

Policy-Making, Trust and the Demand for Public Services: Evidence from a Mass Sterilization Campaign

Gianmarco León-Ciliotta¹ Dijana Zejcirovic² Fernando Fernández³

¹UPF & BSE & IPEG ²University of Vienna ³University of Bern

Motivation

- ▶ 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:
 1. High state capacity to produce and distribute public goods and services
 2. Citizen demand for these services

Motivation

- ▶ 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:
 1. High state capacity to produce and distribute public goods and services
 2. Citizen demand for these services
- ▶ Failure in the implementation of policies – either due to poor execution or malpractices in the processes – undermines citizen trust
 - ▶ this effect may be more pronounced among those who constitute the main building block of its legitimacy, the government's supporters

Motivation

- ▶ 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:
 1. High state capacity to produce and distribute public goods and services
 2. Citizen demand for these services
- ▶ Failure in the implementation of policies – either due to poor execution or malpractices in the processes – undermines citizen trust
 - ▶ this effect may be more pronounced among those who constitute the main building block of its legitimacy, the government's supporters

In this paper ...

- ▶ We study the short- and long-term consequences of a large-scale family planning campaign where alleged human rights violations took place
 - ▶ 1996-2000: Peruvian government conducted a family planning policy in which more than 260,000 women were sterilized
 - ▶ Reports that many women did not consent to the intervention or were threatened/bribed
 - ▶ Information about the way the policy was implemented was not widely discussed until 2001
- ▶ We compare localities w/ and w/o alleged victims, before and after the disclosure of information, and study the effects on health outcomes, the demand for public health services and trust in institutions

Background: The Policy

Programa Nacional de Salud Reproductiva y Planificación Familiar

- ▶ 1995: Ministry of Health approves program
- ▶ Government distributes information and contraceptive methods freely
- ▶ Stated objective: poverty reduction by limiting births in poor areas
- ▶ Top-down approach with stringent sterilization targets
- ▶ Health professionals were not allowed to object to treatment
- ▶ 260,000 women and 10,000 men were sterilized between 1996-2000

Background: Program Implementation

- ▶ Implemented mainly through "health festivals" (mobile medical teams)

Campaign banner



HUANSANCOS (HUANSANCOS, AYACUCHO) 10 Y 12 DE JULIO
DE 1996

Background: Program Implementation

- ▶ Implemented mainly through "health festivals" (mobile medical teams)
- ▶ Many accounts of intimidation, insufficient information, threats and bribes (Defensoria del Pueblo, 2002)

Bribes, threats, fatalities

8B/Política / Diario La República - Perú - Sábado, 10 de enero de 1998

Exigen que presente consentimiento en 110 mil intervenciones Aguinaga admite muerte de cinco mujeres sometidas a esterilización

El viceministro de Salud, Alejandro Aguinaga Recusco, admitió ayer la muerte de cinco mujeres que fueron sometidas a métodos de esterilización quirúrgica dentro del programa de planificación familiar y salud reproductiva que realiza el gobierno para el control de la natalidad.

En tanto, el legislador Arturo Salazar Larrain insistió en exigir al ministro de Salud, Marino Costa Bauer, la presentación de las 110 mil hojas de consentimiento para la anti-concepción quirúrgica voluntaria de número igual de personas, en un plazo perentorio de 35 días. De lo contrario, afirmó que denunciará constitucional-



El viceministro de Salud, Alejandro Aguinaga, defendió en todo momento el programa de planificación familiar que lleva adelante el gobierno.

de control de la natalidad como ligaduras de trompas (mujeres) y vasectomías (varones).

Al respecto, Aguinaga indicó que las 110 mil personas que se sometieron a una esterilización quirúrgica acudieron voluntariamente a los centros de salud sin recibir ningún ofrecimiento a cambio.

El viceministro de Salud afirmó que la muerte de las cinco mujeres, cuyos nombres no reveló, es lamentable pero está dentro del riesgo médico internacional, al haber formado parte de un conjunto de 110 mil intervenciones quirúrgicas.

La presidenta de la Comisión de la Mujer, Luz Salcedo, dijo que se sa-

16/Especial / Diario La República - Perú - Martes, 10 de diciembre de 1997

Programa de planificación familiar del gobierno atenta contra los DDHH, afirma organización feminista Flora Tristán

Agentes de salud reciben hasta 30 soles por mujer esterilizada

Por Adriana Lator
Foto José Lora

La organización Flora Tristán, que defiende los derechos humanos, denunció ayer que el programa de planificación familiar del gobierno atenta contra los DDHH, afirmando que los agentes de salud reciben hasta 30 soles por mujer esterilizada.



La organización Flora Tristán denunció ayer que el programa de planificación familiar del gobierno atenta contra los DDHH, afirmando que los agentes de salud reciben hasta 30 soles por mujer esterilizada.

Material de Prohibidas

La República

Estabilización obligatoria al descubierto

LIGADURAS A CAMBIO DE COMIDA

La República recogió dramático testimonio de mujeres forzadas a someterse a la operación quirúrgica o engañadas con promesas de ayuda en un caso de Arecah

Luis Guerrero, presidente de AMPE

«Los alcaldes no podemos vivir de rodillas»

En esta sesión:

- En esta edición: 1
- Quilómetros de la vida 2
- El día de la mujer 3
- El día de la mujer 4
- El día de la mujer 5
- El día de la mujer 6
- El día de la mujer 7
- El día de la mujer 8
- El día de la mujer 9
- El día de la mujer 10
- El día de la mujer 11
- El día de la mujer 12
- El día de la mujer 13
- El día de la mujer 14
- El día de la mujer 15
- El día de la mujer 16
- El día de la mujer 17
- El día de la mujer 18
- El día de la mujer 19
- El día de la mujer 20
- El día de la mujer 21
- El día de la mujer 22
- El día de la mujer 23
- El día de la mujer 24
- El día de la mujer 25
- El día de la mujer 26
- El día de la mujer 27
- El día de la mujer 28
- El día de la mujer 29
- El día de la mujer 30
- El día de la mujer 31
- El día de la mujer 32
- El día de la mujer 33
- El día de la mujer 34
- El día de la mujer 35
- El día de la mujer 36
- El día de la mujer 37
- El día de la mujer 38
- El día de la mujer 39
- El día de la mujer 40
- El día de la mujer 41
- El día de la mujer 42
- El día de la mujer 43
- El día de la mujer 44
- El día de la mujer 45
- El día de la mujer 46
- El día de la mujer 47
- El día de la mujer 48
- El día de la mujer 49
- El día de la mujer 50

Arrojó edificios de viviendas, escuelas, tienda y orfanato
150 mueren al caer avion sobre ciudad de Siberia

Reclamo

¡CLIC!
El mundo
Asínas

Exclusivo

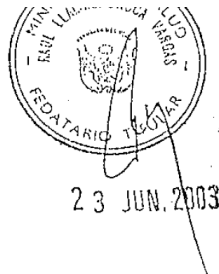
Confesiones del odontólogo asesino

Background: Program Implementation

- ▶ Implemented mainly through "health festivals" (mobile medical teams)
- ▶ Many accounts of intimidation, insufficient information, threats and bribes
- ▶ The policy established stringent targets, and rewarded commitment to such goals

Sterilization targets

Excelentísimo Señor Ingeniero
ALBERTO FUJIMORI FUJIMORI
Presidente Constitucional de
la República
Presente



Excelentísimo Señor Presidente:

Me permito adjuntar al presente los cuadros estadísticos del Programa de Planificación Familiar correspondientes al mes de Junio último así como al período acumulado de Enero a Junio de 1997.

Como podrá usted apreciar Señor Presidente se ha mantenido el incremento en la producción de servicios de AQV de acuerdo con lo previsto, ritmo que debe por lo menos sostenerse en los meses de Julio a Noviembre. En este sentido, considerando que Diciembre es un mes de baja producción debido a las Fiestas de Fin de Año debemos estar cerrando el año 1997 con un producción total bastante cercana a la meta prevista.

Letter by former minister of health, Marino Costa Bauer

Background: Information Environment

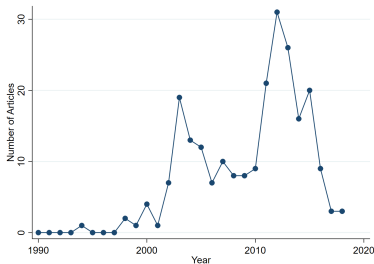
- ▶ The government had large influence on media, and controlled large parts of the judiciary and parliament (McMillan and Zoido, 2004)
 - ▶ E.g. early complaints in 1995 about program implementation were dismissed by parliament
- ▶ November 2000: Fujimori flees the country (and sent his resignation by fax ...)
- ▶ September 2001: Ministry of Health and newly elected Congress launch special commission to investigate the program

Background: Information Environment

- ▶ The government had large influence on media, and controlled large parts of the judiciary and parliament (McMillan and Zoido, 2004)
 - ▶ E.g. early complaints in 1995 about program implementation were dismissed by parliament
- ▶ November 2000: Fujimori flees the country (and sent his resignation by fax ...)
- ▶ September 2001: Ministry of Health and newly elected Congress launch special commission to investigate the program

Background: Information Environment

Num. of News Articles including “Forced sterilizations + Peru” , by year of publication



Notes: The figure plots the number of news articles in the Factiva database including the terms “forced sterilizations + Peru” in the solid blue line and articles with “sterilizations + Peru” in the dashed red line by year of publication

Data

1. Registry of Victims (REVIESFO)

Total number of victims registered, including the location of the events (~ 6,800 registries). Cases are validated by the Ministry of Justice

2. Demographic and Health Survey (1991-2017)

1991-92, 1996, 2000, 2004-2017 (yearly) Child health, contraceptive usage, pre-natal and care and birth attendance, usage of health facilities

3. Electoral Data

Electoral outcomes 1998-2018

4. Latinobarómetro (1996-2018)

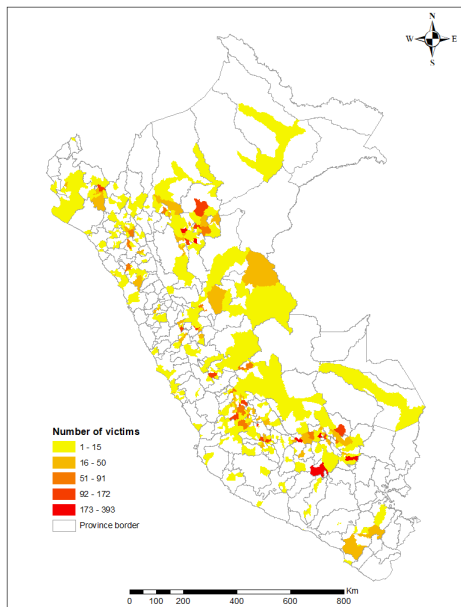
Trust in government institutions

Registry of Victims (REVIESFO)

Registro de Víctimas de Esterilizaciones Forzadas

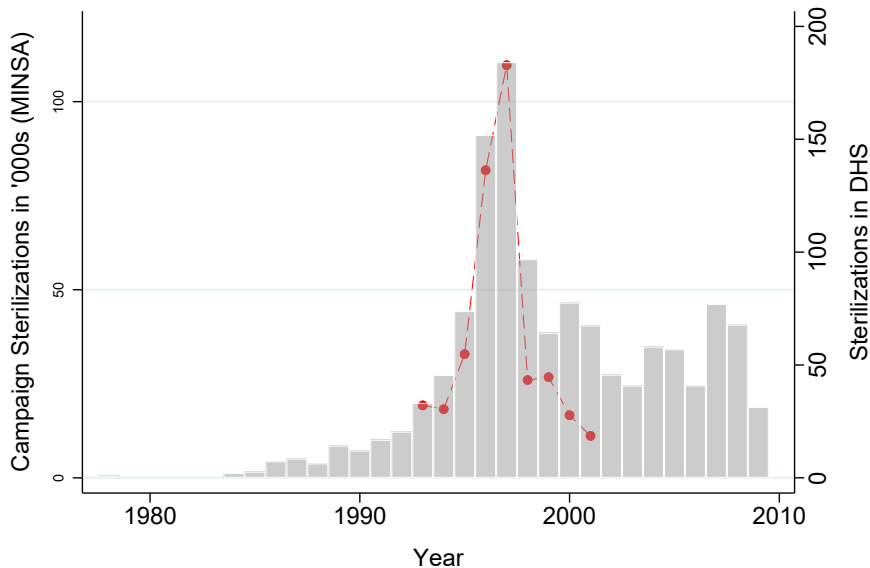
- ▶ Established by Ministry of Justice in 2015
- ▶ Aims at identifying victims illegally sterilized
- ▶ Alleged victims need to provide: proof of sterilization between 1995-2001, statement that occurred w/o consent/sufficient information, ID
- ▶ Ministry of Justice requests information from local health authorities on procedures that took place at the time of the alleged sterilization
- ▶ Benefits of registry: free legal advice, access to health care services, and psychological support. No financial compensation was promised.

Victims reported in REVIESFO, by district



Total victims	6,794
% districts w/ victims	20.5
Avg. num. of victims (if > 0)	17.7
Min	0
Max	341

Total sterilizations: DHS and Ministry of Health (MoH)



Number of sterilizations by year (DHS and REVIESFO)

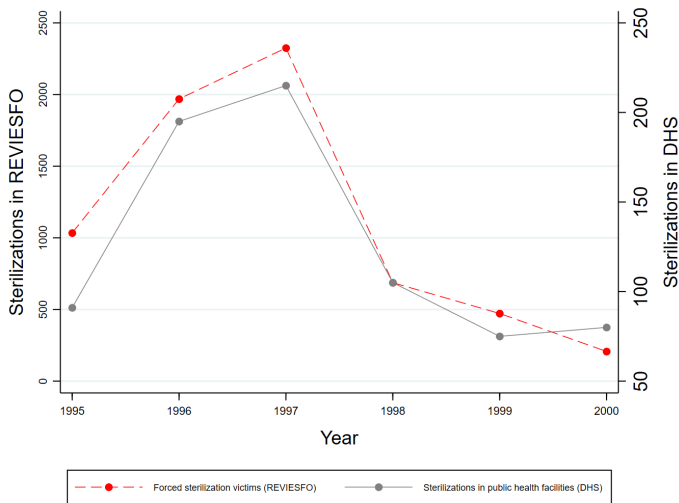


Figure: Total number of reported sterilizations by year (DHS 1991-2017 and REVIESFO)

Correlation between reported sterilizations in DHS and REVIESFO

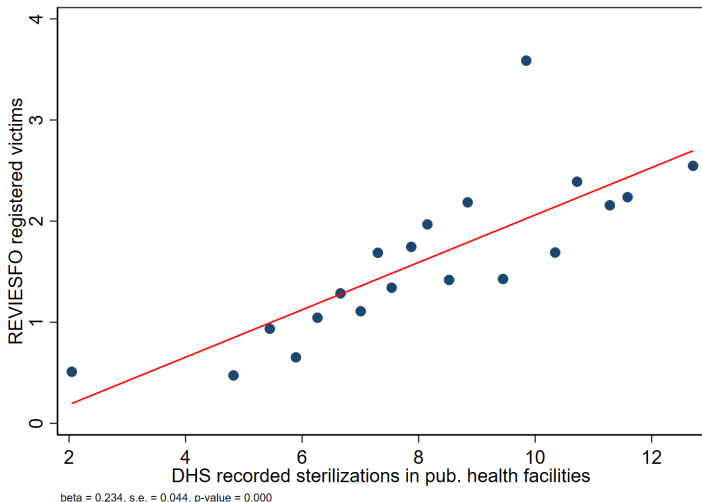


Figure: Binscatter of sterilizations in DHS (x-axis) and REVIESFO (y-axis)

Table: Summary Statistics of Women Registered in REVIESFO and Sterilized Women in Public Health Facilities in the DHS

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	REVIESFO			DHS		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Number of children	6794	4	2.6	649	4	1.54
Age at sterilization	6794	31	5.6	649	31.5	4.01
% Quechua speakers	6794	0.48	0.22	649	0.08	0.27
% agricultural or native community ^a	6794	0.35	0.15	649	0.28	0.45

Empirical strategy

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

- ▶ Y_{ijt} - outcome for individual i , in municipality j , surveyed in year t
- ▶ $Post_t$ - Indicator=1 if survey year ≥ 2001
- ▶ FS_j - (IHS of) total number of women registered as forcibly sterilized in district j
- ▶ γ_j - municipality fixed effects,
- ▶ δ_t - year fixed effects
- ▶ $\nu_{p(t)}$ - province-specific linear time trends
- ▶ ε_{ijt} - error term clustered at the municipality level

DHS Outcome Variables

1. Contraceptive usage
 - ▶ Use of any modern contraceptive method
2. Pre-natal care and delivery index:
 - ▶ Any prenatal care received
 - ▶ Birth at home
 - ▶ Birth assistance (other than relative)
3. Child health:
 - ▶ Child was sick in the last two weeks (diarrhea, fever, cough)
 - ▶ Child's weight-for-age Z-score
 - ▶ Child's height-for-age Z-score
4. Sick child receives health care (none, public, private)

Forced Sterilizations and Health Outcomes

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

	(1) Currently using contraceptives	(2) Prenatal care and delivery index	(3) Child health index
Panel A			
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.015 (0.003)	-0.047 (0.007)	-0.021 (0.004)
Panel B			
Any Forced Sterilization Reported (1=Yes) \times Post 2001	-0.047 (0.009)	-0.115 (0.024)	-0.051 (0.018)
Mean Dep. Var.	0.547	0.356	0.138
Observations	329629	152817	160965
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
Province \times Time	Yes	Yes	Yes

Notes: Prenatal and delivery index: 1) no prenatal care received 2) birth at home 3) birth assistance (other than relative). Child health index: 1) child was sick recently (diarrhea, fever, cough) 2) child's WAZ 3) child's HAZ. Variables standardized (with mean 0 and standard deviation 1). Lower value indicates worse outcome. Standard errors clustered at the municipality level are included in parentheses. Sources: DHS waves 1991-2017 and REVIESFO.

Pre-trend: contraceptives

Pre-trend: prenatal care

Pre-trend: child health

Index split: prenatal care

Index split: child health

Usage of Public Health Services

Table: Forced Sterilizations and the Demand for Health Services (DHS)

	(1) Sick child received any health care	(2) Sick child received private health care	(3) Sick child received public health care
Panel A			
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.005 (0.003)	0.003 (0.002)	-0.009 (0.002)
Panel B			
Any Forced Sterilization Reported (1=Yes) \times Post 2001	-0.011 (0.010)	0.012 (0.006)	-0.024 (0.009)
Mean Dep. Var.	0.266	0.105	0.170
Observations	172645	172250	172169
Adj. R-squared	0.018	0.030	0.025
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
Province \times Time	Yes	Yes	Yes

Notes: Standard errors clustered at the municipality level are included in parentheses. Sources: DHS waves 1991-2017 and REVIESFO.

Robustness

- ▶ No evidence of pre-trends in the main outcome variables Contraceptive use
 - Prenatal care and delivery
 - Child health
- ▶ Direct effects of the campaign
 - ⇒ Effects are *not* concentrated among relatively older or sterilized women Heterogeneity by age Exclude sterilized women
- ▶ Supply side responses
 - ⇒ We do not find that affected localities had significantly less health facilities or personnel Supply
- ▶ Measurement error
 - ⇒ Results are robust to IV'ing sterilizations from DHS w/ REVIESFO IV Results
 - ⇒ no migration response to the campaign migration
- ▶ Other covariates
 - ⇒ Robust to the inclusion of relevant baseline controls and their interactions with time FE Robustness
- ▶ Victims per capita or individual controls Per capita measure and controls

What Explains the Reduction in Health Usage and Outcomes?

- ▶ Social learning through identification (Alsan and Wanamaker 2018): Individual identification with the victims of human rights violations are more affected
- ▶ Political identity (Martinez-Bravo and Stegman 2021): Supporters of a political party disseminating news are more likely to respond
- ▶ Disappointed political supporters (this paper): Supporters of the party implementing the policy are more likely to respond

Forced Sterilizations and Disappointed voters

Table: Main Effects, by Baseline Support for Fujimori's Party

	(1) Currently using contraceptives	(2) Prenatal care and delivery index	(3) Child health index
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.002 (0.007)	-0.009 (0.014)	-0.010 (0.010)
High Support \times IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.020 (0.010)	-0.053 (0.021)	-0.026 (0.014)
Mean Dep. Var.	0.544	0.317	0.119
Observations	201105	94360	100224
Adj. R-squared	0.023	0.505	0.103
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes

Notes: High Support is equal to one if vote share is above the median in the 1998 municipality election results. Standard errors clustered at the municipality level are included in parentheses. Sources: DHS waves 1991-2017, REVIESFO, ONPE municipal vote share data (1998)

Support for the Party Implementing the Policy

Table: Support for Fujimori's Party in Municipal Elections

	(1)	(2)	(3)	(4)
	Turnout	Votes shares	Party rank	Won
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	0.001 (0.003)	-0.013 (0.005)	0.346 (0.100)	0.003 (0.019)
Mean Dep. Var.	0.803	0.18	3.965	0.197
Observations	3241	3241	3241	3241
Adj. R-squared	0.614	0.434	0.391	0.178
Year F.E.	Yes	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the municipality level are included in parentheses.

Sources: REVIESFO, ONPE municipal vote share and turnout data (1998-2018)

Alternative Mechanisms

Table: Horse Race - Alternative Mechanisms (DHS)

	(1) Currently using contraceptives	(2) Prenatal care and delivery index	(3) Child health index
IHS (Num. of Forced Sterilizations Reported) \times <i>Post 2001</i>	-0.00442 (0.006)	-0.01627 (0.015)	-0.00178 (0.011)
Quechua Speaker \times IHS (Num. of Forced Sterilizations Reported \times <i>Post 2001</i>)	0.00895 (0.008)	-0.00358 (0.025)	-0.00625 (0.018)
Rural \times IHS (Num. of Forced Sterilizations Reported \times <i>Post 2001</i>)	0.00289 (0.009)	0.03390 (0.021)	-0.02338 (0.014)
Secondary Education or Less \times IHS (Num. of Forced Sterilizations Reported \times <i>Post 2001</i>)	0.00801 (0.006)	0.01653 (0.012)	0.00857 (0.010)
Signal Strength \times IHS (Num. of Forced Sterilizations Reported \times <i>Post 2001</i>)	-0.00232 (0.005)	0.00646 (0.012)	0.00161 (0.010)
Support for Fujimori \times IHS (Num. of Forced Sterilizations Reported \times <i>Post 2001</i>)	-0.00186 (0.008)	-0.03912 (0.018)	-0.02518 (0.015)
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes

Notes: Information on the radio antennas was provided by the Ministry of Transportation and Communication (MTC). We apply the Irregular Terrain Model (Hufford, 2002) (ITM) 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); Durante et al. (2019) and use the ITM algorithm to calculate the predicted signal loss given the topography of the municipality. We subtract the signal loss from the radio station's transmission power to obtain the predicted signal power in decibels (dB). We keep the highest predicted signal power per municipality and standardize the predicted signal power (0.1). Standard errors clustered at the municipality level are included in parentheses.

Government Policies and Trust in the Government

Table: Forced Sterilizations and Trust in Political Institutions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Government	Public Administration	Judiciary	Involved Institutions	President	Congress	Political Parties	Current Government
IHS (Num. Forced Sterilizations Reported) \times 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	17581	8825	21323	21323	10986	21345	21304	21638
Adj. R-squared	0.092	0.060	0.034	0.034	0.133	0.041	0.037	0.065
Ind. characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Dep. variables equal to 1 if the individual reports having mistrust in the institution, and 0 otherwise. Individual characteristics: gender, educational level, household assets, socioeconomic perception. Standard errors clustered at the municipality level in parentheses. Sources: Latinobarometro (1996-2018) & REVIESFO.

Conclusions

- ▶ Effectiveness of public services on citizen welfare require that citizens trust the government and demand the services provided
- ▶ We show that top-down authoritarian policies that deceive the population negatively affect trust in the government, and the effects are persistent in the long-run
- ▶ Lower trust hampers demand for public health services, affecting health outcomes
- ▶ Our results show the risks of goal-driven policy-making in the absence of proper accountability mechanisms

Thank you!

Comments to: gianmarco.leon@upf.edu

Appendix

Sum. Stats: DHS and REVIESFO

	(1) Observations	(2) Mean	(3) Std. Dev.
Panel A: DHS 1991-2017			
<i>Prenatal Care and Delivery Index</i>			
Prenatal care: none	153678	0.09	0.29
Child birth at home	171934	0.22	0.42
Birth attendant not only relative	175709	0.91	0.29
Currently using contraceptives	329629	0.55	0.50
<i>Child Health</i>			
Child sick	172539	0.46	0.50
Height for age (sd)	161005	-0.98	1.15
Weight for age (sd)	161005	-0.41	1.18
Sick never treated	78549	0.42	0.49
Sick treated in private health institution	78154	0.23	0.42
Sick treated in public health institution	78074	0.37	0.48
Mistrust health personnel (any disease)	34066	0.11	0.31
<i>Household Characteristics</i>			
No education	329629	0.04	0.19
Primary education	329629	0.27	0.44
Secondary education	329629	0.44	0.50
Higher education	329629	0.26	0.44
Speaks indigenous language	329581	0.10	0.30
Rural	329629	0.33	0.47
Panel B: Sterilizations at the District-Level 1995-2000			
<i>REVIESFO</i>			
Sterilizations (total)	1874	4.02	21.91
Sterilizations (IHS)	1874	0.48	1.16
Sterilizations (1=Yes)	1874	0.21	0.41
<i>DHS 2009</i>			
Sterilizations (total)	598	1.08	2.20
Sterilizations (IHS)	598	0.64	0.77
Sterilizations (1=Yes)	598	0.56	0.50

Sum. Stats: Latinobarómetro and Municipal Elections

	(1)	(2)	(3)
	Observations	Mean	Std. Dev.

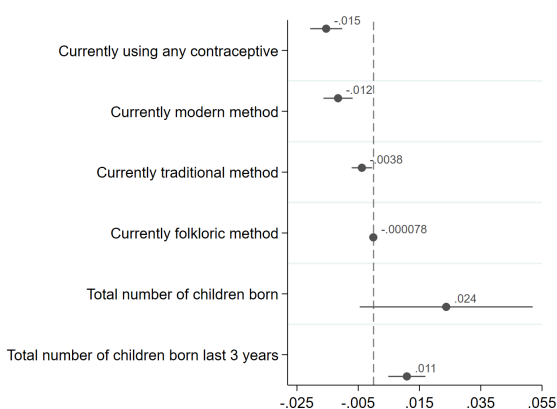
Panel A: Latinobarometro 1996-2018

<i>Mistrust</i>			
Mistrust congress	22839	0.44	0.50
Mistrust government	18937	0.39	0.49
Mistrust judiciary	22807	0.44	0.50
Mistrust president	11176	0.40	0.49
Mistrust public administration	8944	0.31	0.46
Mistrust political parties	22801	0.48	0.50
<i>Household Characteristics</i>			
Socioeconomic level perception	23392	3.02	0.86
Respondent education	22135	4.56	1.74
Female	23392	0.50	0.50

Panel B: Municipal Elections 1998-2018

Turnout	3241	0.80	0.09
Votes shares	3241	18.04	15.06
Party rank	3241	3.96	2.70
Won	3241	0.20	0.40

Forced Sterilizations and Fertility



Notes: The above depicted coefficients represent regression results of Equation 1. We show point estimates and corresponding 95% confidence intervals. Sources: DHS waves 1991-2017 and REVIESFO.

Figure: Prenatal and delivery health care use - Individual Variables

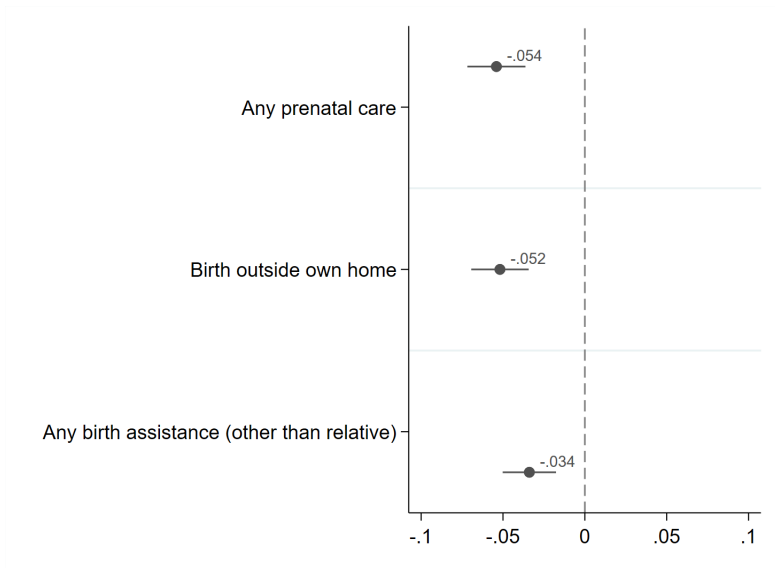
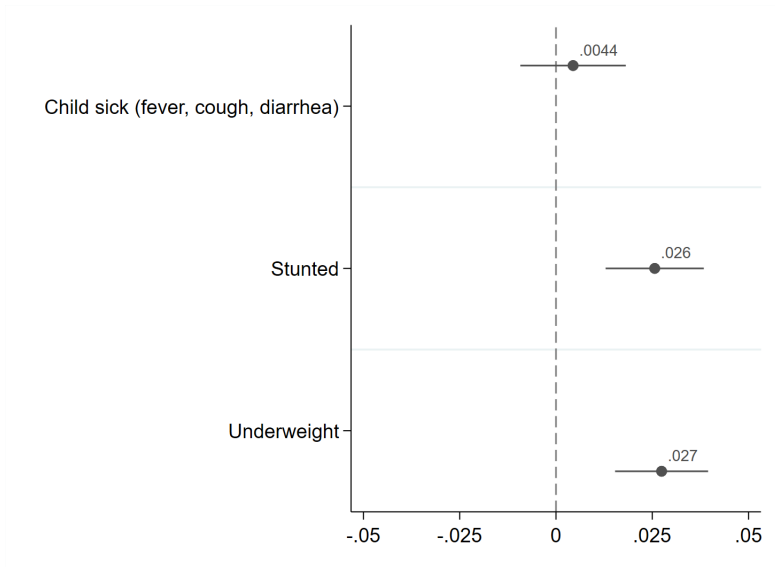
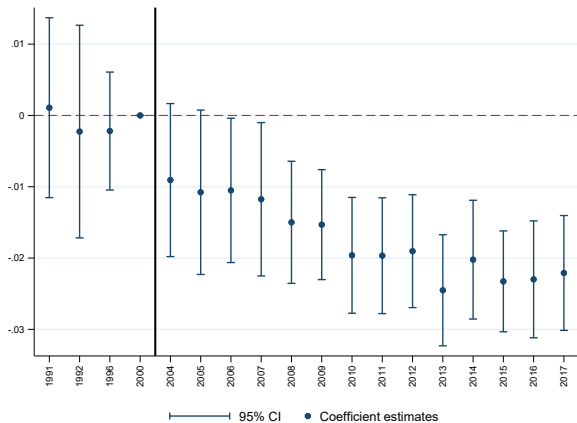


Figure: Child Health Index - Individual Variables

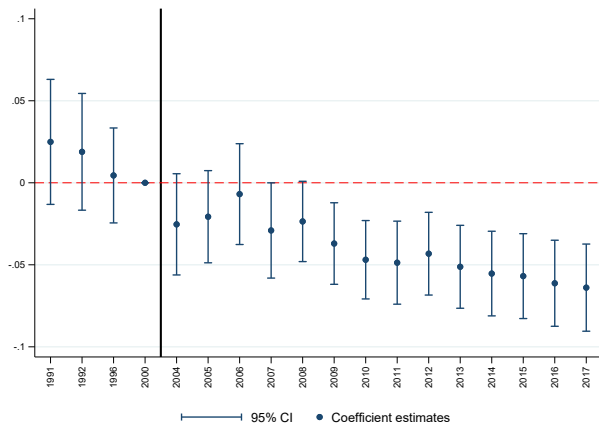


Pre-trends: contraceptive use



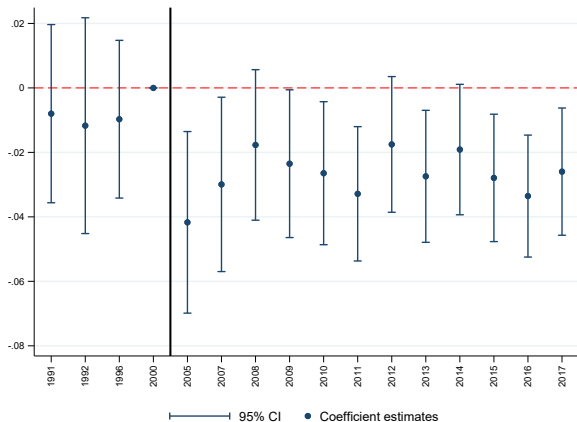
Back

Pre-trends: prenatal care and delivery index



Back

Pre-trends: child health index



Back

Robustness: Per capita measure and ind.covariates

	(1) Currently Using Contraceptives	(2) Prenatal Care and Delivery Index	(3) Child Health Index
Panel A: Using Number of Victims per Capita			
Victims per Capita \times Post 2001	0.000 (0.002)	-0.015** (0.007)	-0.014*** (0.003)
Panel B: Results with Individual Controls			
IHS (Num. of Forced Sterilizations Reported) \times Post	-0.014*** (0.003)	-0.044*** (0.006)	-0.019*** (0.004)
Mean Dep. Var.	0.547	0.356	0.138
Observations	329581	152775	160926
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes

Notes: The Table shows regression results following Equation 1. See footnote of Table 2 for the definition of the dependent variables. In Panel A, the independent variable is the sterilization count divided by 1,000 inhabitants (population count from the 1993 census). Panel B depicts the baseline regression result including the following covariates in column 1: age of respondent, ethnicity, highest educational attainment, whether the respondent lives in a rural area. In columns 2 and 3 the covariates relate to the mother of the child. Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***), 5(**) or 10(*) percent level. Sources: DHS waves 1991-2017 and REVIESFO.

Robustness: DHS and Registry, IV Results

Table: Health Care Usage and Child Health (DHS): 2SLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Currently using contraceptives			Prenatal care and delivery index			Child health index		
REVIESFO									
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.014*** (0.004)			0.006 (0.004)			-0.020*** (0.005)		
DHS									
IHS (Num. of Reported Sterilizations DHS) \times Post 2001		-0.011*** (0.003)	-0.019*** (0.006)		0.012*** (0.003)	0.008 (0.005)		-0.022*** (0.004)	-0.027*** (0.006)
Mean Dep. Var.	0.592	0.592	0.592	0.252	0.252	0.252	0.362	0.362	0.362
Observations	60395	60395	60395	60079	60079	60079	60007	60007	60007
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1st stage Wald F-stat			116.063			116.626			115.373
$\beta_{1st\text{Stage}}$			0.735*** (0.068)			0.736*** (0.068)			0.732*** (0.068)

Notes: Regression results in columns 1, 2, 4, 5, 7, and 8 follow Equation 1, where the measure of sterilization exposure is either the number of victims registered in the REVIESFO or how many 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 3, 6, 9 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 13 for the definition of the dependent variables. Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***), 5(**) or 10(*) percent level. Sources: DHS waves 1991-2017 and REVIESFO.

Robustness: Migration as a source of measurement error

	(1) Currently Using Contraceptives	(2) Prenatal Care and Delivery Index	(3) Child Health Index
IHS (Num. of Forced Sterilizations Reported) \times <i>Post</i> 2001	-0.015*** (0.003)	-0.051*** (0.008)	-0.022*** (0.005)
Ever Moved \times IHS (Num. of Forced Sterilizations Reported) \times <i>Post</i> 2001	-0.002 (0.004)	0.007 (0.008)	0.002 (0.005)
Mean Dep. Var.	0.548	0.356	0.138
Observations	324270	150358	158636
Adj. R-squared	0.034	0.477	0.097
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes

Notes: The estimation results are based on the following Equation: $Y_{ijt} = \beta_1 Post_t \times FS_j + \beta_2 X_i \times Post_t \times FS_j + \beta_3 X_i \times Post_t + \beta_4 X_i \times FS_j + \beta_5 X_i + \gamma_j + \delta_t + \nu_{p(t)} + \varepsilon_{ijt}$, where X_i is equal to one for respondents who have moved at some point in their lives. X_i is equal to zero if the responding woman has never moved. Only the main DiD estimate (β_1) and the triple interaction term (β_2) are shown for exposition purposes. Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***) , 5(**) or 10(*) percent level. Sources: DHS waves 1991-2017 and REVIESFO.

Robustness: Health Care Supply

Table: Forced Sterilizations and Health Care Supply

	Num. of Health Facilities			Num. of Health Specialists		
	All	Public	Private	All	Doctors	Nurses
Panel A: Number of Forced Sterilizations Reported (IHS)						
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.001 (0.002)	-0.002 (0.002)	0.001* (0.000)	-0.014 (0.012)	-0.002 (0.006)	-0.012 (0.008)
Panel B: Any Forced Sterilization Reported						
Any Forced Sterilization Reported (1=Yes) \times Post 2001	-0.006 (0.006)	-0.006 (0.006)	-0.001 (0.002)	-0.013 (0.034)	0.006 (0.017)	-0.020 (0.022)
Mean Dep. Var.	0.478	0.472	0.006	1.085	0.459	0.625
Observations	33027	33027	33027	21069	21069	21069
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes	Yes	Yes	Yes

Direct effects of the policy? (1/2)

Table: Heterogeneity by mother's year of birth

	(1) Currently using contraceptives	(2) Prenatal care and delivery index	(3) Child health index
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.015*** (0.003)	-0.044*** (0.007)	-0.020*** (0.005)
Young \times IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.018 (0.150)	-0.035 (0.214)	0.110 (0.218)
Mean Dep. Var.	0.547	0.356	0.138
Observations	329629	152817	160965
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
Province \times Time	Yes	Yes	Yes

Notes: Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***) , 5(**) or 10(*) percent level. Women are classified as too young to be directly targeted if they were born after 1985. Sources: DHS waves 1991-2017 and REVIESFO.

Direct effects of the policy? (2/2)

Table: Excluding sterilized women

	(1) Currently using contraceptives	(2) Prenatal care and delivery index	(3) Child health index
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.015*** (0.003)	-0.047*** (0.007)	-0.021*** (0.004)
Mean Dep. Var.	0.513	0.352	0.136
Observations	307014	150075	157953
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes

Notes: Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***) , 5(**) or 10(*) percent level. Respondents are excluded from regressions if they report having been sterilized Sources: DHS waves 1991-2017 and REVIESFO.

Baseline covariates

Table: Health Care Use and Child Health with Baseline Covariates Interacted with Year FE

	(1) Currently using contraceptives	(2) Prenatal care and delivery index	(3) Child health index
Panel A			
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.005** (0.003)	-0.020*** (0.007)	-0.020*** (0.005)
Panel B			
Any Forced Sterilization Reported) \times Post 2001	-0.012 (0.009)	-0.036 (0.024)	-0.050*** (0.019)
Mean Dep. Var.	0.547	0.356	0.138
Observations	329629	152817	160965
Adj. R-squared	0.023	0.477	0.096
Year F.E.	Yes	Yes	Yes
District F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes
Baseline CovXYear FE	Yes	Yes	Yes

Notes: Baseline covariates include: share of indigenous population 1993, fertility rate 1993, employment share 1993. Standard errors clustered at the district level are included in parentheses. Asterisks denote statistical significance at the 1(***), 5(**) or 10(*) percent level.

Children's Health Care Use

Table: Children's Health Care Use, Intensive and Extensive Margins

	(1) Sick child received any health care	(2) Sick child received private health care	(3) Sick child received public health care
Panel A: Number of Forced Sterilizations Reported (IHS)			
IHS (Num. of Forced Sterilizations Reported) \times Post 2001	-0.013*** (0.003)	0.009*** (0.003)	-0.022*** (0.004)
Panel B: Any Forced Sterilization Reported			
Any Forced Sterilization Reported (1=Yes) \times Post 2001	-0.028** (0.013)	0.033*** (0.010)	-0.063*** (0.015)
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTIME	Yes	Yes	Yes

Notes: Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***), 5(**) or 10(*) percent level. We replace the outcome variables' values with zero if the child was not recently sick. In the main specification, these values are missing.

Heterogeneity of Main Results

	(1) Currently Using Contraceptives	(2) Prenatal Care and Delivery Index	(3) Child Health Index
Panel A: Rural			
IHS (Num. of Forced Sterilizations Reported) \times <i>Post</i> 2001	-0.005** (0.003)	-0.027*** (0.008)	-0.017*** (0.005)
Rural \times IHS (Num. of Forced Sterilizations Reported \times <i>Post</i> 2001	0.008* (0.005)	0.033*** (0.012)	0.003 (0.008)
Panel B: Indigenous			
IHS (Num. of Forced Sterilizations Reported) \times <i>Post</i> 2001	-0.015*** (0.003)	-0.045*** (0.007)	-0.019*** (0.005)
Quechua Speaker \times IHS (Num. of Forced Sterilizations Reported \times <i>Post</i> 2001	0.024*** (0.005)	0.043*** (0.015)	-0.005 (0.010)
Panel C: Less than Secondary Schooling			
IHS (Num. of Forced Sterilizations Reported) \times <i>Post</i> 2001	-0.010*** (0.003)	-0.038*** (0.008)	-0.016*** (0.005)
Secondary Education or Less \times IHS (Num. of Forced Sterilizations Reported \times <i>Post</i> 2001	0.006 (0.004)	0.014 (0.011)	-0.003 (0.007)
Panel D: Radio Signal Strength 2001			
IHS (Num. of Forced Sterilizations Reported) \times <i>Post</i> 2001	-0.011*** (0.003)	-0.037*** (0.008)	-0.021*** (0.006)
Signal Strength \times IHS (Num. of Forced Sterilizations Reported \times <i>Post</i> 2001	0.001 (0.003)	-0.008 (0.008)	-0.001 (0.005)
Mean Dep. Var.	0.663	0.356	0.138
Observations	253562	152775	160926
Year F.E.	Yes	Yes	Yes
Municipality F.E.	Yes	Yes	Yes
ProvinceXTime	Yes	Yes	Yes

Notes: Results come from the following Equation: $Y_{ijt} = \beta_1 Post_t \times FS_j + \beta_2 X_i \times Post_t \times FS_j + \beta_3 X_i \times Post_t + \beta_4 X_i \times FS_j + \beta_5 X_i + \gamma_j + \delta_t + \nu_{p(t)} + \varepsilon_{ijt}$. Only β_1 and β_2 are shown. Standard errors clustered at the municipality level are included in parentheses. Asterisks denote statistical significance at the 1(***) , 5(**) or 10(*) percent level.