Our ideals to manage the commons neglect equity

There are two economic ideals for managing the commons

- Taxing external costs (Pigou, 1920).
- Laying down property rights (Coase, 1960).

These ideals do not consider equity

- "[A]ll that matters (questions of equity apart) is that the rights of the various parties should be well-defined . . ." (Coase, 1960)

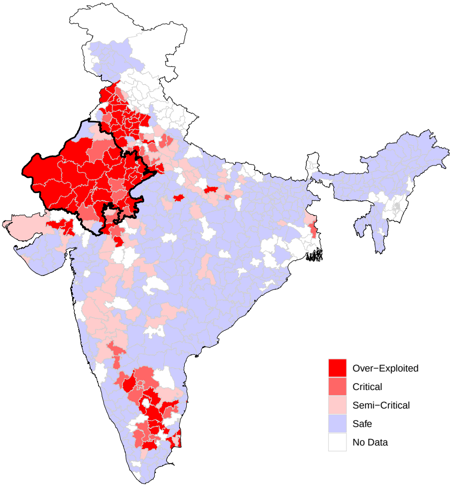
Equity is now the main stop on moving to more efficient regimes

- At a small scale, local institutions can efficiently manage common resources while respecting equity of use (Ostrom, 1990, 1993).
- At a large scale, we are more or less stuck (Arrow et al., 1995; Daily et al., 2000; Walker et al., 2009; Jackson, 2018).

India's groundwater crisis

- India uses more groundwater than the United States and China combined
- Irrigated area increased seven-fold from 1950 to 2014, and agricultural yields three-fold since the 1960s (Mukherjee et al., 2014)
- This growth has drained India's groundwater aquifers (Lo et al., 2016; Famiglietti, 2014).
- Losing water sparks conflict and lowers income (Sekhri, 2014; Blakeslee, Fishman and Srinivasan, 2019).

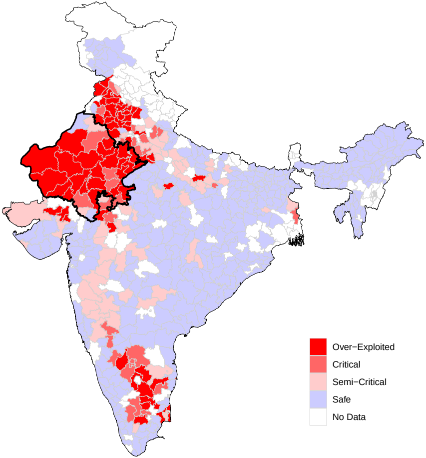
Figure: Groundwater exploitation



Rationing is India's de facto groundwater policy

Figure: States that ration

Figure: Groundwater exploitation



- States that ration have a rural population ≈400 million and produce 60% of India's agricultural output

India’s groundwater policy

- Water has no price and is not excludable
- Power is priced at or near zero for farmers
- *De facto*, electricity rationing is the only policy to manage the commons

Figure: Electricity ration

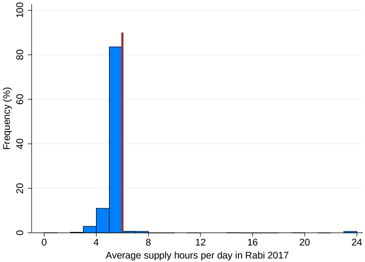
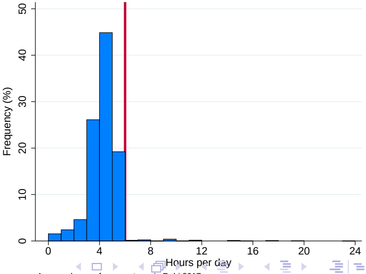


Figure: Electricity use



Analyze the rationing regime in two parts

1. **Marginal analysis**
    - Take as given that the state is rationing
    - Estimate the marginal returns to increasing the ration

   $\Rightarrow$ Minimal assumptions, but only marginal effects

2. **Structural analysis**
    - Estimate the agricultural production function as well as heterogeneity in productivity across farmers

   $\Rightarrow$ Use these estimates to study the distributional impacts of efficient, Pigouvian reform

Three main findings

1. **Level of the ration**. *The current ration is nearly efficient.*

2. **Efficiency of rationing**. *Rationing, relative to a Pigouvian benchmark, lowers surplus from agricultural production by 16% of annual household income.*

   - The gain from Pigouvian reform is *not* due to water conservation.
   - Rather, it is due to *increased* input use and productivity gains, due to the reallocation of water.

3. **Equity of rationing**. *Pigouvian reform would not approach a Pareto improvement.*

   - At least one-fifth of the population is worse off under Pigou, net of (very large) compensating transfers.
   - Rationing benefits unobservably less productive farmers, which makes it difficult to target transfers.

Literature I: Management of common resources

Large body of work on coarse instruments for environmental regulation

- Bans (Davis, 2008), mandates (Fowlie, Knittel and Wolfram, 2012), rationing (Mansur and Olmstead, 2012), and the like are *ubiquitous*.
- Efficient policy will often *not* imply a Pareto improvement in real settings with private information on benefits (Sallee, 2019)

This paper: estimate equity-efficiency trade-offs of reform

- Closest precedent is Donna and Espin-Sanchez (2018) on markets vs. institutions: find quotas are more efficient in a Spanish irrigation community, when poor farmers cannot afford to buy water
- We allow productive heterogeneity, which makes the equity-efficiency trade-off induced by rationing sharper

Literature II: Benefit targeting

Recent work on targeting has considered the delivery of benefits

- Efficiency and targeting of benefit transfers (Alatas et al., 2012; Niehaus et al., 2013; Muralidharan, Niehaus and Sukhtankar, 2016; Hanna and Olken, 2018).
- Screening mechanisms can target beneficiaries more efficiently on unobserved dimensions like poverty (Banerjee, 1997; Alatas et al., 2016).

This paper: non-market allocation as a targeting mechanism

- Rationing makes implicit transfers of 26% of household income, relative to a Pigouvian regime.
- Surplus moves from the productive to the unproductive, without the state touching any money or even knowing productivity.

Literature III: Productivity dispersion

Booming literature on misallocation in developing countries

- Across sectors, manufacturing firms and farms (Gollin, Lagakos and Waugh, 2014; Hsieh and Klenow, 2009; Hopenhayn, 2014; Adamopoulos and Restuccia, 2014; Restuccia and Santaeulalia-Llopis, 2017)

The productive residual may not be due to market or governance failures

- Degree of misallocation depends heavily on model specification (Haltiwanger, Kulick and Syverson, 2018)
- Gollin and Udry (2019) show that a richer model, in the context of African agriculture, greatly reduces estimates of misallocation.
- Restuccia and Rogerson (2017) allow that the indirect approach may inflate dispersion, but argue the direct approach of attributing misallocation to specific policies has had limited success.

This paper: link misallocation to a particular policy: rationing

- Estimated effects are large, but empirically disciplined.

Outline

The farmer's problem

Farmers maximize profits

$$\Pi_i(L_i, X_i^*, K_i^*, H_i^*) = \max_{X_i, K_i, H_i} A_i F(L_i, X_i, K_i, W_i(H_i, D_i)) - w_i X_i - r_i K_i - p_e P_i H_i$$

subject to ration and water extraction function:

$$\begin{aligned} H_i &\leq \overline{H} \\ W_i(H_i, D_i) &= \rho \frac{P_i H_i}{D_i}. \end{aligned}$$

Inputs are land, labor, capital, and water.

Water use depends on electricity ration:

- A farmer runs their pump for H_i hours in the day to lift water from well depth D_i underground
- Water is inversely proportional to depth D_i, as more energy is required to lift water from further down
- ρ is a physical constant.

Profit as a function of water

Define production and profit functions with water as the only argument.

$$\begin{aligned}\widetilde{F}_i(W_i) &= F(L_i, X_i^*, K_i^*, W_i) \\ X_i^*, K_i^* &\in \arg\max_{X_i, K_i} \Omega_i F(L_i, X_i, K_i, W_i) - w_i X_i - r_i K_i\end{aligned}$$

be production as a function of water.

Similarly, let

$$\widetilde{\Pi}_i(W_i) = \Omega_i \widetilde{F}_i(W_i) - w_i X_i^* - r_i K_i^*$$

be the profit from the use of water W_i.

The state's problem

Let the opportunity cost of water be λ_W per liter extracted.

The state sets a ration (assumed binding) to solve:

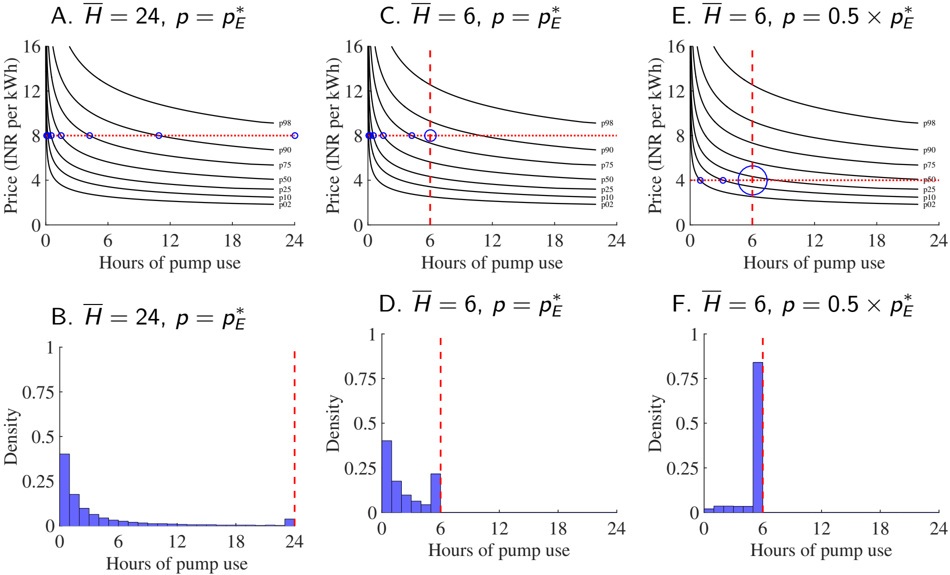
$$\max_{\overline{H}} \sum_i \left[\widetilde{\Pi}_i(W_i(\overline{H}, D_i)) - c_E P_i \overline{H} - \rho_i \frac{\overline{H}}{D_i} \lambda_W \right].$$

The first-order condition for an optimal ration $\overline{H}^*$ is

$$\underbrace{\sum_i \frac{d\widetilde{\Pi}_i(W_i(\overline{H}^*, D_i))}{d\overline{H}^*}}_{\text{Marginal benefit}} = \underbrace{\sum_i c_E P_i + \frac{\rho_i}{D_i}\lambda_W}_{\text{Marginal social cost}} \tag{1}$$

Ration balances:

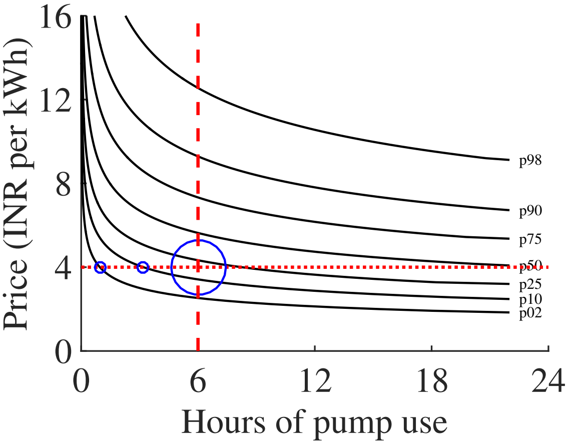
1. Marginal benefit of additional farmer profits;
2. Marginal cost of power and the marginal opportunity cost of water.



A. $\overline{H} = 24,\ p = p_E^*$
C. $\overline{H} = 6,\ p = p_E^*$
E. $\overline{H} = 6,\ p = 0.5 \times p_E^*$
Price (INR per kWh)
Hours of pump use
p98
p90
p75
p50
p25
p10
p02
B. $\overline{H} = 24,\ p = p_E^*$
D. $\overline{H} = 6,\ p = p_E^*$
F. $\overline{H} = 6,\ p = 0.5 \times p_E^*$
Density
Hours of pump use

Estimation of loss due to rationing

Figure: Demand under rationing



- No variation in price or quantity
- The bundle "chosen" is not on the demand curve

Estimation of loss due to rationing

- Allocative loss due to giving heterogeneous farmers the same input
- To estimate that loss, we need to know the marginal return to relaxing the ration, preferably the whole distribution across farmers
- Yet the rationing regime itself suppresses the variation that would enable such estimation. Consider two approaches one might try:

  1. **Direct approach: estimate effect of changing the ration.** Ration does not vary, nor does price.
  2. **Revealed preference: estimate demand for power** The price and quantity bundle we observe under rationing is **not on the demand curve**.

Outline

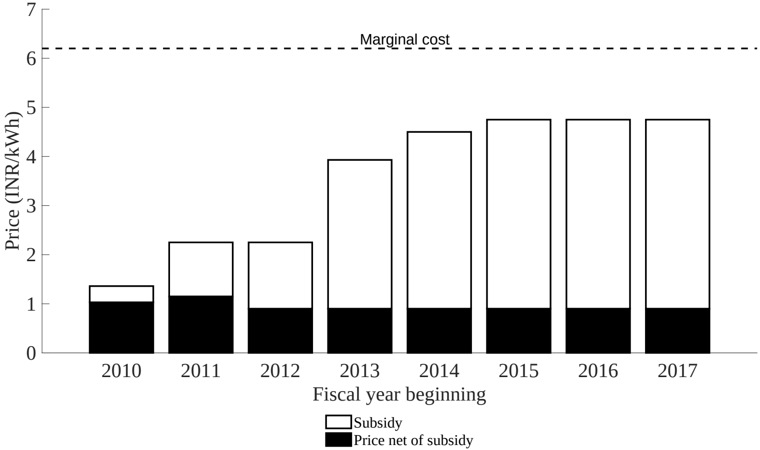
Data: Agricultural production

- Conducted a large, original survey of farmers to learn about how electricity and water use affect profitability
  - Sampling frame of utility customers, done in collaboration with utility using administrative data
  - Select six sub-divisional offices (SDOs) with a population of 47,442 agricultural consumers
  - Sample of 4,262 farmers drawn in 300 feeders.

- Survey data at the farmer $\times$ crop level
  - Many farmers grow multiple crops
  - Survey with reference to the Rabi (dry) growing season. Basically all water input from irrigation.

Rajasthan sets trivial power prices for farmers

Figure: Tariffs and subsidies

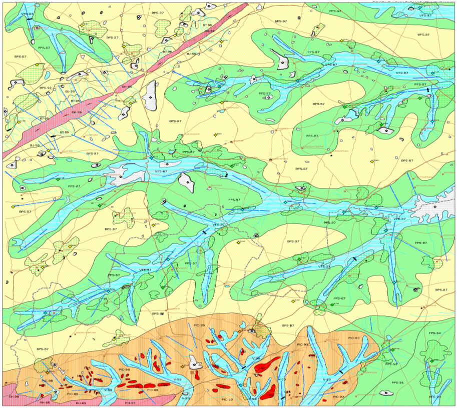


- Marginal price is 15% of private marginal cost

Data: Water scarcity

- Government of India's National Remote Sensing Centre (NRSC) prepared a "groundwater prospects" GIS database to help states find water to drink
- *Prospects* means that the project was explicitly focused on the geological determinants of water availability
- We obtained the data layers for our study areas
    - Faults / fractures
    - Rock types (lithology)

Figure: Groundwater prospects, Bundi district, Rajasthan



Outline

Outline

Idea: estimate benefit of power ration from marginal return to water

The marginal benefit of an increase in the electricity ration $\overline{H}$ is

$$\begin{aligned}
\sum_i \frac{d\widetilde{\Pi}_i(W_i(\overline{H}, D_i))}{d\overline{H}} &= \sum_i \frac{d\widetilde{\Pi}_i}{dW_i}\frac{dW_i}{d\overline{H}} &\quad (2)\\
&= \sum_i \frac{d\widetilde{\Pi}_i}{dW_i}\left(-\frac{dW_i}{dD_i}\frac{D_i}{H_i}\right) &\quad (3)\\
&= \sum_i -\frac{d\widetilde{\Pi}_i}{dD_i}\frac{D_i}{H_i}. &\quad (4)
\end{aligned}$$

- Use D_i variation to mimic (non-existent) H_i variation.
- Pumping water for a longer ration is the same as pumping water from a shallower well.

Need for instrumental variables

- Want to estimate $\frac{\partial \Pi_i}{\partial D_i}$
  - Like cross-sectional hedonic regressions in the climate-agriculture literature (Mendelsohn, Nordhaus and Shaw, 1994)

- Three empirical concerns:
  1. **Omitted variables bias**. Water depth might be correlated with other determinants of productivity. Sign of bias: unknown.
  2. **Endogeneity**. More productive farmers extract more water. Sign of bias: positive.
  3. **Measurement error**. Sign of bias: attenuation (positive, if coefficient negative).

- We use groundwater prospects data as instrumental variables.
  - **Exclusion restriction**: geological features like underground fractures change groundwater depth but are not otherwise related to profits.

Hedonic profit specification

Farmer-level specification

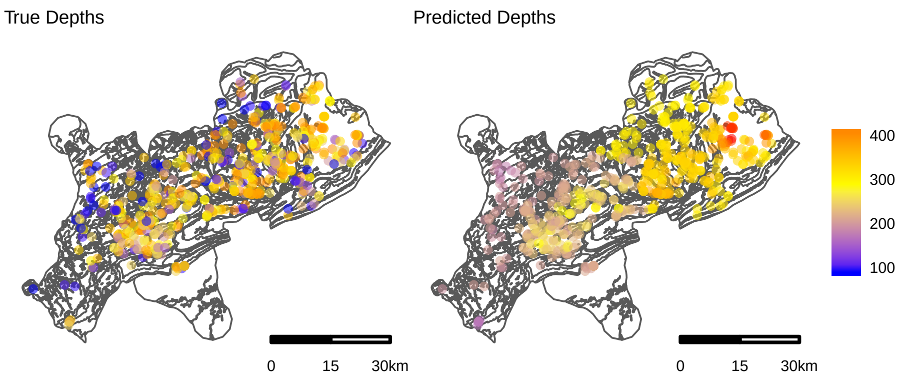
$$\begin{aligned} \Pi_{si} &= \beta_0 + D_{si}\beta_1 + X_{si}'\beta_2 + \alpha_s + \varepsilon_{si} \\ D_{si} &= \alpha_0 + Z_{si}\alpha_1 + v_{si} \end{aligned}$$

- D_{si} is the depth of farmer i's well in utility sub-divisional-office (SDO) s
- X_{si} are farmer controls (elevation, slope, soil quality)
- α_s are SDO fixed-effects
- Z_{si} are functions of geological variables:
  1. Rock type, aquifer type
  2. Distance to faults/fractures
  3. Length of faults/fractures within radii
  4. First-order interactions

  Select over candidate instrument sets with LASSO (Belloni, Chen, Chernozhukov and Hansen, 2012)

Instruments have a strong first stage

Figure: Well depth in Hindoli and Nainwa



- First=stage F-statistics from 80 to 100 for different candidate instrument sets

First stage

Outline

Water scarcity cuts profits

Table: Hedonic regressions of total profit on well depth

	OLS (1)	OLS (2)	IV-PDS (3)	IV-PDS (4)
Well depth (feet)	3.62	-14.3^{*}	-46.5^{***}	-36.4^{**}
	(6.70)	(8.36)	(13.2)	(14.4)
Toposequence		*Yes*	*Yes*	*Yes*
Soil quality controls		*Yes*	*Yes*	*Yes*
Subdivisional effects		*Yes*	*Yes*	*Yes*
Plot size effects		*Yes*	*Yes*	*Yes*
Mean dep. var	−5061.5	−5061.5	−5061.5	−5061.5
Candidate Instruments			419	1728
Instruments Selected			14	19
Unique Farmers	4008	3999	3999	3999
Farmer-Crops	8991	8973	8973	8973

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

▸ Cash Profits ▸ Robustness: Instrument Choice ▸ Robustness: Controls

Water scarcity cuts profits

- Take preferred estimate of INR -46.5 (13.2) profit per Hectare per foot of depth
- One standard deviation (187 ft) increase in depth decreases profits by INR 8,845 (USD 147)
  - A one standard deviation increase in depth decreases dry-season profit by 15% of household income for the whole year
  - A *large* degree of dependence on this common resource.
- Large effects on yield and output:
  - 20% decline in yield per standard deviation of depth Crop Yield
  - 14% decline in the value of output Value of Output

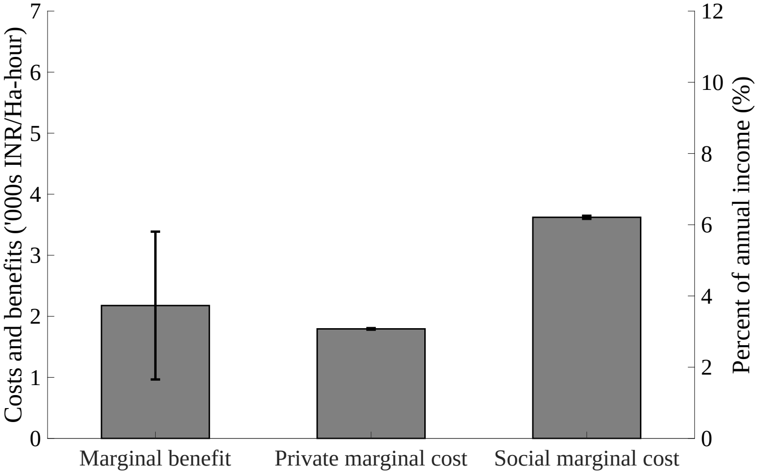
Efficiency of rationing

- With the marginal effect of depth on profits, we can now calculate the marginal benefit of an increase in the ration on profits

- We know farmer pump capacity and use, and can also calculate the marginal cost of an increase in the ration using the costs of electricity and water

- At an optimal (surplus-maximizing) ration, the marginal social benefit and marginal social cost of an increase will be equal
    - The social cost of water is an opportunity cost: the foregone future profit due to today's water extraction lowering the groundwater table.
    - We calculate the social cost of water using a dynamic extension of our production model.

Efficiency of rationing



- One hour longer ration increases profit by 4% of household income.
- $PMC \leq MB < SMC$. Ration about right, or somewhat too high.

▸ Table

Three main findings

1. **Level of the ration**. *The current ration is nearly efficient.*

Outline

Outline

Empirical approach

- Even an optimal ration may be far from first-best, due to the input heterogeneity term.
- In this part, we estimate the agricultural production function and the dispersion in farmer productivity.
- The model estimates then allow us to study the efficiency and equity consequences of larger reforms.

Production function

The observed total value of output y_{ic} for farmer i from crop c is given, in logs, by the Cobb-Douglas function:

$$y_{ic} = \alpha_L l_{ic} + \alpha_X x_{ic} + \alpha_K k_{ic} + \alpha_W w_{ic} + \omega_{Yic}, \tag{5}$$

with log inputs of land l_{ic}, labor x_{ic}, capital k_{ic} and water w_{ic}.

Inputs j_{ic} are observed with measurement error in logs, $j_{ic}^{o} = j_{ic} + \epsilon_{Jic}$.

The residual ω_{Yic} has several parts

$$\omega_{Yic} = \underbrace{W_{Eic}\beta_E + \omega_{ic}}_{\omega_{Eic}} + W_{Hic}\beta_H + \epsilon_{Yic}.$$

- Farmers know ω_{Eic} when choosing inputs.
- The econometrician observes W_{Eic} and W_{Hic} but neither shock.
- Input choices are endogenous to the ω_{ic} shock observed by the farmer but not the econometrician.

Production function

Substituting realized productivity and observed inputs, we obtain:

$$\begin{aligned} y_{ic} &= \alpha_L l_{ic}^o + \alpha_X x_{ic}^o + \alpha_K k_{ic}^o + \alpha_W w_{ic}^o \\ &\quad - \sum_J \alpha_j \epsilon_{jic} + W_{Eic}\beta_E + \omega_{ic} + W_{Hic}\beta_H + \epsilon_{Yic}. \end{aligned} \tag{6}$$

We estimate the production function using:

- Controls for exogenous determinants of productivity (elevation, slope, soil, SDO effects, shocks to crops at harvest)
- Instrumental variables that affect the prices or shadow prices of inputs (Griliches and Mairesse, 1998). Use functions of:
    - Water: Geological instruments as for marginal analysis.
    - Labor: Number of adult, prime-age men in household.
    - Land: Land ownership by parcel size (Fernando, 2018)
    - Capital: Seed prices paid in village.

▸ Input regressions

Productivity residual

- Naïve estimate of productivity residual will overstate productivity dispersion in the presence of measurement error in inputs and output.
- Gollin and Udry (2019) propose a variance decomposition to deflate productivity dispersion using estimates of measurement error.
  1. Assume farmers face the same shadow prices on all their crops.
  2. Within-farmer, across crop variation in inputs due to differences in: productivity, measurement.
  3. If variance is due to productivity, that should drive both a variance in output and a covariance of output and inputs. Farmer input choices respond to productivity, not mismeasurement.
- Use a modified version of their variance decomposition to deflate productivity.

▸ Variance Decomposition

Outline

Production function estimates

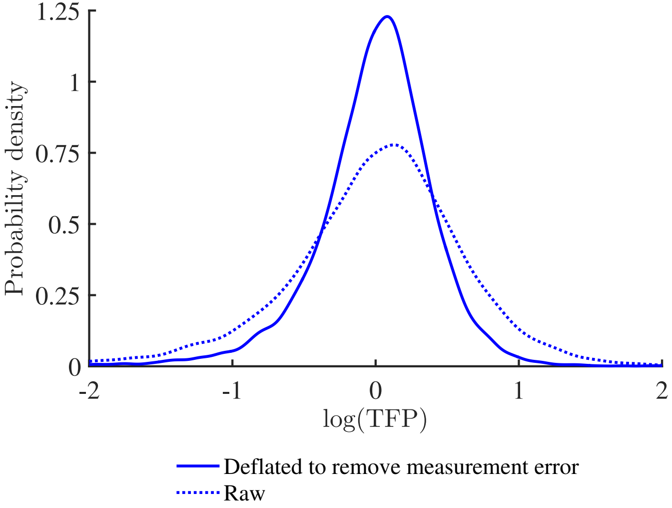
	OLS	2SLS
	(1)	(2)
log(Water)	0.040***	0.37***
	(0.0070)	(0.068)
log(Labor)	0.17***	0.11
	(0.012)	(0.16)
log(Capital)	0.35***	0.34**
	(0.015)	(0.15)
log(Land)	0.54***	0.42***
	(0.014)	(0.055)
Controls	*Yes*	*Yes*
Mean dep. var	3.24	3.24
Farmers	3992	3992
N	8711	8711

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

First Stage

Production function estimates

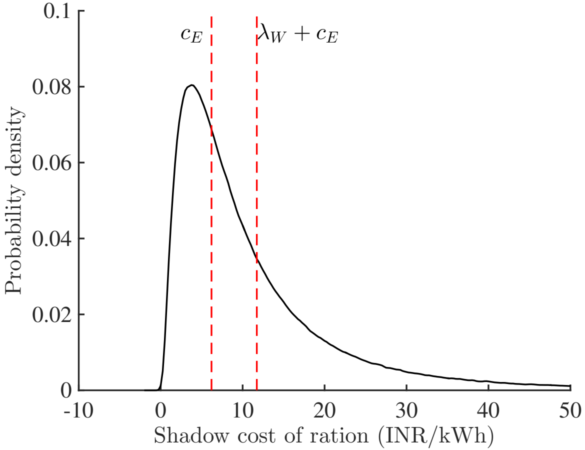
Figure: Dispersion in Total Factor Productivity



- Variance of deflated TFP is 40% as large as the variance of raw TFP.

Shadow cost of ration

Figure: Shadow cost of the status quo ration



- Ration imposes a fairly high shadow cost, *on average*
- There is wide heterogeneity, with many shadow costs near zero, and other farmers facing shadow costs twice social cost

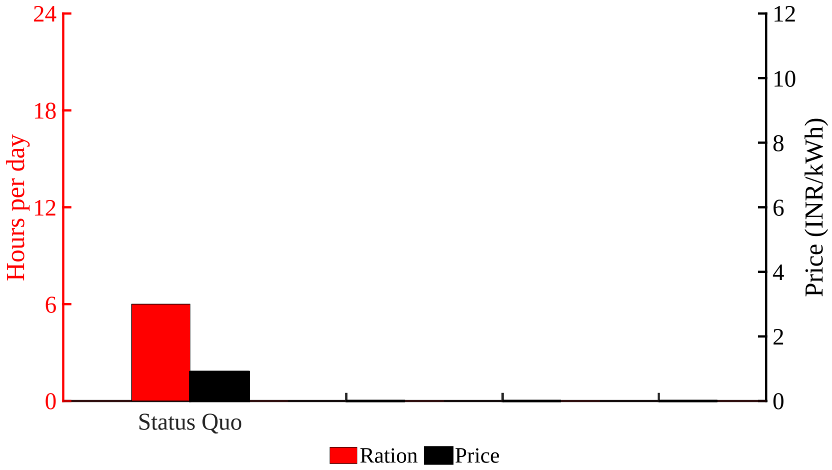
Counterfactual analysis

- With the model, we can simulate farmer input choices, output, profit and social surplus under any set of rations and prices.
  - A farmer-plot retains its observable productivity, pump and depth
  - We additionally hold land and labor fixed in counterfactuals, since large-scale reallocation of these factors may be infeasible

- The counterfactuals are in partial equilibrium
  - Factor prices do not change, for inputs or output
  - The opportunity cost of water extraction λ_W is held fixed

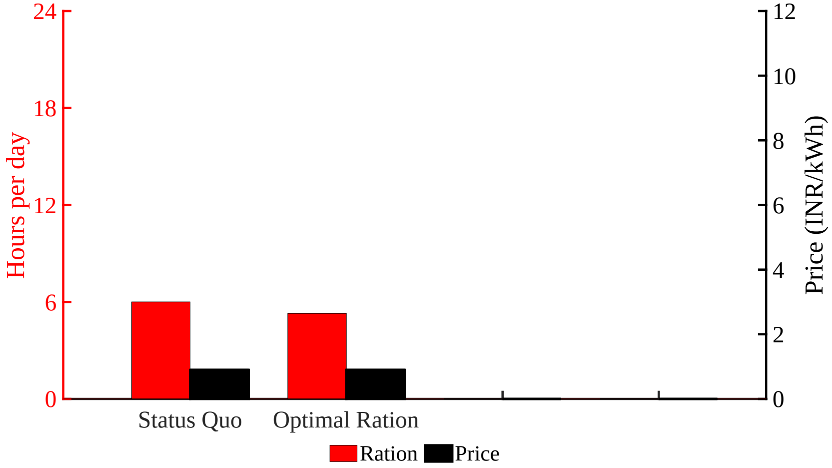
Counterfactual analysis

Figure: Counterfactual policy regimes



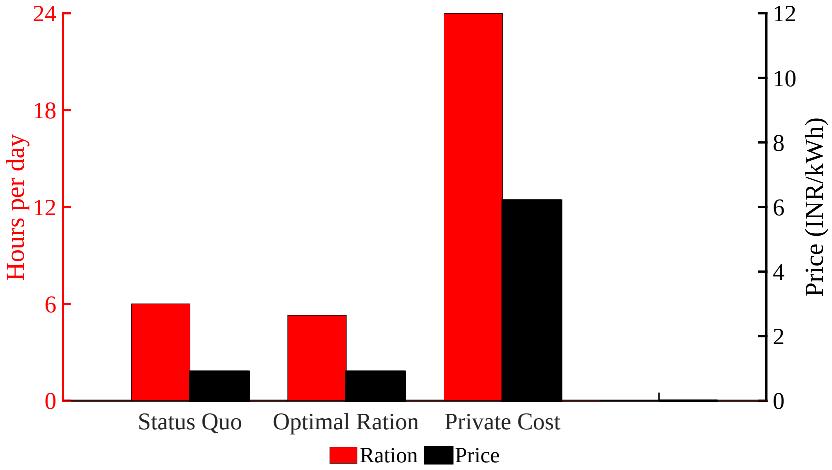
Counterfactual analysis

Figure: Counterfactual policy regimes



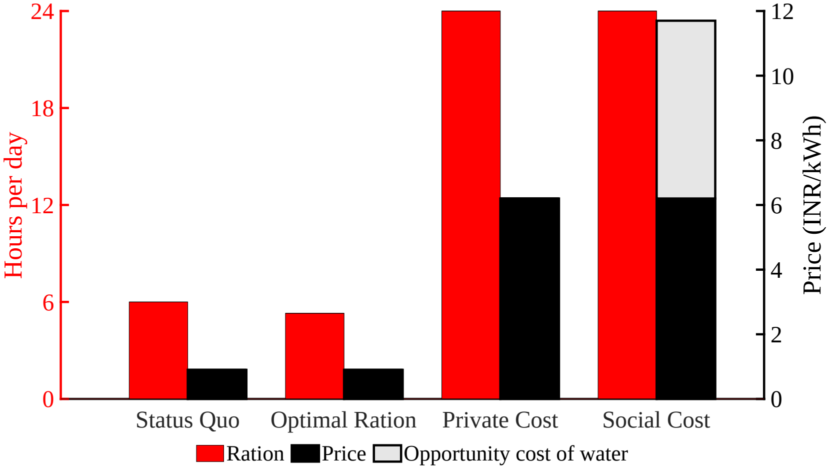
Counterfactual analysis

Figure: Counterfactual policy regimes



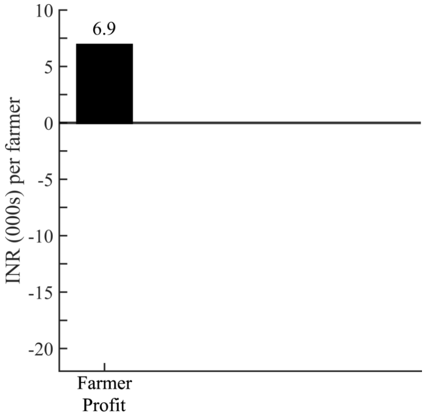
Counterfactual analysis

Figure: Counterfactual policy regimes



Counterfactual outcomes: efficiency

Figure: Surplus under rationing



Counterfactual outcomes: efficiency

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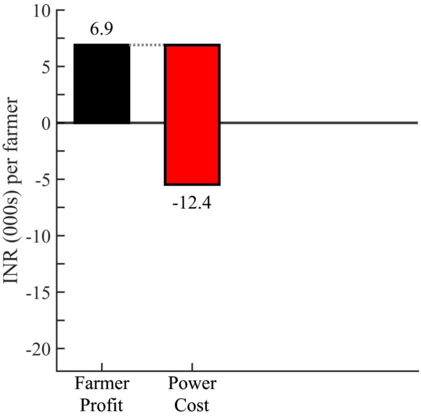

Counterfactual outcomes: efficiency

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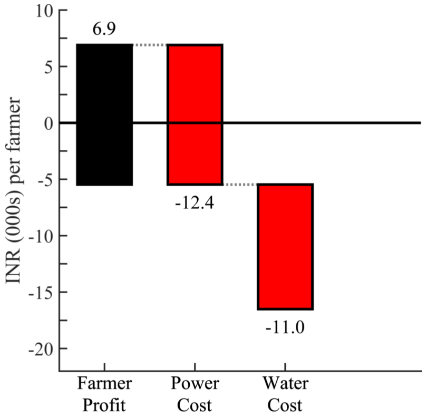

Counterfactual outcomes: efficiency

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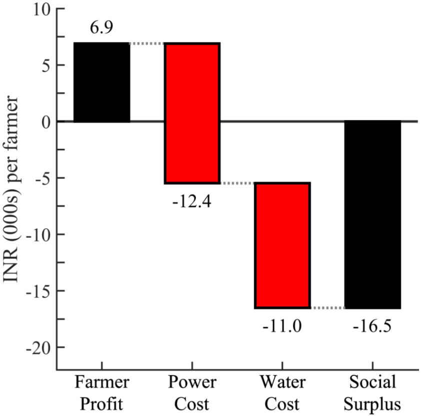

Counterfactual outcomes: efficiency

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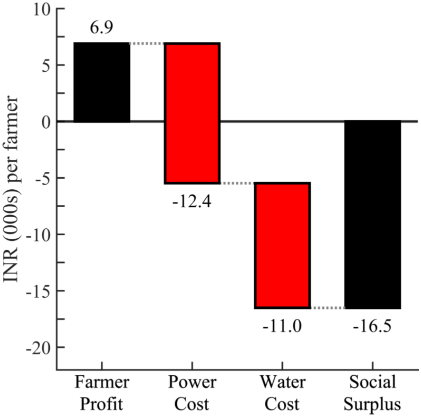
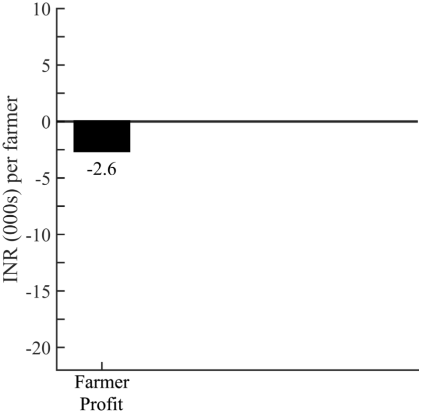


Figure: Surplus under Pigou



Counterfactual outcomes: efficiency

Figure: Surplus under rationing

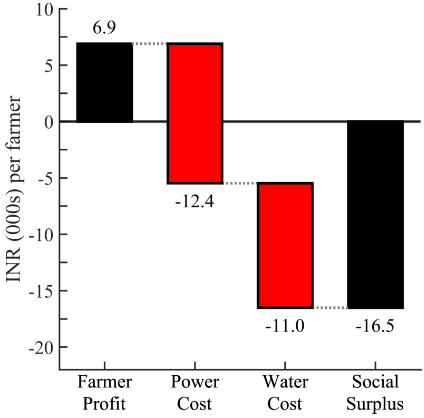
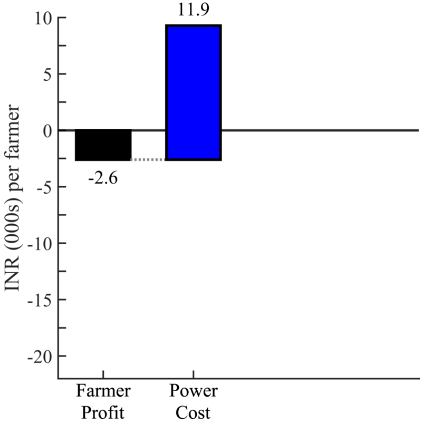
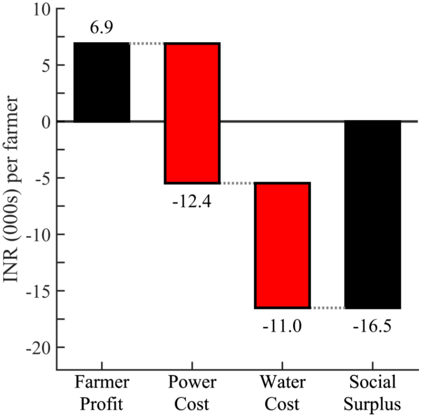


Figure: Surplus under Pigou



Counterfactual outcomes: efficiency

Figure: Surplus under rationing



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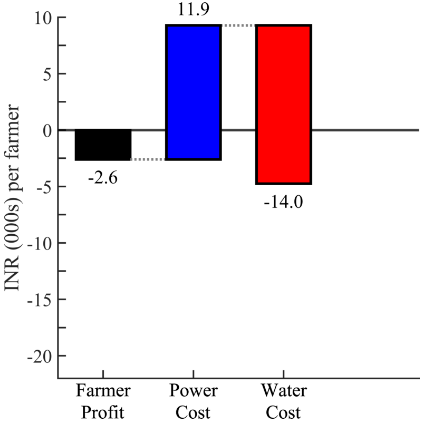


Counterfactual outcomes: efficiency

Figure: Surplus under rationing

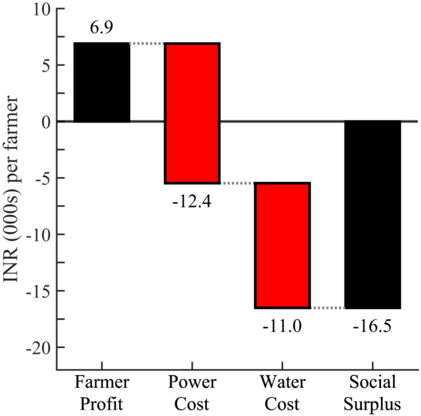
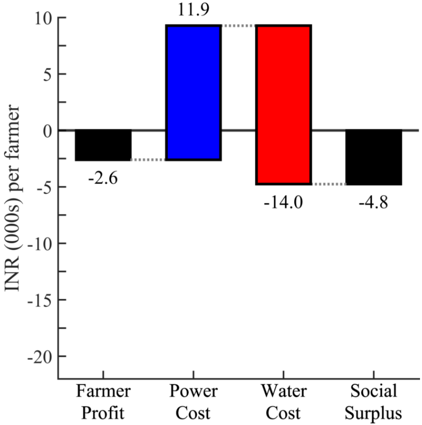


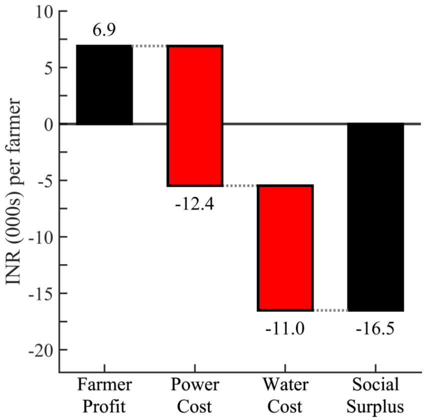
Figure: Surplus under Pigou



- Surplus increase in Pigouvian regime of INR 5,000 per farmer-crop or INR 12,000 per farmer, 16% of annual household income or 2× the Government of India's flagship cash transfer to farmers

Counterfactual outcomes: efficiency

Figure: Surplus under rationing



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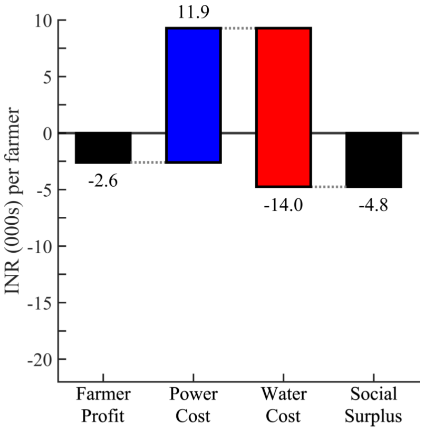


- Surplus increase in Pigouvian regime of INR 5,000 per farmer-crop or INR 12,000 per farmer, 16% of annual household income or 2× the Government of India's flagship cash transfer to farmers

Counterfactual outcomes: efficiency

	Rationing		Pricing	
	Status quo (1)	Optimal (2)	Private cost (3)	Pigouvian (4)
		B. Input use		
Land (Ha)	0.69	0.69	0.69	0.69
Labor (person-days)	54.81	54.81	54.81	54.81
Capital (INR 000s)	10.46	9.84	17.56	13.47
Water (liter 000s)	1598.53	1419.58	3603.14	2033.69
Power (kWh per season)	1015.91	902.55	1871.54	933.27
Hours of use (per day)	5.97	5.30	12.35	6.65

- Farmers use *more* water in a Pigouvian regime, but use less power to extract it. Extraction efficiency goes up.
- Against common wisdom: electricity prices are too low, so farmers use too much water (Kumar and Singh, 2001; Zhang, 2019).

Counterfactual outcomes: efficiency

Table: Counterfactual Production and Social Surplus

	Rationing		Pricing	
	Status quo (1)	Optimal (2)	Private cost (3)	Pigouvian (4)
C. Output and productivity				
Output (INR 000s)	30.94	29.12	51.95	39.86
Ω_{Eit} (output-weighted)	1.16	1.16	1.21	1.25
$\text{Cov}(\Omega_{Eit}, W_{it}^{\alpha_W})$	-0.15	-0.14	0.55	0.62

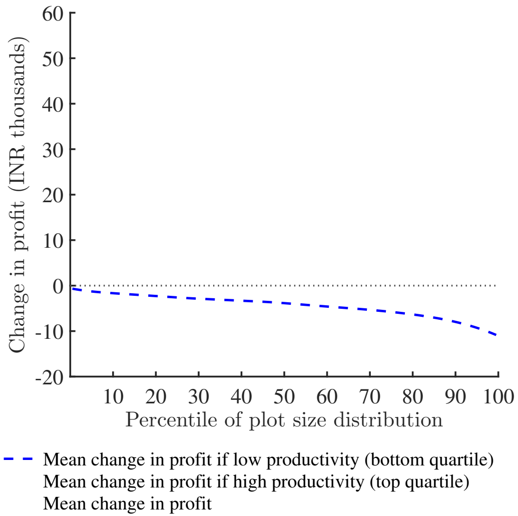
- Output increases 29%. Input use: 19 pp, Productivity: 10 pp.
- Input heterogeneity term feeds productivity gain. The covariance of productivity and effective water input flips from small and negative to positive under pricing.

Three main findings

1. **Level of the ration**. *The current ration is nearly efficient.*

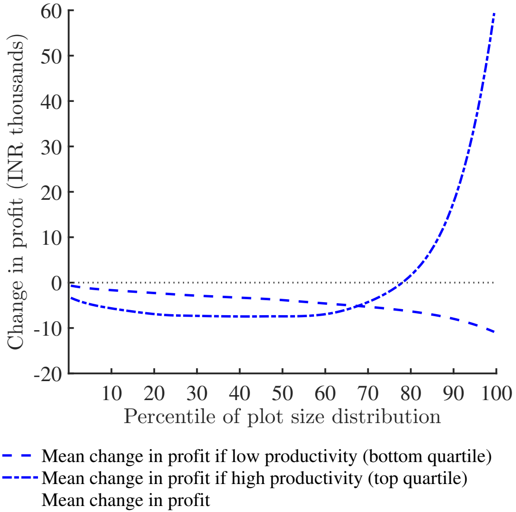
2. **Efficiency of rationing**. *Rationing, relative to a Pigouvian benchmark, lowers surplus from agricultural production by 16% of annual household income.*

Counterfactual outcomes: equity



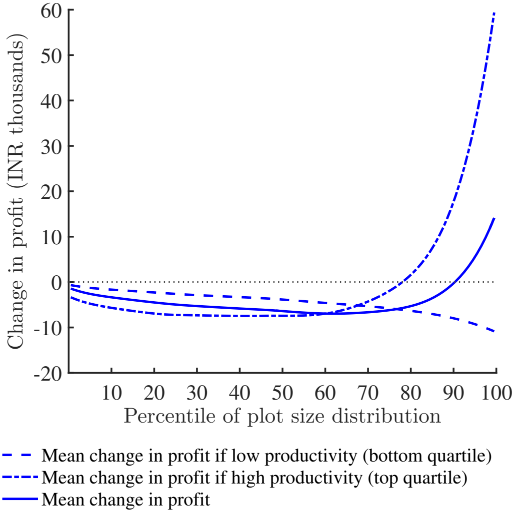
- Unproductive farmers lose without transfers, moreso for larger plots

Counterfactual outcomes: equity



- Productive farmers lose more at small plot sizes, but **gain** at large plot sizes, since they were heavily constrained under rationing.

Counterfactual outcomes: equity



- Taking mean $\Delta\Pi_{ic}$ by plot size hides this heterogeneity

Counterfactual outcomes: equity

- Allow the government to make transfers to rebate the revenue to farmers. Use simple, feasible regimes:

  1. Flat transfers.
  2. Land-based transfers. *Pro rata* rebate on land size.

- Pigouvian reform entails very large transfers. Without transfers, profit falls by INR 9,000.

- Budget-neutral transfer **large**. INR 23,000 per farmer or 26% of household income. Average net profit triples.

Counterfactual outcomes: equity

Table: Distributional Effects of Pigouvian Reform

Transfers:	None (1)	Flat (2)	Land (3)
B. Change from rationing regime due to reform			
Percent who gain	0.13	0.79	0.65
Mean gain given gain	34.00	20.90	27.22
Mean land if gain	2.96	1.47	1.60
Mean ex ante profit if gain	48.09	4.27	7.01
Percent who lose	0.87	0.21	0.35
Mean loss given loss	-15.59	-12.15	-11.03
Mean land if loss	1.29	1.65	1.33
Mean ex ante profit if loss	0.14	15.09	5.62

- Still, 20% of farmers lose net of these large transfers.

Three main findings

1. **Level of the ration**. *The current ration is nearly efficient.*

2. **Efficiency of rationing**. *Rationing, relative to a Pigouvian benchmark, lowers surplus from agricultural production by 16% of annual household income.*

3. **Equity of rationing**. *Pigouvian reform would not approach a Pareto improvement.*

Outline

Rationing as redistribution

Rationing looks like a failure of productive efficiency: the ration is inefficient, yet difficult to reform

- Our results may explain the *de facto* adoption of rationing as the only groundwater policy

As a means of redistribution, rationing looks better:

- The ration reduces surplus by INR 12,000 per farmer-year in order to transfer INR 9,000 per farmer-year.
- The deadweight loss of 25% in this transfer compares favorably to the leakage (which are transfers, not deadweight loss) in many benefit programs (Niehaus and Sukhtankar, 2013; Olken and Pande, 2014).
- Moreover, the transfers are directed toward unproductive farmers, in an environment with many missing markets, and the government does not need to observe productivity!

Rationing the commons

- Ideal economic policies have barely gotten off the ground politically
- Policy proposals need to lead with equity.
  - E.g., Akerlof, George, Robert Aumann, Martin Baily, Ben Bernanke, Michael Boskin, and Angus Deaton. 2019. "Economists' statement on carbon dividences organized by the climate leadership council." Wall Street Journal, January 17th.
- A goal of empirical work should be to measure distributional impacts of environmental policy, to better understand the political economy

  > *[A] comparison between a state of laissez faire and some kind of ideal world . . . is largely irrelevant for questions of economic policy since whatever we may have in mind as our ideal world, it is clear that we have not yet discovered how to get to it from where we are." (Coase, 1960)*