Women's Empowerment and Family Health: Estimating LATE with Mismeasured Treatment

Rossella Calvi*, Arthur Lewbel+, Denni Tommasi*

*Rice University,
+Boston College,
*Monash University

AGEW Workshop 2019

Women's Empowerment and Family Health

- Female intra-household decision making power in developing countries (Thomas (1990; 1994; 1997))
- Resources controlled by women more likely allocated to food and health care (Duflo (2003); Quisumbing and Maluccio (2003); Armand-Attanasio-Carneiro-Lechene (2016); LaFave and Thomas (2017))
- Control over resources and decision power are difficult to observe

Women's Empowerment and Family Health

- Female intra-household decision making power in developing countries (Thomas (1990; 1994; 1997))
- Resources controlled by women more likely allocated to food and health care (Duflo (2003); Quisumbing and Maluccio (2003); Armand-Attanasio-Carneiro-Lechene (2016); LaFave and Thomas (2017))
- Control over resources and decision power are difficult to observe

  - Overcome measurement issues
  - Study the effect of women's control over resources on family health in India directly
  - Combine structural modeling and causal analysis

Women's Empowerment and Family Health

- Little knowledge of how female control of resources affects health outcomes
  - → Local Average Treatment Effect – LATE (Imbens and Angrist (1994))
- Better understanding of the economics of household consumption allocations

Women's Empowerment and Family Health

- Little knowledge of how female control of resources affects health outcomes
  - → Local Average Treatment Effect – LATE (Imbens and Angrist (1994))
- Better understanding of the economics of household consumption allocations

- Structural model to estimate treatment (women's control of resources)
- New estimation method for LATE when treatment is mismeasured (MR-LATE)
- Estimate LATE on a variety of health outcomes (using Indian data and inheritance rights reforms as instrument)
- Sizable effects on women's and children's health outcomes; no effect on men

Women's Empowerment and Family Health

- Little knowledge of how female control of resources affects health outcomes
  - → Local Average Treatment Effect – LATE (Imbens and Angrist (1994))
- Better understanding of the economics of household consumption allocations

  - Structural model to estimate treatment (women's control of resources)
  - New estimation method for LATE when treatment is mismeasured (MR-LATE)
  - Estimate LATE on a variety of health outcomes (using Indian data and inheritance rights reforms as instrument)
  - Sizable effects on women's and children's health outcomes; no effect on men

Women's Empowerment and Family Health

- Little knowledge of how female control of resources affects health outcomes
  - → Local Average Treatment Effect – LATE (Imbens and Angrist (1994))
- Better understanding of the economics of household consumption allocations

  - Structural model to estimate treatment (women's control of resources)
  - New estimation method for LATE when treatment is mismeasured (MR-LATE)
  - Estimate LATE on a variety of health outcomes (using Indian data and inheritance rights reforms as instrument)
  - Sizable effects on women's and children's health outcomes; no effect on men

Women's Empowerment and Family Health

- Little knowledge of how female control of resources affects health outcomes
  - → Local Average Treatment Effect – LATE (Imbens and Angrist (1994))
- Better understanding of the economics of household consumption allocations

  - Structural model to estimate treatment (women's control of resources)
  - New estimation method for LATE when treatment is mismeasured (MR-LATE)
  - Estimate LATE on a variety of health outcomes (using Indian data and inheritance rights reforms as instrument)
  - Sizable effects on women's and children's health outcomes; no effect on men

- Estimating Control over Resources
- Dealing with Measurement Error
- Women's Resource Control and Family Health
- Discussion

- Estimating Control over Resources
- Dealing with Measurement Error
- Women's Resource Control and Family Health
- Discussion

Household Model

- Collective model of the household (nuclear households with up to 4 children) (Becker (1965, 1981); Apps and Rees (1988); Chiappori (1988; 1992))
  - Parents are the decision makers (e.g., consumption and health investment on family members)
  - Decisions are Pareto efficient
- Resource shares (Lewbel-Pendakur (2008); Browning-Chiappori-Lewbel (2013); Dunbar-Lewbel-Pendakur (2013, 2017))
  - Fraction of total household expenditure controlled by mother (R^*) and father ($1 - R^*$)

Household Model

- Collective model of the household (nuclear households with up to 4 children) (Becker (1965, 1981); Apps and Rees (1988); Chiappori (1988; 1992))
  - Parents are the decision makers (e.g., consumption and health investment on family members)
  - Decisions are Pareto efficient
- Resource shares (Lewbel-Pendakur (2008); Browning-Chiappori-Lewbel (2013); Dunbar-Lewbel-Pendakur (2013, 2017))
  - Fraction of total household expenditure controlled by mother (R^*) and father ($1 - R^*$)
- **Binary measure of resource control:** $D = \mathbb{I}(R^* \geq c)$
  - Control $\rightarrow$ health, no obvious functional form
  - Discrete investments in health
  - Changes in behavior at threshold (Bertrand-Kamenica-Pan (2015))

Structural Estimation

- Engel curves of assignable goods (Dunbar-Lewbel-Pendakur (2013), Calvi (2016), Tommasi (2017), Penglase (2017))
  - Engel curve: Relationship between share of expenditure spent on a good and total expenditure
  - Assignable goods: Goods that are consumed exclusively by women or men (clothing)
  - Resource share backed out from the slopes of these Engel curves
- Resource share modeled as linear function of observable characteristics

Engel Curves Estimates

Structural Estimation

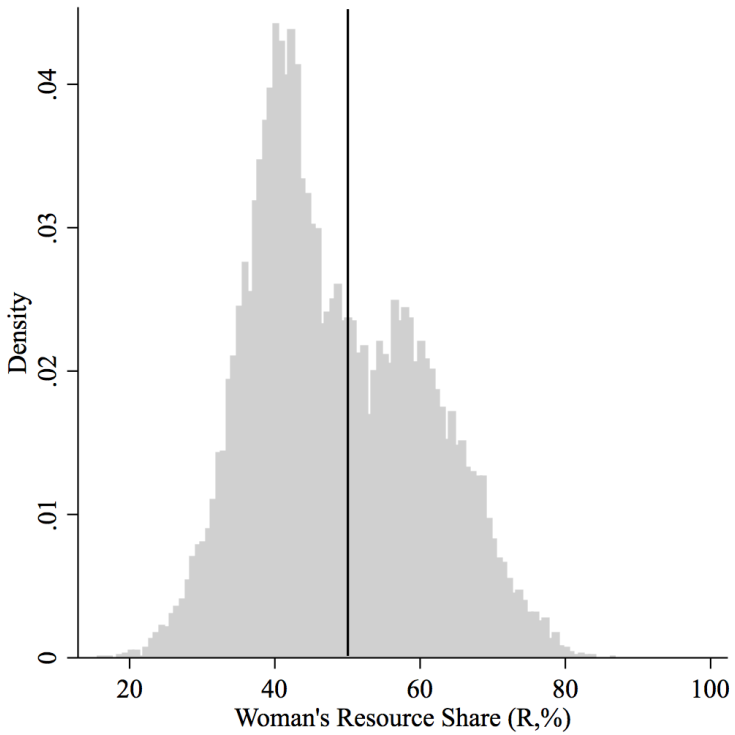
- Engel curves of assignable goods (Dunbar-Lewbel-Pendakur (2013), Calvi (2016), Tommasi (2017), Penglase (2017))
  - Engel curve: Relationship between share of expenditure spent on a good and total expenditure
  - Assignable goods: Goods that are consumed exclusively by women or men (clothing)
  - Resource share backed out from the slopes of these Engel curves
- Resource share modeled as linear function of observable characteristics

Engel Curves Estimates

- NSS Consumer Expenditure Survey (2005-2006)
- Out-of sample prediction on National Family Health Survey (2005-2006)

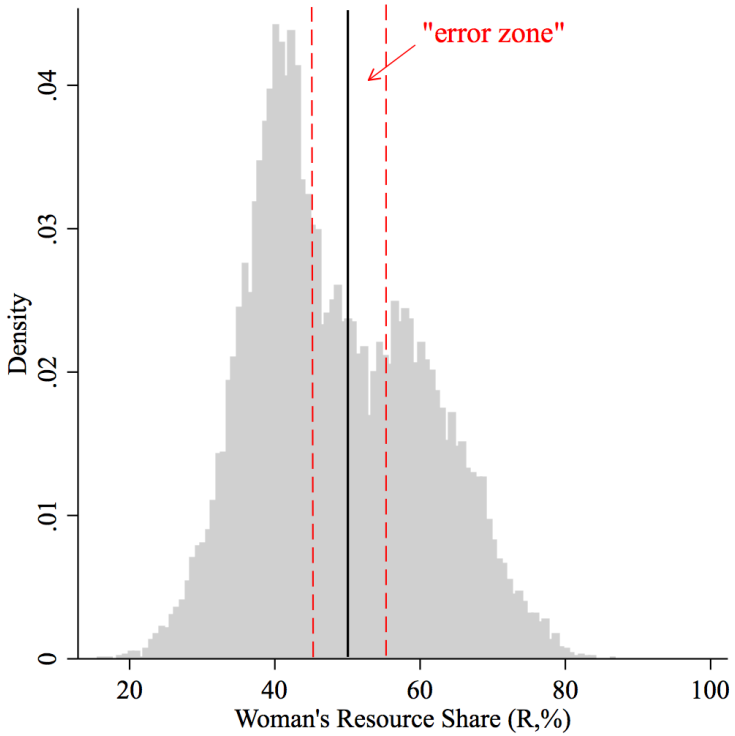
Model Predictions

Estimated Resource Shares



- Estimated $R^* = R$ R and Decision Making
- Estimated $D = \mathbb{I}(R \geq c)$

Estimated Resource Shares



- Estimated $R^* = R$ R and Decision Making
- Estimated $D = \mathbb{I}(R \geq c)$
- Inevitable misclassification error in treatment variable
- *Note:* Heterogeneity in c is obs. equivalent to mismeasurement

- Estimating Control over Resources
- Dealing with Measurement Error
- Women's Resource Control and Family Health
- Discussion

Dealing with Mismeasurement

- D is observed *without* error: Treatment effect on compliers through IV (Imbens-Angrist (1994))

Dealing with Mismeasurement

- D is observed *without* error: Treatment effect on compliers through IV (Imbens-Angrist (1994))
- D is observed *with* error:
  - Non-classical measurement error: negatively correlated with the true value of regressor (Battistin-Nadai-Sianesi (2014); Ura (2016); Di Traglia-Garcia Jimeno (2017); Yanagi (2017))

Dealing with Mismeasurement

- D is observed *without* error: Treatment effect on compliers through IV (Imbens-Angrist (1994))
- D is observed *with* error:
  - Non-classical measurement error: negatively correlated with the true value of regressor (Battistin-Nadai-Sianesi (2014); Ura (2016); Di Traglia-Garcia Jimeno (2017); Yanagi (2017))
  - Mismeasurement-Robust LATE (**MR-LATE**)
  - Two mismeasured treatments (T^a, T^b)
  - LATE identified by **two** IV regressions: of outcome T^aY and T^bY on T^a and T^b, using Z as an instrument (Abadie (2002))

Dealing with Mismeasurement

1. Under standard LATE assumptions and
   - Z independent of potential measurement errors
   - For compliers, potential mismeasures independent of potential outcomes
   - Minimal relevance condition of mismeasured treatments

$$\lambda^a = \frac{cov(T^a Y, Z)}{cov(T^a, Z)} \qquad \lambda^b = \frac{cov\left(T^b Y, Z\right)}{cov\left(T^b, Z\right)}$$

$$\lambda^a - \lambda^b = \text{MR-LATE} \propto \text{LATE}$$

Theorem 1 Corollary 1

Dealing with Mismeasurement

2. If T^a never misclassifies untreated as treated and T^b such that $1 - T^b$ never misclassifies treated as untreated (one-type misclassification):

$$\lambda^a = \frac{cov(T^a Y, Z)}{cov(T^a, Z)} \qquad \lambda^b = \frac{cov\left(T^b Y, Z\right)}{cov\left(T^b, Z\right)}$$

$$\downarrow \qquad\qquad \downarrow$$

$$E(Y_1|C) \qquad\qquad E(Y_0|C)$$

$$\lambda^a - \lambda^b = \text{MR-LATE} = \text{LATE}$$

Corollary 2 Graphical Illustration

Dealing with Mismeasurement

- True binary measure of control: $D = \mathbb{I}(R^* \geq c)$
- We cannot observe R^*, we can only observe $R = R^* + \epsilon$
- $\epsilon \in [\kappa_b - c, \kappa_a - c]$: Measurement/misclassification error

Dealing with Mismeasurement

- True binary measure of control: $D = \mathbb{I}(R^* \geq c)$
- We cannot observe R^*, we can only observe $R = R^* + \epsilon$
- $\epsilon \in [\kappa_b - c, \kappa_a - c]$: Measurement/misclassification error
- Construct T^a and T^b

$$T^a = \mathbb{I}(R \geq \kappa^a)$$
$$T^b = \mathbb{I}(R < \kappa^b)$$

- If κ^a and κ^b are *known*, MR-LATE point-identifies LATE
- If κ^a and κ^b are *unknown*, MR-LATE can sign and bound LATE

Dealing with Mismeasurement

- True binary measure of control: $D = \mathbb{I}(R^* \geq c)$
- We cannot observe R^*, we can only observe $R = R^* + \epsilon$
- $\epsilon \in [\kappa_b - c, \kappa_a - c]$: Measurement/misclassification error
- Construct T^a and T^b

$$T^a = \mathbb{I}(R \geq \kappa^a)$$
$$T^b = \mathbb{I}(R < \kappa^b)$$

- If κ^a and κ^b are *known*, MR-LATE point-identifies LATE
- If κ^a and κ^b are *unknown*, MR-LATE can sign and bound LATE
- *Note:* MR-LATE identifies **LATE of D on outcome Y** (even though D is not correctly observed)

- Estimating Control over Resources
- Dealing with Measurement Error
- Women's Resource Control and Family Health
- Discussion

Empirical Strategy

- **Health Outcomes:** BMI, Pr(Underweight), Pr(Anemic) for adults; HAZ, WAZ, Pr(Fever), Pr(Cough), Pr(Diarrhea), Pr(Vaccination) for children
- **Instrument:** State-level reforms equalizing inheritance rights between genders
  - Hindu Succession Act (1956)
  - Amendments (Kerala in 1976, Andhra Pradesh in 1986, Tamil Nadu in 1989, Maharashtra and Karnataka in 1994; India in 2005)
  - Hindu, Buddhist, Jain and Sikh women who married after the reforms
  - $\uparrow$ women's bargaining and decision power
  - Previously studied (Deininger et al. (2013), Roy (2008, 2015), Heath and Tan (2014), Bose and Das (2016), Calvi (2016)) Results: First Stage

Empirical Strategy

$$Y_i = \beta D_i + X_i'\delta + u_i$$

- 2SLS estimation using exposure to HSA reforms as instrument

Empirical Strategy

$$Y_i = \beta D_i + X_i'\delta + u_i$$

- ~~2SLS estimation using exposure to HSA reforms as instrument~~
- Choose κ^a and κ^b so that up to $\mathcal{K}$ percent of the sample might be misclassified ($\mathcal{K} = 0, 1, 5, 10, 20$)
  - $\mathcal{K}/2$ is misclassified as treated when untreated and viceversa

Empirical Strategy

$$Y_i = \beta D_i + X_i'\delta + u_i$$

- ~~2SLS estimation using exposure to HSA reforms as instrument~~
- Choose κ^a and κ^b so that up to $\mathcal{K}$ percent of the sample might be misclassified ($\mathcal{K} = 0, 1, 5, 10, 20$)
  - $\mathcal{K}/2$ is misclassified as treated when untreated and viceversa
- Construct T^a and T^b with $c = 0.5$ and varying κ^a and κ^b
- For $j = a, b$, estimate with 2SLS

$$Y_i T_i^j = \alpha^j + \lambda^j T_i^j + \delta^j X_i + u_i^j$$

- **Compute MR-LATE as the difference:** $\hat{\lambda}^a - \hat{\lambda}^b$
- Bootstrap SE; fixed effects to ensure excl. restriction is satisfied

MR-LATE Estimates

- Accounting for measurement/misclassification error matters empirically
  - e.g., 10 p.p. differences in effect on Pr(Cough) if misclassification error is not accounted for

MR-LATE Estimates

- Accounting for measurement/misclassification error matters empirically
  - e.g., 10 p.p. differences in effect on Pr(Cough) if misclassification error is not accounted for
- Positive health effects for women Results: Adults
  - If relative resource shares $\uparrow$ 1%: BMI $\uparrow$ 0.46 points, Pr(Underweight) $\downarrow$ 4.24%, Pr(Anemic) $\downarrow$ 2.6%
- Positive health effects for children Results: Children
  - If relative resource shares $\uparrow$ 1%: Height-for-age $\uparrow$ 0.15 points, Pr(Cough) $\downarrow$ 3.65%, Pr(Diarrhea) $\downarrow$ 2.46%
  - Mild increase in HAZ and WAZ
- No effect for men

MR-LATE Estimates

- Accounting for measurement/misclassification error matters empirically
  - e.g., 10 p.p. differences in effect on Pr(Cough) if misclassification error is not accounted for
- Positive health effects for women Results: Adults
  - If relative resource shares $\uparrow$ 1%: BMI $\uparrow$ 0.46 points, Pr(Underweight) $\downarrow$ 4.24%, Pr(Anemic) $\downarrow$ 2.6%
- Positive health effects for children Results: Children
  - If relative resource shares $\uparrow$ 1%: Height-for-age $\uparrow$ 0.15 points, Pr(Cough) $\downarrow$ 3.65%, Pr(Diarrhea) $\downarrow$ 2.46%
  - Mild increase in HAZ and WAZ
- No effect for men
- Effects are **sizable**: Comparison between hhs. with women controlling 40% vs. 60% of resources (Thomas (1990))
- Linear model is rejected

- Estimating Control over Resources
- Dealing with Measurement Error
- Women's Resource Control and Family Health
- Discussion

Discussion

- Novel approach to study the effect of women's control of resources on the health status of family members in India

Discussion

- Novel approach to study the effect of women's control of resources on the health status of family members in India
- External validity our estimates (Kowalski (2016)) ✓
  - Provide an answer to a general question

Discussion

- Novel approach to study the effect of women's control of resources on the health status of family members in India
- External validity our estimates (Kowalski (2016)) ✓
  - Provide an answer to a general question
- New estimator for LATE under misclassification (MR-LATE)
  - Good performance in simulations (in paper)
  - Can be used for standard reporting or recording errors
  - Potential for applications in which the treatment is estimated (e.g., effect of high discount rates on school drop-out; effect of risk aversion on investment decisions)

Discussion

- Novel approach to study the effect of women's control of resources on the health status of family members in India
- External validity our estimates (Kowalski (2016)) ✓
  - Provide an answer to a general question
- New estimator for LATE under misclassification (MR-LATE)
  - Good performance in simulations (in paper)
  - Can be used for standard reporting or recording errors
  - Potential for applications in which the treatment is estimated (e.g., effect of high discount rates on school drop-out; effect of risk aversion on investment decisions)
- Contribution to the debate on the relative benefits and limitations of structural modeling vs. causal

Thank you!

Comments are very welcome:

denni.tommasi@monash.edu

Estimating Resource Control

Engel Curves Estimates

Back

	$R(X)$	$\hat{\delta}_w(X)$	$\hat{\delta}_m(X)$	$\hat{\beta}(X)$
Two children	-0.0554	-0.2660	-0.2260	0.0260
	(0.0166)	(0.3370)	(0.3350)	(0.0409)
Three children	-0.0395	-0.5610	-0.3470	0.0455
	(0.0211)	(0.3880)	(0.3860)	(0.0471)
Four children	-0.0824	0.0203	0.1510	-0.0180
	(0.0270)	(0.5900)	(0.5920)	(0.0721)
Fraction of Female Children	-0.0146	-0.4530	-0.5150	0.0544
	(0.0178)	(0.3600)	(0.3620)	(0.0437)
Gender Age Gap (Man - Woman)	0.0618	1.6710	1.3630	-0.1110
	(0.1320)	(2.6590)	(2.7870)	(0.3390)
Woman's Age	-0.571	2.3910	1.6600	-0.1510
	(0.1200)	(3.1000)	(3.1200)	(0.3810)
Children's Avg. Age	-0.1570	-3.4250	-2.6360	0.2270
	(0.2410)	(5.3780)	(5.3550)	(0.6520)
Hindu, Buddhist, Jain, Sikh	0.0951	1.520	1.038	-0.141
	(0.0214)	(0.3430)	(0.3480)	(0.0418)
Sch. Caste, Sch. Tribe, Oth. Back. Caste	-0.0313	-0.0360	-0.0002	-0.0180
	(0.0158)	(0.3090)	(0.3130)	(0.0380)
Own Land	0.0060	-0.1300	-0.0490	0.0299
	(0.0167)	(0.3270)	(0.3250)	(0.0393)
Woman Completed High School	0.0610	-0.2490	-0.2380	0.0368
	(0.0259)	(0.4840)	(0.4860)	(0.0563)
Man Completed High School	0.0254	0.0243	-0.2200	0.0272
	(0.0207)	(0.4020)	(0.4060)	(0.0477)
Rural	-0.0115	1.545	1.740	-0.194
	(0.0155)	(0.3200)	(0.3200)	(0.0390)
North	-0.0588	0.1130	0.987	-0.0423
	(0.0270)	(0.5250)	(0.5230)	(0.0630)
East	0.128	0.2750	0.0353	-0.0094
	(0.0276)	(0.5440)	(0.5320)	(0.0656)
North-East	0.19	-1.505	-2.055	0.150
	(0.0321)	(0.5970)	(0.5810)	(0.0713)
South	-0.0631	1.521	1.216	-0.139
	(0.0263)	(0.5590)	(0.564)	(0.0681)
Constant	0.623	6.743	6.997	-0.718
	(0.0476)	(1.0060)	(1.0070)	(0.1240)

Estimating Resource Control

Model Predictions: Descriptive Statistics

Back

	Obs.	Mean	St. Dev.	Min.	Max.
NSS Sample :					
Woman's Resource Share (R)	7,440	48.27	11.64	13.54	86.92
$\mathbb{I}(R \geq 50)$	7,440	0.41	0.49	0.00	1.00
NFHS Sample:					
Woman's Resource Share (R)	22,767	48.13	11.81	6.50	86.97
$\mathbb{I}(R \geq 50)$	22,767	0.40	0.49	0.00	1.00

Dealing with Mismeasurement: Details

- **Assumption 1:** Y and D satisfy the standard LATE assumptions (Imbens-Angrist (1994)):
  i. $0 < E(D) < 1$, $0 < E(Z) < 1$ and $Z \perp (Y_1, Y_0, D_1, D_0)$
  ii. (Y_1, Y_0, D_1, D_0, Z) are independent across individuals and have finite means
  iii. Monotonicity/No defiers
- **Assumption 2:**
  i. $Z \perp (Y_1, Y_0, D_1, D_0, T_1, T_0)$
  ii. $(T_1, T_0) \perp (Y_1, Y_0) \mid C$
  iii. $E(T_1 - T_0 \mid C) \neq 0$

Theorem 1

Let Assumptions 1 and 2 hold. Then:

$$\lambda = E\left[qY_1 + (1-q)Y_0 \mid C\right]$$

$\lambda = cov(YT, Z)/cov(T, Z)$
$q = E(T_1 \mid C)/[E(T_1 \mid C) - E(T_0 \mid C)]$.

Back

Dealing with Mismeasurement: Details

Corollary 1

Let Assumption 1 hold and let Assumption 2 hold for T^a and T^b. Then:

$$MR - LATE = (q^a - q^b)\ E\left[Y_1 - Y_0 \mid C\right] = (q^a - q^b)\ LATE$$

Corollary 2

Let Assumption 1 hold, and let Assumption 2 hold for T^a and T^b. If $q^a - q^b = 1$. Then:

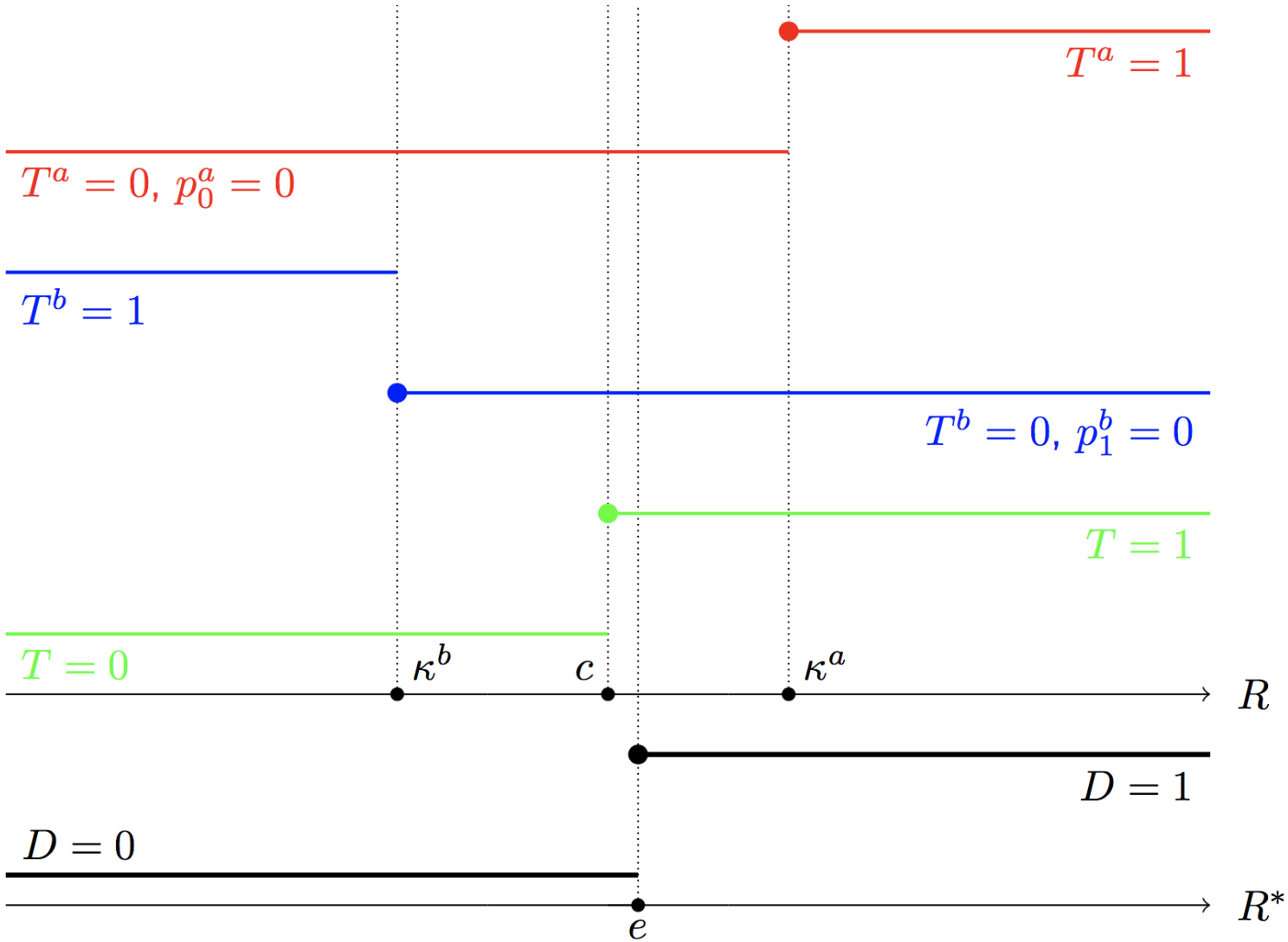
$$MR - LATE = LATE = cov\left(Y, Z\right) / cov\left(D, Z\right)$$

A sufficient condition for MR-LATE to equal LATE is:

$$E\left(T_0^a \mid C\right) = E\left(T_1^b \mid C\right) = 0$$

Back

Dealing with Mismeasurement: Details



Back

Results: Adults' Health

	Women			Men		
	BMI	Pr(BMI≤18.5)	Pr(Anemic)	BMI	Pr(BMI≤18.5)	Pr(Anemic)
MR-LATE ($\mathcal{K}=0$)	9.7989	-0.9175	-0.5572	2.4074	-0.2778	0.0860
	(1.9869)	(0.2288)	(0.2531)	(2.4452)	(0.2971)	(0.2318)
MR-LATE ($\mathcal{K}=1$)	9.2903	-0.8836	-0.5194	2.0658	-0.2345	0.0556
	(2.1346)	(0.2200)	(0.2420)	(2.7973)	(0.2785)	(0.2181)
MR-LATE ($\mathcal{K}=5$)	9.1945	-0.8482	-0.5239	3.0378	-0.2629	0.0925
	(4.1294)	(0.2225)	(0.2487)	(4.3572)	(0.2926)	(0.2195)
MR-LATE ($\mathcal{K}=10$)	12.4103	-1.1476	-0.6254	3.7843	-0.3852	0.0558
	(6.2875)	(0.2715)	(0.3124)	(7.4517)	(0.3633)	(0.2630)
MR-LATE ($\mathcal{K}=20$)	7.7153	-0.7232	-0.5151	-1.0725	-0.5217	-0.1373
	(9.1580)	(0.2915)	(0.3730)	(15.7390)	(0.4454)	(0.3185)

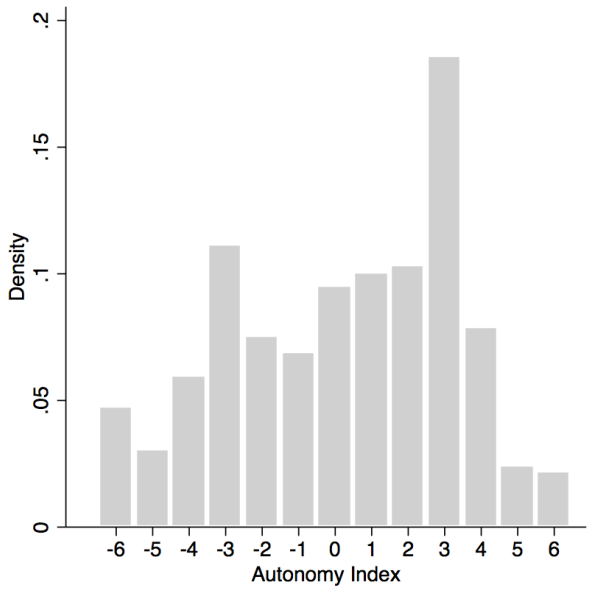
- Positive effects for women:
  If women's resource share ↑ 1 p.p.: BMI ↑ 0.46, Pr(Underweight) ↓ 4.24 p.p., Pr(Anemic) ↓ 2.6 p.p. Back

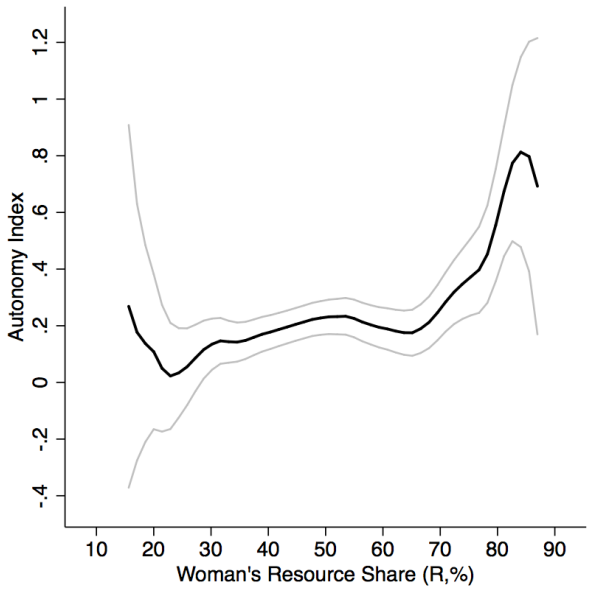
Results: Children's Health

	Weight-for-age (z-score)	Height-for-age (z-score)	Pr(Cough)	Pr(Fever)	Pr(Diarrhea)	Pr(Any Vaccination)
MR-LATE ($\mathcal{K}=0$)	2.0547	2.8140	-0.6649	-0.6114	-0.4549	-0.1296
	(1.4246)	(1.8384)	(0.2973)	(0.4423)	(0.2185)	(0.2797)
MR-LATE ($\mathcal{K}=1$)	2.0093	2.7298	-0.7264	-0.6565	-0.5153	-0.2065
	(1.3814)	(1.7865)	(0.3176)	(0.4551)	(0.2255)	(0.2883)
MR-LATE ($\mathcal{K}=5$)	1.7328	3.0385	-0.7306	-0.6273	-0.4923	-0.2159
	(1.3947)	(1.6276)	(0.2868)	(0.4259)	(0.1981)	(0.3159)
MR-LATE ($\mathcal{K}=10$)	2.4247	3.0848	-0.8890	-0.6361	-0.5121	-0.1029
	(1.7819)	(1.8369)	(0.3115)	(0.4158)	(0.2023)	(0.4178)
MR-LATE ($\mathcal{K}=20$)	2.2458	2.8007	-0.6878	-0.4312	-0.6457	0.0141
	(1.6342)	(1.8806)	(0.3053)	(0.3345)	(0.1789)	(0.5104)

- Positive effects for children:
  If women's resource share ↑ 1%: Height-for-age ↑ 0.15, Pr(Cough) ↓ 3.65 p.p., Pr(Diarrhea) ↓ 2.46 p.p. Back

Resource Shares and Autonomy Index





- Index based on women's response to 3 questions about decision making and 3 questions about mobility. Response equal to
  - 1 if the response is that wife controls that decision (or if she can go alone to places)
  - -1 if the response is that the husband controls that decision (or if she cannot go alone to places)
  - 0 for any other response.
- Index equal to the sum of the responses across all of the questions

Back

Binary Measure of Control and Self-Reported Decision Power

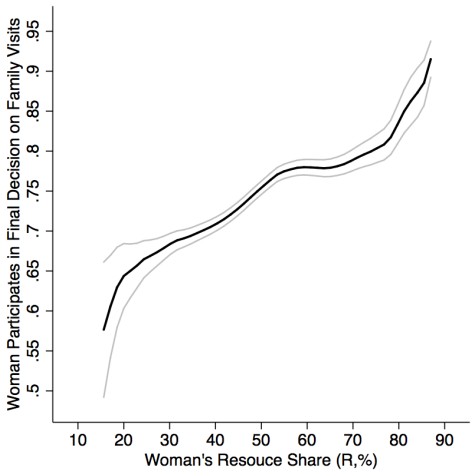
	$\mathbb{I}$(Woman Participates in Final Decisions on)			Autonomy
	Household Purchases	Visits to Family and Relatives	Own Health	Index
$T = \mathbb{I}(R \geq 50)$	0.0245	0.0303	0.0195	0.228
	(0.0147)	(0.0125)	(0.0160)	(0.0994)
Mean Dependent Variable	0.6642	0.7130	0.7400	65.8703

Back

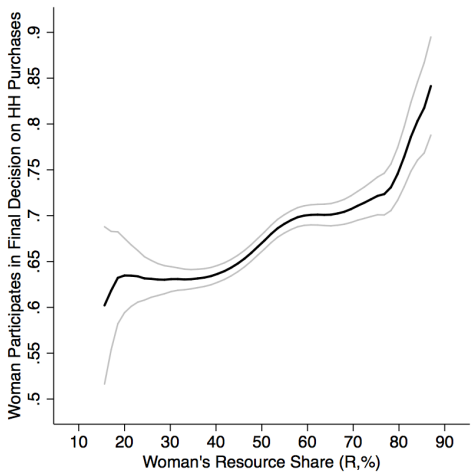
Resource Shares

Structural and Self-reported Decision Power

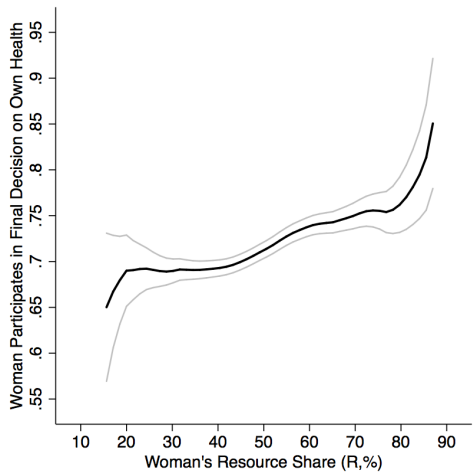
- *Is R a good measure of decision making power?*



Family Visits



Hh. Purchases



Own Health

- Autonomy Index Details
- Binary control Details

Back