

Labor Markets and Poverty in Village Economies

Oriana Bandiera [LSE], Robin Burgess [LSE], Narayan Das [BRAC],
Selim Gulesci [Bocconi], Imran Rasul [UCL], Munshi Sulaiman [BRAC and Yale]

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Poverty and Labor Markets

- labor is the primary asset the poor are endowed with
 - understanding how the poor allocate their **time** across activities is central to poverty alleviation
 - focus on market imperfections of two types:
 - barriers: misallocation and scale
 - distorted prices ($w \neq MP_L$): un(der)employment
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This Paper: Summary 1

- use an RCT to understand how **capital** and **labor** market imperfections determine labor allocations of the rural poor
 - RCT is large-scale, long-term, and a partial popn experiment [Moffitt 2001]
 - reveal the nature of the **poverty trap** faced by the poor:
 - barriers to accessing capital that prevents K -intense work activities being undertaken at scale
 - exacerbated by constrained L^D in L -intense work activities (\bar{L}^D)
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This Paper: Summary 2

- relaxing capital constraints on poor allows them to permanently reallocate time across activities
 - this big-push intervention impacts **village economy**:
 - labor market: standard GE channels (Δw)
 - capital markets: K -accumulation, savings, financial intermediation
 - different **distributional** consequences
 - calculate implied welfare cost of capital market imperfection
 - with and without binding L^D constraint (\bar{L}^D)
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Labor Choices of the Rural Poor

- the rural poor are landless and derive most of their earnings from casual wage labor
 - in the same LM, observe wealthier hhs combining $(L - K)$ in income generating activities [Banerjee and Duflo 2007]
 - K -intense sector has far higher returns than casual labor ($r > w$)
 - misallocation of time across activities:
 - barriers to accessing to capital [poverty trap]
 - lack information on returns to activities [Jensen 2012]
 - un(der)employment:
 - constrained aggregate L^D [exacerbates poverty trap]
 - downward nominal wage rigidity [Lewis 1954, Kaur 2014]
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Specific Context: Setting and Data

- **context:** 1400 villages throughout rural Bangladesh
 - landless poor
 - dual labor market: casual wage labor ($f(L)$) and K -intense activities ($g(L, K)$)
 - panel data collected since 2007 from 23,000 hhs in 1409 communities
 - 7,000 eligibles [eligible *ultra poor women*]
 - 16,000 non-eligibles [near poor, middle, upper classes]
 - data collection focused on:
 - time devoted to income generating activities, by activity and hh member
 - earnings-assets-wealth-consumption-savings-transfers-social ties
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Context: Intervention

- collaboration with BRAC NGO
 - **randomized intervention** in which eligibles receive:
 - a large injection of capital ($\Delta K > 0$)
 - skills that raise MP_L in the K -intensive sector ($g_L(L, K) > 0$)
 - use to understand underlying **capital and labor** market constraints the poor face in allocating their time across activities
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Outline

- context: features of rural labor markets for women in Bangladesh
 - theoretical framework
 - intervention description and research design
 - labor markets: individual→village level
 - capital markets: household→village level
 - efficiency cost of capital constraint
 - lessons and future research agenda
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Four Features of Rural Labor Markets for Women

- dualism: limited range of labor activities
 - returns to K -intense activities (r) $>$ returns from casual wage labor (w)
 - capital market imperfections
 - potential **constrained/weak** aggregate demand for casual wage labour (\bar{L}^D)
 - [Figure 1; Tables 1 and 2]
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Figure 1: Features of Rural Labor Markets for Women

A. Share of Hours of Casual Labor and Self-Employment by Branch

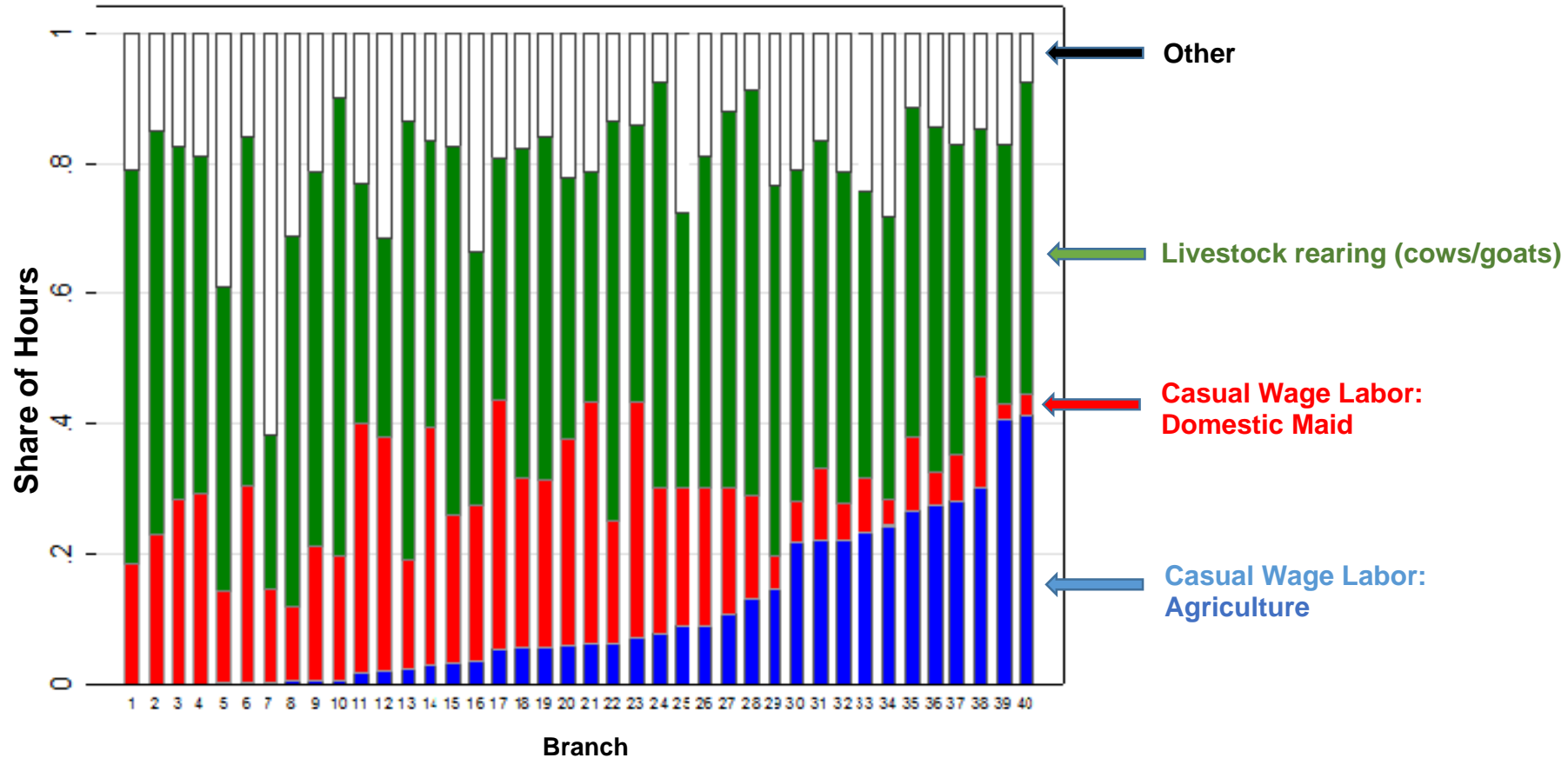


Figure 1: Features of Rural Labor Markets for Women

B. Returns to Activities by Branch

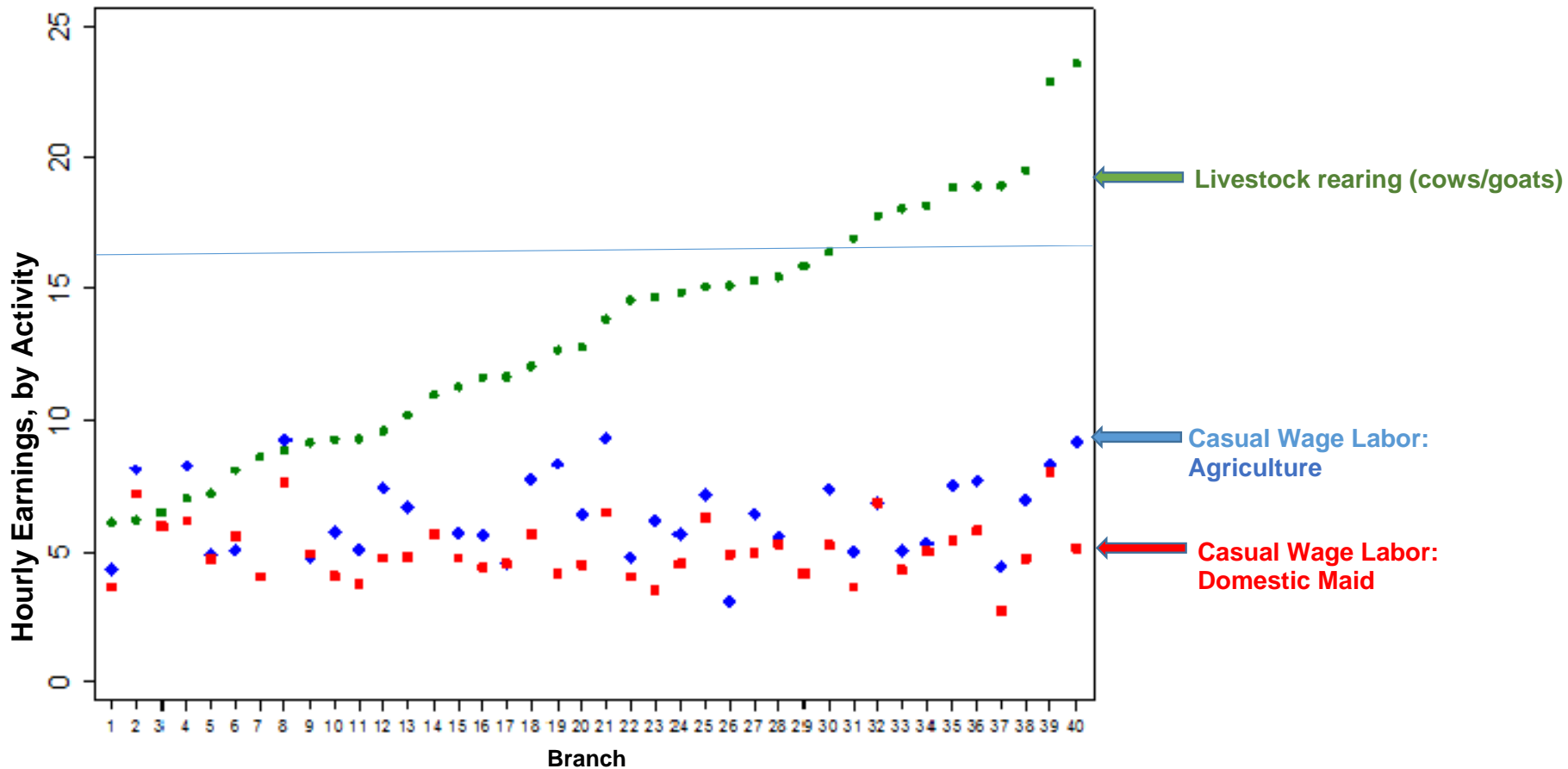


Figure 1: Features of Rural Labor Markets for Women

C. Returns to Activities by Livestock Value

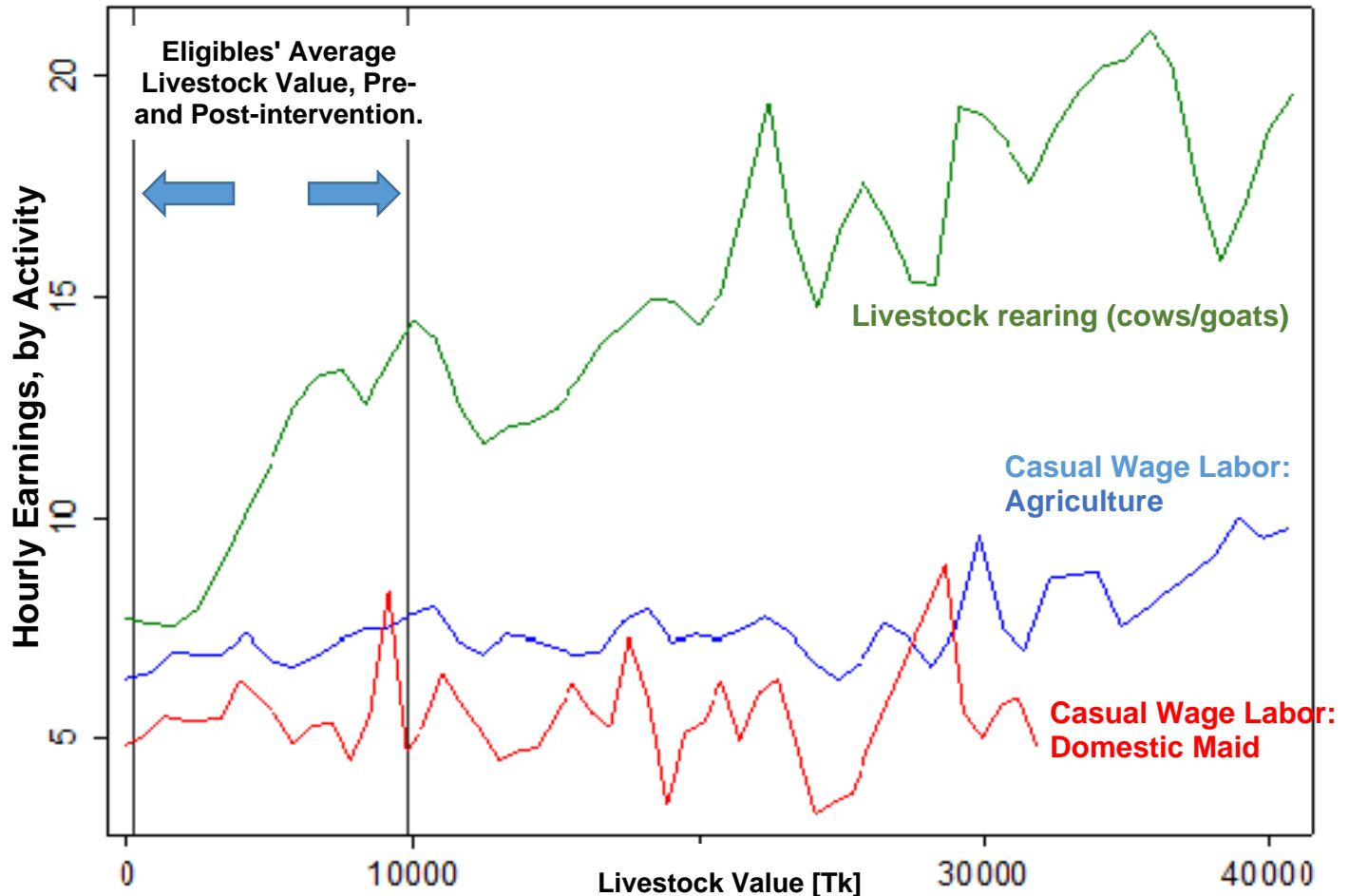


Table 1: Access to Capital, by Wealth Class

Means, standard deviation in parentheses

	(1) Eligible Poor	(2) Near Poor	(3) Middle Class	(4) Upper Class
Engagement in Financial Markets				
Household savings [Tk]	146	404	1618	8608
Any loans outstanding?	.191	.389	.497	.429
Value of loans if any outstanding [Tk]	604.9	1896	4857	11060
Collateral				
Own land?	.066	.110	.489	.912
Value of land if owned [Tk]	3691	9194	126777	741615
Own livestock (cows/goats)?	.477	.610	.842	.952
Value of livestock if owned [Tk]	916	2683	13115	31376
Below the \$1.25 a day poverty line?	.530	.492	.367	.121
Number of households	6732	7340	6742	2215

Notes: All statistics are constructed using baseline household data from both treatment and control villages. Wealth classes are based on the participatory rural assessment (PRA) exercise: the eligible (ultra-poor) are ranked in the bottom wealth bins (4th if 4 bins are used, 5th if 5 are used) and meet the program eligibility criteria, the near poor are ranked in the bottom wealth bins and do not meet the program eligibility criteria, the middle class are ranked in the middle wealth bins (2nd and 3rd if 4 are used, 2nd, 3rd and 4th if 5 are used) and the upper classes are those ranked in the top bin. The number of households in each wealth class at baseline is reported at the foot of the table. Household savings refer to value of savings held at home, at any bank, at any MFI and with saving guards. Any loans outstanding refers to loans from both formal and informal sources. Non-livestock wealth includes the value of land, other business assets and non-business assets. All monetary amounts are expressed in Bangladeshi Taka, set at 2007 prices and deflated using the rural CPI published by Bangladesh Bank. In 2007, 1USD=69TK.

Table 2: Features of Rural Labor Markets for Women

Village Level Statistics, Measured Pre-Intervention

Means, standard deviation in parentheses

	Casual Wage Labor		K-intense Activity	(4) t-test	(5) t-test
	(1) Agriculture	(2) Domestic Maid	(3) Livestock Rearing [Cows, Goats]	[Col 1 = Col 3]	[Col 2 = Col 3]
Hourly earnings [Tk]	6.35 (1.87)	4.92 (1.99)	13.7 (14.6)	[.000]	[.000]
Days per year	127 (65.9)	166 (89.4)	334 (41.1)	[.000]	[.000]
Hours per day	7.62 (1.15)	7.06 (1.73)	1.83 (.772)	[.000]	[.000]

Notes: All statistics are constructed at the village level, using baseline data from both treatment and control villages. Livestock comprises cows and/or goats. To reduce sensitivity to outliers, the hourly earnings and hours per day variables are computed by first taking the median value for each activity in a village, and then average these across all villages. Columns 4 and 5 report p-values on a t-test of the equality of some of these outcomes between the two forms of casual wage labor (agriculture and domestic maid work) and livestock rearing. All monetary amounts are expressed in Bangladeshi Taka, set at 2007 prices and deflated using the rural CPI published by Bangladesh Bank. In 2007, 1USD=69TK.

Theoretical Framework

- develop a model of activity choice and labor supply incorporating these four features of rural LM
 - derive (pre-intervention) predictions of how individual activity choices and labor supply correlate to wealth, r , w ,...
 - make precise heterogeneous individual responses to capital/skills injection
 - use changes in labor allocation across activities to make inference on underlying **constraints**:
 - capital constraint: scale of K -intense activities
 - labor demand constraint: time devoted to casual wage labor
-

Solution

- labor supply functions: $L^* = L(I, r, w)$; $S^* = S(I, r, w)$
 - [Figure 2A: Baseline]
 - [Figure 3: NP estimates of L^S wealth gradient: L_I^* , S_I^*]
 - [Table 3: pre-intervention activities by wealth class]
 - [Figure 2B: Bundled K and Skills Injection]
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Figure 2A: Activity Choice and Labor Supply

Labor Supply
(L^*, S^*)

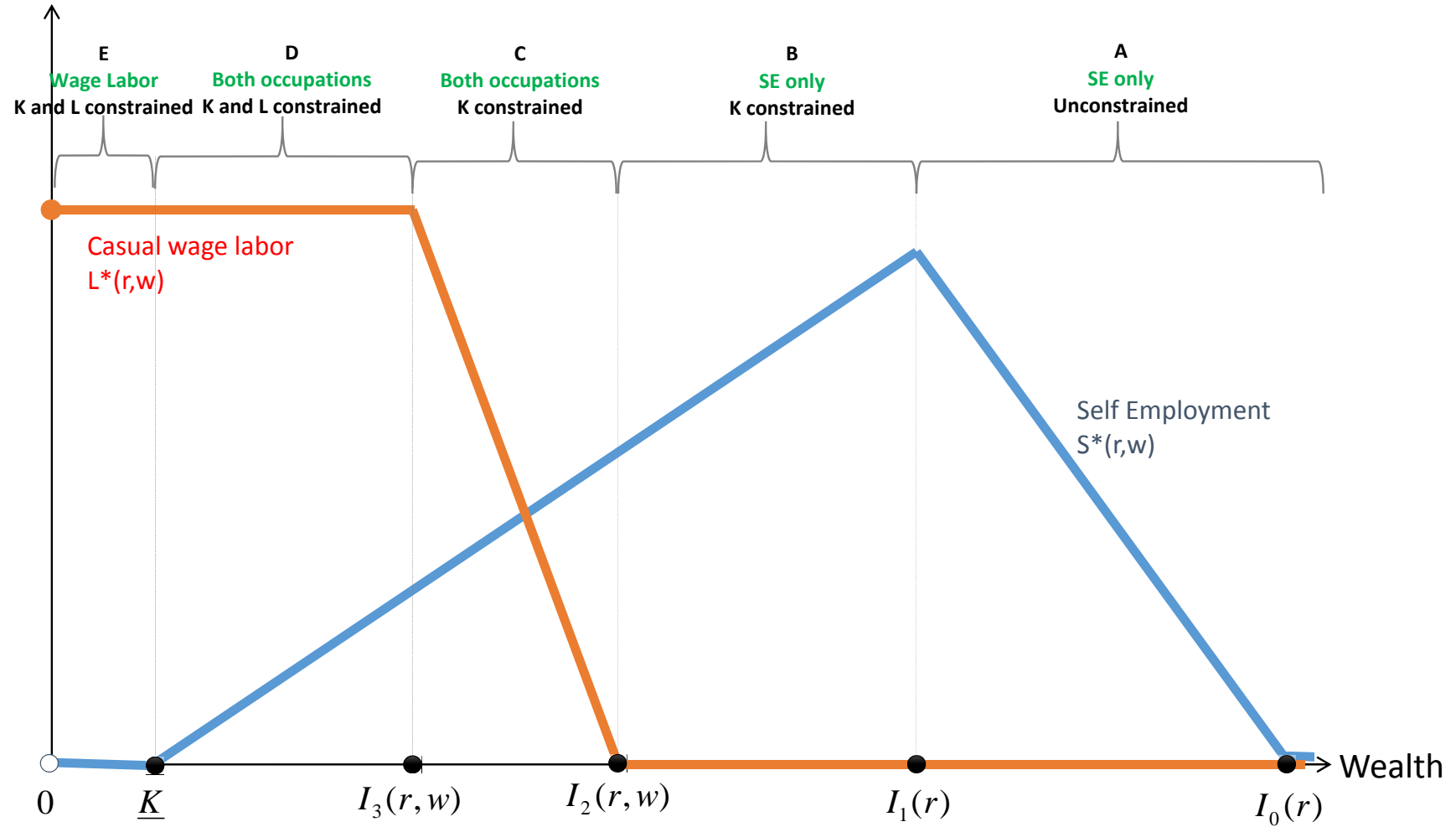


Figure 3: Baseline Labor Market Choices and Wealth

A. Labor Supply by Baseline Wealth, All Wealth Classes

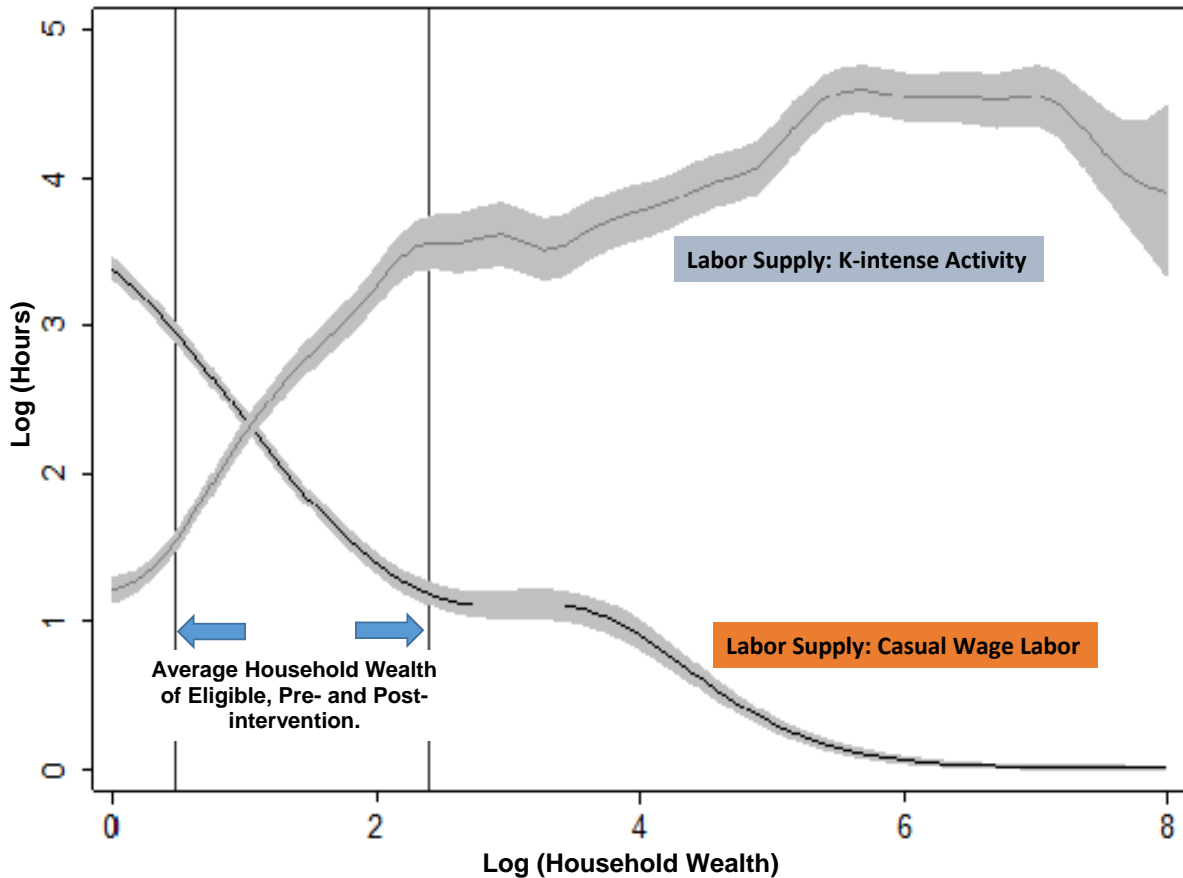


Figure 3: Baseline Labor Market Choices and Wealth

B. Casual Wage Labor Supply by Baseline Wealth, Eligible Poor

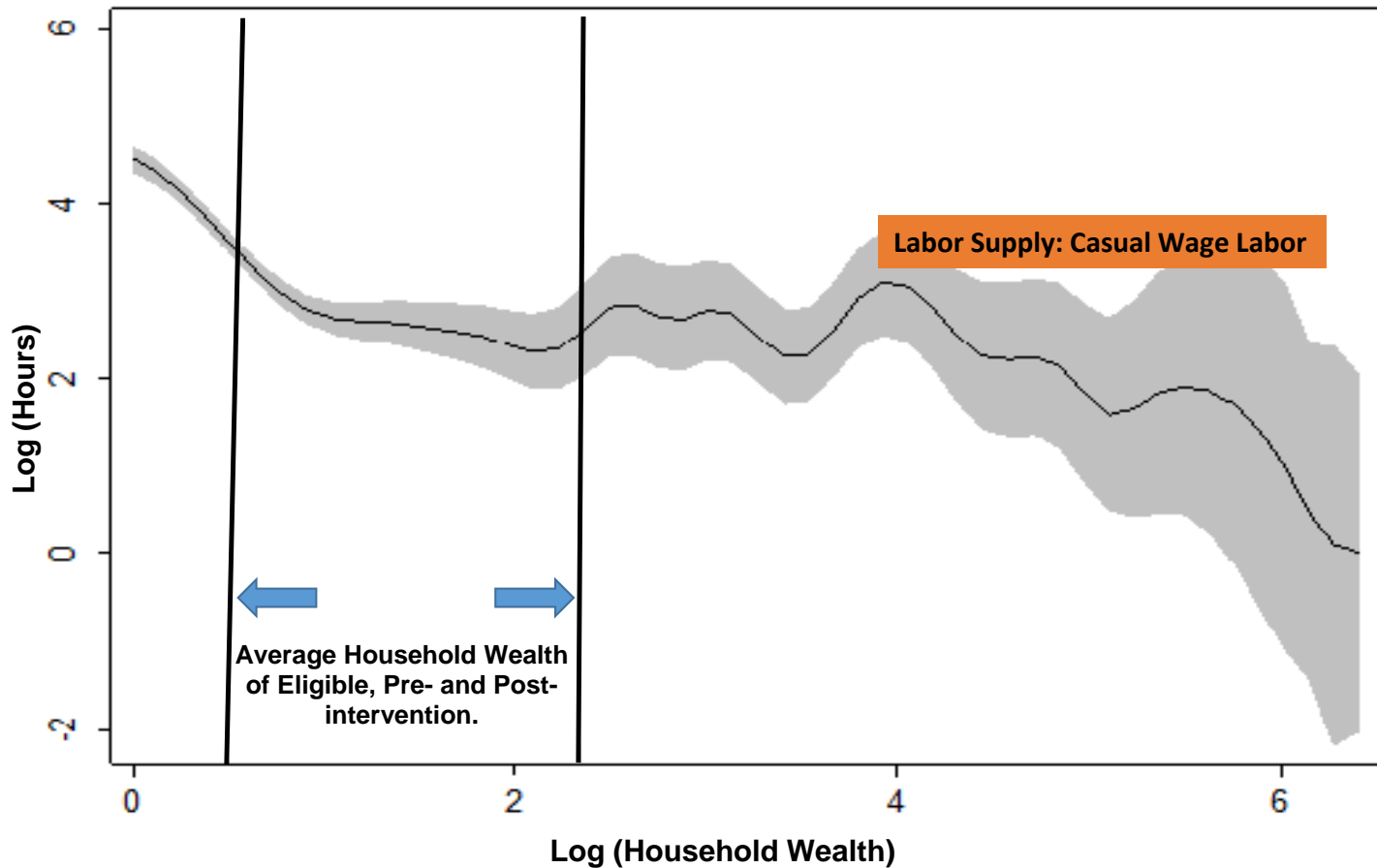


Table 3: Labor Market Activities of Women, By Wealth Class

Means, standard deviation in parentheses

	(1) Eligible Poor	(2) Near Poor	(3) Middle Class	(4) Upper Class
Share of population in this wealth class	.157	.182	.519	.141
Engaged in any income generating activity	.843	.812	.867	.906
Casual Wage Labor:				
Hours devoted to agricultural labor	257.7	189.9	45.9	2.79
Hours devoted to domestic maid	388.5	199.6	42.5	.596
Self Employment:				
Hours devoted to livestock rearing (cows/goats)	121	219	367	403
Total hours worked in the past year	1134	939	820	821
Total days worked in the past year	252	265	304	326
Number of sample households	6732	7340	6742	2215

Notes: All statistics are constructed using baseline household data from both treatment and control villages. Wealth classes are based on the participatory rural assessment (PRA) exercise: the eligible (ultra-poor) are ranked in the bottom wealth bins (4th if 4 bins are used, 5th if 5 are used) and meet the program eligibility criteria, the near poor are ranked in the bottom wealth bins and do not meet the program eligibility criteria, the middle class are ranked in the middle wealth bins (2nd and 3rd if 4 are used, 2nd, 3rd and 4th if 5 are used) and the upper classes are those ranked in the top bin. The number of households in each wealth class at baseline is reported at the foot of the table. Engagement in any income generating activity covers all potential activities.

Figure 2Bi: Capital Injection

Labor Supply
(L^*, S^*)

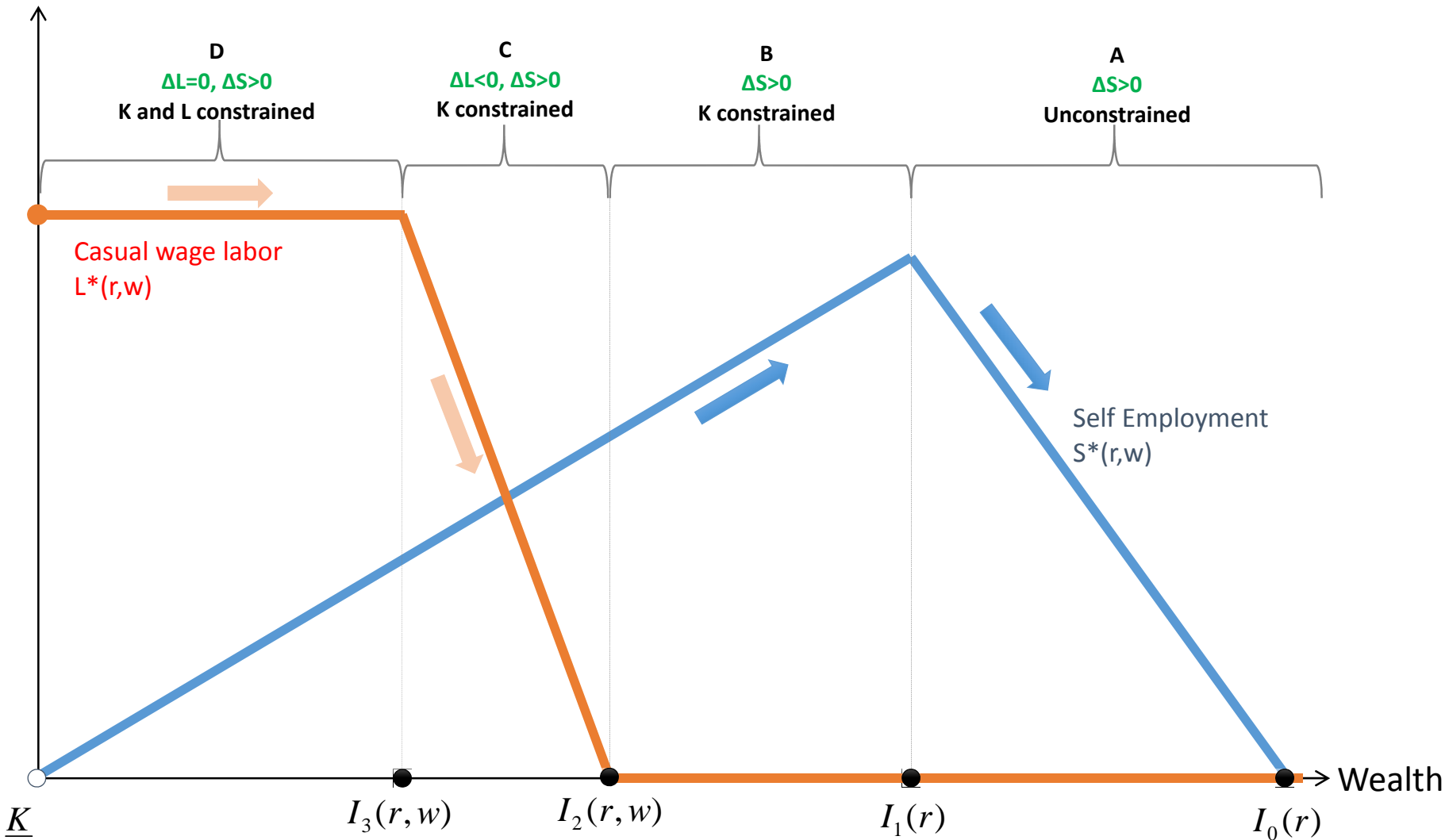
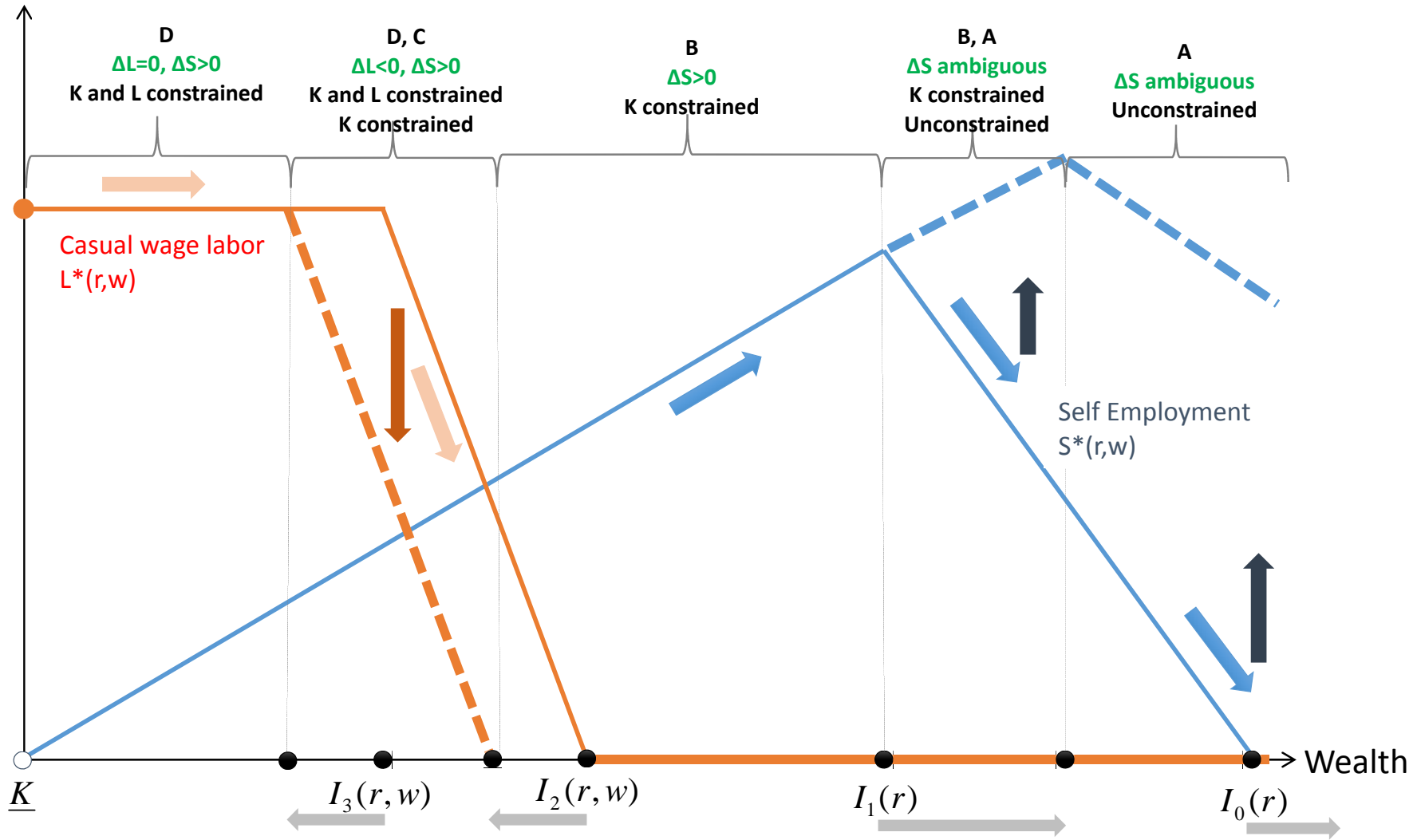


Figure 2Bii: Bundled Capital and Skills Injection

Labor Supply
(L^*, S^*)



The Ultra Poor Program: Capital and Skills Transfers

- designed and implemented by BRAC
 - combined bundle of:
 - an asset chosen from a menu of potential asset transfers [livestock, retail,...]
 - $\Delta K > 0$
 - asset specific training [12-18 months, over life cycle of livestock]
 - $dr_{iv} = r_{\theta_i}(\alpha_v, \theta_i)d\theta_i > 0$
-

Chosen Bundles

- 88% chose at least one cow: replicating asset holding of middle/upper classes
 - social norms do **not** prevent them taking such transfers *en masse*
 - value of asset transfer = 9500Tk = US\$140 = double baseline wealth
 - average value of asset transfers:
 - cows (8566Tk), goats (736Tk), poultry (242Tk)
 - delivery of asset specific training valued at US\$140 per beneficiary
 - transfers far larger than available through informal loans [Table 1]
 - 86% of initially eligible women are given some asset-training bundle
-

Research Design

- within subdistrict, randomize by BRAC branch
 - mitigates spillovers between villages
 - sampling based on pre-baseline census of 144K households
 - 100% sample of eligible poor and near poor households
 - random 10% sample of middle and upper class households
 - [Table A1: Balance; Table A2: Attrition]
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Results 1: Individual Time Allocation Across Labor Activities

[Table 4: Individual Casual Wage Labor Market Impact, Cols 1-4]

[Figure 4: Casual Labor Hours QTE]

[Table 4: Individual K-intensive Activity Impacts, Cols 5-9]

Table 4: Individual Impacts on Casual Wage Labor

OLS ITT Estimates: Individual Level Outcomes

Sample: Eligible Women

Standard Errors in Parentheses, Clustered by BRAC Branch Area

Casual Wage Labor

	(1) Engaged in Casual Wage Labor	(3) Labor Supply: Agriculture	(4) Labor Supply: Maids
Program impact after 2 years	-0.026 (.024)	-42.3 (53.0)	-57.4 (42.9)
Program impact after 4 years	-0.085*** (.023)	-46.3 (42.7)	-117** (45.0)
Baseline mean	.520	269	325
Four year impact: % change	-16.2%	-17.1%	-36.1%
Adjusted R-squared	.094	.184	.067
Number of eligible poor	6732	6732	6732
Number of observations (clusters)	20196 (40)	20196 (40)	20196 (40)

Figure 4: Casual Wage Labor

QTE Estimates on Hours Devoted to Casual Wage Labor, 4 Year Change

A. Agricultural Wage Labor

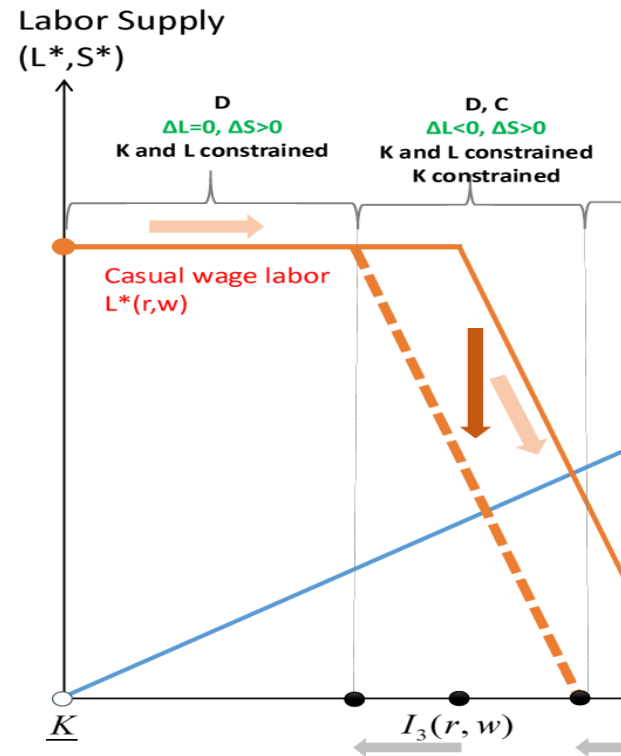
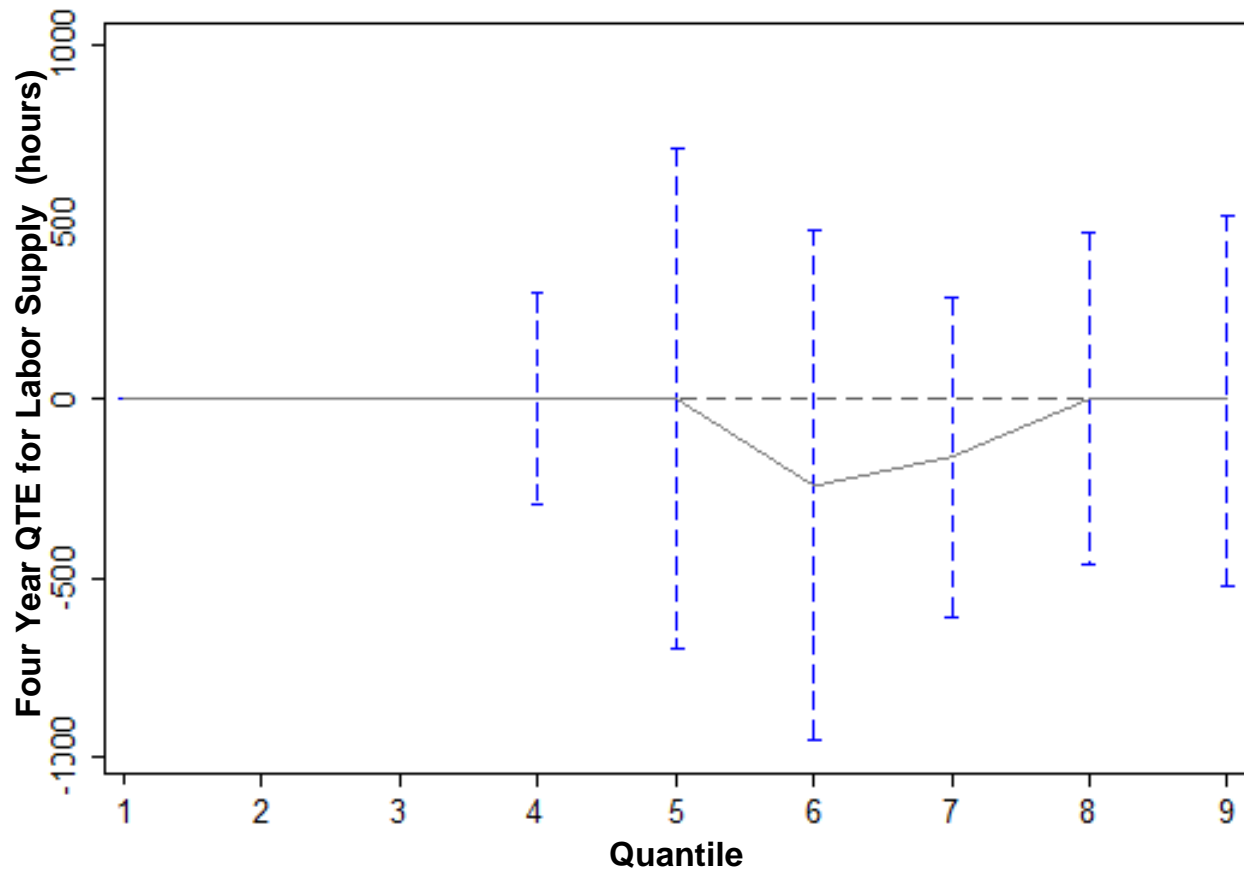


Figure 4: Casual Wage Labor

QTE Estimates on Hours Devoted to Casual Wage Labor, 4 Year Change

B. Domestic Maid Labor

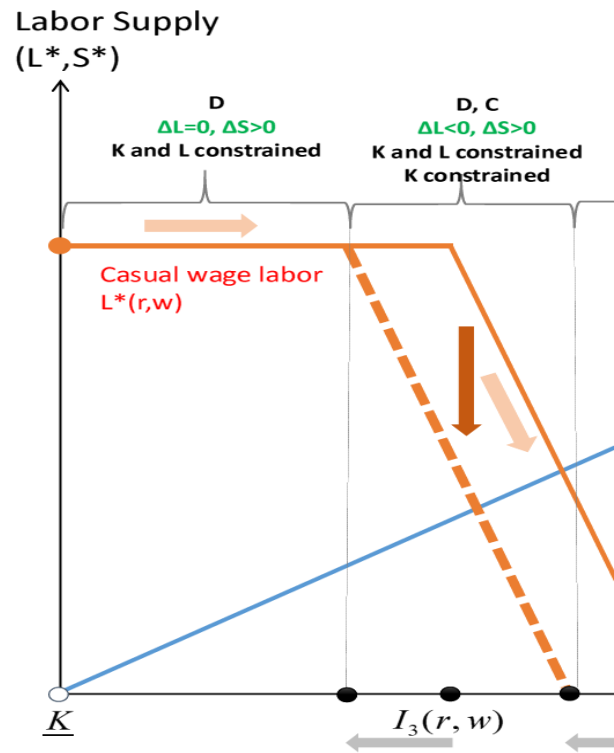
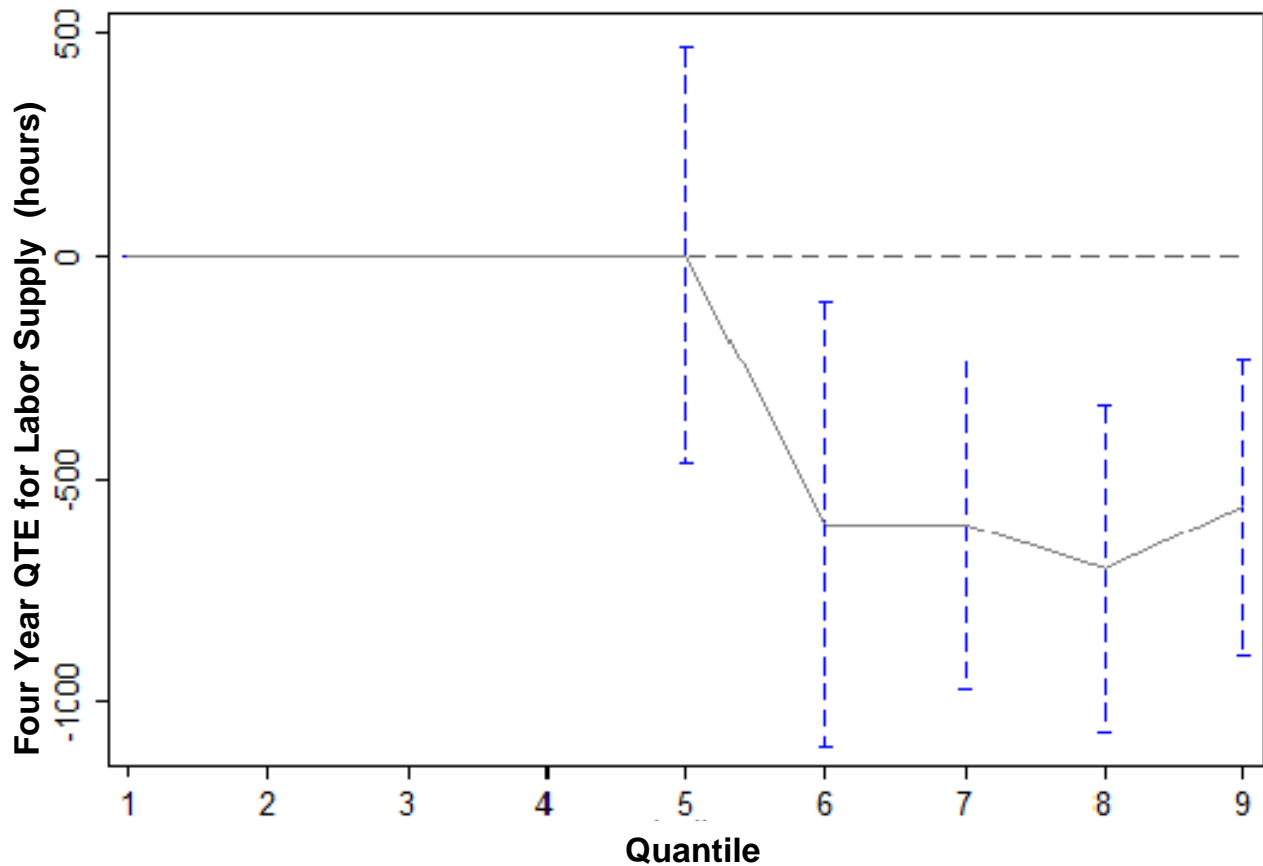


Table 4: **Individual Impacts** on Casual Wage Labor and Self Employment

OLS ITT Estimates: Individual Level Outcomes

Sample: Eligible Women

Standard Errors in Parentheses, Clustered by BRAC Branch Area

	Casual Wage Labor			K-intense Activity	
	(1) Engaged in Casual Wage Labor	(3) Labor Supply: Agriculture	(4) Labor Supply: Maids	(5) Engaged in Self Employment	(6) Labor Supply (hours)
Program impact after 2 years	-.026 (.024)	-42.3 (53.0)	-57.4 (42.9)	.588*** (.038)	487*** (30.7)
Program impact after 4 years	-.085*** (.023)	-46.3 (42.7)	-117** (45.0)	.483*** (.033)	415*** (39.2)
Baseline mean	.520	269	325	.220	268
Four year impact: % change	-16.2%	-17.1%	-36.1%	218%	155%
Adjusted R-squared	.094	.184	.067	.344	.335
Number of eligible poor	6732	6732	6732	6732	6732
Number of observations (clusters)	20196 (40)	20196 (40)	20196 (40)	20196 (40)	20196 (40)

Figure 5: Four Year QTE Impacts Related to Self Employment

A. Hours Devoted to Self Employment

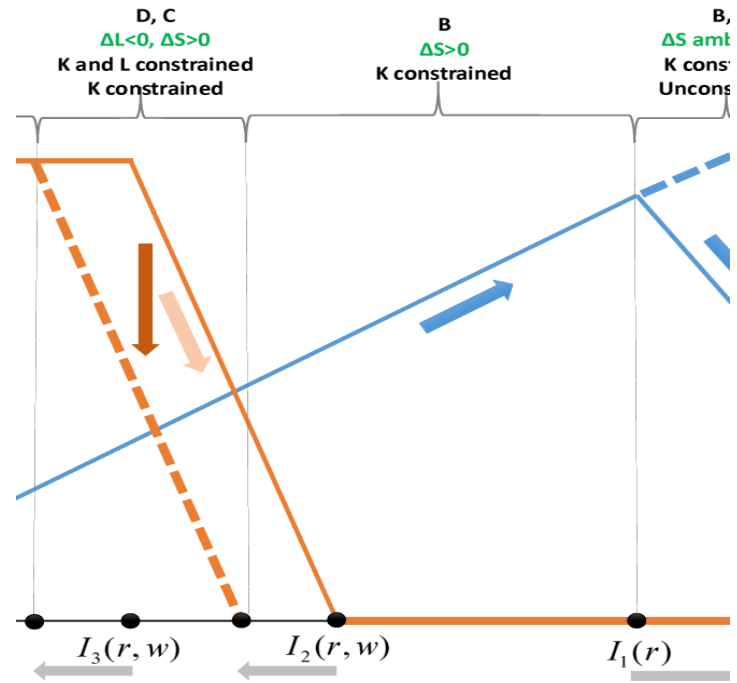
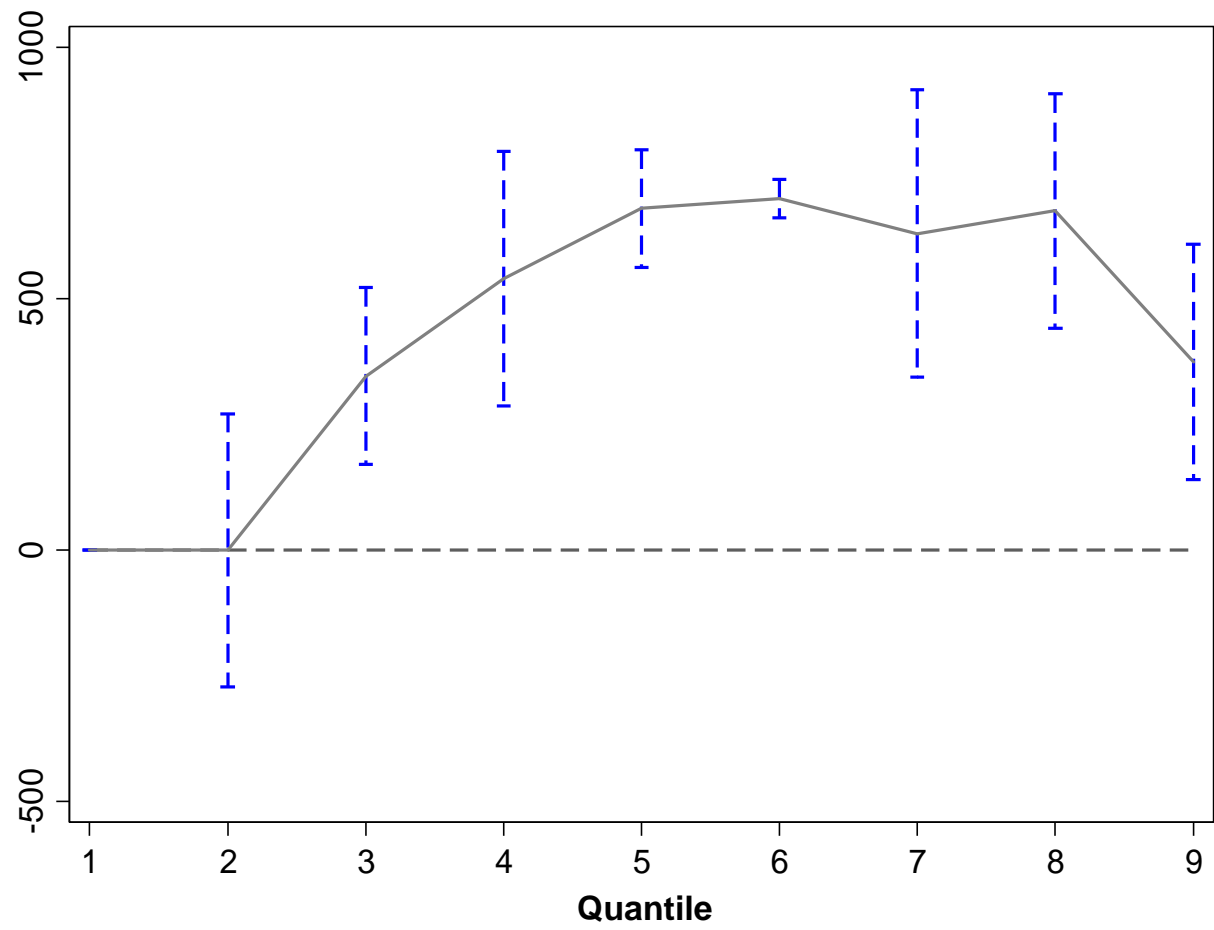


Table 4: Individual Total Impacts

OLS ITT Estimates: Individual Level Outcomes

Sample: Eligible Women

Standard Errors in Parentheses, Clustered by BRAC Branch Area

	All Labor Activities		Net Earnings	Consumption and Poverty	
	(7) Total Hours Worked	(8) Total Days Worked in the Past Year	(9) Net Annual Earnings	(10) Household Expenditures	(11) Below Poverty Line
Program impact after 2 years	395*** (72.7)	72.4*** (10.0)	1579*** (553)	763 (498)	-.051 (.046)
Program impact after 4 years	219*** (74.4)	61.1*** (12.5)	1737*** (536)	1034*** (374)	-.084** (.038)
Baseline mean	1069	247	4608	11677	.525
Four year impact: % change	20.5%	25.0%	37.7%	8.77%	-7.84%
Adjusted R-squared	.060	.069	.098	.046	.035
Number of eligible poor	6732	6732	6732	6732	6732
Number of observations (clusters)	20196 (40)	20196 (40)	20196 (40)	18882(40)	18882(40)

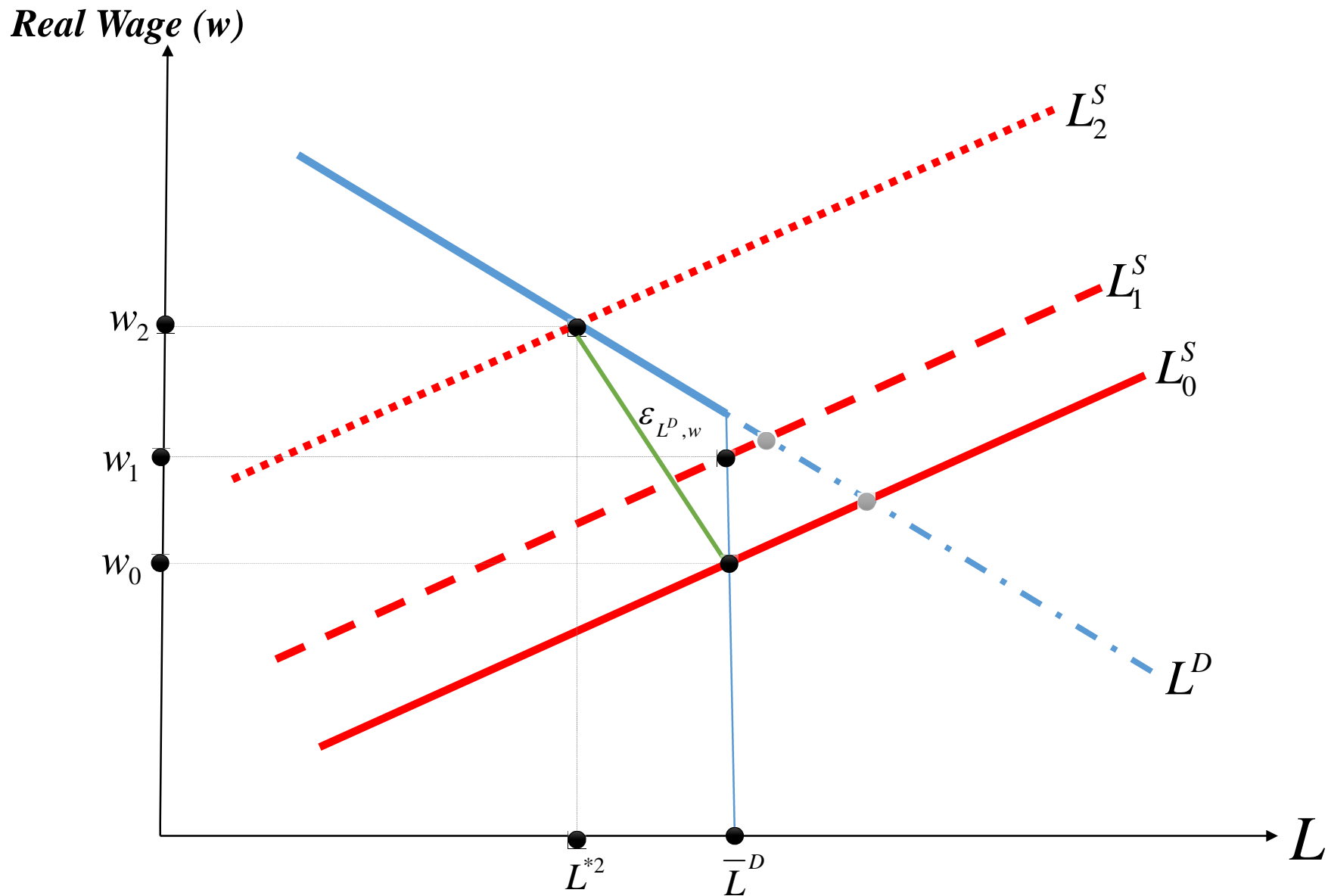
Other Channels

- efficiency wage explanation for increased L^S [Mirrlees 1975, Stiglitz 1976]
 - migration as relevant margin of household response
 - K - and skills transfer lead to misallocation of labor within households
 - other constraint: **information**
 - [Appendix Tables A3, A4]
-

Labor Market Impacts on Village Economy

- no longer take (w, r) as exogenous
 - provide further evidence on \bar{L}^D and estimate $|\tilde{\epsilon}_{L^D, w}| > |\epsilon_{L^D, w}|$
 - GE effects in labor markets:
 - $\Delta w > 0$: positive pecuniary externality on non-eligibles
 - $dr_{iv} = r_{\alpha_v}(\alpha_v, \theta_i)d\alpha_v + r_{\theta_i}(\alpha_v, \theta_i)d\theta_i$
 - price impacts in livestock produce/input markets ($\Delta\alpha_v$)
 - [Figure 6: Constrained Demand for Casual Wage Labor]
-

Figure 6: Constrained Demand for Casual Wage Labor



Results 2: Village Labor Market

[Table 5: Village Wide Labor Market Impacts, Cols 1-4: **distn impacts** on near poor]

[Table 5: Village Wide K-intensive Sector Impacts, Cols 5-9: **distn impacts** on m/u classes]

Table 5: Labor Market Impacts on the Village Economy

OLS Estimates: Village Level Outcomes

Sample: All Villages

Standard Errors in Parentheses, Clustered by BRAC Branch Area

Village Market for Casual Wage Labor

	Agriculture		Domestic Maids	
	(1) Labor Supply (hours)	(2) Earnings per Hour	(3) Labor Supply (hours)	(4) Earnings per Hour
Program impact after 2 years	-524 (1187)	.623* (.330)	-117 (976)	.486 (.370)
Program impact after 4 years	-799 (1222)	.900** (.400)	-2657** (1249)	.785** (.380)
Baseline mean	6771	6.16	7488	4.78
Four year impact: % change	-11.8%	14.6%	-35.5%	16.4%
Four year impact on eligible poor [%]	-525 [65.7%]	-	-1726*** [65.0%]	-
Four year impact: % change UP	-16%		-39%	
Four year impact: % change NUP	-8.9%		-29.6%	
Adjusted R-squared	.350	.512	.177	.235
Number of villages	1409	943	1409	1275
Number of observations (clusters)	4227 (40)	2216 (40)	4227 (40)	3176 (40)

Table 5: Labor Market Impacts on the Village Economy

OLS Estimates: Village Level Outcomes

Sample: All Villages

Standard Errors in Parentheses, Clustered by BRAC Branch Area

Village Labor Market Related to K-intense Activity

	(5) Labor Supply (hours)	(6) Earnings per Hour	(7) Unit Price of Milk	(8) Transaction Price of Cows
Program impact after 2 years	6138** (2628)	-1.31 (1.65)	-.039 (.110)	-355 (371)
Program impact after 4 years	3803 (3082)	.132 (1.82)	-.048 (.120)	-513 (408)
Baseline mean	21603	13.1	2.08	8492
Four year impact: % change	17.6%	3.88%	2.41%	6.03%
Four year impact on eligible poor [%]	5607 [147%]	-	-	-
Four year impact: % change UP	346%			
Four year impact: % change NUP	-8.4%			
Adjusted R-squared	.157	.038	.259	.174
Number of villages	1409	1405	1389	1356
Number of observations (clusters)	4227 (40)	3803 (40)	3743	3253

Labor Markets: Summary

- constrained L^D for casual agricultural wage labor
 - weak L^D for maids
 - positive pecuniary externality through $\Delta w > 0$ on non-eligibles
 - some crowding out of non-poor in K -intense activities
 - negligible impact on returns to such activities, related input/output markets
-

Results 3: Household Capital Accumulation

[Table 6: Household Asset Accumulation]

Table 6: Asset Accumulation

OLS ITT Estimates: Household Level Outcomes

Sample: Households with an Eligible Women

Standard Errors in Parentheses, Clustered by BRAC Branch Area

Livestock, Land and Business Assets

	(1) Value of Livestock	(2) Value of Cows	(3) Rents Land	(4) Owns Land	(5) Value of Other Business Assets
Program impact after 2 years	9984*** (495)	9200*** (427)	.067*** (.020)	.005 (.011)	2151*** (315)
Program impact after 4 years	10734*** (939)	10097*** (866)	.110*** (.022)	.026* (.012)	2916*** (348)
Baseline mean [Tk]	916	666	.058	.068	501
Mean value of assets transfer	9545	8566	-	-	-
Four year impact: % change (net of transfer)	2.61%	9.37%	190%	38.2%	578%
Four year impact = Initial transfer [p-value]	.197	.085	-	-	-
Two year impact = Four year impact [p-value]	.297	.194	.054	.005	.003
Adjusted R-squared	.328	.314	.077	.034	.138
Number of eligible poor women	6732	6732	6732	6732	6732
Observations (clusters)	20196 (40)	20196 (40)	20196 (40)	20196 (40)	14258 (40)

COW SHEDS

Table 6: Asset Accumulation

OLS ITT Estimates: Household Level Outcomes

Sample: Households with an Eligible Women

Standard Errors in Parentheses, Clustered by BRAC Branch Area

	Savings		
	(6) In Kind Savings	(7) Cash Savings	(8) Household Savings Rate
Program impact after 2 years	302* (152)	983*** (90.6)	.184*** (.022)
Program impact after 4 years	880*** (164)	1051*** (78.4)	.182*** (.020)
Baseline mean [Tk]	817	121	.017
Four year impact: % change	107.0%	869%	1058%
Two year impact = Four year impact [p-value]	.009	.530	.939
Adjusted R-squared	.090	.088	.065
Number of eligible poor women	6732	6732	6732
Observations (clusters)	20196 (40)	20196 (40)	18563 (40)

Results 4: Village Capital Market

[Table 7: The Supply of Credit in the Village Economy from the UP]

[Table 7: Village Consumption, Investment and Savings]

Table 7: **The Supply of Credit** in the Village Economy

OLS Estimates: Village Level Outcomes

Sample: All Villages

Standard Errors in Parentheses, Clustered by BRAC Branch Area

Village Aggregate:

Supply of Credit from Ultra Poor

(1) Transfers

(2) Loans

(3) Total

Program impact after 2 years

115

4623***

4738***

(110)

(1441)

(1464)

Program impact after 4 years

190*

7130***

7319***

(97.8)

(1474)

(1508)

Baseline mean

129

311

440

Four year impact: % change

146%

2299%

1663%

Adjusted R-squared

.020

.059

.062

Number of villages

1409

1409

1409

Number of observations (clusters)

3927 (40)

3927 (40)

3927 (40)

Table 7: Consumption, Investment and Savings in the Village Economy

OLS Estimates: Village Level Outcomes

Sample: All Villages

Standard Errors in Parentheses, Clustered by BRAC Branch Area

Village Aggregate:	Consumption		Investment		Savings	
	(4) Consumption	(5) Value of Land Owned	(6) Number of Cows	(7) Value of Business Assets	(8) Cash Savings	(9) Savings Rate
Program impact after 2 years	111965 (119115)	-528981 (952821)	11.9*** (2.34)	-3051 (43158)	5218 (7931)	.016*** (0.00)
Program impact after 4 years	104570 (177852)	134818 (1297465)	13.8*** (3.13)	104144** (48888)	18486* (9532)	.027*** (0.01)
Baseline mean	3347085	10600000	74.4	328187	63623	.013
Four year impact: % change	3.1%	1.2%	18.5%	32%	23.4%	207%
Four year impact on eligible poor	58548	118104	14.6	22231	13519	.12
% contribution of eligible poor to village impact	56.0%	87.6%	106%	21.3%	73.1%	-
Adjusted R-squared	.073	.125	.198	.105	.022	.034
Number of villages	1409	1409	1409	1409	1409	1409
Number of observations (clusters)	4227 (40)	4227 (40)	4227 (40)	4227 (40)	4227 (40)	4227 (40)

TREES
AGRICULTURAL TOOLS
COW SHEDS

Results 5: Efficiency Cost of K-constraint

Rate of Return

$$ROR_t = \frac{(P_t - P_{t-1}) + \pi_t}{P_{t-1}}$$

- P_t : asset value in year t [retained asset bundle]
 - info on livestock values, assets at baseline, transfer, and follow-up
 - have to make some assumption on training depreciation rate
 - π_t : profits from retained asset bundle
 - net earnings from livestock rearing (revenues minus input costs)
 - opportunity cost of labor [$\Delta hours = 219$]
 - ignore ΔU arising from smoothed earnings streams vs lost leisure
 - [Figure 7: Rate of Return]
-

Figure 7: Rate of Return to Asset and Skills Transfers

A. Returns on Transfer: Constrained Labor Demand

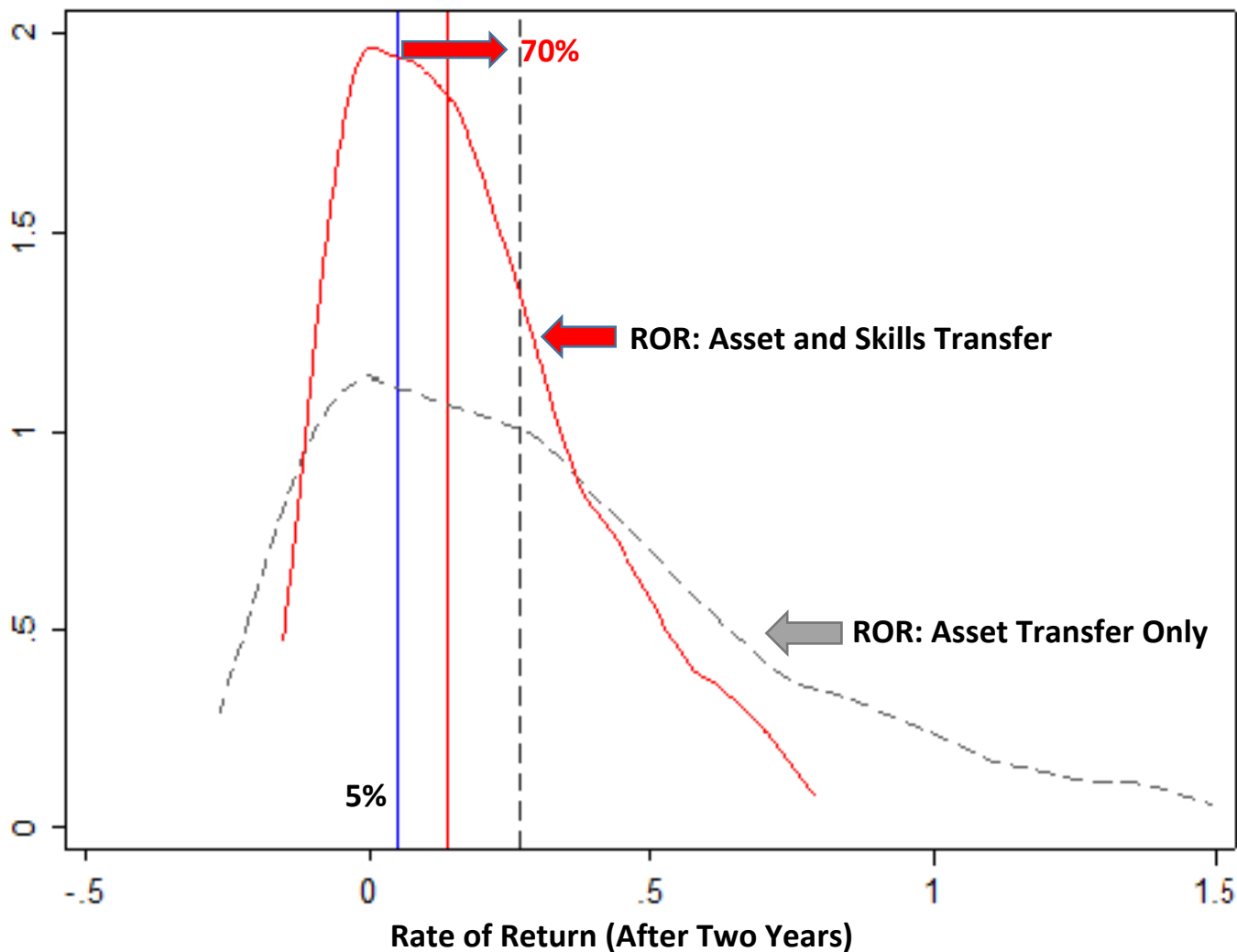
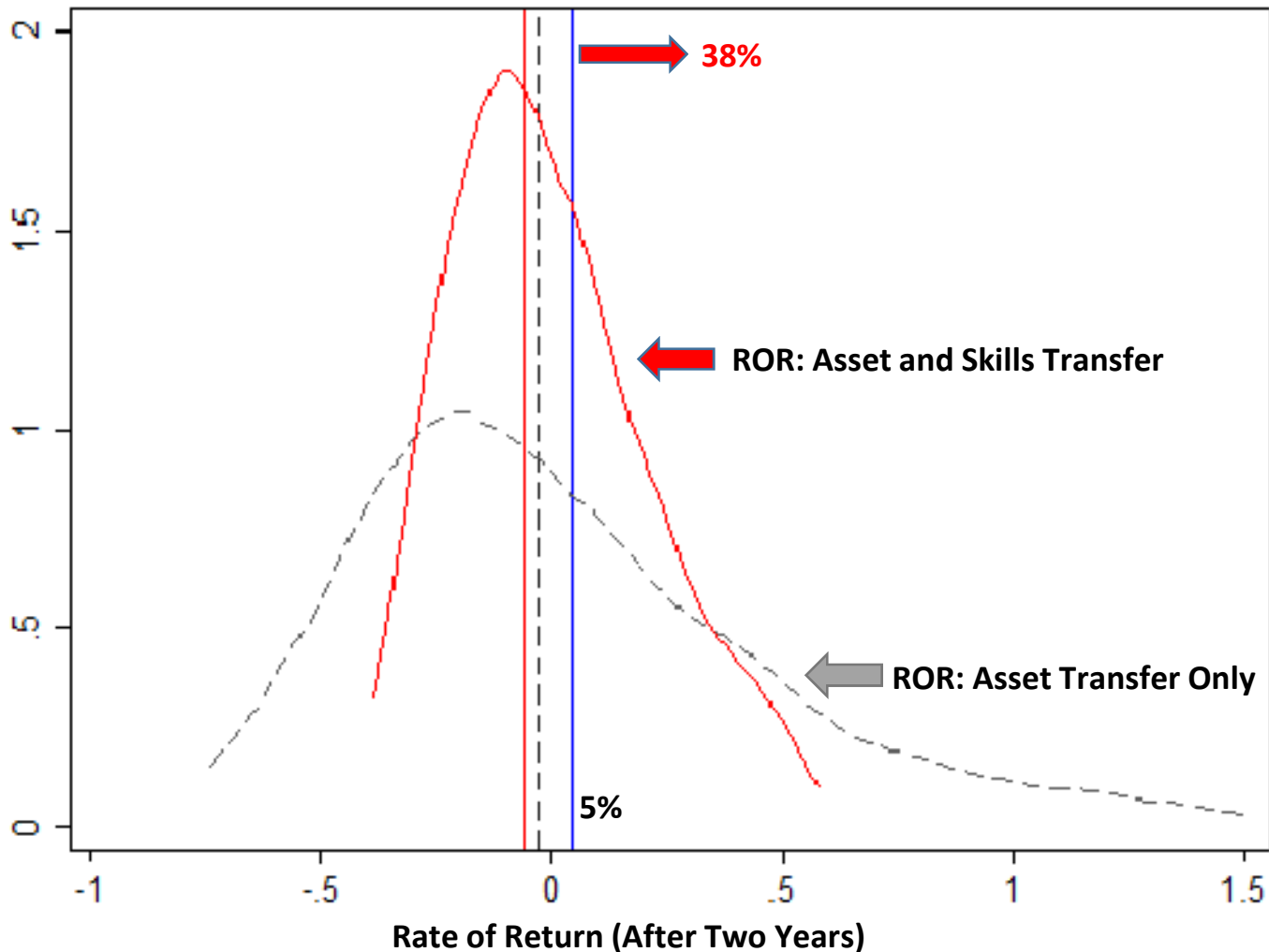


Figure 7: Rate of Return to Asset and Skills Transfers

B. Returns on Transfer: Unconstrained Labor Demand



Conclusions

Rural Labor Markets

- **research question:** what determines labor market choices of rural poor?
 - misallocation of labor across sectors:
 - access to capital: **40-70% of profitable entrepreneurs left unfinanced**
 - un(der)employment:
 - constrained aggregate L^D : **DWL**
 - other constraints related to information are less relevant
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Poverty Alleviation Policy

- poor can escape poverty trap through a **big-push** intervention:
 - joint relaxation of K - and skills constraints
 - **commitment** to hold assets for some period
 - **sustainable**: four year impacts on asset accumulation and village wide savings
 - **scalable**: 400K hhs reached by 2011, 250K more to be reached 2012-16
 - **replicable**: similar ITT impacts on consumption/well-being in six other settings [Banerjee *et al.* 2015]
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Functioning of Village Labor and Capital Markets

- GE effects in casual wage labor markets: positive pecuniary externality to near poor
 - smaller spillovers in K-intense sector [eligibles only 16% of population]
 - increased savings of eligible → credit market development → village wide K-accumulation...
 - not going into consumption or bidding up fixed factors
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Big Push or Nudge

- distinction is key if root causes of poverty are constraints → poverty trap
 - one time big push has lasting impacts: increases savings and **savings rate** s
 - cannot rule out that preferences compound the K -constraint in the poverty trap:
 - self-control worse with fewer assets [Bernheim *et al.* 2015]
 - NH prefs: temptation goods as inferior [Banerjee and Mullanaithan 2010]
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Future Agenda

- replicating study in Pakistan
 - partial population experiment tracking 20,000 households
- treatment arms:
 - menu of asset/training bundles with and without **equivalent UCT**
- are there differential responses to in-kind versus cash transfers?
- how much of the wedge is attributable to:
 - market imperfections
 - preferences (biases)