

Why experiment? | Pourquoi faire des expériences ?

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Key points for this lecture | Points clés de ce cours

- ▶ What are some limitations of observational research?
- ▶ What is a randomized experiment?
- ▶ Who uses experiments?
- ▶ What are experiments good for (and not)?
- ▶ Qu'est-ce qu'une expérience aléatoire?
- ▶ Qui utilise les expériences?
- ▶ À quoi servent (ou ne servent pas) les expériences?

What is the impact of decentralization on corruption?

► How would we try to answer that question?

► TRANSLATE:

Observational research: the “normal” approach

- ▶ Download and merge existing datasets
 - ▶ Measure naturally occurring behaviors or outcomes, perhaps by running a survey
 - ▶ *Observe*, don't “intervene” or “treat”
- ▶ TRANSLATE: Download and merge existing datasets
 - ▶ Measure naturally occurring behaviors or outcomes, perhaps by running a survey
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What is the impact of decentralization on corruption?

► How would we try to answer that question?

► TRANSLATE:

An observational study of decentralization

- ▶ Fisman and Gatti (2002):
“Decentralization and corruption: evidence across countries” (cited 2,423 times)
 - ▶ Finds a strong country-level correlation between fiscal decentralization in government expenditure and lower corruption
 - ▶ World Bank heavily promoted decentralization in the 1990s and 2000s
- ▶ TRANSLATE:

Should the World Bank believe that decentralization decreases corruption, based on Fisman and Gatti (2002)?

- ▶ Countries that decentralize may be less corrupt to begin with
 - ▶ They may have stronger civil societies
 - ▶ They may adopt other governance reforms at the same time
 - ▶ *Confounding*: a hidden factor that makes it look like there's a causal effect when there might not be
 - ▶ Observational research can show patterns and associations, but rarely causality
- ▶ TRANSLATE:

What is a randomized experiment? | Qu'est-ce qu'une expérience aléatoire?

- ▶ You have a treatment (intervention)
 - ▶ *You randomly assign units to treatment and control conditions*
 - ▶ You compare the outcomes for the units that were assigned to treatment to outcomes for those that were not
- ▶ Vous avez un traitement (intervention)
 - ▶ *Vous assignez de manière aléatoire des sujets aux conditions de traitement et de contrôle*
 - ▶ Vous comparez les résultats des unités qui sont assignées au groupe de traitement et de celles qui sont assignées au groupe de contrôle

Policy experiments | Expérimentations politiques

A method for:

- ▶ Putting beliefs about what works to the test
- ▶ Enabling policy decisions based on data

Une méthode pour:

- ▶ Tester les idées ou croyances sur ce qui fonctionne
- ▶ Prendre des décisions politiques en se basant sur les données

What is an experiment? | Qu'est-ce qu'une expérimentation?

- ▶ Question: Does informing communities about school oversight committees improve education outcomes?
 - ▶ India's Village Education Committees (VECs): Include 3 parents, head teacher, and village leader
 - ▶ Study: 65 Indian villages received info on VEC roles and responsibilities, 80 villages did not (*randomly chosen*)
 - ▶ Outcome: Children's scores on basic reading, writing, and math tests
- ▶ TRANSLATE:

Why an experiment? | Pourquoi une expérimentation?

Random assignment → highly credible evidence that there is discrimination based on ethnicity

If politicians believe results → decide to introduce policies to avoid discrimination

Affectation aléatoire → preuve hautement crédible qu'il existe une discrimination fondée sur l'ethnicité

Si les hommes politiques croient aux résultats → décident d'introduire des politiques pour éviter la discrimination

Long history of the method | Une longue histoire de la méthode

- ▶ Late 1700s: Early double-blind experiments with comparison group (not randomized)
- ▶ 1920s: First randomized experiments in agriculture, education, and political science
- ▶ 1965: First clinical randomized trial (Streptomycin for TB)
- ▶ 2019: Nobel prize for popularizing randomized experiments in economics
- ▶ Fin des années 1700 : Premières expériences en double aveugle avec groupe témoin (non randomisé)
- ▶ Années 1920 : Premières expériences randomisées dans les domaines de l'agriculture, de l'éducation et des sciences politiques
- ▶ 1965 : Premier essai clinique randomisé (Streptomycine pour la tuberculose)
- ▶ 2019 : Prix Nobel pour avoir popularisé les expériences aléatoires en économie

Widespread use | Utilisation répandue

- ▶ Clinical trials for medicine
 - ▶ Political campaigns
 - ▶ Tech A/B testing
 - ▶ Policy trials in governments
- ▶ Essais cliniques
 - ▶ Campagnes politiques
 - ▶ Tests A/B en tech
 - ▶ Essais politiques dans les gouvernements

Use in social science | Utilisation en sciences sociales

- ▶ Corrected wrong beliefs
 - ▶ Found that some things don't scale
 - ▶ Encouraged good policies
- ▶ Corrigé des croyances erronées
 - ▶ Montré que certaines politiques ne s'étendent pas bien
 - ▶ Soutenu les bonnes politiques

Proving beliefs wrong | Démontrer que les croyances sont fausses

- ▶ Belief: Info on politicians changes votes
 - ▶ Intervention: Give info on performance
 - ▶ Result: No effect on vote share
- ▶ Croyance : L'information change les votes
 - ▶ Intervention : Donner des infos sur les élus
 - ▶ Résultat : Aucun effet

Proving beliefs right | Prouver que les croyances sont justes

- ▶ Belief: Cash incentives change behavior
 - ▶ Intervention: Conditional cash for child vaccinations
 - ▶ Result: Large increase in vaccine uptake
- ▶ Croyance : Les incitations modifient les comportements
 - ▶ Intervention : Argent pour vaccins
 - ▶ Résultat : Hausse des vaccinations

Scaling up successes | Transposition à plus grande échelle des succès remportés

- ▶ Belief: Small-scale success might not scale
- ▶ Program: Education volunteers scaled to 35,000 villages
- ▶ Result: Still effective

- ▶ Croyance : Les petits succès ne s'étendent pas toujours
- ▶ Programme : Volontaires en éducation dans 35 000 villages
- ▶ Résultat : Toujours efficace

Limitations to experiments | Limites des expériences

- ▶ Some things don't need an experiment
 - ▶ Smoking → bad for health
 - ▶ Parachutes → useful when jumping
- ▶ Pas besoin d'expérience pour tout
 - ▶ Le tabac nuit à la santé
 - ▶ Les parachutes aident à sauter

Why experiments | Pourquoi des expérimentations?

- ▶ Let's put beliefs to the test
- ▶ What works? → Let's find out!
- ▶ Mettons les croyances à l'épreuve
- ▶ Qu'est-ce qui fonctionne ? → Découvrons-le !