

14.771: Public Finance Lecture

Ben Olken

Outline

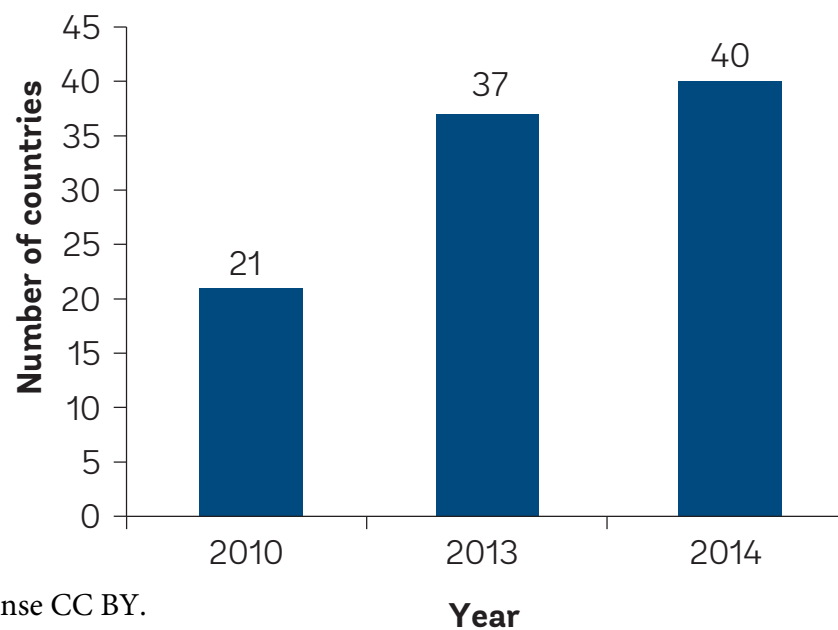
- From our perspective in rich countries, we sometimes think of poverty and development as going together - i.e., most people in developing countries are 'poor'
- But this masks substantial inequality *within* poor countries
 - For example, in in Indonesia (where I happen to have the data microdata handy), 10th percentile household consumes about US\$1 / day per / capita
 - But the 90th percentile household consumes about US\$5 / day / capita
 - And this is a very equal country, compared to others in e.g., Latin America
- This creates substantial scope for redistribution within developing countries
- As countries develop a bit of tax capacity, developing country governments are doing this...
- And given the scope of governments, these programs vastly swamp any private sector or NGO-led anti-poverty programs

Spread of redistribution programs

From World Bank (2015): "The State of Social Safety Nets"

Figure 1.2 Social safety net programs have been rising steadily

a. Unconditional cash transfers, Sub-Saharan Africa

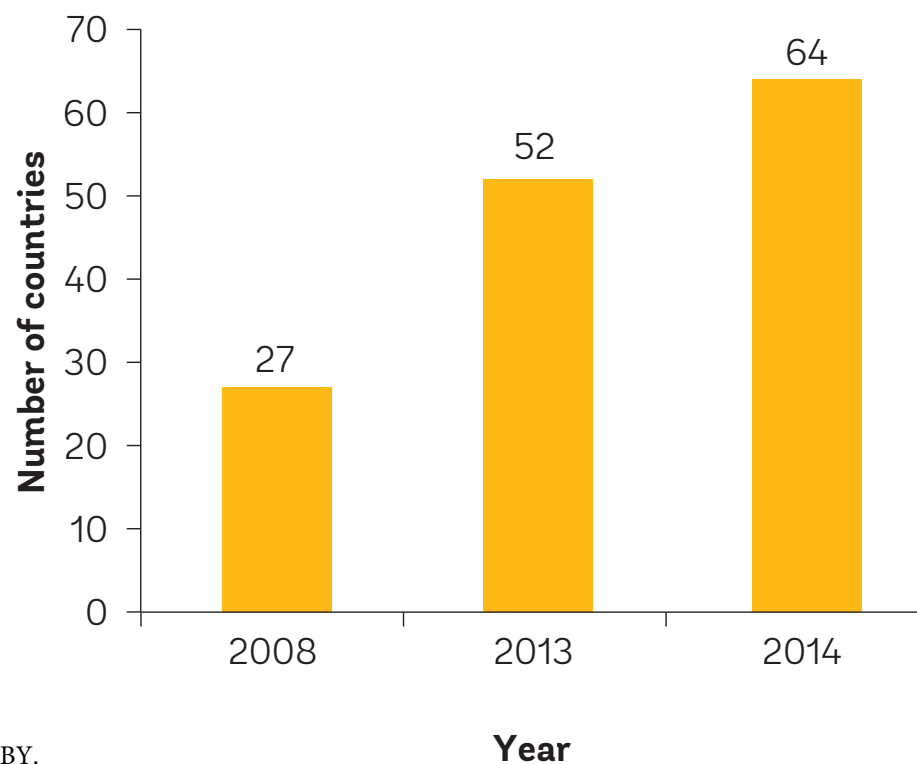


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Spread of redistribution programs

From World Bank (2015): "The State of Social Safety Nets"

b. Conditional cash transfers, all developing countries



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These programs are ubiquitous

From World Bank (2015): "The State of Social Safety Nets"

Table 1.1 Number of Countries with at Least One Type of Social Safety Net Program, by Region

Number of countries

Program type	Region						Total of countries with at least one program
	Africa	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	
Conditional cash transfers	18	7	7	22	5	4	63
Unconditional cash transfers	41	11	29	28	14	7	130
Unconditional in-kind transfers	42	7	8	24	7	4	92
School feeding	45	12	23	28	16	7	131
Public works	39	9	17	17	7	5	94
Fee waivers	12	7	14	10	3	3	49
Total number of countries in respective region	48	21	30	29	19	8	157

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And cover hundreds of millions, if not billions, of people

From World Bank (2015): "The State of Social Safety Nets"

Table 1.3 Top Five Social Safety Net Programs, by Scale

Conditional cash transfers		
Country	Program name	Beneficiaries (millions)
Brazil	Bolsa Familia	49
Mexico	Prospera	26
Philippines	Pantawid	19
Colombia	Familias en Acción	12
Bangladesh	Stipend for primary students	8

Unconditional cash transfers		
Country	Program name	Beneficiaries (millions)
	Bantuan Langsung Sementara Masyarakat (BLSM)	61
	BR1M	15

Unconditional in-kind/near-cash transfers		
Country	Program name	Beneficiaries (millions)
Turkey	Gıda Yardımı	9
Mexico	Milk grant benefit	6
China	Wubao	6
Sudan	General food distribution program	5
Ghana	Free uniforms/books	5

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And cover hundreds of millions, if not billions, of people

From World Bank (2015): "The State of Social Safety Nets"

Table 1.3 Top Five Social Safety Net Programs, by Scale
(Continued)

School feeding		
Country	Program name	Beneficiaries (millions)
	Program de Alimentacao Escolar	47
	School feeding	9
Public works programs		
Country	Program name	Beneficiaries (millions)
	PSNP*	7
	Regional public works	2
Fee waivers		
Country	Program name	Beneficiaries (millions)
Indonesia	Jamkesmas, including Jampersal	86
China	Medical assistance	42
Philippines	PhilHealth	39
Turkey	Green card	36
Ukraine	Housing and utility allowances	5

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Questions about redistribution programs

- How should beneficiaries be selected? Should programs be universal, or targeted so only the poor could be eligible?
 - Aside: how could a universal program achieve redistribution?
- Conditional on doing a particular type of program, what form should it take?

Universal vs. targeted programs

- Basic problem: lack of information about who is really poor.
- This is a problem everywhere.
 - In the US literature, the problem is typically framed that we observe income, not true earning ability.
 - Optimal taxes are set taking into account this asymmetric information (Mirrlees 1971, Saez 2001).
 - If we know more characteristics about individuals that predict poverty (e.g., widowhood), we can “tag” these individuals and assign them different tax schedules (Akerlof 1978).
- The problem is particularly severe in developing countries: we don’t even observe income!
- Three approaches to solving this problem:
 - Subsidies of particular goods (e.g., food subsidies)
 - Universal Basic Incomes (e.g., untargeted cash transfers)
 - Try to do targeted transfers anyway

Poverty metrics

- Standard decomposable metric developed by Foster, Greer, and Thorbecke (1984):
 - Define z as the poverty line.
 - Then for $\alpha \geq 0$ define

$$P_\alpha = \int_0^z \left(\frac{z-y}{z} \right)^\alpha f(y) dy$$

- Special cases:
 - $P_0 = \int_0^z f(y) dy$ is the “headcount” ratio, i.e., number of poor people
 - $P_1 = \int_0^z \left(\frac{z-y}{z} \right) f(y) dy$ is the “poverty gap”, i.e., the amount of money required to bring all poor people up to the poverty line.
 - $\alpha > 1$ puts more weight on the poverty of very poor.
- Key property is decomposability. Assume i subgroups with population shares λ_i . Then

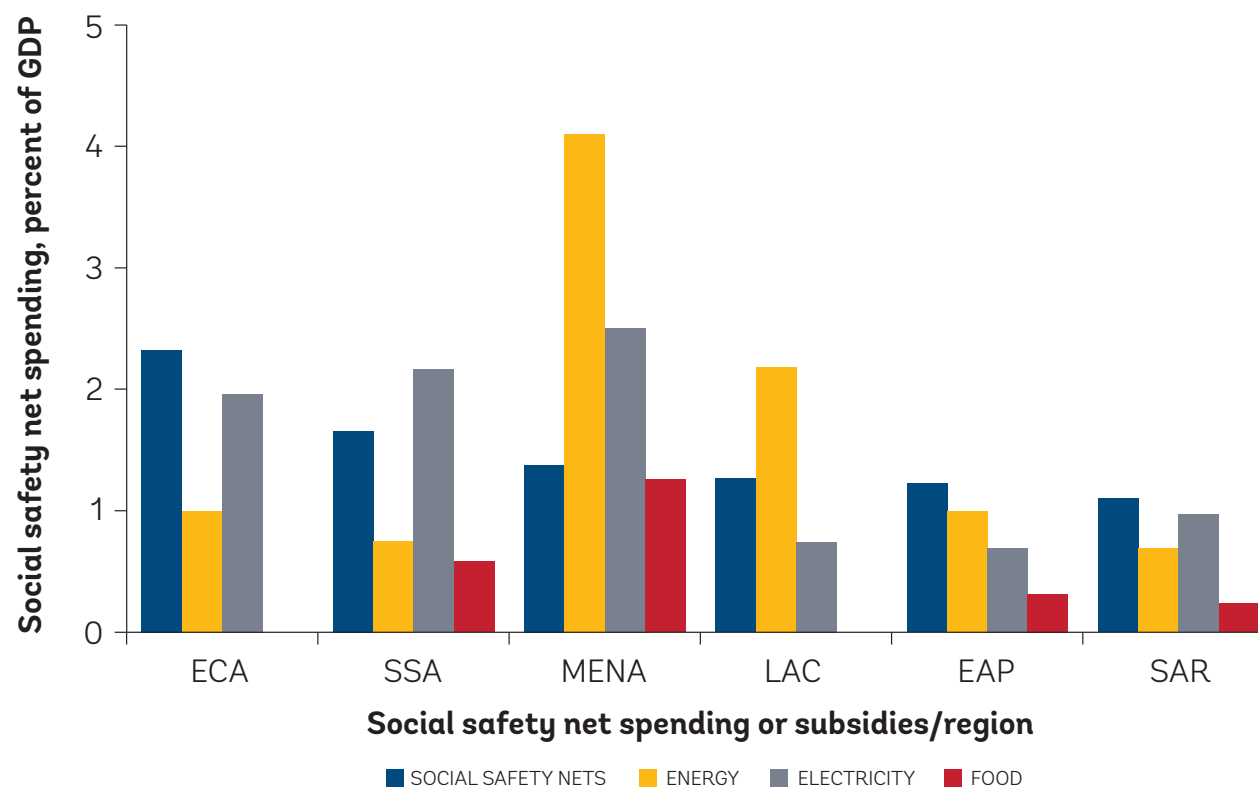
$$P_\alpha = \sum_i \lambda_i P_{i,\alpha}$$

Thinking about transfers

- Assume for the moment we cannot directly identify poor households (i.e., no targeting)
- Besley and Kanbur (1988): How do we evaluate subsidies in terms of poverty reductions?
 - Infra-marginal subsidies
 - To everyone
 - With geographical targeting
 - Marginal subsidies (i.e., price changes)
 - To everyone
 - When there are both producers and consumers
- What goods would you want price subsidies on? Inferior goods. Why?
- Why are price subsidies worse in general? Why is a gasoline subsidy a bad idea? Distortions, positive Engel curves.
- Why might they be better?

Subsidies are still quite relevant

Figure 2.7 Half the world spends more on subsidies than on social safety nets, on average



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UBIs

Hanna and Olken 2018: Universal Basic Incomes vs. Targeted Transfers: Anti Poverty Programs in Developing Countries

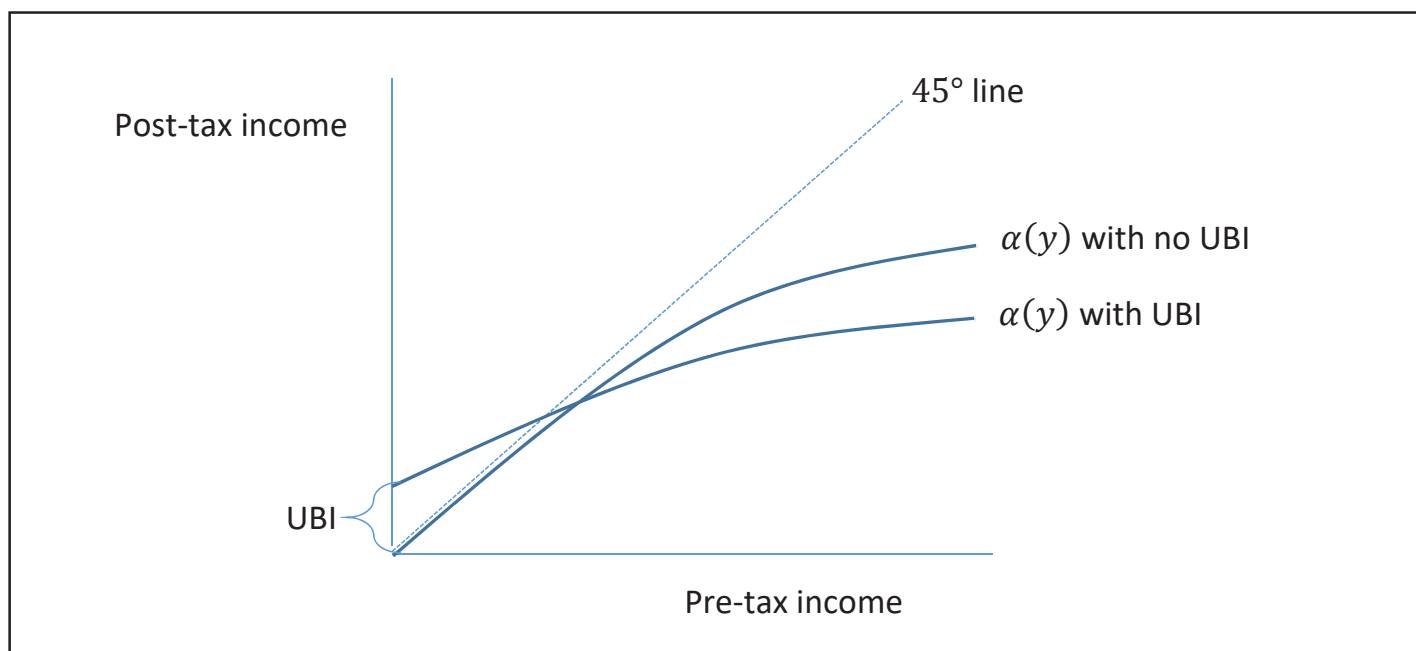
- Given subsidies are distortionary, many people have begun to advocate universal cash transfers
- No price effects, and labor supply effects likely small (Banerjee, Hanna, Kreindler, and Olken 2017)
- Comparatively simple - but needs two things to function
 - A system of unique IDs so nobody receives the transfer twice
 - A mechanism to handout the cash that works everywhere (even rural, remote areas)
- How can this be redistributive?

Conceptual framework

- Suppose pre-tax income is y
- Define after-tax-and-transfer income as $\alpha(y)$.
- Then any tax-and-transfer system that features $\alpha(0) > 0$ can be thought of as featuring a UBI
- Saez (2002) discusses this in the US context
 - Key result: UBI is often optimal when intensive labor supply elasticity is larger than extensive labor supply elasticity.
- How does this differ for developing countries?
 - Jensen 2016: most people don't pay taxes.
 - So if you set $\alpha(0) > 0$ you need to give that same transfer much further up the income distribution

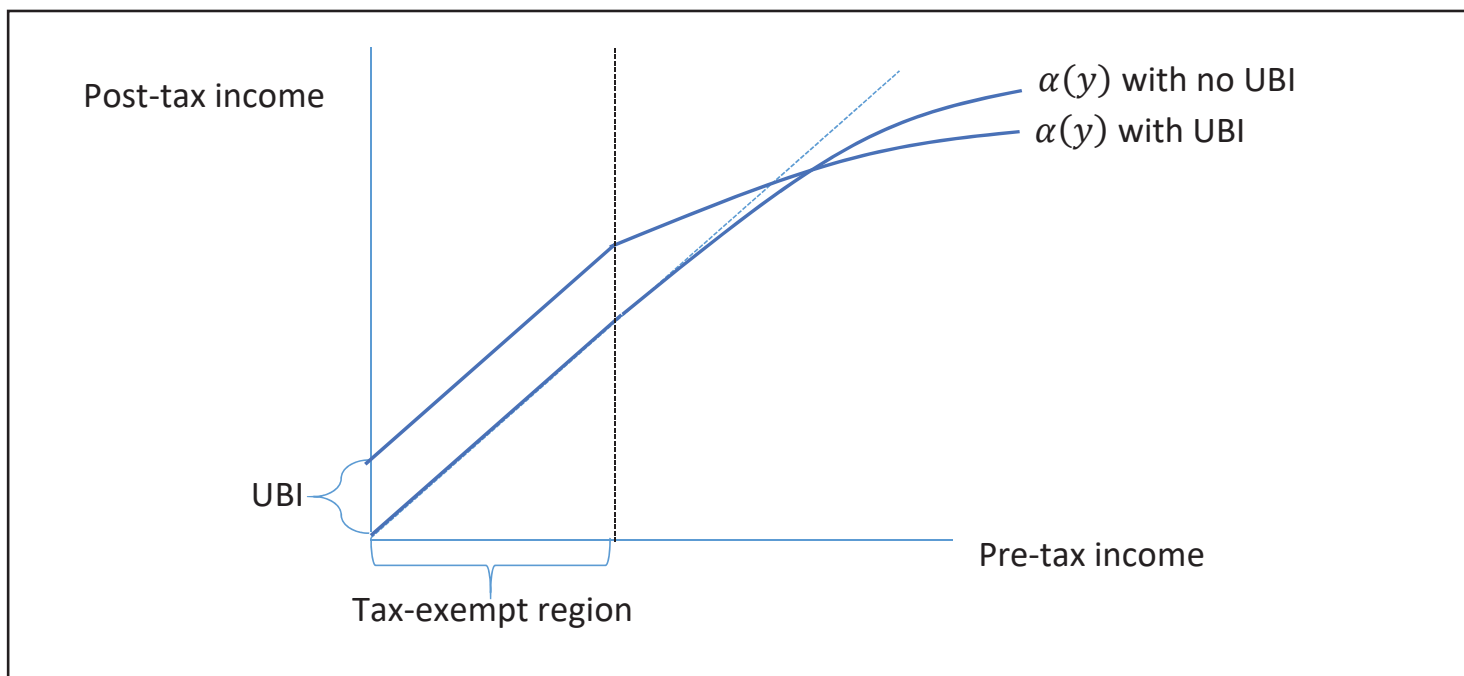
Developed countries

Figure 1: Example of Progressive Post-Tax Income Schedules With and Without a Universal Basic Income



Developing countries

Figure 2: Example of Post-Tax Income Schedules with and Without a Universal Basic Income, With a Tax-Exempt Region



Tradeoffs

- We then simulate welfare gains to contrast UBI vs targeted transfers
- More details later, after we discuss targeting...

Targeting

- Nevertheless most programs rely on targeting
- Targeting options if income is not observable:
 - Proxy-means tests (more generalized version of “tagging”)
 - Community-based targeting
 - Self-targeting

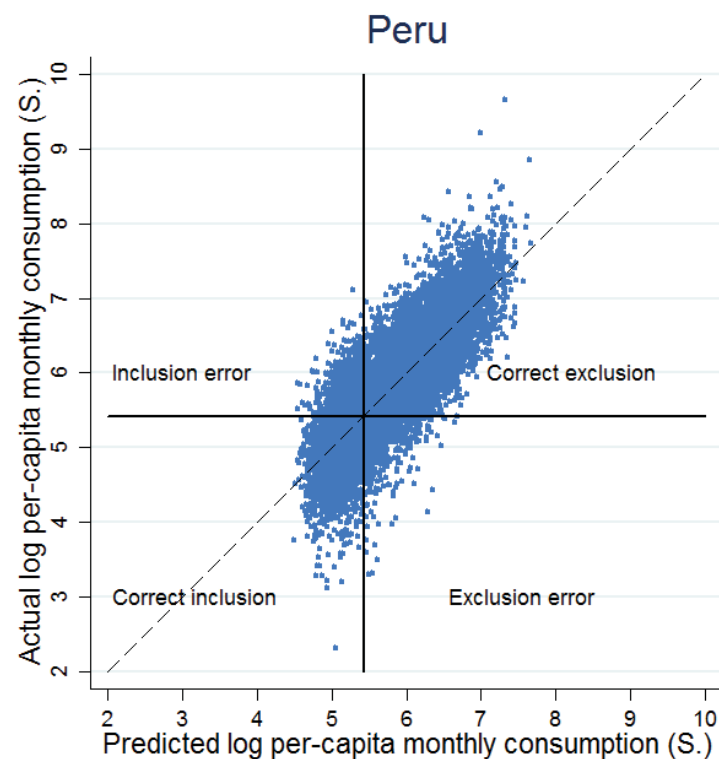
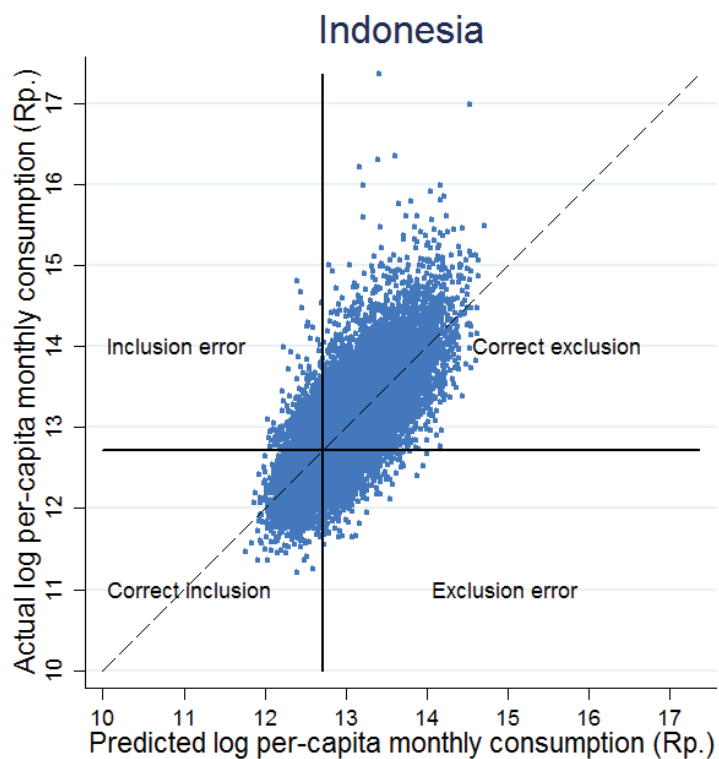
Proxy-Means Tests

- Similar idea to poverty mapping, but at individual level. This is the main way individual targeting is done in most developing countries (e.g., Progresa).
- Concept: consumption surveys are expensive, and non-verifiable, so you can't use them to target directly
- Instead: do a survey where you collect data on assets (land, house, motorcycle, etc.)
 - Assets capture permanent component of income
 - And they are hard to falsify on a survey
- Use survey data to estimate relationship between consumption and assets, and use predicted consumption for targeting
- Problems
 - R^2 much less than 1, so you don't get poverty exactly right (horizontal equity)
 - Corruption among surveyors
 - Costly: need to do a census (but not that costly)

Example of PMT prediction

From Hanna and Olken 2018

Figure 3: Predicted vs. actual per-capita consumption in test set data



Community-Based

- Allow local community to identify poor households
- Idea: local community has much more information than central government
 - This is the premise behind informal insurance, microfinance, etc.
- Problem:
 - If you are using this information to target beneficiaries, this information may not get revealed. Instead, elites may capture the project
 - Potential tradeoff: better local information vs. more elite capture
- Some existing evidence that communities do know more (Alderman, Galasso and Ravallion)

Comparing PMT and Community Approaches

Alatas, Banerjee, Hanna, Olken, and Tobias (2012): “Targeting The Poor: Evidence from a Field Experiment in Indonesia”

- Randomized experiment compares three targeting methods:
 - Proxy-means test
 - Community ranking
 - Hybrid: community ranking, followed by proxy-means test on bottom 50% (to prevent elite capture)
- Villages randomized to one of above treatments, used to give out real one-time \$3 transfer
- Sub-treatments to tease out why community and PMT may differ
 - Elite capture: let elites run meetings or invite full community
 - Effort: randomize order of ranking and see if going first matters, start with identifying 10 poorest first
 - Preferences: vary time of meeting to encourage more women in some meetings
- Baseline survey to measure true consumption, endline to measure satisfaction with targeting

Community treatment



Olken

PF Lecture 2

Community treatment



Experimental design

TABLE 1—RANDOMIZATION DESIGN

Community/hybrid subtreatments			Main treatments			
			Community	Hybrid	PMT	
Elite	10 poorest first	Day	24	23		
		Night	26	32		
	No 10 poorest first	Day	29	20		
		Night	29	34		
Whole community	10 poorest first	Day	29	28		
		Night	29	23		
	No 10 poorest first	Day	28	33		
		Night	20	24		
			Total	214	217	209

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14.771: Development Economics
Fall 2021

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