Using Impact Evaluation to Improve Regulatory Reforms

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Outline

1. Why Impact Evaluation

2. Using Impact Evaluations to evaluate Regulatory Reforms

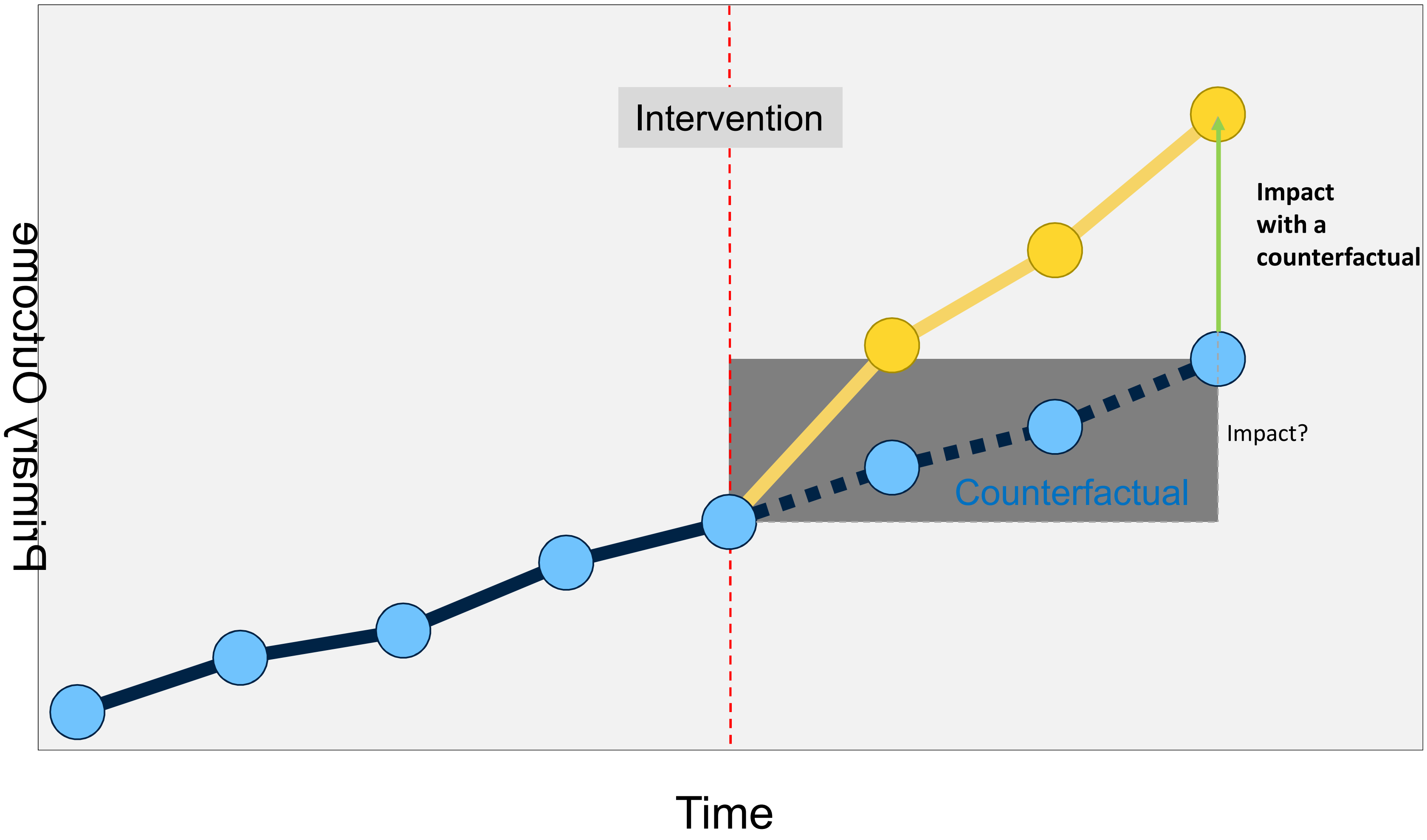
3. Examples

What are Impact Evaluations?

- What is the impact of reform X on outcome(s) Y?
  - Monitoring offers a descriptive before-after of participants
  - Correlations and trends? Could be misleading.
  - Neither establish causality

- How do we establish causality?
  - Counterfactual analysis: compare what happened with reform X to what would have happened without reform X.

Counterfactuals



Why Impact Evaluations?

- Strong counterfactual analysis to arrive at causality.
  - Treated & control groups have identical initial average characteristics (observed and unobserved)
  - So that, the only difference is the treatment
  - Therefore the only reason for the difference in outcomes is due to the treatment

- Evaluation objective: identify cause-effect to enable good policy decisions

- In the process, we can often answer two key questions:
  - **What** is the value of policy X?
  - **How** do we get the most out of it?

WHY IS UNDERSTANDING CAUSALITY SO IMPORTANT?

It is easy to confuse correlation with causation

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Step 1: Which Regulatory Reforms?

- A number of regulatory reforms aim to ensure top-down accountability:
  - Eg: audits, inspections, supervision, performance assessment and feedback, laws and regulations.

- But what about demand-led accountability ?
  - Eg: information, report cards, user participation and monitoring.

Source: Chris Woodruff, 2015

Step 2: How?

- Targeting and take-up
  - Is the reform targeting implicitly or explicitly? Is the right group being reached
    - Can we evaluate a pilot before scale-up?
  - Is compliance or take- up high? Can it be improved?
    - Pilot and compare different options - offer different forms of information and incentives to see what is most effective.

- In general, evaluating and comparing options in pilot phase can address design issues before the reform is scaled up
  - Who to deliver – public? Can private sector do this better?
  - In what form – will electronic systems be used?
  - When – does timing matter?

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   1. Formalization in Benin and Malawi
   2. Trade Facilitation in Albania

Business Registration in Benin and Malawi -
Background

Benin

Large informal sector (70% of GDP, 95% of Employment).

In 2011 (with WBG support), became first OHADA country to introduce the '*Entreprenant*' status to facilitate formalization of MSEs.

'*Entreprenant*' a simplified legal regime applicable to any person who runs a MSE with limited turnover that offers most of the benefits of formalization (a limitation is that the MSE cannot export or access large public contracts).

Malawi

Informality wide-spread (93% of firms).

Government of Malawi effort (supported by WB to improve business environment and improve process of business registration.

New Business Registration Bill, new Business Licensing Bill, Electronic system of business registration, resulting in reduced time and costs register.

Impact Evaluations in Benin and Malawi

Evaluation Questions

- Do businesses register if registration is made (i) Less costly (B)? (ii) Completely costless (M)?
- What is the effect of becoming formal on firm performance and growth (B,M)?
- Is the fear of tax administration an important barrier to formalization - can complementary tax-mediation services increase formalization (B)?
- What do complementary services, (i) business support and training services (B), and (ii) bank information session and offer of business bank account (M) add to outcomes?

Immediate Policy Objectives

- In Benin,
  - GoB will use the results to scale up the *entreprenant* status.
  - Other OHADA countries have committed to implement a similar program in the next years and can benefit from Benin experience.
- In Malawi,
  - Department of the Registrar General aims to use results to either create incentives for firms to register or to identify bottlenecks that constrain enterprise performance.

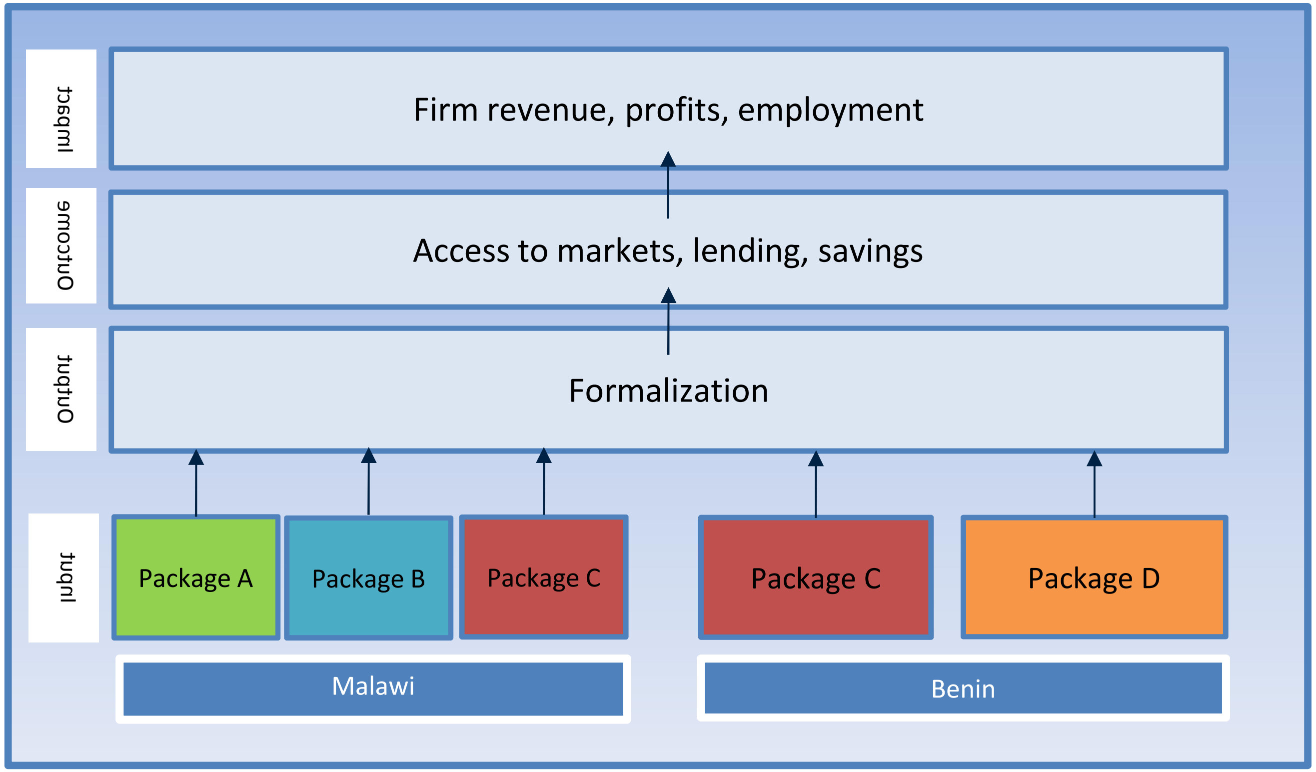
Malawi, Benin Randomized Control Trials

Package A
- Regulatory simplification/ free registration

Package B
- Package A
- Provision of Tax ID number

Package C
- Package A
- Bank services
- Provision of business advisory services/trainings

Package D
- Package C
- Provision of tax filing and payment advice + tax return certification
- Provision of tax mediation services



Short-term results

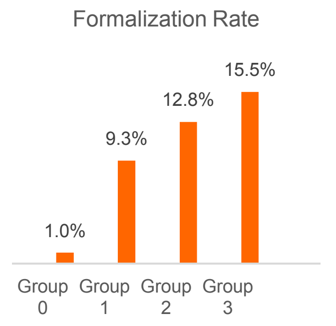
Malawi

- Take-up for business registration very high in treatment groups (75-85%)
- Take-up for tax registration modest among treatment group that also received tax registration service (4%).
- Business registration alone did not have a significant impact on financial services use.
- Combining with bank information sessions resulted in large impacts on likelihood of having a business bank account, financial practices, and use of complementary financial services.
- Cost-per-registration=~USD 27.

Benin

- Take-up for registration high in treatment groups (9-15%).
- Take-up higher in treatment groups that received complementary counselling services and tax mediation services.
- No short-run impacts of formalization on business performance, firm behavior, trust, and perceived well-being.
- Cost-per-registration=~USD1000

Midline Survey Results



Formalization rate is higher among
- Male business owners
- Businesses operating outside Dantokpa market
- Non-trade sectors
- Business owners who went at least to secondary school
- Businesses that received more than one visit from a tax inspector in the year prior the program implementation
- Informal businesses that were similar to formal businesses program implementation

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Learning so far?

- Free registration take-up very high when there are no tax implications in Malawi.

- In Benin, where tax and business registration were not separate, lower levels of registration observed than in Malawi. (This also drove the higher costs-per-registration figure).

- Combining with bank information session and offer of bank services a good way to increase use of financial services in a big way in Malawi.

- Delivery: In Benin, since only 53% of business owners had a passport or an ID card, a requirement to register, lack of proper identification was a barrier to formalization.

- Still to learn: Worth it for these firms to formalize from either a firm viewpoint or a public policy viewpoint?
  - Depends on extent to which formalization enables firms to access finance, gain more customers, and grow, and the extent to which incorporating firms into the formal sector results in increased tax payments or other public policy benefits.

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Customs Reforms

Background

Trade Facilitation Reforms

- Trade facilitation widely seen as key to integration and trade growth: Hundreds of millions of U.S. dollars devoted to aid-for-trade initiatives – e.g., 2013 WTO Trade Facilitation Agreement.
- Commitments to adopt best practices on border procedures
- Rigorous evidence on effectiveness? Limited

Risk-management reforms in customs

- High rates of physical inspections → Inefficient, cause delays, and impede trade.
- Risk-management: shift inspections away from 'low-risk' shipments towards 'high-risk' shipments
  - Inspection decisions based on risk score (score based on past outcomes, shipment characteristics etc.)
  - Improvements to efficiency and compliance in the customs clearing process.
- Should, if successful, reduce physical inspections and border delays. Does this affect trade?

Evidence?

Albania offered a strong setting

- Substantial reforms starting from high level of physical inspections
  - ✓ Customs law aligned with EU customs law, incl. authorization of automated customs procedures
  - ✓ 2001-2012: improvements to IT systems (ASYCUDA, ASYCUDA++, ASYCUDAWorld) and implementation of risk management
- Low tariffs and high levels of measured compliance
  - ✓ Limited incentives to evade tariffs
  - ✓ Scope to reduce the physical inspections
- High-quality data, sufficient post-reform period for analysis.
- Useful (Middle-income country) example for developing countries

What is the effect of reduction in inspections through risk-management reforms in Albanian customs on Imports?

Estimation

IV (2SLS*)

- Idea: Automated system allocates shipments to red channel (physical, most-intensive inspections) based on risk score *plus a random element*.
- Approach: Identification using exogenous variation in physical inspection rates that come from the random assignment by automated system to red channel.
  - Random assignment to red channel is (i) exogenous to value of imports and (ii) highly correlated with time spent at customs.
  - Non-random sources of variation in inspection rates swept out by controlling for unit-level fixed effects. Unit = Aggregate imports of a specific product by a specific firm from a specific country in a given year (importing firm-product-country-year).
  - Use median allocation (>50% of shipments) to red channel as an instrument for time spent in customs in a 2SLS framework.
- Data supports this approach
  - Conditioning on fixed effects, allocation to red channel is independent of import value.
  - Conditioning on fixed effects, allocation to red channel is independent of previous allocation decision.

*Preferred over GMM for computational feasibility, given v.large no. of fixed effects.

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Findings

- For the typical unit that experienced a change in median allocation to the red channel (i.e. minority of shipments now go to red channel instead of majority).
  - This lead to a decrease in time to clear customs of 0.07 days.
  - That decrease in clearance time caused an increase in import values of 7%.
- How big is this effect?
  - Let’s compare to a tariff cut that would generate an equivalent effect on impact.
  - Using figures from Bernard et al. 2003 (1% tariff cut=>3.8% import growth), this is equivalent to 1.8 pp reduction in tariffs for these units.
  - Given 21% (inspection rate fell from 43% to 12%) of units experienced a decline in median allocation between 2007 and 2012, the aggregate impact on Albanian imports was equivalent to a tariff cut of 0.36 pp.

Lessons

- Risk-based reforms generated private sector savings estimated at US$12 million annually.
  - This is based on 3.8pp tariff cut and value of Albanian non-oil imports in 2012 (US$3.3 bil).
  - Note that welfare gains are bigger than in a tariff cut scenario since no tariff revenue is lost.
- These estimates are useful for cost-benefit analysis of similar policies here and elsewhere.
- Results may be indicators for other contexts, but more work can be done:
  - Can we verify results in other types of border agencies such as technical control agencies – responsible for food safety, sanitary and phyto-sanitary standards?
  - Can we examine differences that arise in a different environment?
    - High-tariff environment (more typical of lower-income countries),
    - With more non-compliant behavior, which may limit the ability of customs agencies to reduce inspections.

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Impact Evaluations of Regulatory Reforms

Impact Evaluation	Description of reform	Papers/ reports
Albania Customs Reforms	Based on several reforms in customs experienced by Albania in the early 2000s, the study evaluates the impact of a dramatic reduction in the rate of physical inspections by Albanian customs to estimate the effects of fewer inspection-related delays on the level and composition of imports.	Working paper Policy note
Georgia SME Tax Reform	The Ministry of Finance re-introduced a simplified tax regime for MSMEs in 2010. Under this new regime, businesses with annual revenue below GEL 30,000 (US$ 18,255) and without employees are designated as "micro" businesses and exempt from income taxation. Firms with annual revenue between GEL 30,000 and GEL 100,000 (US$ 60,850) are designated as "small" businesses and have the option to be taxed based on revenue instead of profits, at a rate of 3 or 5 percent.	Working paper Policy note
Benin Entreprenant Status	The entreprenant status is a simplified legal regime to facilitate firm formalization. The reform and incentives being tested involve streamlining the business registration process, including reducing the number of steps, time and cost to register; provision of information for registration, tax filing and payment information as well as business services and training.	Working paper (short-term analysis) Baseline report
Malawi Business Registration Reform	The Malawi's Department of the Registrar General is streamlining its registration process to increase business registration rate, and supporting this evaluation with the aim of using the results to either create incentives for registration or identify bottlenecks that constrain enterprise performance. Among the incentives being tested are: costless registration, assistance with tax ID and financial training for firms.	Working paper (short-term analysis) Policy note
Serbia In-house Clearance Reform for Imports	In 2011, Serbian customs implemented the in-house clearance program. The program allows qualified firms to clear their goods in their own warehouse rather than at the customs office. The impact evaluation aims at estimating the effect of the program on clearance times and imports.	Working paper under review (available upon request)

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Impact Evaluations at Baseline Stage – (design and preliminary report available)

Impact Evaluation	Description of reform	Papers/ reports
Rwanda Tea Pricing Reform	In 2012, the GoR's reform of green leaf pricing came into force, linking green leaf prices to international market prices for 'made tea'. The evaluation proposes to estimate the impact of the reform on tea production, tea quality, and the living standards of Rwandan smallholder tea farmers.	Baseline report
Tajikistan E-filing Reform	Tajikistan introduced tax E-filing in 2012, and has conducted public information campaigns, trainings for business associations and discounts in order to encourage take-up. The evaluation assesses the effectiveness of different incentive packages in increasing the adoption rate of electronic tax filing in Tajikistan, and the subsequent effect of adoption on firm outcomes.	Baseline report
Kenya Inspections Regime	Testing a reform to improve quality standards for patient safety that includes a new regulatory package, supply side interventions (inspections) and demand-side interventions (consumer scorecards).	

Thank You

For more information, please contact
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For more information on the Impact Program,
https://www.wbginvestmentclimate.org/results/impact-program.cfm