ISRCTN22381841 https://doi.org/10.1186/ISRCTN22381841

AUDIT study: To determine whether federal and state audits increase Mexican municipalities' compliance with a federal grant program to improve municipal infrastructure

Submission date
22/10/2012

Recruitment status
No longer recruiting

Registration date
02/11/2012

Overall study status
Completed

Last Edited
18/12/2023

Condition category
Other

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims

This study is being carried out over 85 municipalities across 17 Mexican states to compare the effect of audits by federal and state audit agencies, and no audits. The first objective is to identify the reduced-form impacts of randomized assignment to audits on outcomes such as knowledge about program requirements, compliance with the law, and capacity building; as well as on municipalities' spending priorities and actual spending patterns. The second objective is to identify the reduced-form impacts of assignment to audit by the federal or state level on audit verdicts, including the number of observations made, their severity, and the amounts of mandated reimbursements to federal treasury of misspent grant money. The third and final objective is to test for the effect of audits on career prospects, and on state governors' discretionary allocations to municipalities. The study's findings contribute to our understanding the nature of local accountability mechanisms in Mexico and help improve the design of the National Program of Audits for better municipal public service delivery.

Who can participate?

Mexican municipalities, that receive 10 million pesos or more from the federal Contribution Fund for Social Infrastructure (FISM, in Spanish), that have not been audited in the years 2009 and 2010, that are not part of the current National Program of Audits, and that have ranks 6 through 10 in terms of the amount of transfers received from the FISM within their state.

What does the study involve?

The interventions are part of the National Program of Audits led by Mexico's Superior Auditor of the Federation in collaboration with state level audit agencies. In particular, eligible municipalities not already included in the National Program of Audits are randomly assigned to be audited by either federal auditors, by state auditors, or to receive no audit. At the end of the intervention survey data is collected from elected and appointed officials working in study

municipalities; as well as administrative data reported by municipalities to the Mexican Treasury on the investments made, their location, and amounts. The outcome data across municipalities that receive a federal or state audit, or no audit at all is compared.

What are the possible benefits and risks of participating?
Participating municipalities may experience improved access to basic municipal public services. Over the long-term, the study may inform changes to the National Program of Audits in a way that improves the performance of the federal Contribution Fund for Social Infrastructure. There are no anticipated risks for participating municipalities. However, given the level of drug related violence in Mexico we are concerned about the safety of state and federal auditors, as well as survey enumerators. We are in constant communication with ASF management to discuss such concerns. Regarding data collection, we rely on phone surveys to avoid exposing enumerators to unnecessary risk.

Where is the study run from?
This study is being run by Yale University (USA) and the Harvard School of Public Health, with close collaboration with Mexico's Superior Federal Auditor.

When is the study starting and how long is it expected to run for?
March 2011 to January 2013

Who is funding the study?
1. Yale University (USA)
2. Leitner Program in International and Comparative Political Economy (USA)
3. New York University (USA)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Study information

Scientific Title
A randomized trial to determine whether federal and state audits increase Mexican municipalities' compliance with a federal grant program to improve municipal infrastructure

Acronym
AUDIT

Study objectives
It is hypothesized that audits by federal and state audit agencies will improve Mexican municipalities' compliance with a federal grant program to improve basic municipal infrastructure, including access to piped water, sanitation, and electricity by marginalized households.

The null hypothesis is that the audits have no effect on investment choice and location because they fail to induce a deterrent effect on municipal administrators, or because they do not improve their knowledge of program requirements, or because municipal administrators turnover is so high it blunts the effect of exposure to an audit.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Yales Human Subjects Committee, 23 June 2011, ref: 1106008610

Primary study design
Interventional

Study design
Block randomized field experiment

Study type(s)
Quality of life

Health condition(s) or problem(s) studied
Public health

Interventions
The study will involve 85 municipalities, 5 from each of 17 Mexican states participating in the study. 17 municipalities (one per state) will be assigned at random to be audited by the Federal Auditor; another 17 municipalities (one per state) will be assigned at random to be audited by their State Auditor; the remaining 51 municipalities (3 per state) receive no treatment.

Other than the random assignment the intervention consists of audits carried out as usual by federal and state level auditors.

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
1. Municipal administrators awareness scale: the sum score of observed binary responses to five questions about treatment awareness. The integer measure ranges in the closed interval [0 to 5].
2. Binary indicator equal to one if respondent to survey expects the probability of being audited in 2012 is less than the probability of being audited in 2013.
3. Respondent's perceived probability of being audited over years 2013-2015. The continuous measure ranges in the closed interval [0, 1]
4. Municipal administrators' knowledge scale, the sum score of observed binary responses to 24 items asking about the rules governing the federal Contribution Fund for Social Infrastructure (FISM, in Spanish). The integer measure ranges in the closed interval [0,24].
5. Simple average of subjects' response to the proportion of FISM grant money that ought to be invested (i) outside council seat and (ii) in public goods. The integer measure ranges in the closed interval [0,100]
6. Simple average of Municipal administrators perception of (i) municipal capacity and (ii) their experience and perceptions about need for training. The integer measure ranges in the closed interval [0,24].
7. Municipalities' compliance with FISM reporting and data accessibility rules. The integer measure ranges in the closed interval [0,4].
8. Simple average of (i) the actual proportion of investments going to municipal council seat and (ii) the actual proportion going to public goods as reported by the municipality to the federal Treasury. The continuous measure ranges in the closed interval [0, 1].

Key secondary outcome(s)
1. Simple average of the municipal rankings in terms of (i) number of observations made by auditors during a municipal audit and (ii) amount of refunds to the federal treasury requested.
2. Average municipal observation score measuring the average severity of audit findings. The integer measure ranges in the half-closed interval [0, infinity)
4. Overall auditor opinion of municipal handling of FISM transfers. The integer measure rages in the closed interval [0,4]
5. Auditor diagnostic, a 2 X 11 contingency table counting how federal and state auditors classify observations into 11 diagnostic categories.
6. Subjects' expectations about future political appointments. A binary outcome.
7. Subjects' expectations about future career prospects. The integer measure ranges in the half-closed interval [3,15]
8. Subjects' rank ordering of Superior Federal Auditor as principal. The integer measure ranges in the half-closed interval [1,3]
9. Log yearly change in budgeted gubernatorial FISM transfers, namely the change in the natural log of budgeted FISM transfers for municipality j, in states, between calendar years 2011 and 2012.

Completion date
30/01/2013

Eligibility

Key inclusion criteria
We selected our convenience sample using the following criteria:
Stage 1

From the universe of 2,440 municipalities located in 31 states select:
1. States with more than 20 municipalities
2. Municipalities with FISM transfers in 2010 of 10 million pesos or more
3. Municipalities not audited in the previous two years (2009, 2010)
4. Municipalities not amongst the 43 pre-selected by the ASF for the 2011 National Program of Audits

Stage 2
From this selection of 767 municipalities located in 21 states select:
1. States with 5 or more municipalities
2. For each state, rank municipalities in decreasing order of FISM transfers and choose by state the five municipalities with ranks 6 to 10.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
85

Key exclusion criteria
Does not meet inclusion criteria

Date of first enrolment
26/03/2011

Date of final enrolment
30/01/2013

Locations

Countries of recruitment
Mexico

United States of America

Study participating centre
Assistant Professor of Political Science
New Haven
United States of America
06510

Sponsor information

Organisation
Yale University (USA)

ROR
https://ror.org/03v76x132

Funder(s)

Funder type
University/education

Funder Name
Institution for Social and Policy Studies, Yale University (USA)

Alternative Name(s)
Yale Institution for Social and Policy Studies, Institution for Social and Policy Studies, Institution for Social and Policy Studies at Yale University, ISPS

Funding Body Type
Private sector organisation

Funding Body Subtype
Universities (academic only)

Location
United States of America

Funder Name
Leitner Program in International and Comparative Political Economy (USA)

Funder Name
New York University (USA)

Alternative Name(s)
University of the City of New-York, Universitas Neo Eboracensis, NYU

Funding Body Type

Government organisation

Funding Body Subtype
Universities (academic only)

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		01/05/2023	18/12/2023	Yes	No
Protocol article	protocol	03/09/2014		Yes	No