristics are important not only contemporaneously, but also *at the time of crime events*. We find that, as is the case with current fiscal deficits, a low fiscal space at the time of the crime event translates into a higher pass-through from historical crime exposure to current crime concerns. Importantly, crime events in times of recession are not linked to higher crime concerns, in part because concerns about economic growth may become more salient relative to concerns about crime for individuals who were exposed to both high crime and recessions at the same time. We find that other country characteristics at the time of the crime event—banking crises, high debt, or strength of democracy—do not significantly alter the link between historical crime events and current crime concerns.

We then show that individual responses to lived experiences can have macroeconomic implications, as heightened crime concerns shape how the economy responds to crime shocks. We proceed in two steps. First, we estimate a country-specific, time-invariant measure of crime concerns that captures the extent to which countries systematically over- or under-prioritize crime as a societal goal. Second, we contrast the dynamic response of macroeconomic variables to crime shocks in economies with different levels of crime concerns using a local projection framework (Jordà 2005). We find that heightened concerns about crime amplify the negative impact of crime shocks on GDP by weakening consumption, discouraging investment, and reducing productivity. These effects likely reflect greater uncertainty, reduced consumer demand, and firm responses such as delayed investment and inefficiencies in production, while employment remains broadly unaffected in the aggregate. This suggests that lived experiences could make the contractionary effects of crime more acute.

Our results are robust to different samples, alternative definitions of high crime events or measures of crime concerns, to country and individual-level outliers, and to different cutoffs to determine historical crime exposure. The relevance of exposure to past high crime events as a predictor of concerns over crime remains when we exclude years of large economic contractions, when we exclude countries in our sample with extreme crime rates, when we relax our criteria for individuals to be included in our sample and when we change the minimum age that we consider as the first year of exposure.

Related Literature. Our paper contributes to three strands of literature. First, we contribute to the literature exploring the determinants of crime perceptions. This literature has identified individual characteristics such as gender and age (Ferraro 1996; Jackson and Grey 2010; Borg and Hermann 2023), media consumption (Hanslmaier 2013; Mastrorocco and Minale 2018), and the local environment (Brunton-Smith and Sturgis 2011) as factors shaping perceptions about crime. Some of these factors interact with each other, reinforcing their effects on crime perceptions (Brunton-Smith and Sturgis 2011). Choi and Kruis (2021) and Ruddell and Kelsey (2023) explore how social integration and institutional trust affect crime perceptions. Importantly, crime perceptions are not necessarily linked to actual crime rates (Ardanaz et al. 2014), and they can shape individual behavior (Fe and Sanfelice 2022). Our paper focuses on past exposure to crime and how this interacts with other individual- and country-level factors to affect current crime concerns. This relates to past work focusing on how victimization and local exposure affect crime perceptions (Salm and Vollaard 2021). We expand the notion of exposure to focus on national episodes of high crime and exploit differences across cohorts and countries, focusing on a wider set of countries. We also capture direct exposure (i.e, direct victimization), as well as indirect exposure through media and social interactions.

Second, we contribute to a growing literature on lived experiences by focusing on the legacy of crime. This literature on "experience-based learning" studies the importance of lived experiences in shaping people's perceptions and beliefs about economic outcomes (Giuliano and Spilimbergo 2024). For instance, Malmendier and Nagel (2016) show that differences in inflation exposure across U.S. cohorts predict differences in expected future inflation. Binder and Makridis (2022) find that rising gas prices worsen consumer sentiment about the economy, especially among those who lived through the oil crises of the 1970s. Magud and Pienknagura (2025) show that past exposure to inflation is linked to greater concern about inflation today, amplifying the effect of new shocks on inflation

expectations. Other studies show that lived experiences shape attitudes toward financial markets (Malmendier and Nagel 2011) and democratic institutions (Acemoglu et al. 2025). We add to this literature by showing that historical exposure to crime influences both individual concerns about crime and the macroeconomic response to new crime shocks, and by highlighting the role of fiscal and institutional capacity in moderating these effects.

Finally, we contribute to the literature on the economic impacts of crime. For example, Mejia and Restrepo (2016) and Fe and Sanfelice (2022) show that crime can affect consumption by limiting conspicuous consumption and consumption of services. Barbieri and Rizzo (2023) find that high crime discourages firm entry, and Rozo (2018) shows that higher violence is linked to lower firm-level production, firm exit, and lower workers' income. Pinotti (2015a) shows that organized crime is associated with significantly lower GDP per capita. The presence of organized crime has also been found to affect sub-national development (Ganau and Rodríguez-Pose 2002; Pinotti 2015b). Sviatschi (2022) and Melnikov et al. (2020) document how early exposure to criminal organizations can affect long-term labor market outcomes and how criminal governance distorts economic development. Machado Parente (2023) estimates the macroeconomic costs of crime in Latin America and the Caribbean region by instrumenting crime with exogenous criminal deportations from the United States. Using a variety of datasets and methods, Bisca et al. (2024) find a consistent negative relationship between crime and growth, a finding consistent with the theoretical predictions in Plotnikov (2020). We contribute to this strand of the literature by showing that individual crime perceptions can amplify the macroeconomic burden of crime shocks.

The rest of this paper is organized as follows. Section 2 describes the data, Section 3 discusses the impact of historical crime exposure on current crime concerns, Section 4 assesses the macroeconomic implications of crime concerns, and Section 5 concludes.

2 Data and Motivating Evidence

This section describes the main data sources and presents empirical patterns that motivate our analysis. We document that high-crime episodes typically take the form of sharp spikes rather than gradual increases; that current crime levels are positively associated with current concerns about crime; and that past crime surges can have persistent effects on how individuals perceive crime as a key societal issue.

2.1 Crime Data

For a comparable and widely available cross-country measure of violent crime, we compile yearly homicide data from two sources: the United Nations Office on Drugs and Crime (UNODC), available for 1990–2023, and the World Health Organization Mortality Database (WHO MD), available for 1950–2023. Our main crime measure is the annual homicide rate: the number of intentional homicides per 100,000 inhabitants. In what follows, we use crime rates and homicide rates interchangeably. Despite its limitations, the homicide rate is a suitable measure for cross-country comparisons, as cultural differences may influence perception-based measures of crime (Ruddell and Kelsey 2023). While we combine both data sources to maximize coverage, we construct a continuous time series for each country using only one source, given slight differences in the definition of homicide rates.[4]

2.2 World Value Surveys

We draw on individual-level, cross-country survey data from the 1981–2022 World Values Survey (WVS), which documents attitudes toward institutions, norms, and values across countries and over time. The WVS is a series

4. The WHO MD defines homicides as killing of a person by another with intent to cause death or serious injury, using exclusively national civil registries for death certificates with cause of death. In contrast, the UNODC defines homicide as the unlawful death inflicted upon a person by another with intent to cause death or serious injury, collecting data from national law enforcement and criminal justice authorities, supplemented by civil registry data from WHO MD and national authorities. For a discussion and comparison, see Herre and Spooner (2023).

of repeated cross-sections collected in seven waves at roughly five-year intervals. It covers 108 countries and relies on random sampling methods to obtain nationally representative samples of at least 1,000 individuals aged 18 and older.

To measure concerns about crime, we use two WVS questions that ask respondents to rank the most and second most important societal goals among four options: "A stable economy," "Progress toward a less impersonal and more humane society," "Ideas count more than money," and "The fight against crime" (questions E005 and E006 in the WVS Time Series 1981–2022, variable report V5.0). Following Magud and Pienknagura 2025, we construct a baseline measure for crime concerns as an index that assigns a value of 100 if "The fight against crime" is ranked first, 50 if ranked second, and 0 otherwise. Country averages of this variable capture the relative priority given to crime prevention compared to alternative societal goals such as economic stability. For robustness, we construct two alternative measures. First, a high-crime concern dummy equal to one only if respondents choose "The fight against crime" as the most important goal. Second, an overall crime concern dummy equal to one if respondents choose "The fight against crime" as either the first or second most important goal.

The WVS also provides a rich set of individual-level variables on socio-demographic characteristics, preferences, attitudes, and media consumption, which we use as controls and interaction terms in the regression analysis. The core set of individual controls, selected based on relevance and cross-country availability, includes age, gender, marital status, parental status, employment status (employed, unemployed, or other) and income scale (low, middle, high). In addition, we draw on other individual-level variables in the heterogeneity analysis that are not included as baseline controls due to more limited availability. These include, among others, political orientation (left, center, or right), life and financial satisfaction (measured on a 1–10 scale), education (low, medium, high), financial situation (saver, just gets by, or borrows), attitudes toward job security, type of profession (e.g., employer, worker, military, etc.) and regular news consumption (based on daily use of newspapers, radio, or television).[5]

To reflect the fact that the coverage of crime rates in some countries can be limited, we restrict our estimation sample to individuals for which we have non-missing crime rates for at least 90 percent of the years between between ages 10 and the year of the survey. We explore sensitivity of our results to this threshold in the Section 3.5. Table 1 displays the sample of countries and years used in the analysis.

2.3 Other Country Data

For country-level controls, we draw on three main sources. First, we use the World Development Indicators (WDI) from the World Bank, which provide measures of economic growth, inequality, unemployment, demographics, and government spending in a consistent way across countries. Second, we rely on the World Governance Indicators, published by the World Bank as well, which summarize institutional quality along dimensions such as government effectiveness, rule of law, and control of corruption. Third, we use the Penn World Table 10.01, a widely used database that reports internationally comparable aggregates on consumption, productivity, investment, employment, and human capital.

2.4 Motivating Evidence

We now present stylized facts on crime and crime perceptions across countries and over time. First, Table 2, left panel, reports summary statistics for the baseline measure of crime concerns. The average crime concerns index is 36.7, reflecting 18.5% of respondents ranking "fight crime" as their first priority and 36.5% ranking crime as their second priority. Second, there is substantial variation within countries and over time. The overall standard deviation of the crime concerns index accounts for 30% of the mean; the standard deviation between countries within years accounts for 25% of the mean; and the standard deviation within countries across years represents 17%

5. Additional details regarding the WVS can be found in Appendix B.

Table 1: Countries and years included in the baseline specification

Country	years					
ARG	1991	1995	1999	2017		
ARM	1997	2021				
AUS	1995	2005	2012	2018		
BGD	2018					
BGR	1997	2006				
BRA	1997	2006	2014	2018		
CAN	2000	2006	2020			
CHE	1989	1996	2007			
CHL	1990	1996	2000	2006	2012	2018
CHN	2018					
COL	1998	2012	2018			
CYP	2019					
CZE	2022					
DEU	2006	2013	2018			
ECU	2013	2018				
EGY	2013	2018				
ESP	1990	1995	2000	2007	2011	
EST	2011					
FIN	1996	2005				
FRA	2006					
GBR	2005					
GRC	2017					
GTM	2004	2020				
HKG	2018					
HUN	2009					
IND	2006	2012	2023			
ITA	2005					
JPN	1990	1995	2000	2005	2010	2019
KAZ	2011	2018				
KGZ	2003	2011	2020			

Country	years					
KOR	2001	2005	2010	2018		
LVA	1996					
MAC	2019					
MAR	2011	2021				
MDA	2006					
MEX	1990	1996	2000	2005	2012	2018
MMR	2020					
MNG	2020					
MYS	2006	2012	2018			
NIC	2020					
NLD	2006	2012	2022			
NOR	1996	2007				
NZL	1998	2004	2011	2020		
PAK	2012	2018				
PER	2012	2018				
POL	2005	2012				
PRI	2001	2018				
ROU	2005	2012	2018			
RUS	2006	2011	2017			
SGP	2002	2012	2020			
SRB	2017					
SVK	2022					
SVN	2005	2011				
SWE	1996	1999	2006	2011		
THA	2007	2013	2018			
TTO	2006	2010				
UKR	2006	2011				
URY	2006	2011	2022			
USA	1995	1999	2011	2017		
ZAF	2006	2013				

of the mean. Third, Table 2, right panel, highlights the countries with the lowest and highest crime concerns index, where for each country we average responses across individuals and over time. South Korea reports the lowest level of concern, with an average index of 15.5, while Trinidad and Tobago reports the highest index of 65.5.

Figure 1 plots the evolution of homicide rates (per 100,000 inhabitants) in AEs and EMDEs. Three patterns emerge. First, homicide rates are systematically higher in EMDEs than in AEs. Second, cross-country variation is much larger in EMDEs. In fact, the within-year standard deviation across countries is 9.3 in EMDEs compared to 3.4 in AEs. Third, homicide rates have declined since the 1990s, with sharper reductions in both the median and dispersion of rates in AEs. Taken together, these patterns highlight differences not only in the level of crime but also in its persistence as a feature of many EMDEs.

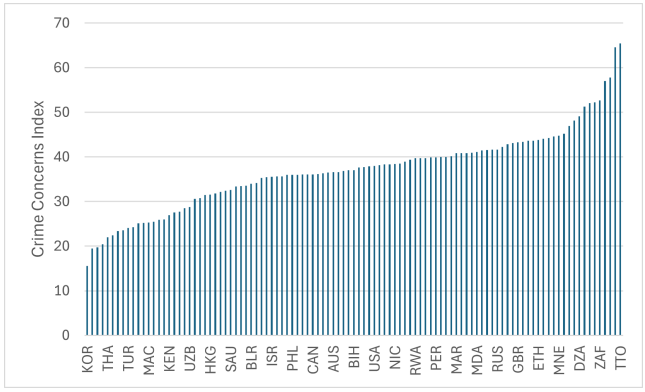
We next relate homicide rates to the baseline crime concerns index. Countries with higher crime levels also tend to rank crime concerns among their top priorities. Figure 2 plots country-year observations and simple correlations, showing a positive and statistically significant association between crime concerns and violent crime contemporaneously, both in the aggregate and separately for EMDEs and AEs. Violent crime is measured as the logarithm of the country's mean homicide rate.[6]

Crime can have persistent effects on individuals' priorities. Figure 3 shows two examples of how homicide rates and concerns about crime evolve over time: Germany (left panel) and Argentina (right panel). Three patterns

6. The correlation in 2 controls for both contemporaneous values and one-year lags.

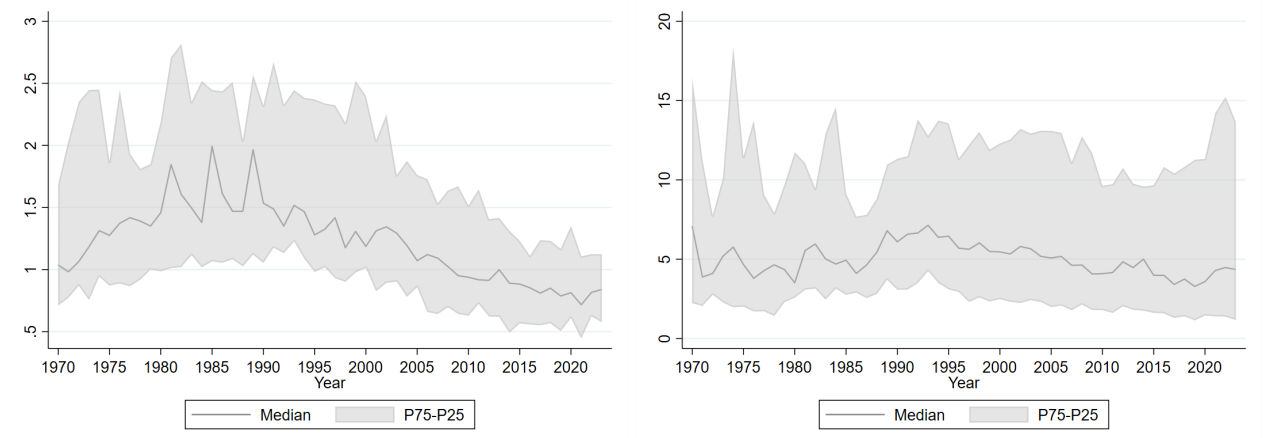
Table 2: Summary Statistics on Crime Concerns

Variable	Mean	Std	Min	Max	Obs
Crime Concerns Index	36.7	10.7	9.36	67.7	$N = 287$
Between		9.05	15.5	65.5	$n = 105$
Within		6.31	17.9	58.2	$\overline{T} = 2.73$



Notes: Left: Crime concerns index takes a value of 100 if respondents report "The fight against crime" as their first most important societal goal, 50 if second, 0 otherwise. "Between" variation reflects cross-country differences within years, while "Within" variation reflects time variation within countries. Right: The figure shows the crime concerns index in each country, averaged across all waves of the WVS. *Sources:* World Values Survey (1981–2022).

Figure 1: Homicide Rates over Time



AEs EMDEs

Notes: This figure plots the evolution of cross-country differences in homicide rates. The left panel focuses on AEs, and the right panel focuses on EMDEs as per the classification in the World Economic Outlook. Shaded areas represent the 75-25 percentiles and lines denote median across countries in a given year.

Figure 2: Crime and crime concerns across countries

Notes: The figure depicts country-wave observations in average crime concerns and log homicide rates (left) as well as standardized log real GDP and crime concerns. Regression estimates are: β_{EMDE}: .03*** β_{AE}: .05***. *Sources:* UNODC (1990-2022), WHO MD (1950-2023), World Values Survey (1981-2022) and Penn World Table. Assumes equal country weights.

emerge. First, countries sometimes go through short periods of very high crime, which then revert back to historical averages, such as Germany in 1995 or Argentina in the 2000s. Second, during these periods people are more likely to view crime as one of the most important problems facing society. Third, these effects can last long after crime itself has fallen. In Argentina, the crime concerns index rose from 30 to 40 during the 2000s crime wave and remained elevated for many years, even after homicide rates returned to their 1995 levels.

In sum, the descriptive evidence in this section highlights key patterns on crime and crime concerns. First, crime often comes in sharp spikes rather than gradual changes. Second, higher crime today is closely associated with stronger contemporaneous concerns about crime. Third, past crime episodes can leave a lasting imprint on how people view crime as a societal priority. These patterns motivate the next section, where we formally estimate the impact of crime on crime perceptions.

3 The Impact of Crime on Crime Concerns

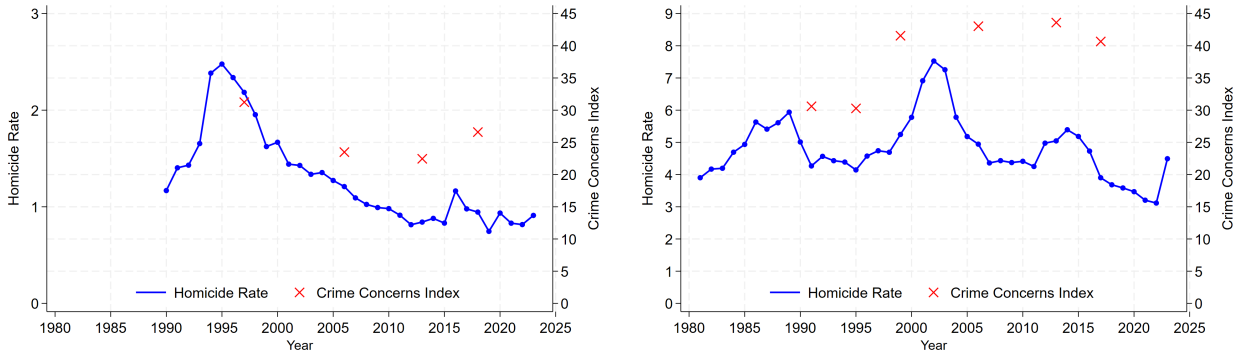
This section estimates the effect of crime on crime concerns. We first describe the construction of key variables and outline the empirical strategy. We then examine the relationship between crime concerns and episodes of high crime. Next, we study how *past* exposure to high crime can have a lasting effect on crime concerns, the main focus of the paper. We also investigate how individual and country characteristics influence the link between historical crime exposure and current crime concerns. Finally, we explore the robustness of the results to different measures of exposure and crime concerns, and to different samples.

3.1 Measuring Exposure to Crime

To systematically assess the impact of crime on crime concerns, we construct a baseline dummy indicator identifying country-specific years of high-crime:

$$HC_{c,t}^{5y} = \mathbb{I}\left\{Crime_{c,t} > \frac{1}{5}\sum_{y=t-5}^{t-1} Crime_{c,y} + \sqrt{\frac{1}{5}\sum_{y=t-5}^{t-1}\left(Crime_{c,y} - \frac{1}{5}\sum_{y=t-5}^{t-1} Crime_{c,y}\right)^2}\right\} \quad (1)$$

Figure 3: Country Examples of Crime and Crime concerns



Germany Argentina

Notes: The figures depict country-year homicide rates for Germany (left) and Argentina (right), as well as average crime concerns for available WVS waves. *Sources:* UNODC (1990-2022), WHO MD (1950-2023) and World Values Survey (1981-2022). Assumes equal country weights.

where c and t denote country and year, respectively. Hence, any given year is classified as high-crime ($HC^{5y}_{c,t} = 1$) if the homicide rate in that year *exceeds the country-specific five-year historical mean by at least one standard deviation.* This definition allows the threshold for high crime years to adjust to each country's own level and volatility of crime, thus capturing episodes that are likely to be perceived as unusually intense for the local population.

Focusing on five-year windows may make our baseline dummy sensitive to short-term crime surges that appear less extreme when compared with a country's full historical record. For robustness, we construct an alternative dummy for high-crime years:

$$HC^{-\infty}_{c,t} = \mathbb{I}\left\{ Crime_{c,t} > \frac{1}{n_{c,y<t}} \sum_{y<t} Crime_{c,y} + \sqrt{\frac{1}{n_{c,y<t}} \sum_{y<t} \left(Crime_{c,y} - \frac{1}{n_{c,y<t}} \sum_{y<t} Crime_{c,y} \right)^2} \right\} \tag{2}$$

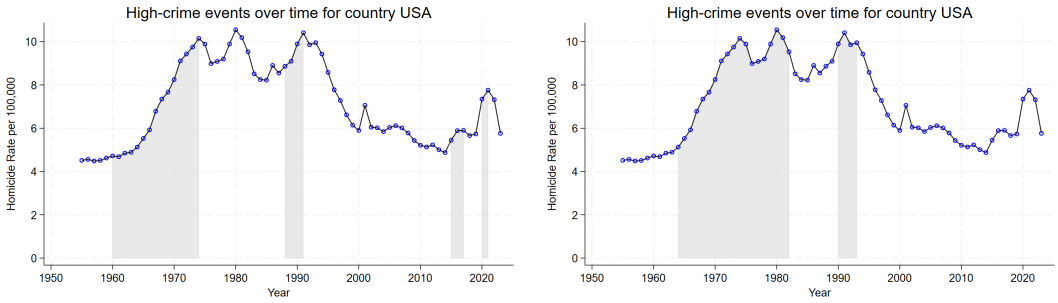
Compared to the baseline dummy, $HC^{-\infty}_{c,t}$ uses the full historical record—rather than the preceding five years—to calculate country-specific means and standard deviations. To illustrate potential differences between these two gauges, Figure 4 plots US homicide rates together with high-crime years according to the definitions above. The figure illustrates the distinct features each definition captures. While $HC^{-\infty}_{c,t}$ picks out the historically highest peaks in crime, $HC^{5y}_{c,t}$ is more sensitive to shorter-term surges in homicide rates, and emphasizes steep increases in crime over recent years rather than absolute historical highs.

An important point raised by the Argentina and Germany examples in the previous section is that high crime events can have persistent effects on crime concerns. To capture the potentially long shadow of high crime events, we construct a measure of historical crime exposure (HCE), following recent literature (Acemoglu et al. 2025; Magud and Pienknagura 2025). This measure combines the country-year high-crime dummies with the birth years of respondents. Formally, we construct:

$$HCE_{a,c,t} = \sum_{j=t-a+k}^{t} \mathbb{I}\{HC^{5y}_{c,j} = 1\} \tag{3}$$

where c denotes country, t denotes the interview year, k represents the age threshold where we start counting high-crime years, and a represents age at the time of the survey. HCE counts the number of years an individual has been exposed to high crime ($HC^{5y}_{c,j} = 1$) from age k to their respective age at the moment of the survey, time t. In the baseline specification, we set $k = 10$, and we test robustness to alternative initial thresholds. While exposure

Figure 4: Different measures for high-crime years, USA



$HC_{c,t}^{-5y}$ $HC_{c,t}^{-\infty t}$

Notes: The figures depict U.S. historical homicide rates per 100,000 inhabitants from the WHO mortality database. High-crime years are marked as shaded areas. Figures differ in the measure of high-crime years.

at younger ages may be especially influential, extending the window further back reduces the number of cohorts available for estimation given the limited historical coverage of the homicide data.

To address potential concerns such as "recency bias"—the tendency for more recent experiences to weigh more heavily in shaping people's attitudes (Malmendier and Nagel 2015)—and variation in the intensity of crime during high-crime years, we construct alternative measures of crime exposure for robustness. Specifically, we define:

$$SHCE_{a,c,t} = \frac{\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}^{5y} = 1\}}{t-a}, \quad IHCE_{a,c,t} = \frac{\sum_{j=t-a+k}^{t} Crime_{c,j}}{t-a} \tag{4}$$

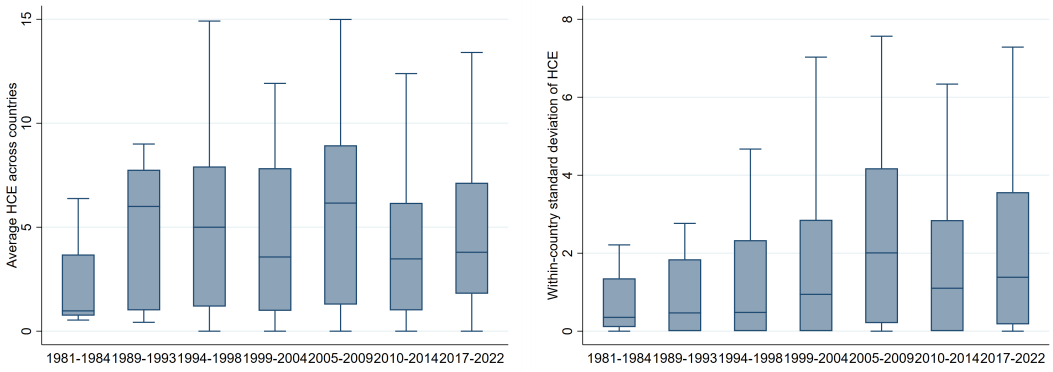
The measure $SHCE_{a,c,t}$ captures the *share* of high-crime years over the life cycle of an individual, rather than the total count of high-crime years, while $IHCE_{a,c,t}$ incorporates the *intensity* of exposure by averaging homicide rates experienced over one's life cycle.

Figure 5 summarizes the evolution of HCE within and across countries. Two findings are central for our empirical strategy. First, there is substantial cross-country variation in HCE. The left panel shows that, in the median country, the average individual experienced about five years of exposure to high-crime events over the life cycle, though this varies widely across countries. Importantly, there is no systematic change in HCE for the median country across survey waves, which fluctuates around 5 with the exception of 1981-1984 WVS, alleviating concerns about data coverage. Second, the right panel plots the distribution of within-country variation in HCE. Here too variation is sizable: the average country exhibits a coefficient of variation of about 40 percent.

3.2 Empirical Strategy

We now introduce the four empirical specifications used to estimate the impact of crime on crime perceptions. First, we estimate the contemporaneous relationship of high-crime years on crime concerns. This serves as a validation exercise, confirming that WVS-based measures of crime concern are closely related to realized crime. Second, we examine the effect of historical crime exposure on crime concerns, testing whether past crime events leave a lasting imprint on perceptions. Third, we explore heterogeneity in the link between past crime exposure and current crime concerns by individual and country characteristics. That is, whether historical exposure impacts people's perceptions more strongly in AEs, or in individuals with higher education. Fourth, we investigate which conditions amplify the historical pass-through of crime shocks to people's perceptions. For instance, which period of one's lifetime matters most for the formation of perceptions on crime.

Figure 5: Differences in HCE within and across countries



Distribution of average country-level HCE Distribution of within-country std. of HCE

Notes: The left panel plots the cross-country distribution of average within-country HCE. The right panel calculates the within-country over time standard deviation of HCE and plots the distribution of that varible across countries.

The first exercise estimates the following panel model:

$$P_{i,c,t} = \beta\, HC^{5y}_{c,t} + \gamma' X_{i,c,t} + \delta' W_{c,t} + \eta_c + \theta_t + \epsilon_{i,c,t} \tag{5}$$

where i indexes individuals, c countries, and t years. The dependent variable $P_{i,c,t}$ is the baseline measure of crime concerns, which we refer to as the crime concerns index, described in Section 2. The key regressor is the high-crime year dummy $HC^{5y}_{c,t}$. The coefficient β captures the impact of an exceptionally high-crime year on individual i's crime concerns.

At the individual level, $X_{i,c,t}$ includes socio-demographic characteristics that may be correlated with both crime and crime concerns, such as age, gender, income, and marital status. At the country level, $W_{c,t}$ captures time-varying indicators of economic performance and governance quality. All specifications include country and year fixed effects (η_c and θ_t) to absorb persistent cross-country differences and global time trends.

The second specification builds on the suggestive evidence that high crime events can have long-lasting effects on people's perceptions, while also addressing concerns about potential reverse causality in the first specification. In particular, we estimate:

$$P_{i,a,c,t} = \beta\, HCE_{a,c,t} + \gamma' X_{i,a,c,t} + \omega_{c,t} + \pi_a + \epsilon_{i,a,c,t} \tag{6}$$

The dependent variable remains the index for crime concerns. The key regressor is now an individual's historical crime exposure $HCE_{a,c,t}$. The coefficient β captures the impact of one additional year of historical exposure to high crime on how much individuals in country c report strong concerns about crime. This specification leverages variation by age group, country and year. This allows us to include both age fixed effects (π_a) and country-year fixed effects ($\omega_{c,t}$), with the latter absorbing all country-specific shocks in a given year, such as changes in economic growth, governance, or law enforcement.

The third specification tests whether the impact of historical crime exposure on current crime perceptions depends on *current individual and country characteristics*. Namely, we estimate:

$$P_{i,a,c,t} = \beta_1\, HCE_{a,c,t} + \beta_2\, HCE_{a,c,t} \cdot Z_{i,a,c,t} + \gamma' X_{i,a,c,t} + \omega_{c,t} + \pi_a + \epsilon_{i,a,c,t} \tag{7}$$

where $Z_{i,a,c,t}$ represents either individual characteristics such as gender, or country characteristics such as income levels. The interaction coefficient β_2 captures the differential impact of one additional year of historical crime

exposure on crime concerns across individuals or countries with different characteristics.

The fourth specification investigates which *conditions at the time of the high crime event* (denoted g) matter most for their historical pass through to current perceptions on crime. Specifically, we regress:

$$P_{i,a,c,t} = \sum_g \beta_g HCE^g_{a,c,t} + \gamma' X_{i,a,c,t} + \omega_{c,t} + \pi_a + \epsilon_{i,a,c,t} \tag{8}$$

where $HCE^g_{a,c,t} = \sum_{j=t-a+k}^{t} \mathbb{I}\{HC^{5y}_{c,j} = 1\}\mathbb{I}\{Z_{i,a,c,j} \in g\}$ additively decomposes $HCE_{a,c,t}$ into groups, depending on the country characteristics at the time of the crime event. For example, we tease out the impact of high crime years that happened in tandem with other economic crises—such as recessions or banking crisis—from the impact of years with high crime but no economic crises. The coefficients β_g capture the impact of one additional high-crime year under different historical conditions on current crime perceptions.

3.3 Results: Crime Concerns and Contemporaneous Crime Shocks

Before delving into the effects of historical crime exposure on current crime concerns, Table 3, Column (1), presents estimates from Equation (5), relating current crime concerns to individual characteristics, country-level variables, and *contemporaneous* high-crime episodes.

At the individual level, women and parents report significantly higher concerns about crime relative to men and individuals without children, respectively. This is consistent with prior work documenting greater fear of crime among women and individuals who care about the well-being of others (Hale 1996; Borg and Hermann 2023). Moreover, crime concerns decline with income, presumably due to crime being more prevalent in lower-income neighborhoods, and are more prevalent among people who are not working—both unemployed and out of the labor force.

At the country level, concerns about crime are higher in countries with weaker institutions, gauged by a proxy of governance, and in countries with higher population growth. Somewhat surprisingly, stronger economic performance, as manifested by lower unemployment and higher growth, tends to be associated with higher concerns about crime. This likely reflects the survey design, as a competing option to "The fight against crime" in the question used to construct our baseline crime concerns index is "A stable economy". To the extent that in good times a stable economy is less likely to be listed as a concern, listing "The fight against crime" among the top concerns becomes more likely.

Importantly, Table 3, Column (1), also shows a strong positive association between crime concerns and contemporaneous episodes of high crime. The point estimate suggests that periods of high crime are associated with a 0.6 standard deviation increase in the crime perception index. While this correlation is expected, it is reassuring that concerns about crime move closely with actual crime levels, lending credibility to our dependent variable.

Beyond the contemporaneous correlation between crime and crime concerns, it is plausible that crime waves leave a lasting scar on individuals. As shown in Figure 3, high-crime episodes can have persistent effects on crime concerns, potentially shaping individuals' perceptions and economic behavior well after the crime wave subsides. This is consistent with a broader literature on the long-lasting effects of economic and social shocks. For example, Malmendier and Nagel (2011) show that individuals who lived through the Great Depression were less likely to participate in the stock market. Giuliano and Spilimbergo (2024) review the literature on "lived experiences," showing how past experiences have lasting effects on individuals. Against this backdrop, the rest of the paper focuses on the long-term legacy of high-crime episodes on current concerns about crime and their macroeconomic consequences.

Table 3: Crime shocks, historical exposure to crime, and crime concerns

	(1)	(2)	(3)	(4)	(5)
$HC^{5y}_{c,t}$	6.768***				
	(0.753)				
$HCE_{a,c,t}$		0.385***	0.377***	0.397***	0.385***
		(0.090)	(0.089)	(0.092)	(0.088)
Age	0.054***			-0.176***	-0.122***
	(0.016)			(0.037)	(0.032)
Female	1.564***	1.676***	2.209***	1.596***	2.120***
	(0.466)	(0.533)	(0.486)	(0.533)	(0.484)
Married	-0.471	0.795	0.079	0.589	-0.335
	(0.509)	(0.572)	(0.552)	(0.558)	(0.539)
Parent	1.776***	3.133***	4.106***	2.969***	3.751***
	(0.590)	(0.693)	(0.602)	(0.678)	(0.592)
Unemployed	2.843***	2.099*	1.844**	2.171**	2.045**
	(0.805)	(1.096)	(0.915)	(1.101)	(0.913)
Out of labor force	2.191***	2.643***	1.904***	2.952***	2.310***
	(0.523)	(0.667)	(0.593)	(0.613)	(0.540)
Middle income	-3.243***	-2.960***	-2.168***	-2.929***	-2.036***
	(0.518)	(0.637)	(0.541)	(0.641)	(0.540)
High income	-5.343***	-6.836***	-3.881***	-6.793***	-3.701***
	(0.752)	(0.894)	(0.755)	(0.895)	(0.755)
Unemployment rate	-0.633***		-1.882***		-1.744***
	(0.115)		(0.224)		(0.222)
log GDP	3.016		-43.670***		-46.720***
	(3.974)		(9.998)		(9.951)
GDP growth	0.447**		0.862***		0.917***
	(0.191)		(0.300)		(0.298)
Population growth	9.336***		7.162***		6.929***
	(1.165)		(1.512)		(1.509)
Gini index	-0.161		0.052		0.144
	(0.131)		(0.236)		(0.235)
Governance index	-28.470***		-9.079		-6.764
	(4.446)		(6.904)		(6.881)
Obs	128,721	93,824	56,363	93,824	56,363
Adj. R-squared	0.076	0.084	0.095	0.082	0.093
Country & Year FEs	✓		✓		✓
Country-Year FEs		✓		✓	
Age FEs		✓	✓		

Notes: Each column corresponds to a different specification. The omitted variables are: Male; Unmarried; No child; Employed; Low income. Column (1) regresses crime concerns on high-crime dummy. Columns (2)-(5) regress crime concerns on historical crime exposure. All specifications use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

3.4 Results: Crime Concerns and Exposure to Historical High Crime Events

We now explore the historical legacy of high crime events on crime perceptions. To this end, we estimate Equations (6)-(8), which explore how exposure to past high crime years affects current crime perceptions, and how the impact of exposure varies with contemporaneous characteristics and with characteristics at the time of exposure.

3.4.1 Baseline Findings

To examine the effect of historical crime exposure on current crime concerns, Columns (2)-(5) in Table 3 report estimates from Equation (6) for different combinations of control variables and fixed effects. Our preferred specification, Column (2), controls for age and country-year fixed effects. This allows for non-linearities in the relationship between crime concerns and age, and controls for time-varying country characteristics such as the current crime rate, economic growth, and changes in governance quality. The baseline specification points to a positive and statistically significant relationship between HCE and current crime concerns. This finding is robust to alternative configurations of fixed effects and control variables. The coefficient remains roughly stable and statistically significant when we separately control for country, year, and age fixed effects while including country-level controls such as unemployment rate, real GDP, among others (Column (3)), when we linearly control for age (Column (4)) and when linearly controlling for the age of individuals and including country and year fixed effects separately (Column (5)). These results are consistent with prior work studying how local exposure to past crime can affect perceptions about crime (Salm and Vollaard 2021). Our results show that concerns about crime may respond to broader exposure, as individuals may be exposed to crime both directly (by victims of crime, having a victim in the family, or witnessing crime) and indirectly (via social interactions and news).

In addition to being statistically significant, our estimated effects are also economically relevant. A one standard deviation increase in HCE is associated with an increase in crime concerns of 0.06 standard deviations, corresponding to around 6.3 percent increase in the average crime concern index (Table 8). This suggests that past exposure to high crime can be an important driver of concerns about crime, even when contemporaneous crime might not be particularly high.

3.4.2 The Role of Contemporaneous Characteristics as Amplifiers/Dampeners of Past Crime Exposure

Thus far, we have focused on the *average* relationship between historical crime exposure and current crime concerns. However, this relationship could be shaped by individual and country characteristics. For instance, parenthood may amplify concerns about crime for individuals who lived through past crime waves, as they may retrieve memories about insecurity from their young age and attach them to their own children. Similarly, income and wealth may affect the link between past crime events and current crime concerns, especially if wealth is persistent and influences the costs of crime at the time of the event.[7]

To allow for individual-level heterogeneity in the response of current crime concerns to historical crime events, Table 4, Panel (a), shows results from estimating Equation (7), which interacts HCE with individual characteristics used as controls in the baseline specification. Individual characteristics such as age, parenthood, and an individual's income have a statistically significant impact on the connection between historical crime and current perceptions, while others such as gender and the individual's marital status do not. In particular, the pass-through from high crime exposure to crime concerns increases with age, as individuals aged 40-60 and 60+ respond more strongly to past crime experiences relative to individuals under 40. Hence, the elasticity of crime concerns to past experiences appears to increase with age, reflecting a potential sense of vulnerability by older individuals who lived through

7. On the one hand, wealth can mitigate the costs of crime if it allows individuals to live in relatively safe areas. On the other hand, it can exacerbate the costs of crime, if wealthy individuals are the target of criminal activity.

past crime events relative to younger individuals.[8] Similarly, parents appear to be more responsive to past crime events compared to individuals without kids. As discussed, parents who lived through crime events in the past may be more concerned about crime as they worry about both their well-being and the safety of their kids. Finally, the strength with which individuals' concerns for crime respond to historical crime events increases with income, suggesting that the perceived costs of crime may be associated with income levels. Note that the direct relationship between income and crime concerns is negative, thus the interactions suggest that past crime exposure equalizes crime concerns across the income specturm. At the same time, gender and an individual's marital or employment status do not appear to systematically affect the response of current concerns to historical exposure. Importantly, this does not imply that crime concerns are not related to these attributes—as shown in Table 3, each of these individual characteristics are directly correlated with crime perceptions.

In Table 4, Panel (b), we use additional individual-level variables from the WVS to further examine which factors shape the relationship between historical crime exposure and current crime concerns.[9] For each variable, we add it to the baseline controls and interact it with HCE. We find that an individual's political stance is an important factor shaping the pass-through of past crime exposure to current crime concerns. In particular, the legacy of past crime is more prevalent among individuals who self-identify as being right-leaning, as the responsiveness of crime concerns to HCE is larger in right-leaning individuals relative to those in the political left and center. Next, we explore how an individual's type of employment could affect their responsiveness to past crime events. Relative to employers, workers and individuals who have never worked are more responsive to past crime events. Importantly, we are controlling for an individual's income, so differences across employment status are for individuals with similar income. Other characteristics, such as an individual's education, news consumption habits, life and financial satisfaction, economic outlook, or ability to save, do not significantly affect the relationship between crime concerns and past crime exposure.

In addition to individual characteristics, Table 5 tests whether current country-level characteristics affect the historical legacy of crime exposure. First, we explore heterogeneity by country income group and find that the elasticity from HCE to crime concerns is larger in AEs than in EMDEs (Column (1)). There are two potential explanations for this pattern. First, it is plausible that, given the fact that AEs have on average lower crime rates (Figure 1), episodes of high crime leave a more lasting scar in high-income countries as these are events outside the norm. A second explanation relates to the pattern found at the individual level—given higher wealth, richer countries have more to lose from crime compared to poorer countries. We also assess whether contemporaneous crime rates interact with past crime exposure to affect crime concerns (Column (2)), and find no evidence that current crime accentuates the legacy of past crime. Put differently, current and past crime appear to act independently.

Finally, we explore how fiscal variables affect the way past crime exposure translates to current crime concerns. As will be discussed below, more fiscal space, in the form of lower debt and fiscal prudence, may allow countries to devote more resources to fight crime, thus mitigating concerns about security. This logic is consistent with the findings in Table 5, Columns (3) and (4), which show that the link between past crime exposure and current crime concerns is stronger in countries with higher public debt and with weaker primary balances. There are two interpretations for these results. First, when experiencing a weak fiscal position today, individuals become more concerned about crime because they feel the country is not well equipped to tackle crime. An alternative interpretation, albeit not mutually exclusive, is that, to the extent that past high crime episodes were linked to weak public finances, individuals could assess current periods of high debt or large fiscal deficits as potentially crime prone. The latter explanation is more plausible if past crime events have stronger effects when they were

8. Appendix Table A.1 shows that age also matters at the time of the crime event. That is, individuals that were 60+ *at the time of the crime event* had significantly stronger pass-through to current crime concerns than individuals that were 40 or under at the time of the crime event.

9. These variables are excluded from our baseline controls because many are correlated with existing covariates—raising concerns of over-controlling—and because their inclusion reduces the sample size due to missing responses. Importantly, baseline results are robust to the restricted sample with non-missing information on the additional control variables.

Table 4: Individual heterogeneity in the Effects of Historical Crime Exposure

(a) Baseline control variables

Personal characteristics	Interaction
Age $[40, 60) \times HCE$	**0.356****
	(0.152)
Age 60+ $\times HCE$	**1.135*****
	(0.187)
Female $\times HCE$	-0.130
	(0.085)
Married $\times HCE$	-0.004
	(0.084)
Parent $\times HCE$	**0.311*****
	(0.103)
Employment and income	Interaction
Unemployed $\times HCE$	0.012
	(0.179)
Out of labor force $\times HCE$	0.132
	(0.096)
Middle income $\times HCE$	0.130
	(0.102)
High income $\times HCE$	**0.280****
	(0.138)

(b) Extended heterogeneity analysis

Personal characteristics	Interaction
Medium education $\times HCE$	-0.083
	(0.150)
High education $\times HCE$	-0.198
	(0.159)
Political left $\times HCE$	-0.177
	(0.117)
Political right $\times HCE$	**0.592*****
	(0.118)
Regular news $\times HCE$	0.228
	(0.325)
Life satisfaction $\times HCE$	0.034
	(0.097)
Employment and income	Interaction
Just gets by $\times HCE$	-0.037
	(0.105)
Borrowed $\times HCE$	-0.185
	(0.122)
Job security concerns $\times HCE$	0.096
	(0.178)
Worker $\times HCE$	**0.494****
	(0.200)
Agriculture $\times HCE$	-0.231
	(0.470)
Military $\times HCE$	-0.852
	(0.669)
Never had job $\times HCE$	**0.682****
	(0.338)
Financial satisfaction $\times HCE$	0.003
	(0.091)

Notes: Each row corresponds to a separate regression. In bold are the specifications with significant interaction coefficients. The omitted variables in each specification are (from top-left to bottom-right): Age under 40; Male; Unmarried; No child; Employed; Low income; Low education; Political center; No regular news consumption; Little life satisfaction; Saved money; Not mentioned job security concerns; Employer; Little financial satisfaction. All specifications include individual controls, and country-year and cohort fixed effects, which are omitted for brevity, and use population as cross-country weights. Full regressions are available upon request. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Country heterogeneity in the Effects of Historical Crime Exposure

Country characteristics	Interaction			
	(1)	(2)	(3)	(4)
Advanced economy dummy × HCE	0.245*			
	(0.129)			
Crime rate × HCE		-0.004		
		(0.006)		
Debt to GDP × HCE			0.317***	
			(0.066)	
Primary balance to GDP × HCE				-0.025*
				(0.015)

Notes: Each column corresponds to a separate regression, where HCE is interacted with contemporaneous country-specific variables. Column (1) interacts HCE with advanced economy dummy and omits the interaction between HCE and EMDE dummy. Column (2) interacts HCE with contemporaneous crime rates. Column (3) interacts HCE with the log of debt-to-GDP ratio. Column (4) interacts HCE with cyclically adjusted primary balance as a percent of GDP. All specifications include individual controls, and country-year and cohort fixed effects, which are omitted for brevity, and use population as cross-country weights. Full regressions are available upon request. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

accompanied by weaker fiscal positions. In the next section, we explore whether this is the case by exploring whether the characteristics of past crime events affect how they translate to concerns today.

3.4.3 The Role of the Characteristics of Past Crime Events

In the previous section, we studied how contemporaneous factors may amplify or dampen the effect of past crime shocks. In this section, we turn to studying whether the factors accompanying past crime events shape the pass-through to current crime concerns. It is reasonable to expect that spikes in crime that coincide with a recession or a period of low investment in security may leave a bigger mark in an individual's memory. With this in mind, we unpack historical crime events along several dimensions, following Equation (8). In particular, we distinguish between: (i) crime events that coincide with a banking crisis and those that do not; (ii) events that coincide with a recession (defined as GDP growth below 1 percent) and those that do not; (iii) episodes that occur in times of high public debt (defined as debt levels above the 75^{th} percentile for the year) and those that do not; (iv) crime events that coincide with periods of large fiscal surpluses (defined as a primary balance above the 75^{th} percentile for the year) and those that do not; and (v) events that occur during more democratic periods and those that occur in less democratic ones.

Results in Table 6, Column (1), suggest that high crime events coinciding with banking crises translate to higher concerns about crime. However, high crime events in absence of banking crises also have a significant effect on crime concerns, and while the difference in the point estimate between the two types of crime events is large, it is not statistically significant. By contrast, when comparing crime events occurring in periods of large GDP contractions and those that do not, we find that the positive link between past crime events and contemporaneous crime concerns is mostly driven by years in which GDP growth is not a big concern (Column (2)). These results suggest that the severity of the economic crisis accompanying crime events matters. Banking crises are expected to result in severe economic turmoil (Laeven and Valencia 2020; Baron et al. 2021) and economic unrest, which may yield either a more intense crime wave or a bigger sense of insecurity among those living it. Economic contractions that are not linked to banking crises, which account for a large share of the sample, are expected to activate concerns about economic stability without necessarily triggering excessive concerns about crime. Thus, since our index to some extent pits economic and crime concerns against each other, in periods of both recessions and crime waves individuals seem to put more weight on the former rather than the latter.

Table 6: Heterogeneity in pass through of historical crime to current perceptions

	Bank crisis (1)	Recession (2)	Debt/GDP (3)	Prim. balance/GDP (4)
Yes/High	0.623**	-0.648*	0.342***	0.062
	(0.311)	(0.363)	(0.096)	(0.116)
No/Low	0.363***	0.426***	0.497***	0.864***
	(0.092)	(0.091)	(0.143)	(0.142)
Difference	0.260	-1.073***	-0.155	-0.802***
	(0.320)	(0.363)	(0.144)	(0.183)

Notes: This table decomposes the historical crime exposure into different macroeconomic conditions such that, for example, $HCE_{a,c,t} = HCE_{a,c,t}^{\text{Bank crisis}} + HCE_{a,c,t}^{\text{No bank crisis}}$. Each column corresponds to a separate regression. All specifications include individual controls, and country-year and cohort fixed effects, which are omitted for brevity, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Next, we assess how the country's fiscal stance at the moment of past crime events may affect current crime concerns. A weaker fiscal position may affect the severity of the crime shocks as it may prevent the government to contain and fight such event. It can also contribute to a potential economic crisis. On the one hand, Table 6, Column (3), suggests that the level of debt-to-GDP at the moment of the crime event do not significantly affect the pass-through from past events to contemporaneous crime concerns. Both crime events occurring in years of high debt and those coinciding with low debt are statistically significant and the difference in the point estimates is not significant. What does seem to matter is the government's primary balance. A large fiscal surplus at the time of the crime wave mitigates substantially the pass-through from past crime events to crime concerns (Column (4)). In fact, the positive elasticity found in our baseline results appears linked to events coinciding with a low primary balance.

Finally, we explore how the legacy of crime varies depending on whether high crime events occur in more and less democratic countries. Differences may emerge due to potential non-linearities in the relationship between crime and democratic institutions. On the one hand, crime rates in countries with strong democratic regimes are typically lower compared to those with underdeveloped democratic institutions (Piccone 2017), due to the former's better ability to prevent crime. On the other hand, autocratic countries may be better equipped to suppress crime, especially compared to young democracies, thus limiting its length and impact. This means that in both highly democratic and autocratic countries the legacy of high crime events may be more lasting, as they are rare events.

Table 7 tests this formally by separating crime events that occur in countries with a low, intermediate, and high democratic score. Results show that the estimated impact of larger exposure to high crime events is positive and statistically significant when crime events occur in either autocratic countries or places with high levels of democracy, while it is smaller in magnitude and statistically insignificant when they occur in weak democracies. However, the magnitudes of the point estimates for the three types of high crime events are not statistically different from each other.

3.5 Robustness

One potential concern is that our results may be sensitive to specific choices in measurement, sample composition, or omitted variables. In this section, we assess the robustness of our findings along several dimensions: the definition of a high-crime year, the measurement of crime concerns, the construction of historical crime exposure, the composition of the individual-level sample, the inclusion of additional controls, and the influence of countries with exceptionally high crime levels. We address each of these in turn.

Table 7: Democracy and the pass through of historical crime to current perceptions

	Coefficients	Difference relative to Middle democracy
$HCE_{a,c,t}^{\text{Low democracy}}$	0.486**	0.238
	(0.247)	(0.275)
$HCE_{a,c,t}^{\text{Middle democracy}}$	0.247	
	(0.200)	
$HCE_{a,c,t}^{\text{High democracy}}$	0.395***	0.147
	(0.090)	(0.185)
Observations	93,824	

Notes: This table decomposes the historical crime exposure into different democracy levels: $HCE_{a,c,t} = HCE_{a,c,t}^{\text{Low democracy}} + HCE_{a,c,t}^{\text{Middle democracy}} + HCE_{a,c,t}^{\text{High democracy}}$. For each year, low (high) democracy are the countries in the bottom (top) 25th percentile of V-DEM democracy index. The last column tests the difference between low and high democracy coefficients relative to middle democracy. All specifications include individual controls, and country-year and cohort fixed effects, which are omitted for brevity, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 8 tests the sensitivity of our findings to alternative definitions of high-crime years and historical crime exposure. First, we redefine high crime years as spikes relative to all previous years up to t (rather than the prior five years). We then construct an alternative historical crime exposure index, $HC_{c,t}^{\infty}$, according to Equation (4). Second, we calculate alternative measures of historical crime exposure where, instead of counting the number of years of high crime an individual has lived, we compute the *share* of years in an individual's life that were of high crime ($SHCE$). This helps address the concern that the effect of an additional year of high crime may vary depending on how large a share of an individual's life it represents. Finally, we calculate the average crime rate an individual has experienced—$IHCE$ in Equation (4)—allowing for variation in exposure intensity. Across all definitions, we continue to find a positive and statistically significant impact of historical crime exposure on current crime concerns. The effects remain economically meaningful: a one standard deviation increase in any of the exposure measures is associated with a 3.3 to 7.7 percent increase in current crime concerns.

Table 9 tests the robustness of our findings to alternative definitions of crime concerns. Column (1) replicates the baseline results. Column (2) modifies the index by assigning higher weight to cases where individuals rank crime as their second most important concern. Instead of giving crime as the second most important concern half the weight of crime as the top concern, we give it two-thirds the weight. Columns (3) and (4) use binary indicators as alternative dependent variables: one equal to one if crime is ranked among the top two concerns, and another equal to one if it is ranked as the top concern. In all cases, we find that higher historical crime exposure significantly increases the crime concern index or the likelihood of reporting crime as a key concern. These results confirm that our findings are not sensitive to the particular definition of the crime concerns index. The relationship between individual characteristics and crime concerns is broadly stable across specifications, with one exception: marital status becomes significant when using the binary outcome for crime as the top concern, possibly reflecting similar mechanisms as for parenthood—greater concern for household safety.[10]

Appendix Table A.3 tests the robustness of our findings to alternative sample definitions. First, to address the concern that our results may be driven by countries undergoing economic distress, we exclude country-year observations with real GDP growth below 1 percent. Column (2) shows that the results are robust: the estimated coefficient on HCE is positive, statistically significant, and slightly larger than in the baseline. Second, we examine whether our findings are driven by countries with persistently high crime rates. Excluding the five countries with the

10. Appendix Table A.2 shows that our findings are broadly robust to all the combinations of crime concerns indices and measures of historical crime exposure.

Table 8: Robustness checks: Different measures of historical crime exposure

	Crime concerns index β	S.E.	Impact of 1std increase on crime concerns (%)
Number of high crime years: $\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}=1\}$			
$HC_{c,j}^{5y}$	0.385***	(0.090)	6.26
$HC_{c,j}^{-\infty}$	0.300***	(0.057)	7.05
Share of high crime years: $\frac{\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}=1\}}{t-a}$			
$HC_{c,j}^{5y}$	8.909**	(4.270)	3.30
$HC_{c,j}^{-\infty}$	13.580***	(2.960)	7.72
Average crime rate exposure: $\frac{\sum_{j=t-a+k}^{t} Crime_{c,j}}{t-a}$			
IHCE	0.241**	(0.094)	4.01

Notes: Each row corresponds to a separate regression. Our baseline measure for historical crime exposure is reported in the first row, The last column depicts the percent increase in crime concerns after a 1 standard deviation increase in the respective historical crime exposure. All specifications include individual controls, and country-year and cohort fixed effects, which are omitted for brevity, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Robustness checks: Different measures of crime concerns

	(1) Baseline	(2) Alternative index	(3) Crime top-2 priority	(4) Crime top-1 priority
HCE	0.385***	0.447***	0.006***	0.002**
	(0.090)	(0.095)	(0.001)	(0.001)
Female	1.676***	1.559***	0.013**	0.020***
	(0.533)	(0.560)	(0.007)	(0.006)
Married	0.795	0.591	0.002	0.014**
	(0.572)	(0.600)	(0.007)	(0.006)
Parent	3.133***	3.435***	0.041***	0.022***
	(0.693)	(0.724)	(0.009)	(0.007)
Unemployed	2.099*	1.909*	0.015	0.027**
	(1.096)	(1.130)	(0.013)	(0.012)
Out of labor force	2.643***	2.651***	0.027***	0.026***
	(0.667)	(0.696)	(0.008)	(0.007)
Middle income	-2.960***	-3.173***	-0.036***	-0.023***
	(0.637)	(0.661)	(0.008)	(0.007)
High income	-6.836***	-7.295***	-0.083***	-0.054***
	(0.894)	(0.940)	(0.011)	(0.009)
Obs	93,824	93,824	93,824	93,824
Adj. R-squared	0.084	0.079	0.066	0.074

Notes: Each column corresponds to a different specification. Column (1) replicates the baseline regression; (2) creates alternative index with weight of 66 to crime as second most important priority; (3) is a dummy for crime being top-2 concern; (4) is a dummy for crime being top-1 concern. The omitted variables are: Male; Unmarried; No child; Employed; Low income. All specifications include individual controls, and country-year and cohort fixed effects, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

highest peak crime rates—Brazil, Colombia, El Salvador, South Africa, and Trinidad and Tobago—does not alter the main result; if anything, Column (3) shows that the effect strengthens. This is consistent with the notion that crime shocks are more salient when they occur in typically low-crime environments. Third, Column (4) explores how sensitive our results are to the filter used for the inclusion of an individual in the regression sample. As discussed in Section 2, we require crime rate data to be available for at least 90 percent of an individual's life for that observation to be included. Column (5) lowers this threshold to 75 percent and shows that results are robust to this change. Finally, Column (5) re-estimates the baseline specification without population weights—giving equal weight to all countries—and still find a positive and statistically significant relationship between past crime exposure and current crime concerns, though the estimated magnitude declines modestly.

We conclude our robustness checks by testing the sensitivity of our results to the choice of minimum age at which individuals are assumed to begin forming lasting perceptions of crime. In our baseline, exposure begins at age $k = 10$. Appendix Table A.4 presents results using lower and higher thresholds ($k = 5$ and $k = 15$, respectively). While the estimated effect of HCE on crime concerns declines slightly as k increases, the coefficients remain similar in magnitude and statistically significant. This suggests that our findings are not sensitive to the specific age threshold chosen to define the start of crime exposure.

4 The Macroeconomic Consequences of Crime Concerns

We have shown that exposure to high-crime episodes—both current and, importantly, historical—is associated with greater concerns about crime, and that this relationship varies across individuals and countries. We now examine whether these crime concerns have broader macroeconomic implications. While prior work has studied the direct effects of crime on economic activity, our focus is on whether individual concerns about crime shape the response of key macroeconomic variables to new crime shocks.

4.1 Empirical Strategy

To study the link between crime concerns and macroeconomic performance, we follow the approach in Acemoglu et al. (2025), and proceed in two steps. First, we estimate a country-specific, time-invariant measure of crime concerns that captures the extent to which countries systematically over- or under-prioritize crime as a societal goal, after controlling for observable determinants of crime, crime concerns, and economic development. Second, we assess the dynamic response of economies with different levels of crime concern to crime shocks using a local projection framework (Jordà 2005).

In the first step, we estimate the following individual-level regression:

$$P_{i,a,c,t} = \beta_1 \, HCE_{a,c,t} + \beta_2 \, Crime_{c,t} + \gamma' X_{i,a,c,t} + \delta' W_{c,t} + \eta_c + \theta_t + \pi_a + \epsilon_{i,a,c,t} \tag{9}$$

where as before $P_{i,a,c,t}$ is the index of crime concerns. We are interested in the country fixed effects, $\hat{\eta}_c$, which capture average country-level crime perceptions. Since our goal is to link the fundamental, country-specific, entrenchment of crime concerns with macroeconomic variables, we control for historical crime exposure, contemporaneous crime rates, and, importantly, additional covariates that may affect both crime perceptions and economic performance. The set of controls mirrors those used in Equation (5), and helps us mitigate omitted variable bias.[11] In a nutshell, this approach isolates the country-specific component of crime perceptions net of actual crime, crime exposure, and other confounding factors.

11. We exclude governance quality from the controls to increase country coverage.

In the second step, we estimate the following country-level regression:

$$\log(y_{c,t+h}) - \log(y_{c,t-1}) = \alpha_{0,h} HC^{5y}_{c,t} + \alpha_{1,h} HC^{5y}_{c,t}\hat{\eta}_c + \sum_{k=1}^{L} \alpha_2^k \log(y_{c,t-k}) + \sum_{k=1}^{L} \alpha_3^k HC^{5y}_{c,t-k} + \delta' Z_{c,t-1} + \pi_c + \pi_t + \nu_{c,t+h} \quad (10)$$

where the dependent variable $y_{c,t+h}$ denotes different macroeconomic variables of interest. The key right-hand-side variable is the interaction between the time-invariant, country-specific crime perception $\hat{\eta}_c$ and the high-crime event indicator $HC^{5y}_{c,t}$. The coefficient of interest, $\alpha_{1,h}$, captures how preexisting levels of crime concern mitigate or amplify the economic effects of a high-crime episode. To account for pre-trends, we include three lags of both the dependent variable and the high-crime indicator, our main independent variable, following the rule-of-thumb of optimal choice of lags proposed by Chudik and Pesaran (2015).[12] We also control for a set of country-level covariates, $Z_{c,t-1}$, including the real interest rate, GDP, human capital, employment, unemployment, consumption, TFP, capital stock and services, imports and exports, that may influence the evolution of crime and macroeconomic outcomes. Finally, all regressions include country and year fixed effects to absorb persistent cross-country differences and common time trends. Standard errors are clustered at the country level and are robust to heteroskedasticity.

The goal of this exercise is not to estimate the causal effect of crime on the economy, but rather to examine whether differences in crime perceptions systematically shape the dynamic co-movement between economic activity and crime shocks across countries with higher or lower concern about crime. To this end, we compare the dynamic responses of economic outcomes in two types of economies. The first is characterized by high crime concerns, with outcomes evolving according to $\hat{\alpha}_{0,h} + \hat{\alpha}_{1,h} \cdot (\bar{\eta} + \sigma_\eta)$. The second has low crime concerns, with outcomes given by $\hat{\alpha}_{0,h} - \hat{\alpha}_{1,h} \cdot (\bar{\eta} - \sigma_\eta)$. In both cases, $\bar{\eta}$ denotes the cross-country average of crime concerns and σ_η represents one standard deviation in their distribution.

4.2 Results

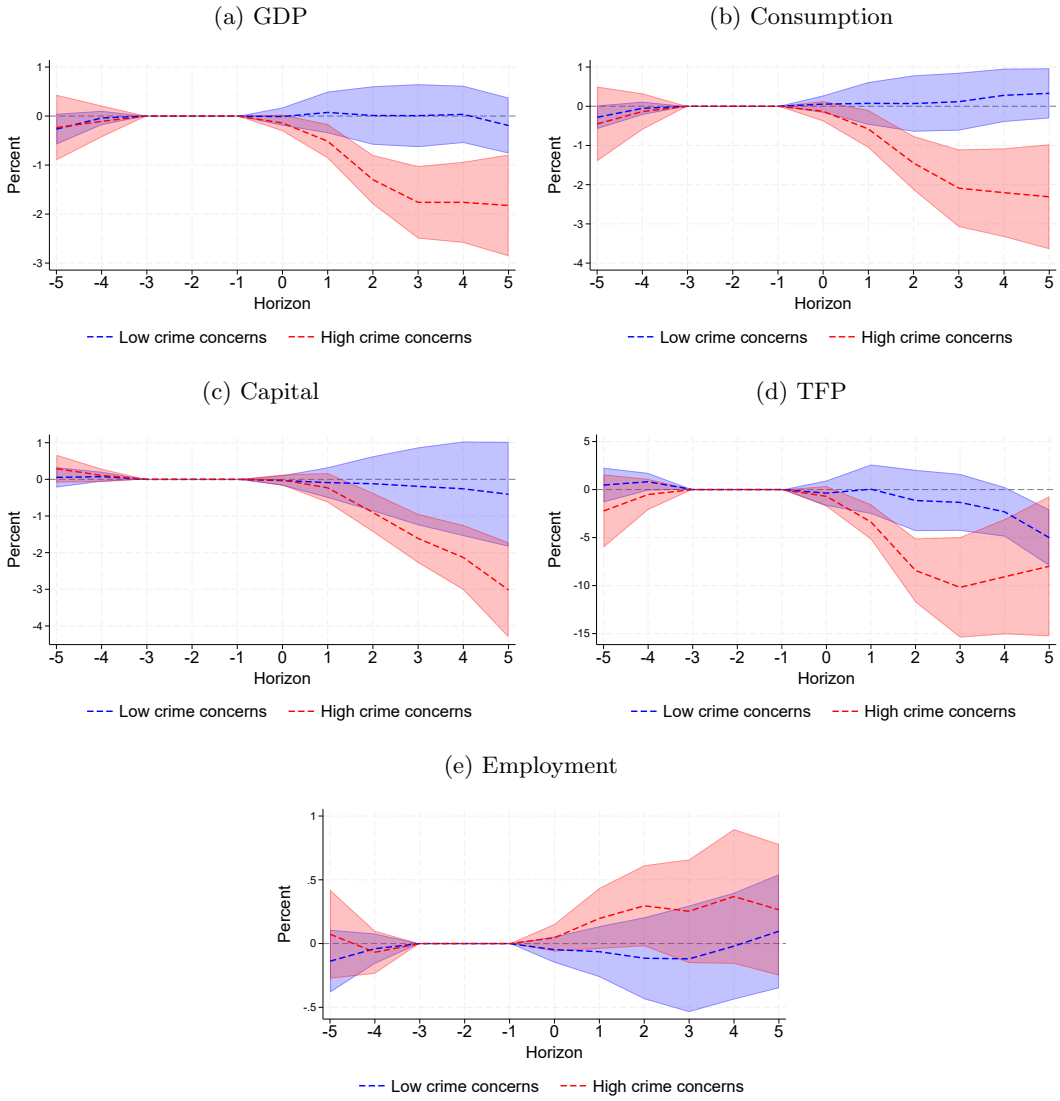
Figure 6, Panel (a), shows that in countries where concerns about crime are more entrenched, high-crime episodes are followed by a persistent decline in economic activity. Specifically, GDP falls by approximately 1 percent in the years following a crime shock and 2 percent in a 5 years horizon. In contrast, in countries with lower levels of crime concern, GDP remains broadly stable in the aftermath of crime shocks. Importantly, Appendix Figure A.1 confirms that the difference in GDP trajectories across the two groups is statistically significant in the later years of the projection horizon.

What explains the stronger GDP response in countries with more entrenched crime concerns? One possibility is that individuals and firms in countries where crime is a key concern react more quickly to crime shocks. That is, agents in countries with high crime concerns have an intrinsic crime awareness that makes them change their economic decisions as soon as a new wave of crime emerges. For example, individuals living in countries with high crime concerns may cut back on their consumption, especially of durable goods, as a response to a high crime event. Similarly, firms in environments with entrenched crime concerns may delay investments in the aftermath of crime shocks, thus affecting aggregate demand and firms' production capabilities.

To explore the channels behind the different GDP responses to crime shocks across countries with high and low crime concerns, Figure 6, Panels (b)-(e), show the results of the estimation of Equation (10) for consumption, investment, TFP and employment. Panel (b) shows that in high-crime-concern countries, consumption declines steadily—falling by over 2 percent 5 years after the crime shock—mirroring the path of GDP. In contrast, consumption in low-concern countries remains stable or even increases, suggesting that crime has little to no adverse effect on aggregate demand. This is consistent with Mejia and Restrepo (2016) and Fe and Sanfelice (2022), who show that crime lowers conspicuous consumption in the US and food and entertainment retail consumption in Chicago,

12. Our regression sample has just under 50 years of data per country.

Figure 6: Crime perceptions and the impact of crime shocks on economic activity



Notes: This figure plots the impact of one additional high-crime year on different macroeconomic variables. For high crime concern countries in red, the percent impact is calculated as: $100 \times \{\exp[\alpha_{0,h} + \alpha_{1,h} \cdot (\bar{\eta} + \sigma_\eta)] - 1\}$. For low crime concern countries in blue, the percent impact is calculated as: $100 \times \{\exp[\alpha_{0,h} + \alpha_{1,h} \cdot (\bar{\eta} - \sigma_\eta)] - 1\}$. Shaded areas are 90 percent confidence intervals.

respectively. It could also reflect the fact that crime may foster out-migration, thus reducing the consumer base (Cullen and Levitt 1999).

Panels (c) and (d) show similar patterns for investment and TFP, respectively: both decline following crime shocks in high-concern countries, and have no visible response in low-concern countries. The nearly 4 percent decline in investment in countries with entrenched crime concerns is more pronounced than the reduction in GDP and consumption, likely because firms can more easily postpone capital spending than households can delay essential consumption.[13] Crime can also reduce investment by deterring firm entry, as firms anticipate lower returns from their operations due to less consumption. In sum, firm investment falls as crime operates both as a tax on firms, particularly when there is organized crime (Goldberg et al. 2014), and lowers expected demand.

The sharp decline in TFP in countries with entrenched crime concerns suggests that crime-related uncertainty and adjustments to production—such as delaying investment or shifting input sources—generate inefficiencies that weigh on aggregate productivity. This is consistent with firm-level evidence linking crime to weaker firm performance (Gaviria 2002; Krkoska and Robeck 2009; Perez-Vincent et al. 2024; Ganau and Rodríguez-Pose 2002).

Employment is an exception. Panel (e) shows no significant difference in labor market responses across high- and low-concern countries, and the overall effect is close to zero. One possible explanation is that individuals may remain in the labor force out of necessity, even in the face of rising crime. However, this result may obscure shifts in job quality, such as transitions to informal work, to safer occupations, or to jobs that demand less commuting time.[14]

One potential concern with our results is reverse causality. While our difference-in-differences strategy helps mitigate this concern, we further address it by examining the evolution of pre-trends for each of our macroeconomic outcomes of interest. The results are reassuring: in all cases, there is no statistically significant pre-trends prior to the high crime event. That is, countries with high crime concerns did not exhibit systematically different trends in economic performance *prior to the shock* compared to countries with low concerns. Moreover, Appendix Figure A.2 shows that our findings are robust to reducing the number of lags in the local projection specification (Equation 10) from three to one. In the few cases where pre-trends emerge——under the one-lag specification and only in countries with low crime concerns–they suggest that the macro variables tend to rise, not fall, following crime shocks. In those specific cases, a plausible reading of the results is that crime does not negatively affect the variables of interest.

Overall, our results highlight the significant macroeconomic implications of high crime concerns. Countries where crime concerns are entrenched experience a larger negative impact on key macroeconomic variables in the aftermath of crime shocks. These results suggest that past exposure to crime, by shaping current perceptions, can make economies more vulnerable to future crime waves.

5 Conclusion

This paper highlights the role of lived experiences in shaping individual perceptions and beliefs. We show that individuals exposed to high-crime episodes earlier in life report significantly greater concern about crime. The effect is both statistically and economically meaningful, and varies across groups—being stronger among parents, older and higher-income individuals, and those who identify as politically right-leaning.

Country characteristics—both contemporaneous and at the time of the crime event—also shape this relationship. The pass-through from past crime to present concerns is larger in countries with weaker fiscal capacity, suggesting that limited ability to respond to crime may make its legacy more persistent. By contrast, crime events occurring during periods of economic downturn are associated with a weaker long-term effect on crime concerns, indicating that economic crises may dominate crime in shaping long-run attitudes.

13. BenYishay and Pearlman (2014) find that firms in Mexico exposed to crime are less likely to expand operations and invest.
14. In the context of Latin America and the Caribbean, Machado Parente (2023) also estimate a negative response of capital and TFP and a null response of employment to crime shocks.

Importantly, we find that these individual concerns have macroeconomic relevance. In countries where concern about crime is more entrenched, new crime shocks lead to larger declines in GDP, TFP, consumption, and investment. These results suggest that past crime exposure can amplify the economic costs of future crime surges, underscoring the importance of reducing crime not only for immediate safety but also to avoid lasting economic harm.

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Appendix

A. Additional Results

This Appendix presents additional results not shown in the main text.

Table A.1: Age exposure and the pass through of historical crime to current perceptions

	Regression coefficients
$HCE_{a,c,t}^{\text{Age}<40}$	0.254^{***}
	(0.0915)
$HCE_{a,c,t}^{\text{Age}\in[40,60)}$	1.054^{***}
	(0.226)
$HCE_{a,c,t}^{\text{Age}\geq 60}$	4.034^{***}
	(0.510)
Observations	93761

Notes: This table decomposes the historical crime exposure into different parts of an individual's life cycle such that $HCE_{a,c,t} = HCE_{a,c,t}^{\text{Age}<40} + HCE_{a,c,t}^{\text{Age}\in[40,60)} + HCE_{a,c,t}^{\text{Age}\geq 60}$. We include individual controls, and country-year and cohort fixed effects, which are omitted for brevity, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.2: Robustness checks: all measures of crime concerns and historical crime exposure

	Baseline index	Alternative index	Crime top-2	Crime top-1
Baseline: $\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}^{5y} = 1\}$	0.385^{***}	0.447^{***}	0.006^{***}	0.002^{**}
	(0.090)	(0.095)	(0.001)	(0.001)
$\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}^{-\infty} = 1\}$	0.300^{***}	0.357^{***}	0.005^{***}	0.001^{**}
	(0.058)	(0.061)	(0.001)	(0.001)
$\frac{\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}^{5y}=1\}}{t-a}$	8.909^{**}	11.000^{**}	0.154^{***}	0.024
	(4.270)	(4.523)	(0.055)	(0.046)
$\frac{\sum_{j=t-a+k}^{t} \mathbb{I}\{HC_{c,j}^{-\infty}=1\}}{t-a}$	13.580^{***}	16.850^{***}	0.238^{***}	0.034
	(2.960)	(3.144)	(0.038)	(0.031)
$\frac{\sum_{j=t-a+k}^{t} Crime_{c,j}}{t-a}$	0.241^{**}	0.259^{***}	0.003^{**}	0.002^{*}
	(0.094)	(0.100)	(0.001)	(0.001)

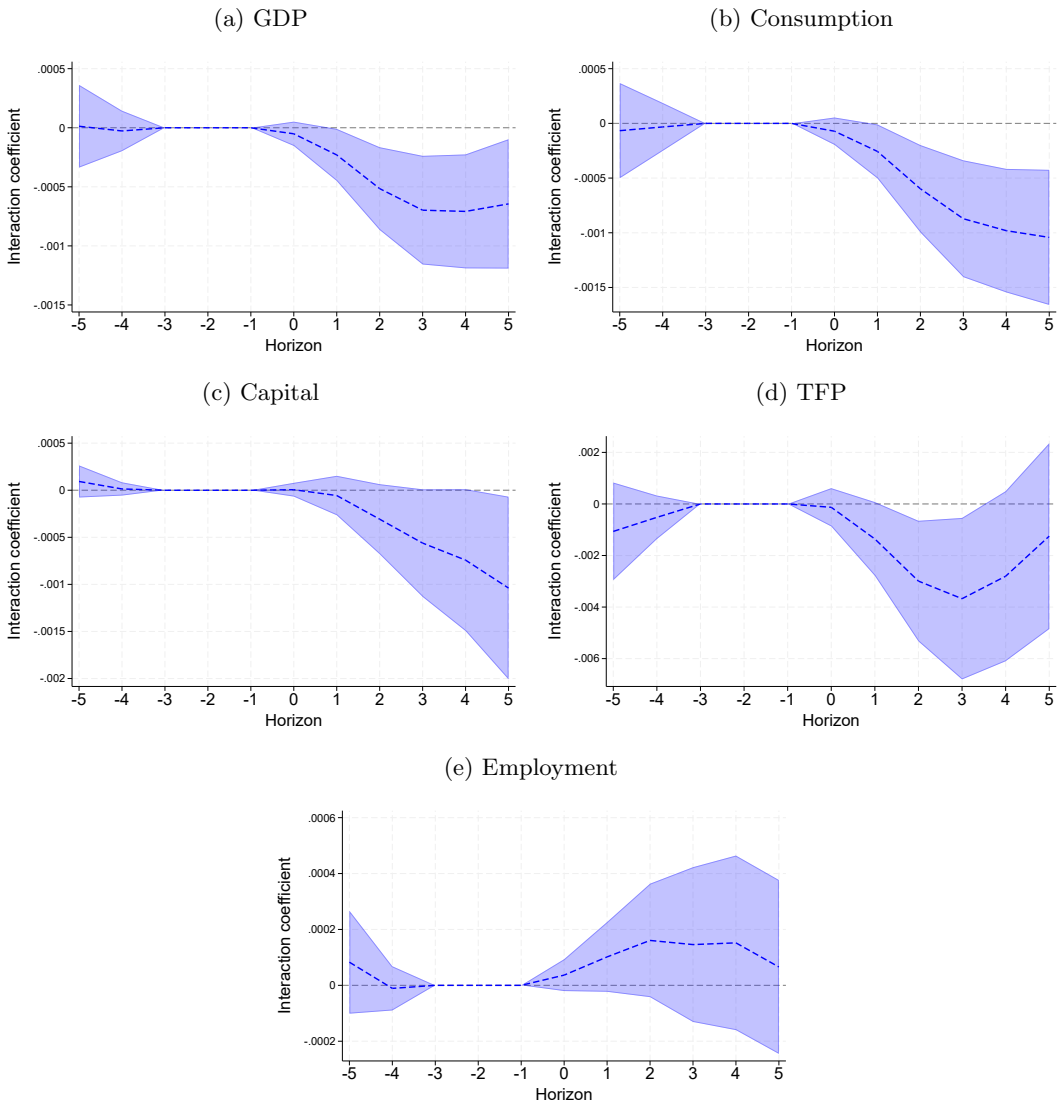
Notes: Each cell corresponds to a different specification. Different rows denote different measures for historical crime exposure. Different columns denote different measures of crime concerns. Alternative index puts weight 66 on crime being the second priority. All specifications include individual controls, and country-year and cohort fixed effects, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.3: Robustness checks: Different specifications

	Baseline	Drop severe recessions	Drop highest crime rates	Lower coverage cutoff	No country weights
	(1)	(2)	(3)	(4)	(5)
HCE	0.385***	0.398***	0.460***	0.359***	0.204***
	(0.0900)	(0.0910)	(0.0951)	(0.0843)	(0.0623)
Female	1.676***	1.714***	1.914***	1.915***	2.025***
	(0.533)	(0.545)	(0.570)	(0.483)	(0.246)
Married	0.795	0.777	0.594	0.258	1.041***
	(0.572)	(0.586)	(0.613)	(0.532)	(0.311)
Parent	3.133***	3.131***	2.663***	3.182***	3.029***
	(0.693)	(0.711)	(0.752)	(0.641)	(0.338)
Unemployed	2.099*	2.093*	2.110	1.358	1.015**
	(1.096)	(1.122)	(1.294)	(0.999)	(0.482)
Out of labor force	2.643***	2.721***	2.519***	2.481***	0.599*
	(0.667)	(0.681)	(0.715)	(0.607)	(0.310)
Middle income	-2.960***	-2.933***	-2.926***	-3.152***	-2.726***
	(0.637)	(0.648)	(0.695)	(0.572)	(0.300)
High income	-6.836***	-6.853***	-6.803***	-7.243***	-4.972***
	(0.894)	(0.913)	(0.947)	(0.825)	(0.408)
Obs	93824	85099	87056	116442	93824
Adj. R-squared	0.084	0.084	0.059	0.090	0.077

Notes: Each column corresponds to a different specification. Column (1) replicates the baseline regression; (2) drops countries with annual real GDP growth rate below -1 percent; (3) drops countries with highest crime rates from the sample; (4) lowers the coverage cutoff to 75%; (5) Uses equal country weights. The omitted variables are: Male; Unmarried; No child; Employed; Low income. All specifications include individual controls, and country-year and cohort fixed effects. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Figure A.1: Evolution of interaction coefficient: $\alpha_{1,h}$



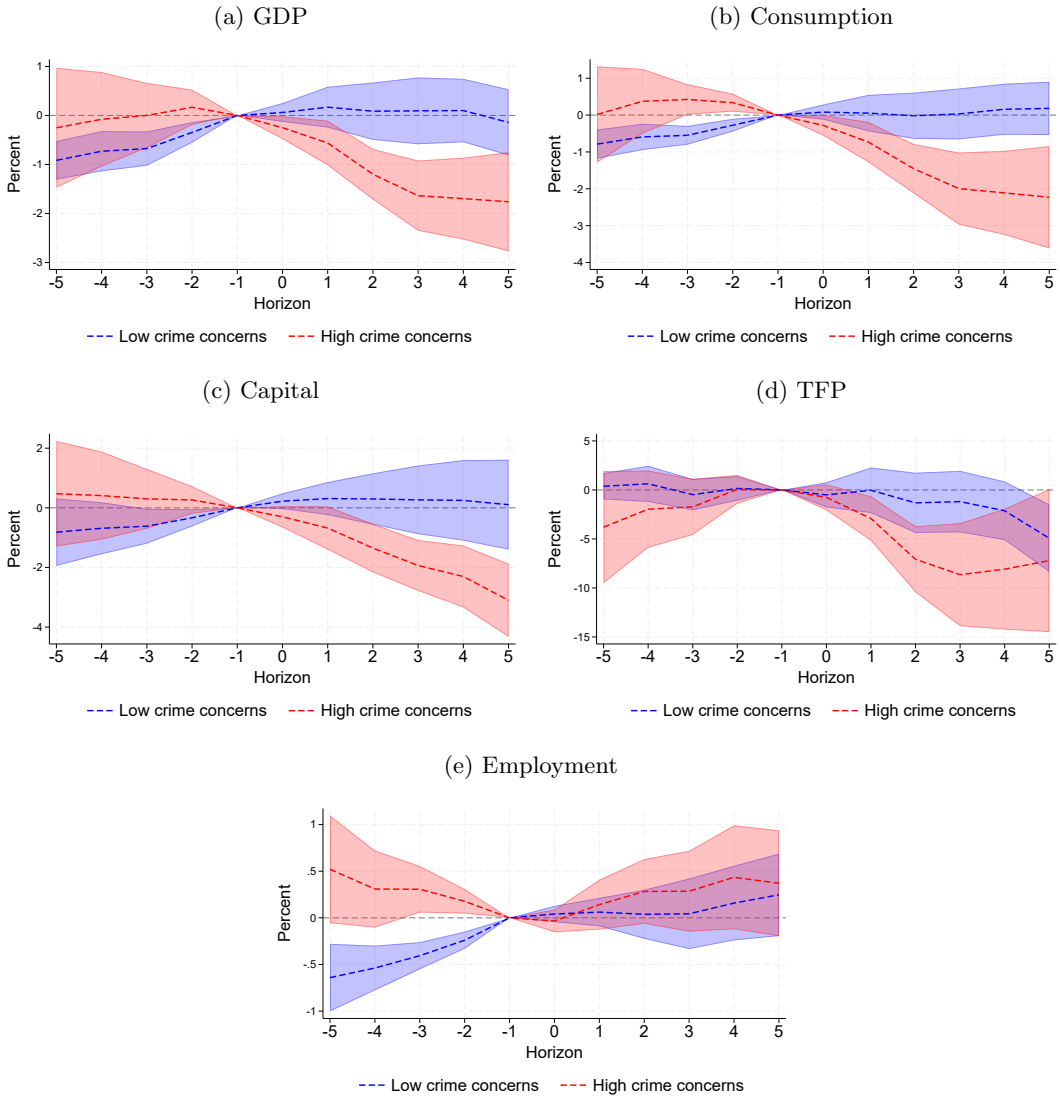
Notes: Blue dashed lines represent the dynamic interaction between crime shocks and country-specific crime concerns: $\alpha_{1,h}$. Shaded areas are 90 percent confidence intervals.

Table A.4: Robustness checks: Different age thresholds k

	$k = 5$	Baseline ($k = 10$)	$k = 15$
HCE	0.403***	0.385***	0.350***
	(0.096)	(0.090)	(0.084)
Female	2.045***	1.676***	1.657***
	(0.560)	(0.533)	(0.499)
Married	0.154	0.795	0.547
	(0.601)	(0.572)	(0.556)
Parent	4.049***	3.133***	3.168***
	(0.722)	(0.693)	(0.658)
Unemployed	2.127*	2.099*	1.058
	(1.166)	(1.096)	(0.999)
Out of labor force	2.393***	2.643***	1.916***
	(0.699)	(0.667)	(0.619)
Medium income	-2.246***	-2.960***	-3.455***
	(0.663)	(0.637)	(0.597)
High income	-5.503***	-6.836***	-7.178***
	(0.951)	(0.894)	(0.843)
Obs	77,822	93,824	112,127
Adj. R-squared	0.078	0.084	0.087

Notes: Each column corresponds to specifications with different age threshold k. The omitted variables are: Male; Unmarried; No child; Employed; Low income. All specifications include individual controls, and country-year and cohort fixed effects, and use population as cross-country weights. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Figure A.2: Robustness check: control for one lag of dependent and independent variables in the local projections



Notes: This figure replicates Figure 6 but including one lag of both dependent and independent variables in the local projection estimation. For high crime concern countries in red, the percent impact is calculated as: $100 \times \{\exp[\alpha_{0,h} + \alpha_{1,h} \cdot (\bar{\eta} + \sigma_\eta)] - 1\}$. For low crime concern countries in blue, the percent impact is calculated as: $100 \times \{\exp[\alpha_{0,h} + \alpha_{1,h} \cdot (\bar{\eta} - \sigma_\eta)] - 1\}$. Shaded areas are 90 percent confidence intervals.

B. Additional Data Details

This appendix provides additional information on the data in the World Value Surveys (WVS), as well as on the specific variables used in the analysis.

Overview: The World Values Survey (WVS) is an international research program devoted to the scientific and academic study of social, political, economic, religious and cultural values of people in the world. The project grew out of the European Values Study and was started in 1981 and since then has expanded to cover a large set of countries and economies (over 120) worldwide. The main research instrument of the project is a representative comparative social survey which is conducted globally every 5 years. At the moment, the WVS is the largest non-commercial cross-national empirical time-series investigation of human beliefs and values.

So far, the WVS has collected information in 7 waves. For each wave, suggestions for questions are solicited by social scientists from all over the world and a final master questionnaire is developed in English. Since the start in 1981 each successive wave has covered a broader range of societies than the previous one. Analysis of the data from each wave has indicated that certain questions tapped interesting and important concepts while others were of little value. This has led to the more useful questions or themes being replicated in future waves while the less useful ones have been dropped making room for new questions. The questionnaire is translated into the various national languages and in many cases independently translated back to English to check the accuracy of the translation. In most countries, the translated questionnaire is pre-tested to help identify questions for which the translation is problematic. In some cases certain problematic questions are omitted from the national questionnaire.

In our case, we merge data from the WVS with our historical crime data, leaving us with a sample of 60 countries (see Table 1 in the main text). Further, we use data from surveys in the second through the seventh wave.

Sampling: The minimum sample size—the number of completed interviews which are included into the national data-set—in most of countries is 1,200. Samples must be representative of all people in the age 18 and older residing within private households in each country, regardless of their nationality, citizenship, or language. Individuals between 15 and 18 years old are also interviewed. Whether the sampling method is full probability or a combination of probability and stratified, the national team should aim at obtaining as many Primary Sampling Units (starting points in case of random route sampling) in the sample as possible. The WVS team requires a complete explanation of proposed sampling procedures before the beginning of the survey fieldwork.

The main method of data collection in the WVS survey is face-to-face interview at respondent's home/place of residence. Respondent's answers could be recorded in a paper questionnaire (traditional way) or by CAPI (Computer Assisted Personal Interview). The approval of the Scientific Advisory Committee in writing is necessary for application of any methods of data collection other than face-to-face interview.

Data collection: Following the sampling, each country is left with a representative national sample of its public. These persons are then interviewed during a limited time frame decided by the Executive Committee of the World Values Survey using the uniformly structured questionnaires. The survey is carried out by professional organizations using face-to-face interviews or phone interviews for remote areas. Each country has a Principal Investigator (social scientists working in academic institutions) who is responsible for conducting the survey in accordance with the fixed rules and procedures. During the field work, the agency has to report in writing according to a specific check-list. Internal consistency checks are made between the sampling design and the outcome and rigorous data cleaning procedures are followed at the WVS data archive. No country is included in a wave before full documentation has been delivered. This means a data set with the completed methodological questionnaire and a report of country-specific information (for example important political events during the fieldwork, problems particular to the country). Once all the surveys are completed, the Principal Investigator has access to all surveys and data. Non-response is an issue of increasing concern in sample surveys. The team collected the data are expected to make every reasonable effort to minimize non-response.

Data in the analysis: To ensure consistency in the analysis, our analysis focuses on questions consistently collected across WVS waves. We rely on the time series dataset from the Longitudinal WVS (Inglehart et al. 2022) which, in addition to appending all 7 waves, standardizes variable names. In the analysis we focus on a pair of questions from the survey that we use as our dependent variable.

- It asks individuals: "In your opinion, which of these is is most important (question E005 in the standardized longitudinal dataset)? i) A stable economy, ii) Progress toward a less impersonal and more humane society, iii) Progress toward a society in which ideas count more than money, or iv) The fight against crime?" In a follow-up, they are asked to mention which they rank second (question E006 in the standardized longitudinal dataset). With this information, we construct four variables: 1) a dummy variable taking value one if the individual ranked "The fight against crime" as the most important variable (strong crime concerns), 2) a dummy taking value one if the individual ranked "The fight against crime" as either most or second most

important (overall crime concerns), and an index taking value 100 if the individual ranked "The fight against crime" as the most important, 50 it ranked "The fight against crime" as the second most important, and zero otherwise. These set of variables are at the core of the analysis.

In addition, we use the following questions to construct our individual-level control variables:

- Respondent's sex (question X001 in the standardized longitudinal dataset): male or female, coded by observation by the interviewer). We then construct a dummy variable taking value one if the individual is a male.
- Year of survey: Used to match country-year variables.
- Year of birth (question X002 in the standardized longitudinal dataset). Used to construct each individual's cohort and her exposure to inflation episodes.
- Age (question X003 in the standardized longitudinal dataset).
- Marital status (question X007 in the standardized longitudinal dataset). We create a dummy variable taking value one if the individual is single and has never being married and zero otherwise (married, divorced, separated, living together as married, widowed). This aims to capture financial obligations other than with the individual.
- Employment status (question X028 in the standardized longitudinal dataset): The individual provides information on whether he/she is: (i) full time employee, (ii) part-time employee, (iii) self-employed, (iv) retired, (v) unemployed, (vi) housewife, (vii) student, or (viii) other. We then create a dummy variable taking value one if the individual is retired; a dummy taking value if the individual is unemployed; and a dummy taking value if the individual is out of the labor force (a student, a housewife, or other).
- Household income scales (question X047WVS in the standardized longitudinal dataset): The surveys ask individuals the following "On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in." We then construct three dummies: a high income dummy taking value one if the individual answers 8, 9, or 10; a middle income dummy, if the individual answers 4, 5, 6, or 7; and a low income dummy if the individual answer any value below 4.
- Education level (question X025R in the standardized longitudinal dataset): The surveys ask individuals the following "What is the highest educational level that you, your spouse, your mother, and your father have attained?" We then construct three dummies: a high education dummy taking value one if the individual responds Short-cycle tertiary education, Bachelors or equivalent, Masters or equivalent or Doctoral or equivalent; a medium education dummy taking value one if the individual responds Upper secondary education or post-secondary but non-tertiary; and low education dummy if the individual responds early childhood education, primary education or lower secondary education.
- Number of children (question X011 in the standardized longitudinal dataset): The survey ask individuals the following "Do you have any children?" The respondent provides the number of children he or she has.
- Political leaning (question E033 in the standardized longitudinal dataset): The surveys ask individuals the following "In political matters, people talk of "the left" and "the right." How would you place your views on this scale, generally speaking?" The scale goes from 1 (left) to 10 (right). We then construct three dummies: a right-leaning dummy taking value one if the individual answers 8, 9, or 10; a political-center dummy, if the individual answers 4, 5, 6, or 7; and a left-leaning dummy if the individual answer take a 1-3.
- Life satisfaction (question A170 in the standardized longitudinal dataset): The surveys ask individuals the following "All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are "completely dissatisfied" and 10 means you are "completely satisfied" where would you put your satisfaction with your life as a whole?" We then construct a high life satisfaction dummy taking value one if the individual's answer is 6-10.
- Financial satisfaction (question C006 in the standardized longitudinal dataset): The surveys ask individuals the following "How satisfied are you with the financial situation of your household?" The scale goes from 1 (completely dissatisfied) to 10 (completely satisfied). We then construct a high financial satisfaction dummy taking value one if the individual's answer is 6-10.

- News consumption (questions E48, E50, E58, E59, E61, E62 in the standardized longitudinal dataset): We use information in the survey asking individuals to indicate the frequency with which they use several information sources to construct a dummy variable taking value one if the individual is a consumer of traditional news outlets. In particular, the dummy takes value one if the individual obtains information from newspapers, printed magazines, TV news, radio news, e-mail or the internet on a daily or weekly basis. Zeroes will include cases in which the individual does not obtain frequent information on the news, or if they obtain from alternative sources (mobile phones, social media, talking to friends).

- Job security concerns (question H006/01 in the standardized longitudinal dataset): The survey asks individuals the following "To what degree are you worried about losing my job or not finding a job? Very much (1), a good deal (2), not much (3), not at all (4)." We then construct a dummy taking value one if the individual responds (1) or (2).

- Job type (question X036 in the the standardized longitudinal dataset): The survey asks "In which profession/occupation are you doing most of your work? If you do not work currently, characterize your major work in the past! What is/was your job there?" We then construct dummies indicating whether the individual's last job was as a non-agricultural worker, an agricultural worker, in the military, as an employer, or has never had a job.