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Policymaking, Trust, and the Demand for Public Services: Evidence from a Mass Sterilization Campaign†

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We study a large-scale family planning intervention in which more than 260,000 Peruvian women were sterilized. Many of these medical procedures are alleged to have been performed without patient consent. The subsequent disclosure of alleged illegal sterilizations caused reductions in the usage of contraceptive methods and prenatal and birth delivery services and, more generally, the demand for medical services in affected areas. As a result, child health worsened. The results persist for at least 17 years after the information disclosure and are driven by disappointed supporters of the implementing government. Learning about the government's malpractices undermined trust in institutions. (*JEL* I12, I18, I38, J13, J16, J18, O15)

State legitimacy and trust in government institutions are at the core of the effective delivery of public services in democratic societies. To ensure the success of public policies, it is crucial to have high state capacity to provide public goods and services, as well as a corresponding demand for these services. Trust in the government and its institutions is a key ingredient needed to generate such demand.[1] Failure in the implementation of policies—due to either poor execution or malpractices in the processes—undermines citizen trust, and this effect may be more pronounced among those who constitute the main building block of its

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[1] The case of the United States and its COVID-19 vaccination campaign makes for a good illustration of this point. On the one hand, substantial state capacity ensured that funds were readily available for research and development of new vaccines and, once developed, rapid and effective distribution of the medicines. On the other hand, for a relatively long period, vaccination rates were significantly lower than in other developed nations. The low demand for this public good was argued to have been explained by low levels of trust in specific institutions among certain groups of citizens. See Saad (2022) and Pasquini and Saks (2022) for recent surveys on the role of political preferences and mistrust toward government actors in explaining differences in COVID-19 vaccination rates in the United States.

legitimacy: the government's supporters. While a large body of literature studies different ways in which governments can strengthen state capacity (e.g., Besley and Persson 2011; Khemani 2019), much less is known about how government actions affect trust and the demand for public services.

In this paper, we study a large-scale family planning campaign in which human rights violations were alleged to have taken place, and its short- and long-term consequences for child and maternal health service utilization, child health, and trust in institutions. Between 1996 and 2000, the Peruvian government launched an antipoverty strategy, which featured family planning as one of its central components. During the implementation of this policy, 260,850 women were sterilized (Subcomisión Investigadora de Personas e Instituciones Involucradas en las Acciones de Anticoncepción Quirúrgica Voluntaria 2002). Following the fall of the authoritarian government that implemented this policy, reports surfaced recounting how a large number of women were forced or pressured into undergoing the procedure. Many of them suffered from procedure-related health complications, including extreme cases that resulted in death. Thousands of women lost their ability to have children through procedures conducted without their consent and were often unaware that the procedure was irreversible (Defensoría del Pueblo 1999).

Comparing affected and unaffected municipalities before and after the disclosure of these alleged human rights violations, we show that revealing the abuses of the sterilization campaign led to long-lasting reductions in the usage of contraceptive methods and prenatal and birth delivery services, and to worse child health outcomes and, more generally, lower demand for health services in public facilities. The effects can be observed up to 17 years after the administration responsible for this policy left office. The results show that the effects are entirely driven by municipalities where the baseline support for the government was strong. Additional evidence shows that the mechanism underlying these effects is one in which voters who supported the government, upon learning about the abuses committed during the implementation of the policies, became disappointed, thus eroding their trust in institutions in charge of public goods provision in affected municipalities.

Demand for public health care remains low in many developing countries despite the growing availability of public health services and effective treatments of common diseases (Dupas and Miguel 2017). Mistrust toward health care providers and skepticism about treatments can be important drivers of this low demand (Alsan and Wanamaker 2018; Lowes and Montero 2021; Martinez-Bravo and Stegmann 2022). To study how government policies can bolster or undermine trust in institutions responsible for delivering health services, and the effects on the demand for such services, we investigate a historical event in Peru in which widespread and systematic medical malpractices occurred and a large number of women were sterilized (allegedly) without providing their consent. These sterilizations were conducted under a democratically elected government that took an authoritarian turn. The national policy imposed very ambitious monthly targets on the number of sterilizations while also waiving the right of practitioners to object to carrying out certain treatments and procedures. These targets put significant pressure on physicians and senior staff since high-level officials had to report the progress of the campaign directly to the president.

During the first years of the campaign, several NGOs and the Ombudsman's Office of Peru received complaints about the way the sterilization program was being conducted, claiming that in many parts of the country, health service providers were not following the protocols for obtaining consent to perform the sterilization procedures. For example, there were reports that women were lied to, not informed about the irreversible nature of the procedure, or threatened with having public benefits withheld if they did not agree to the surgery.

The government of President Alberto Fujimori—which conducted the family planning campaign—has been shown to have had tight control of the press and other public institutions, including the Congress and the judiciary (McMillan and Zoido 2004). Journalistic and legal investigations of alleged human rights violations occurring during the campaign were not brought to light, were suppressed, or were quickly dismissed. Public discussion of these atrocities did not take place to any significant degree until the Fujimori regime fell and a new democratically elected government took power. The new government started formal investigations into these cases, which began to be widely reported in the press. We take advantage of the change in the information environment to estimate the causal effects of the disclosure of the alleged violations on the usage of public health services and child health outcomes. We implement a difference-in-difference (DiD) strategy, which compares outcomes in municipalities with different intensities of alleged human rights violations, before and after the change in the information environment.

A key challenge in the estimation of the effects of the public disclosure of the abuses committed during the campaign is measuring its incidence. We collect new data from a registry created in 2015 by the Ministry of Justice (MINJUS) to track the number of alleged victims of forced sterilizations. Inclusion in the registry is voluntary. Women who registered gained priority access to legal counseling, psychological support, and medical assistance covered by the government, but no monetary compensation was offered. Overall, 6,794 cases were listed in the registry at the time we obtained the data. Each case was validated by the MINJUS by means of a medical examination and by cross-checking the information against the medical records maintained by the regional office of the Ministry of Health (MINSA, for its acronym in Spanish), which documented that the person went through a sterilization procedure during the period when the program was active.

Given the number of women who signed up in the registry, it is very likely that it represents a lower bound of the true number of women sterilized without consent during the family planning campaign in each municipality. To validate whether the variation in this registry captures the relative intensity of the alleged illegal sterilizations across municipalities, we compare its time and cross-sectional variation with that of sterilizations in public health facilities reported in the Peruvian Demographic and Health Survey (DHS). Presumably, the alleged forced sterilizations are a subset of those recorded in the DHS, which should also include consented sterilizations conducted during the campaign. We document not only that the correlation between these two datasets is high, in both the time series and the cross section, but also that the individual characteristics of women who report having been sterilized during that period match quite well those in the registry. We also provide suggestive evidence that there is no systematic undercounting of cases in specific locations. This

provides confidence that the registry is a fairly accurate representation of the actual relative incidence of the sterilizations performed during the implementation of the family planning program.

Our main findings are as follows. First, we show that after the disclosure, women in municipalities with a higher number of reported cases of forced sterilizations are less likely to use contraceptives, use prenatal health services, and seek professional care during birth. In these locations, after the information disclosure about these cases, a 10 percent increase in the number of reported cases leads to a 0.9 percent lower usage of contraceptives and a 4.4 percent lower usage of delivery and prenatal care services.

Second, we show that after 2001, children in treatment areas are more likely to be sick and show higher levels of malnutrition. A 10 percent increase in the number of reported cases of illegal sterilizations caused child health to deteriorate by 4.9 percent. We also find that in these areas, after the disclosure of the way sterilizations were conducted, women were less likely to seek professional health care in public health facilities when their children were sick. While some people compensated by visiting private health facilities more often, the net effect on health service usage is negative.[2]

We validate our identification assumption by showing that there are no differential trends in any of our main outcome variables in the period preceding the disclosure of the abuses committed during the campaign. Further, in an event study framework, we also show that the results on contraceptive usage, prenatal and delivery health service usage, and child health persist until our last period of available data, in 2017. Our main results are robust to using an alternative dataset to measure the incidence of the campaign and to using an instrumental variable strategy that mitigates potential measurement errors in the main independent variable.

Our main results could also be explained by differential trends in health care usage and child health in municipalities targeted by the program. Our baseline specification includes municipality and time fixed effects as well as province-specific time trends. We also show that the core results are robust to the inclusion of interactions between baseline municipality characteristics and flexible time trends, and the results are unchanged if we use the number of reports as a proportion of the population instead of the raw levels. Additionally, consistent with our hypothesis that the results are driven by women who became aware of the campaign, we show that not only are the main effects present among women who were old enough to have been directly affected by the policy, but the effect is equally strong for women who were too young to have been sterilized between 1996 and 2000. This implies that some information was transmitted to women who were not directly affected. We

[2] Previous studies have examined the *direct* effects of this campaign on health outcomes. Byker and Gutierrez (2021) find that children of sterilized women show improvements in educational attainment and health outcomes. Battaglia and Pallarés (2020) document reduced infant mortality in provinces where the campaign took place earlier, but the reductions are only present among nonindigenous mothers. Unlike these studies, we focus on the effects of *the disclosure* of allegedly illegal governmental actions on the behavior of women living in affected areas *after* the campaign had ended. Additionally, our study exploits new data on the relative incidence of campaign exposure across municipalities.

also show that our results cannot be explained by changes in the supply of public or private health services in the affected municipalities after the information disclosure.

What mechanisms underlie the reduction in demand for public health services among women in municipalities with higher incidences of alleged forced sterilizations? Previous literature has argued that declines in the demand for health services in the aftermath of medical malpractice events may stem from social learning induced by individual or political identification with the victims (Alsan and Wanamaker 2018; Martinez-Bravo and Stegmann 2022). We argue instead that these effects are explained by political supporters of the regime who, after learning about the human rights violations during the policy implementation, lose trust in institutions in charge of health service provision and are hence less likely to seek out medical care from the public sector. Consistent with this hypothesis, we show that our main effects are entirely accounted for by women in municipalities where voter support for Fujimori's party was high at baseline. Further, the political disappointment is also reflected in voter support for Fujimori's party, which drops significantly after 2001 in locations more affected by the sterilization campaign. We also find no indication that the drop in demand was linked to social learning by individual or political identification. The main effects are not driven by women who share characteristics with those directly affected by the policy—namely, those from rural areas, Quechua speakers, or the less educated.

Finally, we document that mistrust in those institutions charged with implementing the sterilization campaign and those who failed to take action against responsible parties (i.e., the government, the public administration, and the judiciary) significantly increases after the information disclosure, while mistrust in other institutions and generalized trust remain unchanged.

This paper contributes to the literature studying state capacity, the legitimacy of policymaking, and trust in government (Besley and Persson 2011; Khemani 2019). A small group of studies shows that effective policymaking can lead to increases in trust in and the legitimacy of the government (Acemoglu et al. 2020; Fair et al. 2017). Another strand of literature (e.g., Gonzalez-Torres and Esposito 2022) shows that trust in the government is an important mediator for the effectiveness of public policies. The effects of failures in policymaking on trust are, however, not necessarily symmetric, since policymaking is not unidimensional. As was the case with the Fujimori regime, governments can have a good track record in certain dimensions of public goods provision while deceiving citizens in other areas. Voters must thus evaluate the improvements in government services against government failures or abuses committed. We contribute to this literature by showing that failures in policymaking can undermine trust, not only because of not achieving relevant policy goals but also due to the specific means through which they are implemented. We show that deliberately misleading citizens to achieve a policy objective erodes trust in government institutions, reducing their legitimacy and decreasing the demand for public services lastingly. We thus provide evidence that citizens are not necessarily utilitarian—willing to accept authoritarian policies in exchange for public good provision—but rather use a minmax criteria when evaluating the state's role; i.e., they are willing to punish governments for deceiving and abusing parts of the population.

Our work also speaks to the body of literature seeking to identify the determinants of the demand for health in developing countries (for a good review of this literature, see Dupas and Miguel 2017). Trust in medical personnel, in the treatments themselves, and, more broadly, in the institutions providing medical services has long been hypothesized to be among the leading factors affecting willingness to seek health services; at the same time, empirical evidence supporting this hypothesis has been scarce until relatively recently. Three recent studies identify the causal effects of medical malpractices on trust in medicine and show that these events have important consequences on the demand for health services (Alsan and Wanamaker 2018; Lowes and Montero 2021; Martinez-Bravo and Stegmann 2022).[3] Unlike these studies—which focus on actions taken by a foreign or nonstate actor—our setting is one in which a democratically elected government executed a large-scale domestic policy in which abuses were committed. These actions in turn undermined trust and the legitimacy of the state itself, and this is particularly the case among the supporters of the government (the source of their legitimacy), thus leading to a long-term decrease in the demand for public services.

Finally, our work contributes to the understanding of the long-lasting impacts of historical events in which forced or mass sterilization campaigns have been conducted by domestic policymakers, which, unfortunately, have been common.[4]

I. Background and Study Setting

A. *Political Regime and the Family Planning Campaign*

In 1990, amid a severe economic situation and deep political and security crises, Alberto Fujimori was elected as president of Peru. His government quickly took an authoritarian turn with the dissolution of Congress in 1992, later exerting control over large parts of the judiciary, the newly elected Congress, the National Board of Elections, and the media (McMillan and Zoido 2004). Levitsky and Way (2002) argue that Peru under Fujimori is best described as a regime of competitive authoritarianism, where elections are the means to obtain political power, but incumbents

[3] In a similar vein, Archibong and Annan (2021) show that the revelation of news on unethical medical trials of a new drug among children in Nigeria led to a decrease in vaccination rates. Conversely, Christensen et al. (2021) show that interventions that increase trust in the health sector personnel in noncrisis times improve their effectiveness in the response to emergencies. Two recent studies focus on the so-called "Emergency" episode that took place in India between 1975 and 1977. During this period of wide social unrest, public officials were incentivized to meet specific targets of sterilizations that were defined at the state level. Pelras and Renk (2023) and Sur (2023) compare states with excess sterilizations (actual levels were above the target) with states without such excess, finding that higher exposure is linked to lower vaccination rates, which is partly explained by a decrease in birth deliveries in hospitals.

[4] For example, forced sterilization policies have been carried out by the Chinese government, which targeted Uighurs and Tibetan women, and by the Uzbek government under President Islam Karimov; Roma women were targeted in former Czechoslovakia; and in Canada and the United States, women from indigenous communities were victims (Pegoraro 2015). Additionally, in four Latin American countries (El Salvador, Honduras, Mexico, and Nicaragua), women living with HIV were targeted (Kendall and Albert 2015), while in Australia, adolescents with disabilities were victimized (Elliot 2017), and in Finland, mentally ill women were targeted in the 1940s (Seeman 2007) (see Zampas and Lamackova 2011 for other cases in Europe). In 1998, the International Criminal Court recognized systematic forced sterilizations as a crime against humanity (Rome Statute of the International Criminal Court).

attack democratic rules to an extent that the minimum standards for democracy are not met.

Throughout his term in office, Fujimori's domestic program was centered around poverty reduction. He argued that one of the main ways to achieve this goal was by diminishing fertility rates, and as such, in 1992, he declared the start of the "Decade of Family Planning." Instituto Nacional de Estadística e Informática (1992) documents that at that time, 60 percent of Peruvian women with stable partners used traditional contraception methods (i.e., "natural" family planning methods or withdrawal), while access to modern contraceptives was not only low but also unequal across socioeconomic groups, translating into stark differences in fertility rates. For instance, women with a college education had on average 1.9 children, whereas those with no formal education had 7.1 children (Aramburú 2002). Similarly, women in urban areas had an average of 2.8 children, while women living in rural areas had 6.2 children. Maternal and child mortality rates were extremely high, at 234 deaths per 100,000 live births (Instituto Nacional de Estadística e Informática 2002) and 74 deaths per 1,000 live births (United Nations 2020), respectively, with similar inequalities between education categories and rurality.

After winning his first reelection in 1995, Fujimori launched a family planning program to fight poverty by reducing fertility: the National Program of Reproductive Health and Family Planning (Programa Nacional de Salud Reproductiva y Planificación Familiar) (Ministerial Resolution N. 071-96-SA/DM, MINSA 1996). The program was well funded and became a top priority for the administration (Aramburú 2002). The prominence of the program became evident when Fujimori proclaimed that "Peru is not only fighting poverty and exclusion but also against the lack of information so citizens can plan their families with absolute freedom" (MINSA 1996). Similarly, the prime minister stated that "the government cannot reduce poverty efficiently if poor families keep having seven children on average" (Diario Gestión, as quoted in Aramburú 2002). The program primarily targeted areas where fertility was high, which mostly corresponded to rural areas in the highlands and the Amazon, as well as urban areas with extremely poor populations (see Supplemental Appendix Table A.1 for the correlates of the campaign's incidence). There was no explicit targeting of the campaign to any ethnic or educational group.[5]

Three significant legal reforms were at the core of the implementation strategy of the program. First, public health facilities were authorized to perform male and female sterilizations at no charge as a contraceptive method.[6] Second, the General Health Law removed the possibility of objection to treatment for public health professionals, effectively mandating them to perform any type of prescribed contraceptive intervention. Third, women were provided with other modern contraceptives

[5] The legislative text of the policy explicitly states that "the objective of the program is to reduce the total fertility rate to 2.5 children per woman." The Congressional report on the case of forced sterilizations mentions that "sterilizations were disproportionately higher in areas where women were poorer and had lower access to education." While there was no explicit targeting of specific groups of the population, several reports from NGOs and the Ombudsman's Office suggest that the policy effectively targeted Quechua-speaking women in rural areas.

[6] The use of sterilizations as a contraceptive method follows world trends at the time. By the early 1990s, sterilization was the most common contraceptive method globally for married women. Its prevalence began to grow in the 1980s, after medical developments made the procedure easier, faster, and cheaper. In 1992, the World Health Organization started to promote this method worldwide, reaching 15 percent of all married women in the world.

in public health facilities—including birth control pills, intrauterine devices, and condoms—for free.

The sterilization campaign was named Voluntary Surgical Contraception (AQV, for its acronym in Spanish). The AQV campaign established ambitious monthly targets on the number of sterilizations, which put significant pressure on physicians and senior staff. In addition, given the key role of the campaign in the government's policy agenda, compliance with these targets was monitored at the highest levels through direct reports to the president.[7] The tight schedule to meet these targets and the inability of medical professionals to refuse to perform procedures may have led to violations of medical guidelines. Various NGOs and the Ombudsman's Office indicate that the national policy focused almost exclusively on tubal ligations (and, to a lesser extent, on vasectomies) and that targets were established determining that a particular number of women must use certain contraceptive methods. These reports collected testimonies from several witnesses alleging that women were sterilized without consent, were provided with limited information on the irreversible nature of this procedure, were threatened with withholding public services, or were not provided sufficient time to think about the procedure's consequences (as established in medical guidelines) (Defensoría del Pueblo 2002).[8]

The implementation of the AQV campaign in rural areas was done through mobile clinics, which were set up at a central place in each municipality. Around these mobile clinics, health personnel organized "health festivals," which were widely advertised the week prior to the event by frontline workers to people in the surrounding communities. The advertisement of the events was a key part of the campaign, making festivals very salient to everyone in the municipality, including those who did not attend.

B. *Media Environment and Information Availability*

Government officials systematically dismissed complaints about alleged human rights violations associated with the AQV campaign. For example, the deputy minister of health, Alejandro Aguinaga, stated that "the Ministry of Health has clarified endlessly that it is not part of its policy to establish goals in the family planning program" after being questioned about the sterilizations quotas in the family planning program (*El Comercio*, January 12, 1998).[9] Additionally, these complaints were seldom reported in newspapers or on TV, arguably due to the regime's strong influence on

[7] For example, Mariano Costa Bauer, minister of health in 1997, had to submit monthly reports to President Fujimori detailing whether the targets had been met and if not, providing explanations for any delay (MINSA 2020). Over 1997, the monthly target was sterilizing 12,000 women (i.e., 144,000 for the year). Supplemental Appendix Figure A.1 shows one of the reports sent by the minister in August 1997.

[8] From June 1997 to January 1998, the Ombudsman's Office received reports of women who had been sterilized without proper consent and of alleged irregularities in the application of AQV. These irregularities mainly consisted of a lack of safeguards to free choice. Additionally, some testimonies show a lack of proper follow-up after surgery and an imprecise application of the program's guidelines (Defensoría del Pueblo 1998; Zauzich 2000; Committee for Latin America and the Caribbean for the Defense of Women's Rights 1999; Subcomisión Investigadora de Personas e Instituciones Involucradas en las Acciones de Anticoncepción Quirúrgica Voluntaria 2002). These reports received very poor coverage by the press, as we document in the next section.

[9] As shown in Supplemental Appendix Figure A.1, this statement is false. Similarly, an investigation of these cases was promptly archived in Congress by the government's political allies in 1998 (Subcomisión Investigadora de Personas e Instituciones Involucradas en las Acciones de Anticoncepción Quirúrgica Voluntaria 2002).

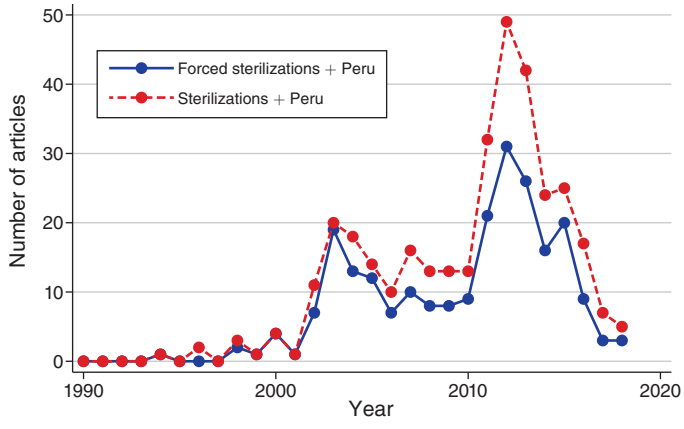


FIGURE 1. NUMBER OF NEWS ARTICLES INCLUDING "FORCED STERILIZATIONS + PERU," BY YEAR

Notes: The figure shows the quantity of news articles in the Factiva database containing the words "forced sterilizations + Peru" in the solid blue line and articles with "sterilizations + Peru" in the dashed red line, by year of publication.

the media (McMillan and Zoido 2004; Levitsky and Ziblatt 2018).[10] Figure 1 shows the total number of news articles in international media outlets that contain the words "forced sterilizations + peru" and "sterilizations + peru" in the Factiva (2021) database (blue solid line and red dashed line, respectively.)[11] The number of articles for both search terms remains minimal over the period in which Fujimori was in power.

Consistent with the government's control of the news, we observe a sharp spike in the number of articles talking about the alleged human rights violations during the family planning campaign only after 2001.

After illegally winning his third election in 2000, Fujimori faced well-founded claims of widespread corruption. The resulting protests ended up forcing his resignation from the presidency in September 2000. During the transition government, isolated complaints about the sterilization campaign surfaced in the press but were framed as unrelated incidents. It was not until September 2001—when the new democratically elected government took power—that the new minister of health, Luis Solari, announced that an investigation of the AQV campaign would soon begin.[12] Following the executive's actions, Congress established a commission to investigate the way in which the campaign had been rolled out. In August 2002, after months of research, the head of the committee, Hector Chávez Chuchón, filed

[10] McMillan and Zoido (2004) analyze bribe receipts from Vladimiro Montesinos, the head of Peru's intelligence services. The authors show that bribes to the media (newspapers and television channels) were much larger than those to politicians from opposition parties or judges, revealing how much power and control they had on the press. Levitsky and Ziblatt (2018) state that the Fujimori government was "masterful at buying out its critics, particularly those in the media." For example, the government was able to get specific journalists dismissed from the leading TV channels and had influence on news programming.

[11] Unfortunately, there is no systematic digital record of newspaper articles circulated in Peru for the relevant period of study.

[12] This announcement was reported by the BBC (Sánchez 2001), one of the first major international media outlets to report on the campaign and the alleged human rights violations that had taken place.

a constitutional indictment against Fujimori and three of his ministers of health for the role they played in the AQV campaign (Burneo 2008). This constitutional indictment was widely reported in national and international media outlets, and thus we treat this event as the one triggering the nationwide disclosure of the violations committed during the AQV campaign. Moreover, the salience of this indictment has only continued to grow over the years, as it set the legal precedent for the public trial of Fujimori and his ministers of health (the trial began on March 2021 and is still ongoing). Finally, this indictment, along with other charges, prepared the legal background for the creation of the registry of victims that we use in the empirical analysis (detailed in the next section). We summarize the events leading up to the disclosure of the alleged human rights violations occurring during the AQV campaign in Supplemental Appendix Figure A.2.

Overall, the evidence indicates that the AQV campaign was a salient event in the municipalities where it took place, even for people who did not attend. However, the government played a large role in suppressing the information about the abuses that happened during the campaign, and this information was only publicized in 2001, after the regime had fallen. We hypothesize that the dissemination of this information played two roles among people living in municipalities where forced sterilizations took place. On the one hand, it informed them that the campaign (which they most likely knew about) provided health services to the population using methods that led to serious human rights violations. On the other hand, this information increased the salience of these events among people living in these municipalities. More details about the planning and implementation of the program, as well as relevant results from posterior investigations, are provided in Supplemental Appendix B.

II. Data and Descriptive Statistics

A. *Data Sources*

For our empirical analysis, we draw from multiple sources of data.

Demographic and Health Surveys, 1991–2017.—For our main outcome variables, we use the Peruvian DHS, which is available from 1991 until 2017.[13] The DHS waves used here are nationally representative cross-sectional surveys conducted before the campaign disclosures (1991, 1992, 1996, 2000) and after (yearly, between 2004 and 2017). We have information on our main outcomes of interest for 329,630 women aged 15–49 and their children under 5 years of age. Importantly, these surveys include information on the municipalities where the respondents live, which allows us to link them to the number of forced sterilizations reported during the campaign.

Exposure to information about human rights violations during the family planning campaign may have affected women's willingness to seek medical advice on family planning, to seek prenatal care and medical assistance during birth, and, more generally, to seek medical care for their children (if needed). Our main outcome variables

[13] The 1991–1992 rounds of the DHS were obtained from INEI (1992) and the 1996–2017 rounds were obtained from INEI (2018).

in the analysis are thus the usage of contraceptive methods, the usage of prenatal care and delivery services, child health outcomes, and the usage of health facilities.

Contraceptive usage is relatively low in our sample, with only 55 percent of women of childbearing age reporting to be currently using a contraceptive method. Outcome variables related to the use of prenatal care and delivery services and child health are presented using two indices. We first construct an index of prenatal care and delivery, which includes survey responses on whether the woman received any prenatal care during her pregnancy, whether she gave birth at home (as opposed to institutional deliveries), and whether any qualified personnel assisted the birth. Nine percent of the women in the sample received no prenatal care at all, and 22 percent delivered their children at home (see Supplemental Appendix Table A.2, panel A). Responses are standardized with respect to baseline year (2000) and then averaged; hence, lower values of the index imply lower usage of these services.

Our child health index employs survey questions asking whether the child is moderately or severely stunted (height-for-age z-score below two standard deviations), is moderately or severely underweight (weight-for-age z-score below two standard deviations), and was recently sick with fever, cough, or diarrhea. On average, 46 percent of them report having been sick with fever, cough, or diarrhea in the past 4 weeks. Again, these variables are standardized with respect to the baseline year (2000) and averaged. Lower values of the index indicate worse child health outcomes.

Finally, among the subsample of children who reported having been sick in the preceding four weeks, the survey asks whether they were taken to a health facility and whether it was a private or public center. Forty-two percent of sick children were not treated in any health institution. Twenty-three percent of sick children were treated in private institutions, and 37 percent in public institutions. The summary statistics of relevant variables are shown in panel A of Supplemental Appendix Table A.2.

Latinobarómetro, 1996–2018.—We measure trust in different governmental institutions and people in charge of public offices using the Peruvian waves of Latinobarómetro between 1996 and 2018 (Latinobarometer 2019). Overall, we have 23,392 respondents in our dataset, with survey responses before (1996–2000) and after (2001–2018) the disclosure of the alleged cases of forced sterilizations. We present summary statistics of relevant variables in panel A in Supplemental Appendix Table A.3.

Electoral Outcomes, 1998–2018.—To estimate the heterogeneity of our main effects by baseline support for Fujimori's party, as well as the effects on later voting outcomes, we collected information on municipal mayoral elections between 1998 and 2018, which we obtained from the National Electoral Commission (JNE, for its acronym in Spanish) (JNE 2018). Panel B in Supplemental Appendix Table A.3 shows the corresponding summary statistics.

Forced Sterilization Victims.—Data on the incidence of allegedly illegal sterilizations during the government's AQV campaign were obtained from the Registry of Victims of Forced Sterilizations (REVIESFO, for its acronym in Spanish). This registry was created in December 2015 by the MINJUS (2019). The main objective

of the registry was to provide victims with free priority access to legal counseling, psychological support, and medical assistance for potential sequels associated with an alleged forced sterilization. Even though women have not been offered monetary compensation, anecdotal reports from the REVIESFO's senior officials suggest that some victims are hoping to receive reparations in the future if the perpetrators are found guilty in court.

In 2016, the MINJUS organized multidisciplinary groups of professional workers (health personnel, lawyers, psychologists, and translators) to collect data on the victims in three waves.[14] The data we use include all victims registered until August 2021.

The information on each alleged victim of illegal sterilization was carefully verified. Women interested in adding their names to the registry were required to complete a questionnaire and document their claims with lawyers, psychologists, and translators. At the verification stage, each alleged victim had to be checked by a medical specialist, who, after determining whether or not the person had been sterilized at some point in time, would then send a detailed report to the regional office of the MINJUS. Furthermore, each case was checked against the medical records of the victim in the corresponding regional office of the Ministry of Health (MINSA, for its acronym in Spanish), when available. An investigation for each case may take up to 30 days, during which officials would determine where and when the sterilization took place. Once all the information had been verified, the victim was included in the registry. There are a total of 6,794 women registered with the REVIESFO, with cases reported in 378 of 1,874 municipalities (21 percent; see panel B of Supplemental Appendix Table A.2). Supplemental Appendix Figure A.3 shows the geographical distribution of registered cases included in the REVIESFO.[15] In the next subsection, we perform a series of empirical exercises to validate the representativeness and coverage of these data.

B. *Validation of REVIESFO*

Despite extensive efforts made by officials in the REVIESFO, the actual number of victims is likely higher than the number of recorded cases, but the true proportion is unknown. Some NGOs estimate that only about 10 percent of the more than 260,000 women sterilized during the campaign provided consent and had sufficient information about the procedure (Committee for Latin America and the Caribbean for the Defense of Women's Rights 1998). In addition to underreporting the actual number of victims, registered cases in the dataset may be biased toward specific locations, types of victims, or time of occurrence. In this subsection, we provide evidence that this is likely not the case.

To validate the information in the REVIESFO, we use data from the 2009 round of the DHS, which has a large geographic coverage and is likely to capture sterilizations that took place during the 1990s. In particular, the DHS asks respondents "Have you

[14] In the first wave, between January and March 2016, officials went to five regions with previous reports of cases: Cusco, Cajamarca, Piura, Huancavelica, and Eastern Lima. In the second wave, during July 2016, officials went to four additional regions: Ayacucho, Center of Lima, South of Lima, and San Martin. In the third wave, in the remaining months of 2016, officials went again to the same regions and La Libertad, Huanuco, Junin, and Moquegua. Thereafter, women were allowed to register at their municipalities or at regional MINJUS offices at any time.

[15] Shape files for the map come from INEI (2020b).

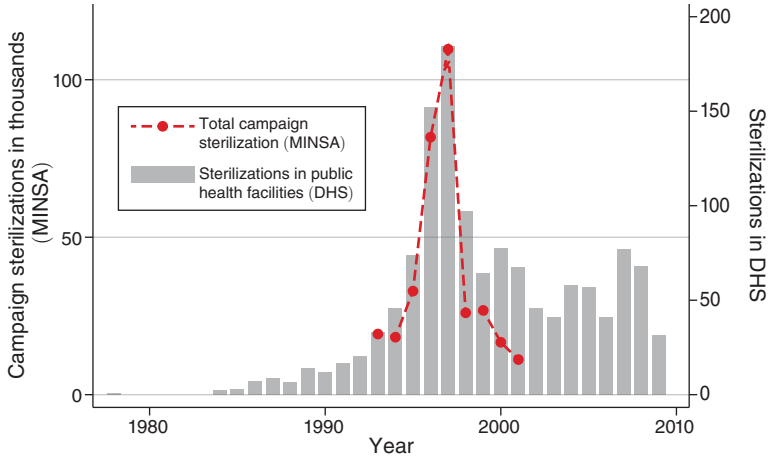


FIGURE 2. TOTAL NUMBER OF REPORTED STERILIZATIONS IN PUBLIC HEALTH FACILITIES BY YEAR (DHS 2009) AND NUMBER OF REPORTED CAMPAIGN STERILIZATIONS (MINSA)

Notes: The figure shows the total number of sterilizations in public health facilities by year of occurrence, registered in the DHS 2009 wave (right *y*-axis). For the DHS data, we use survey weights. The reported number of sterilizations is based on the following questions: "Have you ever used a female sterilization method (tubal ligation)? (Some women can have an operation to avoid having more children)" and "In what month and year did you (they) operate (you)—Female sterilization?" Public health facilities include campaign/fair/jornada, MINSA hospital, MINSA health center, MINSA health post, MINSA health worker, ESSALUD hospital, ESSALUD post, army/police hospital, and local government hospital. The figure also shows the total number of campaign sterilizations in thousands, as reported by MINSA (left *y*-axis).

Sources: DHS 2009 wave, MINSA, Subcomisión Investigadora de Personas e Instituciones Involucradas en las Acciones de Anticoncepción Quirúrgica Voluntaria (2002)

ever used a female sterilization method (tubal ligation)?" and follow up by asking "In what month and year did you (they) operate (you)?" and where did the procedure take place. We consider that a sterilization was part of the campaign if the respondent says it happened between 1996 and 2000 at a public health care facility.[16] The sterilizations recorded in the DHS include consented sterilizations as well as the ones in which the proper procedures were not followed; thus, the relevant cases for us are a subset of the total records in the DHS.

Figure 2 reports the total number of women who report in the DHS to have been sterilized in a public health facility by year, along with the total number of sterilizations as reported by the MINSA. Although the DHS does not specify whether any of these sterilizations were performed as part of the campaign, recall that prior to 1996 the procedure was not provided for free in public health facilities and thus the total number of sterilizations in public health establishments was low. Consistent with the timing of the program, Figure 2 shows a sharp spike in the number of sterilized women in 1996 and 1997.[17] By 2001, this number decreases to roughly its

[16] This includes the options MINSA hospital, MINSA health center, MINSA health post, MINSA health worker, ESSALUD hospital, ESSALUD post, army/police hospital, local government hospital, and campaign/fair/jornada.

[17] The slight increase in the number of sterilizations in the period before the start of the AQV campaign is in line with the patterns observed around the globe—in the early 1990s, female sterilization was the most prevalent contraceptive method in the world (da Costa Leite, Gupta, and do Nascimento Rodrigues 2004). One cause

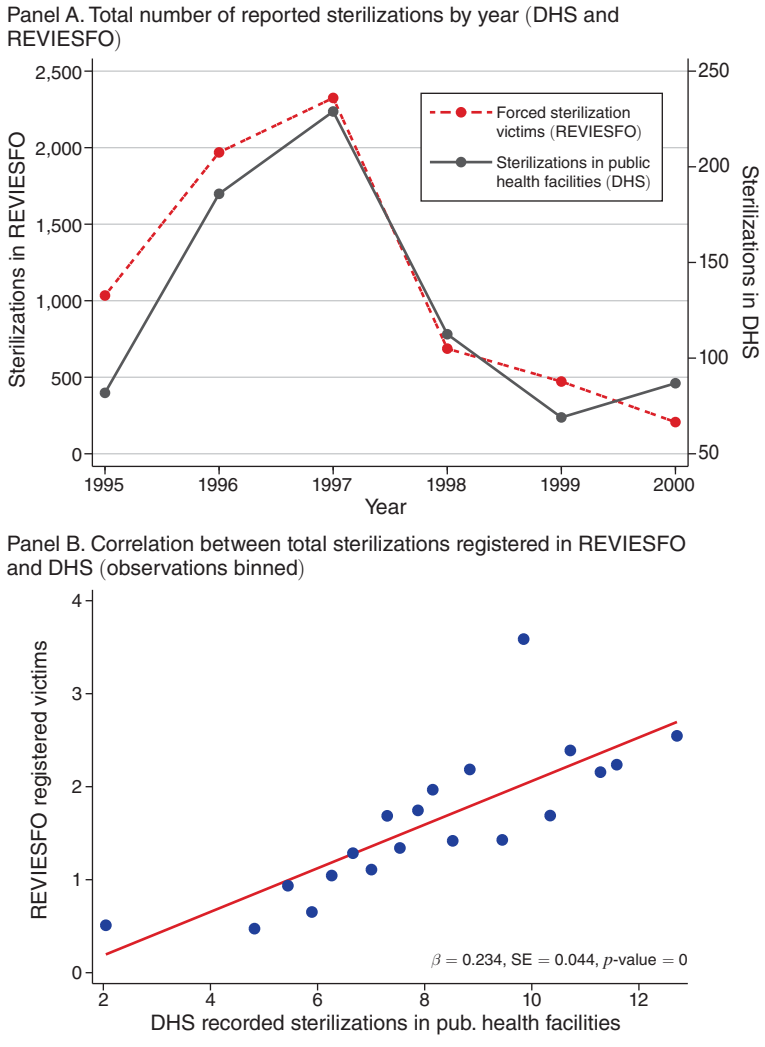


FIGURE 3. CROSS-SECTIONAL AND TIME VARIATION IN REVIESFO AND DHS

Notes: Panel A shows the aggregated number of reported sterilizations in public health facilities by year in the 2009 DHS (solid gray line) and REVIESFO (red dashed line). For the DHS data, we use survey weights. Panel B shows a binscatter of the total sterilizations registered in REVIESFO (y-axis) and a count of women reported to have been sterilized in a public health facility in the 2009 DHS wave at the municipality level (x-axis). See footnote of Figure 2 for a description of the sterilization variable.

Sources: DHS 2009 wave and REVIESFO

preprogram trends (see also Byker and Gutierrez 2021). Importantly, the reports in the DHS follow the same time profile as the total number of campaign sterilizations per year of occurrence, as reported by MINSA, which are depicted in the dashed red lines.

behind this trend was that the surgical procedure got easier, faster, and cheaper (United Nations 1984; World Health Organization 1992). Additionally, wealth is an important predictor of the use of sterilizations in the precampaign years, and during this period we also observed high rates of economic growth in the country.

Figure 3, panel A shows that the time variation in the number of cases reported in the REVIESFO matches quite closely that of the number of sterilizations in a public health facility as reported in the 2009 DHS. The red dashed line shows how many victims in the REVIESFO were sterilized in a given year, while the gray solid line represents the number of women reporting having been sterilized in a public health facility in the 2009 DHS. Even though the registry does not cover the universe of alleged victims, the figure shows that the cases recorded in the REVIESFO provide meaningful information about the evolution of sterilizations performed by public service providers in the country.

From the DHS, we can identify the municipality where each respondent lives, and thus we can compare the time and cross-sectional variation in sterilizations in the DHS and REVIESFO. Figure 3, panel B shows a binscatter plot between the municipality records of sterilizations in the DHS and REVIESFO. The correlation between the two variables is 0.234 (p-value < 0.01), showing that these variables are also highly correlated in the cross section.

The fact that the variation in both variables is similar indicates that female sterilizations with and without adequate consent mostly coincided, in both the moment and location where they were performed. Furthermore, the fact that the observations in the figure are clustered around the regression line suggests that underreporting is not systematically concentrated in specific municipalities.

We can go a step further in using the data in the DHS to validate the REVIESFO by comparing the few observable characteristics of women in the registry with those who report having been sterilized during the years of the AQV campaign. These comparisons are presented in Supplemental Appendix Table A.4. Sterilized women in both the registry and the DHS look remarkably similar in terms of their number of children at the time of the sterilization (four), their age at sterilization (31), and whether they live in an agricultural or rural location (28–35 percent). The only clear deviation we observe between the reports in the two datasets is a higher share of Quechua-speaking women in the victim registry, compared to the DHS (48 percent versus 8 percent).[18]

To gain a better understanding of how the campaign was implemented geographically, and to bolster the argument that the correlation between the DHS and REVIESFO is not led by spurious factors, we investigate which municipality baseline characteristics (from the 1993 census) determine the intensity of sterilizations. In Supplemental Appendix Table A.1, we run a prediction exercise in which the dependent variables are either the number of reports of sterilizations in the REVIESFO (columns 1 and 3) or in the 2009 DHS (columns 2 and 4), and the predictors are population, gender shares, indigenous population, education, fertility, and the supply of public health services.[19] We use both OLS and LASSO to run these predictions.[20] As one would expect, the family planning campaign was targeted toward municipalities

[18] The share of indigenous and Spanish-speaking women surveyed in the DHS are similar to the shares found in the 1993 census. The classification of whether someone is a Quechua speaker is very sensitive to the way the question was asked. We do not have the details on the specific question asked in the REVIESFO.

[19] Our measure of fertility (births per capita) in 1993 is calculated using data from the population census of 2007 (INEI 2020a), while our measures of health supply include health centers, doctors, and nurses, which are taken from the health census of 1996 (MINSA 2022).

[20] To pick predictors of the sterilization count, we apply a penalty parameter that minimizes the Bayesian information criterion.

with higher fertility rates (as proxied by the number of children born in the last five years), which are also the locations with higher shares of Quechua-speaking people and with lower levels of education. Reassuringly, we observe that similar characteristics are simultaneously predictive of the DHS and REVIESFO sterilization counts, in both the OLS and LASSO specifications.

Finally, one may worry that the selection of sites chosen to collect the data was politically motivated—e.g., some locations where the support for Fujimori's party was particularly high may have been targeted in order to sway voters. We rule out this possibility in panel B of Supplemental Appendix Table A.1, where we show that the probability that a municipality appears in the registry and the number of alleged victims is uncorrelated with the support for Fujimori's party in the 1998 municipal elections.[21]

Overall, the data reveal a significant correlation between the reports of alleged illegal sterilizations registered in the REVIESFO and the female sterilizations reported in the DHS. Importantly, this correlation holds in both the temporal and cross-sectional dimensions. Furthermore, individual characteristics of sterilized women in the DHS and the registry are very similar, and the municipality-level intensity of sterilizations in both datasets is very much aligned. While none of the pieces of evidence presented in this subsection are conclusive, the weight of the evidence leads us to conclude that the variation in the REVIESFO data can plausibly be interpreted as a meaningful representation of the distribution of sterilization cases that took place during the AQV campaign.

III. Empirical Strategy

To identify the causal effect of the disclosure of information on the forced sterilization campaign on a range of relevant outcomes, we use a DiD strategy. We compare individuals living in municipalities that were exposed or not exposed to the AQV campaign (and its intensity), before and after the campaign started to be publicly debated (i.e., before and after the fall of the Fujimori regime). Thus, survey year and the municipality of residence jointly determine the exposure to the shock induced by the campaign disclosure. We test our main hypotheses by estimating the following regression equation:

$$Y_{ijt} = \beta Post_t \times FS_j + \gamma_j + \delta_t + \nu_{p(t)} + \varepsilon_{ijt}, \tag{1}$$

where Y_{ijt} is the outcome of interest for individual i in municipality j in survey year t. $Post_t$ takes value 1 if the survey took place after the disclosure in 2001. FS_j, denotes our treatment variable in municipality j as reported in the REVIESFO. This variable can be either the number of women illegally sterilized in municipality j during the campaign period (1995–2000) or a dummy for whether any women reported being illegally sterilized in municipality j between 1995 and 2000. Given the skewed distribution of the intensity of the program and the large number of zeros, we apply the

[21] The lack of correlation between the presence of reports and its intensity also speaks against the possibility that in localities where the support for Fujimori was higher, local implementing officers may be more willing to achieve the targets regardless of the means to do it.

inverse hyperbolic sine (IHS) transformation (Johnson 1949; Friedline, Masa, and Chowa 2015).

Finally, we account for any municipality-specific, time-invariant factors through the inclusion of municipality fixed effects (γ_j), and for any time-specific shocks by including survey year fixed effects (δ_t). The aggregate time profile of our main outcome variables is controlled for by including province-specific linear trends in the regressions ($\nu_{p(t)}$). Standard errors are clustered at the treatment unit level, the municipality (j). Through our main specification, we are able to uncover the average treatment effect on the treated using a two-way fixed effect estimation approach, because our setup does not involve staggered adoption of the treatment (Roth et al. 2023). As a robustness check, we can also account for other potential determinants of the demand for health care and child health outcomes by adding a vector of individual-level time-varying covariates $\mathbf{X}_{ijt}$ in the regression equation, which include the ethnicity of the respondent (mother of the child), her highest educational attainment, her age, and whether she lives in a rural area.

We are interested in the coefficient β, which is estimated using variation in the intensity (presence) of the AQV campaign across municipalities within the same province trend, before and after the campaign disclosure. In the next section, we extend this DiD specification to study the persistence of the effects over time and show the validity of the parallel trends assumption in an event study framework.

IV. Forced Sterilizations, Health Outcomes, and Service Utilization

A. *Main Results*

The start of public discussions around the way female sterilizations were conducted during the AQV campaign may have led to a reduction in the usage of health services by women in the municipalities where the campaign took place. This should be especially relevant for outcomes related to the usage of family planning methods and professional health services for both women and their children.

The raw data show patterns consistent with our main hypotheses. Supplemental Appendix Figures A.4a to A4.c present binscatter plots relating our three main outcomes variables (contraceptive use, delivery index, child health index) and our treatment (total number of sterilizations recorded in the REVIESFO in the corresponding municipality, using the IHS transformation), before and after the change of the information environment.[22] Before the information revelation, we observe no correlation between treatment intensity and contraceptive use and child health, and observe a small positive association with the delivery index. After 2001, these correlations change significantly. Municipalities with more reported sterilizations have less usage of contraceptive methods, and children have a worse health status.[23] The correlation

[22] To make the figures comparable, we limit the sample to municipalities that appear in the DHS at least once in the pre- and posttreatment periods.

[23] Note that in the pretreatment period we have 4 survey rounds, whereas in the posttreatment period there are 14 survey rounds available. This is reflected in the dispersion of the data shown in Supplemental Appendix Figures A.4a to A.4f, where the bins fit much more precisely the regression line in the posttreatment period than in the pretreatment period.

Table 1—Forced Sterilizations, Health Care Usage, and Child Health (DHS)

	Currently using contraceptives (1)	Prenatal care and delivery index (2)	Child health index (3)
Panel A. Number of forced sterilizations reported (IHS)			
IHS (num. of forced sterilizations reported) × Post-2001	−0.015	−0.047	−0.021
	(0.003)	(0.007)	(0.004)
Panel B. Any forced sterilization reported			
Any forced sterilization reported (1 = Yes) × Post-2001	−0.047	−0.115	−0.051
	(0.009)	(0.024)	(0.018)
Mean dep. var.	0.547	0.356	0.138
Observations	329,629	152,817	160,965
Year fixed effects	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes
Province × Time	Yes	Yes	Yes

Notes: The table shows regression results following equation (1). In column 1, the regression is at the woman level. In columns 2 and 3, the regressions are at the child level. The prenatal care and delivery index is composed of (i) no prenatal care received, (ii) birth at home, and (iii) birth assistance (other than relative). The child health index is composed of (i) child was sick recently (diarrhea, fever, cough), (ii) child is underweight, and (iii) child is stunted. Dependent variables in columns 2 and 3 are standardized (with mean 0 and standard deviation 1) with respect to baseline year 2000. Lower values indicate worse outcomes. Standard errors clustered at the municipality level are included in parentheses.

Sources: DHS waves 1991–2017 and REVIESFO

between sterilizations and the usage of prenatal and delivery services and sterilizations is still positive in the post-2001 period, but it is smaller than in the pre-period. At the bottom of the three graphs, we provide a statistical test on the difference in the correlation pre- and post-2001 and show that in all cases the difference is negative and marginally significant. Supplemental Appendix Figures A.4d to A.4c show that these relationships are starker once we partial out municipality and time fixed effects and province-specific trends, which we use in our main specification.

We test whether the patterns in the raw data are causal in Table 1, where we display the main results following equation (1). We use two different specifications. In panel A, we exploit all the variation in the data, and the main independent variable is the total number of victims registered in the REVIESFO (using the IHS transformation, our preferred specification). In panel B, our treatment is defined as a dummy taking the value of one if any victim was registered in the municipality.

After 2001, women in municipalities with a 10 percent higher incidence of reports of illegal sterilizations are 0.9 percent less likely to use contraceptive methods in the years after the release of information about the campaign (column 1).[24, 25] We obtain a similar result if we use the dummy specification in panel B, where we show that exposure to any alleged illegal sterilizations during the AQV program leads

[24] Contraceptive methods include birth control pills, IUDs, injections, foam/jelly, condoms, periodic abstinence/withdrawal, Norplant, emergency contraception, and sterilization. The results are unchanged if we exclude sterilizations from the definition of this variable.

[25] We follow the recommendation by Bellemare and Wichman (2020) to calculate the elasticities in a linear-arcsinh specification. The elasticities are evaluated at the sample means of y and x, using the following formula: $\hat{\xi}_{yx} = \frac{\hat{\beta}}{\bar{y}} \frac{x}{\sqrt{x^2+1}}$.

to a 4.7 percentage points (9 percent) drop in the usage of contraceptive methods. Modern contraceptive methods delivered through public health facilities represented 79 percent of the country's total in 2001, and hence a reduction in the usage of these methods may reflect the fact that women are less likely to seek family planning services in these facilities. We return to this point later in this section.[26]

Municipalities with 10 percent more reported cases of illegal female sterilizations show, after 2001, a 4.4 percent lower utilization of prenatal care and professional help when giving birth. Child health in these municipalities is also 4.9 percent significantly worse (columns 2 and 3 in panel A, respectively). These results are consistent with the idea that in places with a higher incidence of reported illegal sterilizations, women learning about the alleged human rights violations were more likely to distrust health service providers, leading to lower maternal health service usage and deterioration of child health. Panel B (columns 2 and 3) shows that exposure to the alleged illegal sterilizations caused a decrease in our maternal health service usage index of 0.12σ (32.3 percent), and the child health index is reduced by 0.05σ (36.2 percent) in the years after the fall of the Fujimori regime.

As discussed above, the sterilizations campaign was conducted through "health fairs," which were widely advertised and very salient to people in the municipality. Thus, citizens in these localities are likely to have been aware of the campaign but only learned about the abuses that occurred in its implementation after the regime fell and these facts were widely discussed. Our results could thus be driven either by the information content of the wider dissemination in the post-2001 period or due to the increased salience of the events.

The magnitude of the effects documented in this section represents the comparison between respondents in municipalities where forced sterilizations are alleged to have happened and those in municipalities without reports, before and after the disclosure of information. These effects are thus likely to be a lower bound of the true effect of the information dissemination, since some people in nonaffected municipalities may have also changed their health-seeking behavior upon learning about the abuses committed during the campaign.

The results on prenatal care and delivery service usage or child health are not caused by the standardization or aggregation of the variables. Supplemental Appendix Figures A.6a and A.6b show the regression results on each of the variables included in these indices. Women are less likely to receive prenatal care, more likely to give birth at home, and less likely to receive qualified birth assistance (other than from a relative). Children in affected areas tend to be shorter and have lower body weight after the campaign disclosure and are more likely to report being sick in the four weeks preceding the survey (Supplemental Appendix Figure A.6b).[27]

[26] The overall reduction in contraceptive usage is driven by reductions of modern contraceptives, which are the ones typically recommended by health professionals (see Supplemental Appendix Figure A.5). We do not see a differential change in the usage of folkloric methods. Following the lower usage of contraceptives, we also document that fertility rates (as measured by the total number of children and the number of children born in the past three years) increased after the disclosure of the alleged abuses during the campaign.

[27] We also investigate whether campaign exposure affected vaccination rates. The results are shown in Supplemental Appendix Table A.5, where we focus on whether the child received tuberculosis and measles vaccines and the first doses of diphtheria, pertussis, tetanus, and polio vaccines and a dummy for whether the child received all vaccinations according to the Peruvian vaccination schedule (column 5). We do not find significant

Table 2—Forced Sterilizations and Health-Seeking Behavior (DHS)

	Sick child received any health care (1)	Sick child received private health care (2)	Sick child received public health care (3)
Panel A. Number of forced sterilizations reported (IHS)			
IHS (num. of forced sterilizations reported)	−0.005	0.003	−0.009
× Post-2001	(0.003)	(0.002)	(0.002)
Panel B. Any forced sterilization reported			
Any forced sterilization	−0.011	0.012	−0.024
Reported (1 = Yes) × Post-2001	(0.010)	(0.006)	(0.009)
Mean dep. var.	0.266	0.105	0.170
Observations	172,645	172,250	172,169
Adj. R^2	0.018	0.030	0.025
Year fixed effects	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes
Province × Time	Yes	Yes	Yes

Notes: The table shows regression results following equation (1). Dependent variables take the value of 1 if the condition is true and zero otherwise. To avoid using a potentially endogenously selected sample, we impute a zero for children who do not report a recent event of sickness. The results with the restricted sample (missing observations for healthy children) can be found in Supplemental Appendix Table A.7. Standard errors clustered at the municipality level are included in parentheses.

Sources: DHS waves 1991–2017 and REVIESFO

The results on our main outcome variables are qualitatively similar if, instead of using the absolute number of sterilizations in the REVIESFO as the main independent variable, we use the per capita number of reported sterilizations (multiplied by 1,000 for exposition purposes). These results are shown in panel A of Supplemental Appendix Table A.6. Our results are not driven by the inclusion of individual-level covariates and are virtually unchanged if these covariates (age, ethnicity, respondent lives in rural area, years of education of respondent) are included (panel B of Supplemental Appendix Table A.6).

The effects of the disclosure of information about the AQV campaign on child health are partially explained by the fact that after 2001, mothers in affected areas were less likely to seek professional health care services when their children were sick. To investigate this, we use data from the DHS, where women are asked whether each of their children under 5 had been sick within the past four weeks and whether they took the child to a professional health service provider. Table 2 shows that in areas where the number of reported cases of illegal sterilizations is 10 percent higher, women are 0.7 percent less likely to seek professional health care for their sick children (panel A, column 1). The reduction in professional health care is even more pronounced in public health facilities, where women are 1.6 percent less likely to seek care (column 2) if the incidence of illegal sterilizations was 10 percent higher. Instead, the same increase in the incidence of the campaign generates an increase of 1.0 percent in the proportion of women seeking professional health services from

reductions here, which could be explained by the fact that vaccination rates have always been very high in Peru (see the third row of Supplemental Appendix Table A.5).

private providers (column 3). The increase in the usage of private health facilities is not enough to compensate for the large drop in the usage of public health services.[28] The results using an indicator for exposure to the campaign instead of the intensity are shown in panel B for completeness.[29]

B. *Identification Assumption and Time Profile of the Effects*

The identification assumption of the causal effects of exposure to the campaign disclosure is that, absent the campaign, after controlling for the relevant fixed effects and province-specific trends, the outcomes of interest would have behaved similarly in municipalities experiencing different levels of intensity in the implementation of the sterilization campaign. To empirically assess the validity of our identification assumption, we check whether there are any discernible differences in our main outcomes before the campaign disclosure. We execute the analysis laid out in equation (1), using our preferred specification in an event study framework where we interact the treatment with dummies for every survey year available, which includes 4 pretreatment periods and 14 posttreatment observations.

The results for our main outcomes of interest—namely, whether the respondent uses any type of contraceptive methods, the index for prenatal and delivery services, and a child health index—are shown in Figure 4 (see Supplemental Appendix Table A.8 for the corresponding regression results). The omitted category in the analysis is the survey year in which the campaign ended (2000). There are no statistically significant differences in our three main outcome variables in the predisclosure period, supporting the identification assumption. We additionally show that there are no differential pre-trends in strong predictors of our outcome variables in Supplemental Appendix Figure A.8.[30]

Figure 4 also shows the time profile of the effects. Remarkably, the negative effects of the campaign disclosure in municipalities affected by the AQV campaign hold—and, in some cases, are magnified—until our last year of data, 17 years after the campaign had ended. Similarly, we do not observe the presence of pre-trends and the long-lasting effects of exposure to information about the AQV campaign on health-seeking behaviors (see Supplemental Appendix Figure A.7). In the following sections, we study the underlying mechanisms for these effects and their persistence.

[28] We do not observe that the usage of informal or traditional health providers changes systematically between areas more and less affected by the campaign after the disclosure. These results are available upon request.

[29] Note that the question of whether mothers seek professional care for their children is only asked if the child reports having been sick. To avoid using a potentially endogenously selected sample, we impute a zero for children who do not report a recent event of sickness. Supplemental Appendix Table A.7 shows the results of the regressions in the restricted sample of children who had reported a recent sickness, and the results are qualitatively similar, with larger magnitudes. This is expected given that these results comprise the effect of the incidence of sickness among kids and mothers' health-seeking behavior.

[30] In this figure, we use data from the 1996 round of the DHS and predict the three main outcomes of our study using the following respondent characteristics: marital status, ethnicity, total number of children ever born, lives in rural area, highest educational attainment, wealth index, and public clinics in municipality per capita in 1996. We then use the betas from this exercise to produce predicted values of the outcomes in the 1991, 1992, 1996, and 2000 rounds of the survey. We run a similar event study as in our main specification, using the 2000 round as a reference. Supplemental Appendix Figure A.8 shows no differential pre-trends in these predicted outcomes for any of the three main outcome variables.

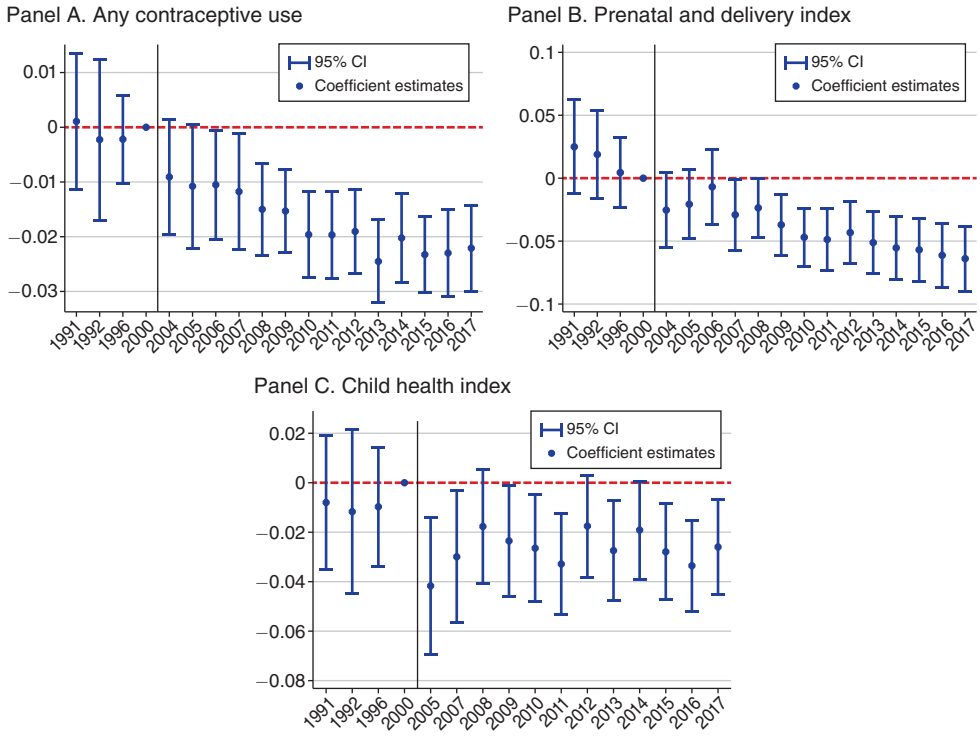


FIGURE 4. PRE-TRENDS AND LONG-TERM EFFECTS

Notes: Coefficients in the above figures represent regression results of equation (1), replacing the post dummy with year dummies. The regression results underlying the coefficients displayed are shown in Supplemental Appendix Table A.8. The *y*-axis shows the coefficient estimates, and the *x*-axis the survey waves. The omitted category is year 2000.

C. *Potential Alternative Interpretations*

One concern about the validity of our results is the reliability of the data on our main measure of the incidence of forced sterilizations. Section IIB shows that the reports contained in the REVIESFO registry correlate well, in both the time and cross-sectional dimensions, with reports of female sterilizations conducted in public health facilities, as reported in the DHS. Additionally, we showed that the reports in the REVIESFO are not systematically biased toward specific municipalities. We now perform two additional analyses to show neither that our results depend on the source of data used for our main independent variable nor that the REVIESFO may be capturing spurious variation.

First, we repeat the analysis shown in Table 1, but using the reports from the DHS on the number sterilizations in a public health facility carried out between 1995 and 2000 as the main independent variable (using the IHS transformation). As mentioned before, this measure includes campaign sterilizations, plus others that took place independently, and thus the variation partially represents the one created by the AQV campaign. The results are shown in columns 1, 3, and 5 in Table 3. Across

Table 3—Forced Sterilizations, Health Care Usage, and Child Health (DHS): OLS and IV Specifications

	Currently using contraceptives		Prenatal care and delivery index		Child health index	
	(1)	(2)	(3)	(4)	(5)	(6)
IHS (num. of reported sterilizations DHS) × Post-2001	−0.017	−0.018	−0.032	−0.061	−0.006	−0.034
	(0.002)	(0.005)	(0.006)	(0.012)	(0.006)	(0.008)
Mean dep. var.	0.545	0.545	0.409	0.409	0.163	0.163
Observations	259,572	259,572	116,454	116,454	122,308	122,308
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
First-stage Wald F-stat		84.703		112.756		119.727
$\beta^{\text{1st Stage}}$		0.664		0.723		0.729
		(0.072)		(0.068)		(0.067)
Method	OLS	2SLS	OLS	2SLS	OLS	2SLS

Notes: Regression results in columns 1, 3, and 5 follow equation (1), where the measure of sterilization exposure is how many women were sterilized according to the 2009 DHS. Sterilizations according to DHS are all women sterilized between 1995 and 2000 in a public health facility. Regression results in columns 2, 4, and 6 follow a two-stage least squares approach where the number of sterilizations recorded in the 2009 DHS is instrumented with the number registered in the REVIESFO in the corresponding municipality. See the note of Table 1 for the definition of the dependent variables. Standard errors clustered at the municipality level are included in parentheses.

Sources: DHS waves 1991–2017 and REVIESFO

the board, we find quantitatively similar results, though the result for the child health index is imprecisely estimated.[31]

Second, both measures of the incidence of sterilizations may contain measurement error. For example, the DHS count of sterilizations may have incorrectly recorded the location or time of the procedure reported by the respondent. Similarly, the REVIESFO reports may be capturing slight differences in the effort put by different teams to get alleged victims women to register. To the extent that both datasets reflect part of the true variation in the program intensity, we can use an instrumental variable strategy to parse out the noise from the signal. Columns 2, 4, and 6 in Table 3 show the results of a set of regressions in which we use the REVIESFO sterilization count to instrument for the DHS sterilization count. The results of the first-stage regressions are depicted in the second-to-last row in Table 3. As expected, there is a positive and robust association between our two measures of program intensity, delivering partial F-values ranging between 84.7 and 119.7 (reported at the bottom of the table.) The second-stage results are qualitatively similar to our main results for the three main outcomes.[32] Classical measurement error in the independent variable causes attenuation bias, and consistent with this, we find that the magnitude of our coefficients in the IV specification is larger for all three main outcomes. We conclude that any potential measurement error in our main

[31] As in Section II, we use the 2009 DHS wave to compute how many women were sterilized in a public health care facility between 1995 and 2000. As just a subset of municipalities are covered in every DHS wave, we have a smaller sample size than in our baseline specification.

[32] Note that this IV strategy is used to correct for potential measurement error rather than to reinforce the causal interpretation of the results, which is warranted by the parallel trends in our difference in differences specification.

treatment variable is unlikely to cause any systematic biases in the estimation of our treatment effects.[33]

If municipalities targeted by the campaign systematically differ from those not targeted and they follow different time trends in health care use and child health measures, our main estimates may be biased. As reported in Section IIB, the AQV campaign was conducted with higher intensity in municipalities where fertility rates were higher and in those with a higher proportion of Quechua-speaking population at baseline. To alleviate the concern of a potential differential trend in outcomes, we include in our main specification flexible trends in baseline measures of variables that may determine health outcomes at the municipality level (taken from the 1993 census)—namely fertility, the share of the indigenous population, and labor market participation (INEI 2019). Supplemental Appendix Table A.10, where we include in the main specification interactions between the variables mentioned before and survey year dummies, shows that the coefficients are similar to our baseline specification, albeit smaller for the first two outcomes and slightly less precise (especially in panel B).

We interpret our results as being driven by women who were exposed to public discussions about the alleged crimes committed during the campaign. However, given the scale of the sterilization program, it could be the case that women directly affected by the campaign are the ones who are less likely to trust public health services and who reduce their usage, leading to worse child health outcomes. We present three pieces of evidence that rule out this possibility. First, the effects are only detectable after 2001. If it were the case that women directly affected by the campaign are driving the results, then we should see effects for the years after the sterilization and during the period 1996–2000 (i.e., we would observe pre-trends before the information dissemination). Second, we run the heterogeneity of the main results by the age of the respondent. Women under the age of 14 by the end of the campaign could not have been sterilized as part of the program. Panel A of Appendix Table A.11 shows that the magnitude of the treatment effects is the same for women who were old enough to have potentially been directly affected as it is for younger women. This implies that some information was transmitted to women who were not directly affected by the campaign. Third, in panel B of Appendix Table A.11, we replicate our baseline specification and exclude all women who report having ever been sterilized, and the results are identical in this subsample, which reassures us that our findings are not only driven by women directly affected by the campaign and that the results are not mechanical (i.e., driven by the fact that sterilized women do not need other contraceptives or prenatal and delivery care).

One additional concern may be that municipalities targeted by the campaign also saw a decrease in the supply of health services in the years after the fall of the Fujimori regime. If that were the case, our results would be driven by changes in the supply side rather than the demand, as we argue. We use data on health centers and medical personnel to study this possibility (MINSA 2022b). Supplemental Appendix Table A.12 shows that after 2001, municipalities more affected by the

[33] For completeness, we present the same set of results for the health care usage outcomes in Supplemental Appendix Table A.9. The conclusions are similar to those from our main specifications.

campaign did not have fewer public health facilities or health professionals (doctors or nurses) per 1,000 inhabitants, compared to municipalities with lower or no incidence of the campaign.

Internal migration may generate a downward bias in our estimates since migrants have a lower exposure intensity to information about the abuses that took place as part of the campaign. To investigate whether migration leads to a potential bias in our estimates, we repeat our main specification and interact the main DiD term with an indicator for whether women who respond had ever moved (and include in the specification the corresponding double interactions). Supplemental Appendix Table A.13 shows that the regression results are similar for women who have never moved and for the overall sample; thus, migration does not seem to generate a downward bias in our estimates, suggesting that the treatment effect was equally effective, even if exposure was potentially lower for some respondents.

Finally, our treatment period starts in 2001, when the Fujimori regime ended. During his government, there were several other human rights violations (e.g., during the internal conflict or against political opponents), and the government was plagued with corruption scandals. The news about these other events was more present in the public discussion after 2001. If these events affected the population's trust in the government, they could explain the reduction in the demand for public services. However, note that for this to be the main driver of our results, we would need to explain why these other events may have differentially affected people in municipalities where the sterilization campaign took place.

V. What Explains the Effects of Campaign Exposure?

The results in previous sections show significant effects of exposure to cases of alleged human rights violations during the implementation of the AQV campaign on the usage of contraceptive methods, the usage of prenatal and delivery services, and child health. What mechanisms are primarily responsible for driving these effects? In previous research, Alsan and Wanamaker (2018) show that the revelation of an experiment in Tuskegee (United States) in which Black citizens with syphilis were monitored but not treated (despite the availability of effective medicines) led to reduced trust in health service providers and higher mortality rates. These results were driven by individuals with similar characteristics to the experimental subjects—i.e., older Black men living closer to the experimental site who learned about a potential threat through social identification with the victims and responded accordingly. Martinez-Bravo and Stegmann (2022) show that the use of vaccination teams for strategic military purposes in Pakistan led to lower trust in vaccines and lower vaccination rates, and the results were driven by areas where the support for Islamist groups was high. Instead of social learning through individual identification, they show that the main mechanism is one of learning through political and religious identification.

Both of these mechanisms could be at play in our setting. First, while the campaign targeted areas in the country where fertility rates were high, these areas were also more rural and had a higher concentration of indigenous population and lower educational levels. The mechanism of learning through social identification would

imply that we should observe that rural, indigenous, and low-educated women are the ones driving the results. Second, the diffusion of information about the alleged human rights violations in the AQV campaign may have been spearheaded by opinion leaders who opposed the Fujimori regime. The hypothesis of learning through political identification would thus imply that we should observe a larger response in areas with lower support for Fujimori at baseline.

A hypothesized alternative mechanism is the disappointment of political supporters of the government in charge of the execution of the policy upon learning about the alleged human rights violations. During Fujimori's term as president, the political and economic crisis of the 1980s was greatly alleviated, and the government's social policies led to an unprecedented reduction in poverty rates and increased access to public services, especially for poor and underserved communities. As a consequence, his party had broad support, leading to a landslide victory in his first reelection run in 1995 and winning many municipal governments in the 1998 local elections. Learning that some of the social policies carried out during Fujimori's term may have been executed by means of abuses and violations of basic human rights may have led to deep disappointment among his supporters. The revelation of abuses committed by a democratically elected government could have caused the government's supporters to reduce their trust in not only the government itself but, more broadly, in government institutions.

In the following subsections, we empirically test the relevance of each of these potential mechanisms, starting with the latter.

A. *Political Disappointment and Health Service Usage*

If supporters of the Fujimori government felt disappointed by learning about the abuses committed during the implementation of the AQV campaign, we should observe that people in affected municipalities where the support for the government was larger at baseline had stronger responses to the disclosure of information about the alleged forced sterilizations.

In panel A of Table 4, we test this hypothesis by presenting the results of a specification that extends that on equation (1) by including a heterogeneity term that interacts the intensity of alleged illegal sterilizations, the indicator for post-2001, and a dummy variable for whether voters in the municipality were strong supporters of Fujimori's party—i.e., whether the vote share for Fujimori's party in the 1998 municipal elections was above the median (25.85 percent). We also include in this specification all the relevant double interaction terms (see table notes for the precise specification).

The 1998 local elections were the last legally valid elections in which Fujimori's party participated before the disclosure of the information on the potential abuses committed during the AQV campaign.[34] Importantly, it's been widely documented that this election was the unofficial start of Fujimori's reelection bid (Tanaka 1999; Vargas León 2002; González 2006). During the campaign, the president himself

[34] Fujimori ran for reelection in 2000. International and local election observers raised several concerns about the reliability and representativeness of the electoral results.

TABLE 4—FORCED STERILIZATIONS, DISAPPOINTED SUPPORTERS, AND SUPPORT FOR FUJIMORI'S PARTY

	Currently using contraceptives (1)	Prenatal care and delivery index (2)	Child health index (3)	
Panel A. Main effects, by baseline support for Fujimori's party				
IHS (num. of forced sterilizations reported)	−0.002	−0.009	−0.010	
× Post-2001	(0.007)	(0.014)	(0.010)	
High support × IHS (num. of forced sterilizations reported) × Post-2001	−0.020	−0.053	−0.026	
	(0.010)	(0.021)	(0.014)	
Mean dep. var.	0.544	0.317	0.119	
Observations	201,105	94,360	100,224	
Adj. R^2	0.023	0.505	0.103	
	Turnout (1)	Vote shares (2)	Party rank (3)	Won (4)
Panel B. Support for Fujimori's party in municipal elections				
IHS (num. of forced sterilizations reported)	0.001	−0.013	0.346	0.003
× Post-2001	(0.003)	(0.005)	(0.100)	(0.019)
Mean dep. var.	0.803	0.180	3.965	0.197
Observations	3,241	3,241	3,241	3,241
Adj. R^2	0.614	0.434	0.391	0.178
Year fixed effects	Yes	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes	Yes
Province × Time	Yes	Yes	Yes	Yes

Notes: Panel A shows the estimation results of the following equation: $Y_{ijt} = \beta_1 Post_t \times FS_j + \beta_2 X_j \times Post_t \times FS_j + \beta_3 X_j \times Post_t + \beta_4 X_j \times FS_j + \beta_5 X_j + \gamma_j + \delta_t + \nu_{p(t)} + \varepsilon_{ijt}$, where X_j is equal to one for municipalities with high support for Fujimori in 1998 (above-median vote share). Only the main DiD estimate (β_1) and the triple interaction term (β_2) are shown for exposition purposes (β_4 and β_5 are absorbed by the municipality fixed effects γ_j). In panel B, the regressions are at the municipality level and the dependent variables are (i) turnout (from zero to one), (ii) vote shares (percentage of votes), (iii) party rank (ranking according to votes), and (iv) indicator of winning the election. Standard errors clustered at the municipality level are included in parentheses.

Sources: DHS waves 1991–2017, REVIESFO, JNE municipal vote share and turnout data (1998–2018)

traveled intensely around the country to personally endorse candidates running for his party, and the core message in the electoral rallies was around what the central government had been able to deliver to those communities. The evidence therefore suggests that we can interpret the vote share for Fujimori's party in the 1998 municipal elections as a good reflection of the support for the central government at the time.

The results in panel A of Table 4 show that the negative effect of the disclosure of the human rights violations occurring during the AQV campaign on contraceptive usage, the usage of maternal health services, and child health are entirely driven by municipalities where the baseline support for Fujimori's party was high. In all cases, the treatment effects for those municipalities with a below-the-median vote share for Fujimori's party are very close to zero and statistically insignificant. This is consistent with the interpretation that learning about the specifics of the campaign led to greater disgruntlement among former Fujimori supporters, who then reduced their demand for public health services, leading to worse child health outcomes.

Note that this result rules out the hypothesis that the main mechanism underlying our main results is learning by political identification, as in Martinez-Bravo and Stegmann (2022), since this would imply that the results were driven by opposition strongholds.

If disappointment with the government among its supporters is the main driver of our core results, we should observe that municipalities with a higher incidence of alleged illegal sterilization also reduced their support for Fujimori's party *after* the disclosure of information about the abuses. We test this in panel B in Table 4, where we evaluate the treatment effects on a variety of relevant political outcomes.

We include in the analysis all municipal elections between 1998 and 2018. Column 1 shows that voters in municipalities affected by the campaign turn out to vote as often as those in unaffected municipalities. Turning to outcomes that reflect the support for Fujimori's party, the result in column 2 shows that after 2001, the vote share of Fujimori's party was 0.6 percent lower in municipalities with 10 percent more registered victims. Consequently, the party ranked higher in the election—i.e., farther from the first position (column 3)—but the effects are not large enough to affect the probability that they would win (column 4).[35,36]

Overall, we see that the effect of the disclosure of the alleged forced sterilizations is entirely driven by municipalities where the baseline support for the party in power was high, which is consistent with the idea that the main mechanism behind these effects is the disappointment of former political supporters.

B. *Alternative Mechanisms*

Table 5 presents a horse race between several alternative mechanisms that could explain our results. We test the hypothesis that our results may be due to learning through individual identification by including, in the main specification from equation (1), interactions between the DiD term and indicators for whether the respondent is a Quechua speaker, lives in a rural locality, or has completed more than secondary schooling. To test whether information diffusion through traditional media explains our results, we also include an interaction with the strength of radio signal in 2001 (normalized with mean zero).[37] Finally, we also include the interaction term that tests for our political disappointment mechanism—namely, the interaction with whether the support for Fujimori's party was above or below the median.

[35] The probability of the party running for election is unrelated to the number of registered victims.

[36] These results resonate with the literature documenting that the release of information about government malpractices increases accountability, affecting the incumbents' vote share (Ferraz and Finan 2008; Larreguy, Marshall, and Snyder 2020).

[37] We use the location and power of all radio transmitting antennas in 2001 to calculate the maximum signal strength in all municipalities at the time of the information disclosure about the AQV campaign. Information on the radio antennas was provided by the Ministry of Transportation and Communication (MTC 2021). We apply the irregular terrain model (Hufford 2002) to calculate the signal loss induced by the distance between the transmitting and receiving antennas and the topography of the municipalities. We follow a similar approach to Olken (2009); DellaVigna et al. (2014); and Durante, Pinotti, and Tesei (2019) and use the ITM algorithm to calculate (i) the predicted signal loss given the topography of the municipality and (ii) the predicted signal loss assuming no obstacles (free-space signal loss). We subtract the signal loss from the radio station's transmission power to obtain the predicted signal power in decibels. We keep the highest predicted signal power per municipality for (i) the predicted signal power and (ii) the free-space signal power. In all specifications using the signal power, we control for the predicted free-space signal strength, allowing us to use variation in signal strength caused by topographical characteristics only.

TABLE 5—HORSE RACE: ALTERNATIVE MECHANISMS (DHS)

	Currently using contraceptives (1)	Prenatal care and delivery index (2)	Child health index (3)
IHS (num. of forced sterilizations reported) × Post 2001	−0.00442	−0.01627	−0.00178
	(0.006)	(0.015)	(0.011)
Quechua speaker × IHS (num. of forced sterilizations reported) × Post-2001	0.00895	−0.00358	−0.00625
	(0.008)	(0.025)	(0.018)
Rural × IHS (num. of forced sterilizations reported) × Post-2001	0.00289	0.03390	−0.02338
	(0.009)	(0.021)	(0.014)
Secondary education or less × IHS (num. of forced sterilizations reported) × Post-2001	0.00801	0.01653	0.00857
	(0.006)	(0.012)	(0.010)
Signal strength × IHS (num. of forced sterilizations reported) × Post-2001	−0.00232	0.00646	0.00161
	(0.005)	(0.012)	(0.010)
Support for Fujimori × IHS (num. of forced sterilizations reported) × Post-2001	−0.00186	−0.03912	−0.02518
	(0.008)	(0.018)	(0.015)
Mean dep. var.	0.544	0.317	0.119
Observations	201,079	94,341	100,204
Year fixed effects	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes
Province × Time	Yes	Yes	Yes

Notes: See the note of Table 1 for the definition of the dependent variables. All regressions include all respective double interactions and the individual variables (see the equation in the footnote of Table 4.). Only the triple interactions and the DiD coefficient are shown for exposition purposes. See footnote 34 in the main text for details on the construction of the signal strength variable. Standard errors clustered at the municipality level are included in parentheses.

Sources: DHS waves 1991–2017, REVIESFO, and Ministry of Transportation and Communications

Our results show that Quechua speakers, women in rural localities, and less educated women in affected municipalities are equally likely to respond to the disclosure of information about the abuses of the campaign as the average women in our sample in their usage of contraceptive methods or the usage of maternal health services. Similarly, their children show comparable health status as those of Spanish-speaking women, those in urban areas, and those of highly educated women. In fact, the triple interaction terms are very close to zero, demonstrating that social learning through identification cannot explain our results.[38,39] Municipalities with better radio signal intensity are also discarded as the main drivers

[38] In the interest of transparency, Supplemental Appendix Table A.14 shows the results of regressions where we include the triple interactions in the main specification independently. Given the high correlation between these variables, these results are hard to interpret independently.

[39] While we do not have a specific explanation for why the hypothesis of learning through social identification does not find support in the data, it is important to recognize that while ethnic and geographic inequalities and grievances are quite present in modern-day Peru, the political support base for many national parties is cross-cutting. For example, the vote share obtained by Fujimori's party in the 1998 elections was 27.2 percent (28.8 percent) in districts in the top (bottom) quartile of concentration of Quechua speakers. Similarly, the vote share in rural (urban areas was 27.7 percent (27.2 percent). This is not unlike other countries in the region—for example, the support for President Lula (Brazil), President Petro (Colombia), and President López Obrador (Mexico) is similar across ethnic lines and across the geography. This implies that disappointed voters may be present throughout the population distribution, which is exactly what we find.

of the result. While surprising, this result may reflect the fact that the information about the alleged human rights violations spread through different mechanisms, including newspapers and public discussions.

Finally, the one interaction coefficient that survives the horse race is the one with baseline support for Fujimori's party. Not only does the interaction maintain its statistical significance (except in the case of contraceptive usage), but the magnitude of the estimates is also barely reduced, supporting our interpretation that the mechanism explaining our results is the disappointment among Fujimori's political supporters.[40]

C. *Forced Sterilizations and Trust in Institutions*

Usage of public health services and child health significantly decreased in municipalities where the alleged medical malpractices took place during the AQV campaign, after the fall of the Fujimori government, when information about these malpractices started to be publicly discussed. We argue that learning about these abuses undermined trust in government institutions, which in turn caused a reduction in health care utilization and worsened child health.

To test this hypothesis, we obtained data on trust in public institutions and government offices from the Latinobarómetro survey, which was collected yearly between 1996 and 2018. We use questions reflecting trust in institutions directly involved in either the implementation of the campaign or its investigation or in individuals in key government posts. As a placebo check, we also use questions related to trust in institutions that were unrelated to the implementation of the campaign. The results are shown in Table 6. Citizens in municipalities where the intensity of the campaign was higher show higher levels of mistrust in the government, in the public administration, and in the judiciary after 2001 (panel A, columns 1–3). Column 4 shows an index aggregating the three measures of mistrust toward institutions involved in the implementation of the campaign or its investigation. Overall mistrust toward these institutions goes up in affected areas. Instead, mistrust in specific individuals in charge of the institutions, like the president, Congress, or political parties (panel A, columns 5–7) remains unchanged in localities with a higher versus lower or null incidence of forced sterilizations (column 8 presents the results for an index summarizing mistrust toward current government actors.) The same is true for trust in institutions that were not related to the implementation of the AQV campaign, like the church, the police, or the armed forces (columns 1–3 in panel B), which we take as a placebo exercise. Column 4 in panel B shows the results using an index aggregating all placebo institutions, where we again see no relationship with campaign intensity. Finally, we also do not observe any significant effects on generalized mistrust (column 5 in panel B).

[40] It is important to note that the samples we are considering here—women of child-bearing age and women with children—could be exactly the individuals most likely to identify with the victims directly. However, even *within* this social group, the effects are only relevant for women living in municipalities where political support for Fujimori's party was high.

Table 6—Forced Sterilizations and Trust in Institutions (Latinobarómetro)

	Mistrust in:							
	Government (1)	Public administration (2)	Judiciary (3)	Involved institutions (index) (4)	President (5)	Congress (6)	Political parties (7)	Current government actors (ind) (8)
Panel A. Forced sterilizations and trust in political institutions								
IHS (num. forced sterilizations reported) × Post-2001	0.025 (0.014)	0.045 (0.014)	0.030 (0.017)	0.064 (0.036)	0.019 (0.017)	0.015 (0.017)	0.018 (0.017)	0.039 (0.030)
Mean dep. var.	0.384	0.306	0.441	0.256	0.400	0.435	0.473	0.208
Observations	17,581	8,825	21,323	21,323	10,986	21,345	21,304	21,638
Adj. R^2	0.092	0.060	0.034	0.034	0.133	0.041	0.037	0.065

	Mistrust in:				
	Church	Police	Armed forces	Not involved institutions (index)	Generalized mistrust
Panel B. Forced sterilizations and trust in other institutions					
IHS (num. forced sterilizations reported) × Post-2001	−0.004 (0.005)	−0.000 (0.012)	0.009 (0.014)	−0.000 (0.021)	0.011 (0.009)
Mean dep. var.	0.095	0.307	0.221	0.165	0.846
Observations	21,573	21,528	21,474	21,784	20,892
Adj. R^2	0.017	0.023	0.043	0.032	0.020
Individual charac.	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Municipality fixed eff.	Yes	Yes	Yes	Yes	Yes

Notes: Dependent variables are equal to 1 if the individual reports having mistrust in the institution and 0 otherwise. Individual characteristics: gender, educational level, household assets (computer and phone), socioeconomic perception. Standard errors clustered at the municipality level in parentheses.

Sources: Latinobarómetro (1996–2018) and REVIESFO

The results show that the increased mistrust is directed at government institutions rather than at specific authorities or political parties in charge of the administration of these institutions. This explains why we see that the reduced usage of public health services and the consequent worsening of child health status persist even 17 years after the disclosure of information about the alleged atrocities committed during the AQV campaign, a period in which multiple authorities from different political parties were in charge of these institutions. This backlash is consistent with the idea that the implementation of public policies through means that go beyond what is acceptable in a democratic society can undermine the legitimacy and trust in public sector institutions, leading to lower demand for public services.

VI. Conclusions

Trust in the government and public institutions is a key determinant of the demand for public services. In turn, the approach in which public policies are executed and

communicated to citizens influences trust in institutions and the legitimacy of the state.

We study how failures in policymaking shape citizen trust by examining the effects of the disclosure of information on alleged human rights violations committed during the execution of a large-scale family planning campaign in the 1990s in Peru. The central government initiated this campaign to reduce fertility and poverty rates. Thousands of women were allegedly forced or pressured into undergoing tubal ligations (sterilizations) or were given insufficient information or time to consider its consequences. After the implementing regime left power, several accounts documented the existence of ambitious sterilization quotas, which put significant pressure on health workers to perform a large number of sterilizations. Many women suffered from procedure-related health complications, some of which resulted in death. The sterilization campaign permanently infringed the reproductive rights of thousands of women who were unfamiliar with the irreversible nature of tubal ligations. Importantly, widespread information about the human rights violations alleged to have occurred during the campaign was not available until a new democratically elected government took office in 2001.

We find that the disclosure of the alleged abuses of the sterilization campaign caused a long-lasting reduction in the utilization of contraceptive methods and the usage of prenatal and birth delivery services, and, more generally, public health services, ultimately leading to worsened child health. Our results are entirely driven by affected municipalities where the support for the government responsible for the sterilizations campaign was stronger at baseline. This suggests that the main mechanism driving the results is the disappointment of political supporters of the regime who discounted the merits achieved by the government in the provision of public services and instead punished it for the abuses that occurred in the implementation of a specific policy. In a democracy, these political supporters constitute the main building block of the government's legitimacy; our results thus show a novel political economy mechanism through which a specific government's actions can undermine the legitimacy of state institutions.

Our results highlight how a government's strategy to achieve its policy objectives shapes citizen trust in institutions and the long-lasting effects on demand for public services. We observe that the effects prevail up to 17 years after the disclosure of information about the alleged human rights violations. This means that citizens who lose trust in a given administration are unlikely to regain confidence in public institutions after that administration leaves office, which translates into a permanent decrease in the demand for public services. These results show the risks of top-down policymaking, which, in the absence of proper accountability mechanisms (as is the case in authoritarian regimes), can place those in charge of executing the policies on the brink of breaking the law.

Understanding the drivers of mistrust and underutilization of public goods is crucial to improving the design of public policy interventions. Furthermore, our results have important implications for how public policies are communicated to citizens. Transparency and accountability could play an important role in fostering trust in institutions and enhancing the demand for public services. A question that is left for future research is how governments can regain citizen trust.

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