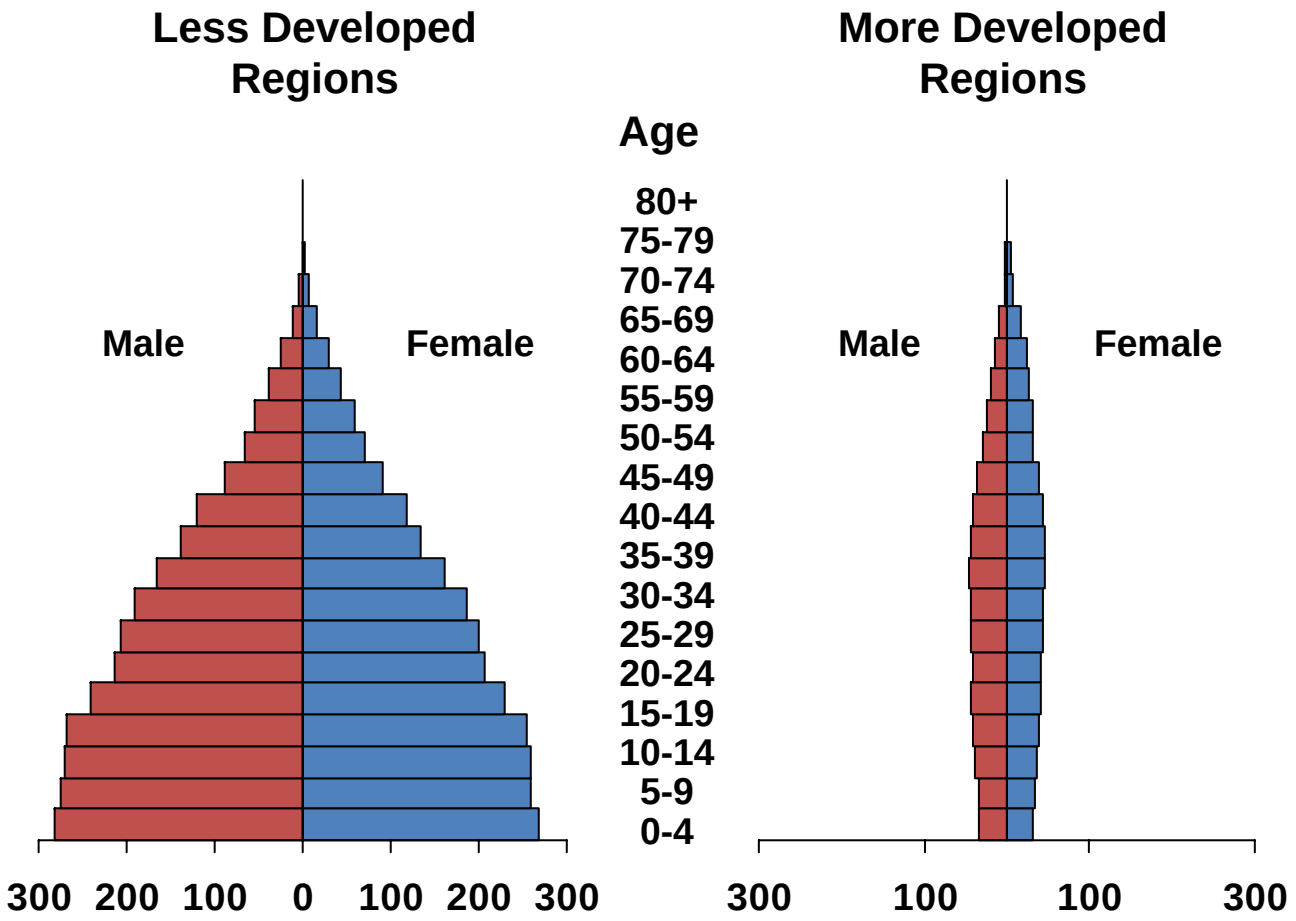
BRAC's Adolescent Development Programme in Uganda and Tanzania

Oriana Bandiera (LSE)
Robin Burgess (LSE)
Narayan Chandra Das (BRAC)
Selim Gulesci (LSE)
Imran Rasul (UCL)
Munshi Sulaiman (LSE/BRAC)
Abebual Zerihun (BRAC)

Population Structures by Age and Gender, 2005 (millions)



Source: United Nations, *World Population Prospects: The 2004 Revision*, 2005.

- There are more than 2 billion young people below age 20 in less developed regions
- Almost one-third of the population in less developed countries is under age 15. In contrast, less than one-fifth of the population in more developed countries is under 15
- [Table 0]: Tanzania and Uganda reflect these global trends

Table 0: Population Statistics By Country and Year

	2000			2010		
	Total Population	**Number Under 15**	**% Under 15**	**Total Population**	**Number Under 15**	**% Under 15**
World	6,079,727,906	1,818,772,345	29.9	6,823,153,417	1,824,307,868	30
Bangladesh	129,194,224	46,974,029	36.4	150,392,397	44,550,288	34.5
Kenya	30,339,770	12,985,458	42.8	33,068,248	11,517,416	38
Tanzania	35,306,126	15,853,895	44.9	44,957,030	19,280,445	54.6
Uganda	23,317,560	11,923,399	**51.1**	31,395,362	15,381,394	**66**
United States	275,562,673	58,554,755	21.2	300,118,269	59,444,392	21.6

ADP: Goal

- To improve the quality of life of adolescent girls, by developing their skill set so they can live as confident, empowered, and self-reliant individuals contributing to a change in their own families and communities

- BRAC has previously implemented a similar ADP for adolescent girls in rural Bangladesh
- Philosophy is to move beyond specializing in providing only microfinance [Yunus 1999]
- Our research: evaluate the program implemented in Uganda and Tanzania

Some Related Literature

- Typically presumed that reducing poverty increases gender equality
- Two-way causality: Sen's [1990] original missing women article emphasized how empowering women can accelerate development

- Economic literature shows positive effects of microfinance [Banerjee and Duflo 2004, Udry and Anagol 2006, McKenzie and Woodruff 2007] and training [Karlan and Valdivia 2009] to entrepreneurs
- Cross country macro evidence suggests gender equality has increased as countries develop [narrowing gender gaps in school enrolment, labor force participation]
- Harder to find micro-evidence that microfinance facilitates female empowerment over how to use the additional resources [Kantor 2005, Ashraf et al 2008, Banerjee et al 2009]
- In contrast to literature on relative income shares of spouses and household outcomes [Thomas 1990, Lundberg et al 1997, Duflo 2003, Rangel 2005, Qian 2008]

- ADP evaluation: (i) does entrepreneurial and life skills training improve economic well-being; (ii) do they aid female empowerment within the household?; (iii) do the results vary if microfinance is provided in additional to training?

Key Programme Components 1

I. Adolescent Development Clubs – established meeting place within a village [20-35 girls in each club, girls only]

II. Life Skills Training – initial training of mentors and ongoing training for club members by mentors [next slide]

III. Livelihood Training – six demand-driven training programs on wage employment and/or entrepreneurship [next slide]

IV. Microfinance – phased-in 12 or 18 months from baseline [later]

V. Community Participation – village support committees and monthly mothers' forum

Key Programme Components 2

- Two girls from each ADC are selected and trained to be mentors or Adolescent Leaders (ALs) [volunteer, promotion prospects/BRAC certification]
- Primary responsibility is to manage the ADC activities and facilitate the life skills training courses
- This methodology has been used extensively and successfully in Bangladesh
- Livelihood training is provided by BRAC professionals
- The following types of courses are expected to be provided – (i) agriculture training on cultivating local crops; (ii) vegetable cultivation; (iii) poultry rearing; (iv) poultry and livestock vaccinator training; (v) tailoring and other non-farm businesses; (vi) community health worker training
- ADCs provide diversified courses rather than training all the adolescent girls in one activity

Key Programme Component 3: Microfinance

- Over time, microfinance will be phased into the ADCs [two treatments]
- In compliance with financial regulations, a lower age limit will be set for those girls eligible to receive microfinance, 18 years
- So even if microfinance is offered at the village level, not all girls in the ADC will have access to it
  - spillover effects [joint ventures, p, q]
  - contamination/discouragement

Village Participation

- 300 villages, equally split between Uganda and Tanzania
- In Uganda, programme operates in Iganga and Kampala districts
- Divide each district into 10 branches – one BRAC office in each branch
- Village selection: located within 4km of branch office
  - spillovers across villages? [discuss later]
- BRAC might already operate in the village in some capacity, but not a pre-requisite; BRAC must however operate in the branch

Other Major BRAC Activites in Uganda

Microfinance	June 2006	Kampala, Iganga	Formed 2,352 groups, disbursed US$16.1 million in micro loans to 43,967 members.
Education	January 2007		58 learning centres, 1891 children enrolled, 58 community teachers trained (100% women)
Health	2007		26,315 participants (100% women), trained 183 community health workers, who reach 183,000 people

- BRAC forming a reputation after recent entry in East Africa – important for some aspects of our survey design

Evaluation Design and Timing

- Randomization into treatment and control at the village level
- Two treatments: ADC with phased-in microfinance
- In each country, two thirds of villages randomly assigned to be treated, one third assigned to be controls

Uganda Timing	T1	T2	Control
Baseline Survey: **May 08**	**X**	**X**	**X**
ADCs established: **May-Sept 08**	**X**	**X**	
Microfinance offered: **May 09**	**X**		
1st Repeat Survey: **Dec 09**	**X**	**X**	**X**
Microfinance offered: **Jan 10**	**X**	**X**	
2nd Repeat Survey: **Dec 10**	**X**	**X**	**X**

ITT Estimates

	T1	T2	Control	ITT Estimate
Baseline Survey	**X**	**X**	**X**	
ADCs established	**X**	**X**		
Microfinance offered	X			
1st Repeat Survey	**X**	**X**	**X**	**T2-C: training** **T1-T2: training + microfinance, short run effects**
Microfinance offered	X	X		
2nd Repeat Survey	**X**	**X**	**X**	**T2-C: training + microfinance, short run effects** **T1-T2: training + microfinance, medium run effects**

- Follow Kling, Liebman, and Katz [2007] approach for estimating ITT effects on multiple correlated outcomes

Individual Participation

- Pre-randomization, a full list of potential beneficiaries (girls aged 14 to 20) in each village identified by BRAC field officers
  - target both those enrolled full-time in school
  - those that have dropped out [engaged in housework, unemployed, IGA]
- In treated villages, BRAC advertises the program, door to door promotion, girls choose to participate or not
- Non-experimental selection into the program
  - admission fee of 2000UGX (roughly1.25$), monthly fee of 1000UGX
  - mentor has discretion to allow delayed fee payment if necessary
  - ex ante expected take-up rate of 25-30%
- Participants form their own Adolescent Development Centres (ADCs)
  - 20 to 35 girls in each ADC
  - girls only
  - can be more than one ADC per village

Survey Instruments 1

- 35 girls sampled in each of the 300 village irrespective of village size

- Since eligible girls do not necessarily reside with their parents, we have designed survey instruments for:
  - young girls and women
  - the head of household in which she resides
  - her parents if they reside in another household in the same village

Table 1 Part A: Descriptive Statistics on Adolescent Girls, By Treatment and Control Status

Means, standard errors in parentheses, p-value on tests of difference in brackets

		(1) Control	(2) Treatment	Test of Equality [p-value]
A. Research Design	**Number of villages**	50	99	
	Number (percentage) of surveyed girls	1738 (33.5)	3457 (66.5)	
	Number (percentage) of adolescent girls [aged 14-19]	1168 (33.2)	2360 (66.9)	
	Number of surveyed girls per village	34.8	34.9	[.898]
		(1.02)	(.738)	
	Number of surveyed adolescent girls per village	25.7	26.6	[.428]
		(.994)	(.700)	
	Number of adolescent girls per village	132	128	[.489]
		(11.5)	(7.49)	
	Number of households in village	232	226	[.604]
		(16.6)	(12.8)	

Notes: For all variables at the village (household) level, the standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by branch (village). Information on the number of adolescent girls in the village and the total number of households in the village was obtained from a pre-baseline census of households.

Survey Instruments 2

- The adolescent girl survey instrument contains modules on:
  - time use split between education, income generating activities, and leisure
  - financial literacy and analytical ability
  - savings, borrowing, and lending
  - expenditures
  - expectations and empowerment related to their aspirations, marriage prospects, fertility, children, attitudes towards entrepreneurship, self confidence, mental health, and overall life satisfaction
  - social networks and relationships with parents, friends, and marriage partners
  - risky behaviors
  - intentions to participate in a ADC like program

- The household survey instrument contains modules on:
  - household members including their education and income generating activities
  - expectations parents' have over all their children with regards to children's education, business opportunities, marriages and relationships
  - household assets, housing conditions, and water and sanitation infrastructure
  - savings, borrowing, and lending of the household
  - intra household transfers
  - consumption and expenditures (basic)

Survey Instruments 3

- We survey girls and young women, aged 9-25, not just eligibles
  - potential for there to be effects on non-participants in treated villages
  - the strength of these effects might vary by their familial and friendship ties to participants
- In household module, parents asked to report various interactions with and expectations over each of their children
  - potential for there to be effects on boys/siblings of participating girls
- Similar questions on attitudes and expectations asked in adolescent girl and household surveys
- Note: there is a separate form to monitor attendance and decisions taken in each monthly mothers' forum

Table 1 Part A: Descriptive Statistics on Adolescent Girls, By Treatment and Control Status

Means, standard errors in parentheses, p-value on tests of difference in brackets

		(1) Control	(2) Treatment	Test of Equality [p-value]
B. Demographics	**Age (years)**	16.3	16.3	[.688]
		(.069)	(.047)	
	Never married [yes=1]	.897	.885	[.440]
		(.007)	(.006)	
	Has children [yes=1]	.094	.104	[.557]
		(.007)	(.005)	
C. Education	**Enrolled in school [yes=1]**	.752	.719	[.236]
		(.010)	(.008)	
	Never enrolled in school [yes=1]	.005	.007	[.419]
		(.002)	(.001)	
	For drop-outs, years of completed schooling	8.46	8.03	[.044]
		(.127)	(.088)	
	Ideally wants to go to college or more [yes=1]	.935	.924	[.427]
		(.007)	(.005)	
	For drop-outs, dropped out because could not afford [yes=1]	.691	.643	[.710]
		(.023)	(.016)	
	For drop-outs, dropped out because of pregnancy [yes=1]	.059	.089	[.034]
		(.011)	(.009)	
	For drop-outs, plans to return to schooling [yes=1]	.067	.085	[.370]
		(.012)	(.009)	

Notes: For all variables at the village (household) level, the standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by branch (village). Information on the number of adolescent girls in the village and the total number of households in the village was obtained from a pre-baseline census of households. Respondents who had dropped out of school were asked, "do you plan to start/go back to school?". On the reasons for quitting schooling, respondents could list up to three of the following answers - distance/school too far, household could not afford, institution did not admit, have to work at home, have to work outside the house, did not want to study, health condition (disability/illness), orphaned, sickness or calamity in the family, marriage, pregnancy, going to school not safe, social/religious pressure, or other, specify.

Table 1 Part B: Descriptive Statistics on Adolescent Girls, By Treatment and Control Status

Means, standard errors in parentheses, p-value on tests of difference in brackets

		(1) Control	(2) Treatment	Test of Equality [p-value]
F. Finances	**Have any savings [yes=1]**	.233	.259	[.446]
		(.010)	(.008)	
	Have any lendings [yes=1]	.060	.084	[.071]
		(.006)	(.005)	
	Have any loans outstanding [yes=1]	.004	.011	[.002]
		(.001)	(.002)	
	Log total monthly expenditures	7.11	7.37	[.288]
		(.088)	(.061)	
	Share of monthly expenditures on clothes, shoes, and cosmetics	.662	.642	[.343]
		(.010)	(.007)	
	Share of monthly expenditures on hairdressing	.237	.236	[.992]
		(.009)	(.006)	
	Share of monthly expenditures on mobile phone pre-payments	.041	.048	[.414]
		(.004)	(.003)	

Notes: The standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village. On time use, respondents were also asked about the time spent going to and attending school, household chores inside the house, work outside the house, doing homework/study, reading books/magazines/newspapers, watching television, surfing the internet/emailing, being with friends, and going to religious gatherings. On the monthly expenditures, the categories of expenditure were jewellery/ornaments, clothes, shoes/footwear, pre-paid talk time for the mobile phone, cosmetics, hairdressing, going to restaurants/bars/café, and presents/gifts. US $1 corresponds to approximately 2250UGX.

Table 1 Part C: Descriptive Statistics on Adolescent Girls, By Treatment and Control Status

Means, standard errors in parentheses, p-value on tests of difference in brackets

		(1) Control	(2) Treatment	Test of Equality [p-value]
G. Expectations	**Ideal age of marriage for a woman**	24.0	24.1	[.474]
		(.080)	(.055)	
	Ideal age to have first child	23.8	23.8	[.866]
		(.090)	(.060)	
	Ideal years of education for daughter	15.7	15.7	[.482]
		(.042)	(.031)	
	Ideal years of education for son	16.0	16.1	[.401]
		(.046)	(.036)	
H. Social Networks	**Number of self-reported close friends [0-5]**	3.65	3.73	[.512]
		(.032)	(.023)	
I. Risky Behaviors	**Ever smoked cigarette [yes=1]**	.003	.005	[.290]
		(.001)	(.001)	
	Ever drunk alcohol [yes=1]	.034	.051	[.053]
		(.004)	(.004)	
	Ever had sexual intercourse [yes=1]	.313	.313	[.975]
		(.011)	(.008)	
	Ever contracted an STD [yes=1]	.118	.139	[.169]
		(.008)	(.006)	
	HIV/AIDS knowledge score [0-5]	3.44	3.40	[.588]
		(.026)	(.019)	

Notes: The standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village. On social networks, respondents were asked, "tell me your five closest friends who live in your village/community". The HIV/AIDS knowledge score is the sum of correct answers - which could either be yes or no - to the following five questions, "during vaginal sex, it is easier for a woman to receive the HIV virus than for a man"; "pulling out the penis before a man climaxes keeps a women from getting HIV during sex"; "a women cannot get HIV if she has sex during her period"; "taking a test for HIV one week after having sex will tell a person if she or he has HIV"; "a pregnant woman with HIV can give the virus to her unborn baby".

Descriptive Evidence

- Surveyed around 25 eligibles, 10 non-eligibles in each village
- [Table 1, Part A]

- Total cash and in kind income from small businesses around $2 per day on average
- Many girls **simultaneously** engaged in full-time schooling and labor

	% report zero hours of work at home	Mean hours at home conditional on hours>0	% report zero hours at work outside the home	Mean hours at work outside the home conditional on hours>0
Enrolled	3.02	13.0	28.4	10.1
Non-Enrolled	1.42	25.2	32.9	19.7

- Under 18s are also engaged in saving, lending
- [Table 1, Part B]

- Can potentially match named network members to other surveyed girls
- [Table 1, Part C]

Outcomes

- Related to specific components of the ADP:
  - livelihood training
  - life skills training
  - empowerment
  - [Table 2]

- Inter-generational transmission of attitudes
  - Adolescent girl and household modules both ask questions on suitable age of marriage, first child, allocation of household chores, allocation of child care etc.

Table 2: Outcomes

Means, standard errors in parentheses, p-value on tests of difference in brackets

		(1) Control	(2) Treatment	Test of Equality [p-value]
Livelihood Training	**For non-enrolled, runs a small business [yes=1]**	.093	.075	[.393]
		(.014)	(.009)	
	For non-enrolled, unemployed [yes=1]	.150	.155	[.880]
		(.017)	(.012)	
	Has small business, daily log cash income generated [including zeroes]	8.28	8.40	[.705]
		(.231)	(.198)	
	Has small business, daily log in kind income generated [including zeroes]	7.47	7.25	[.690]
		(.553)	(.293)	
	For non-enrolled, plan to start an income generating activity within the next year [yes=1]	.217	.276	[.112]
		(.020)	(.015)	

Notes: The standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village.

Table 2: Outcomes

Means, standard errors in parentheses, p-value on tests of difference in brackets

		(1) Control	(2) Treatment	Test of Equality [p-value]
Life Skills Training	**Financial skills score [0-4]**	1.35	1.44	[.010]
		(.020)	(.014)	
	Self-assessed entrepreneurship score [10-100]	75.5	74.3	[.465]
		(.519)	(.354)	
	Self-assessed empowerment attitude [10-100]	72.8	71.9	[.511]
		(.351)	(.241)	
	Position on ladder of life [1-10]	4.43	4.46	[.838]
		(.044)	(.030)	
	Expected change in position on ladder of life in two years time [-10-10]	1.54	1.51	[.641]
		(.024)	(.018)	
	Expected change in position on ladder of life in five years time [-10-10]	3.60	3.45	[.134]
		(.044)	(.030)	
	Satisfaction with life as a whole [1-7]	2.96	2.92	[.714]
		(.039)	(.028)	

Notes: The standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village. The financial skills score is the sum of correct answers - which could be multiple or open ended - to the following four questions, "is there any difference in the interest rate of a current account and savings account in a bank? If so, which one gives a higher interest rate?"; "suppose you have deposited 100 UShs in the bank for an interest of 10 UShs per year. If you withdraw all the money after 2 years, how much will you get?"; "suppose you need to take a loan of UShs 1000 and you have two choices. In one is you pay an interest of UShs 10 every month and in the other you pay an interest of UShs 120 at the end of the year. Which one has a higher interest rate?"; "What will happen to the price of charcoal if the price of kerosene increases?". The self-assessed entrepreneurship (empowerment) score is derived from answers to 10 questions on entrepreneurship (empowerment) in which respondents could answer on a scale of 1 to 10. US $1 corresponds to approximately 2250UGX.

Table 3: Participation

Means, standard errors in parentheses, p-value on tests of difference in brackets

	(1) Control	(2) Treatment	Test of Equality [p-value]
Self reported likelihood [1-10]	8.63	8.66	[.886]
	(.056)	(.041)	
Will participate for sure [yes=1]	.597	.601	[.944]
	(.012)	(.008)	
Will participate more than 3 times per week [yes=1]	.290	.321	[.161]
	(.011)	(.008)	
Will participate for sure and regularly [yes=1]	.188	.219	[.199]
	(.009)	(.007)	
Number of villages	50	99	
Number of villages in close proximity to at least one village of different treatment status	8	8	-
Club members	-	24.9	-
		(.877)	
Participation rate	-	.240	-
		(.021)	
Participation rate in treated villages with control village in close proximity		.223	
		(.054)	

Notes: The standard errors on the differences are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village. On the self report likelihood variable, respondents were asked, "on a scale of 0-10, where 0 is “I definitely would not join such a club” and 10 is “I definitely would join such a club” how much would you like to join such a club?". The will participate for sure variable is equal to one if respondents state 10 to the previous question. On the frequency of attendance, respondents were asked, "If you join, how many times do you think you would go per month?". Possible answers were every day or almost every day, 3 to 5 times a week, 1 or 2 days a week, 2 or 3 days a month, or once a month or less. The participation rate is the number of club members divided by the number of adolescent girls in the village.

Participation

- Around 20% of adolescent girls are classes as “enthusiasts”: will participate for sure and regularly
- Short run participation close to prior expectations of BRAC
- Focus group discussions (N=71) suggest:
  - most hear about the ADC from BRAC (35%)
  - most preferred activity is livelihood training (30%)
  - main microfinance objective is to open a new business (53%)
  - main difficulty in joining is the fee (14%)
- Monthly fee of 1000UGX

Monthly Expenditure	Percentage that have zero	Monthly fee/median expenditure, conditional on positive amount (UGX)
Total	17.1	.133
Shoes/clothes/cosmetics	30.7	.133
Hairdressing	46.4	1.00

- [Table 3]

Table 4: Predictors of Participation for Eligible Girls [Aged 14-19 Inclusive]

Dependent variable: =1 if enthusiast for participation, =0 otherwise
Standard errors in parentheses clustered by village
Marginal effects reported for probit regressions in Columns 1-7

	(1) Treatment	(2) Village Characteristics	(3) Demographics
Treated village [yes=1]	.005	.006	.004
	(.027)	(.027)	(.026)
Number of adolescent girls in the village		-.000	-.000
		(.000)	(.000)
Enrolled full-time in school			-.133***
			(.024)
Age (years)			-.003
			(.003)
Has children [yes=1]			.090***
			(.031)
Has partner [yes=1]			-.051**
			(.022)
Number of observations (clusters)	3371 (134)	3371 (134)	3371 (134)

Notes: *** denotes significance at 1%, ** at 5%, and * at 10%. The dependent variable is a dummy variable equal to one if the respondent is enthusiastic about the ADC, and 0 otherwise. An enthusiast is a respondent that reports they would join the club for sure and attend more than 3 times per week. The standard errors are clustered by village throughout. In Columns 1 to 7, marginal probit regression estimates are reported.

Table 4: Predictors of Participation for Eligible Girls [Aged 14-19 Inclusive]

Dependent variable: =1 if enthusiast for participation, =0 otherwise
Standard errors in parentheses clustered by village
Marginal effects reported for probit regressions in Columns 1-7

	(4) Networks	(5) Skills	(6) Expenditures	(7) All
Treated village [yes=1]	.004	.012	.006	.012
	(.026)	(.025)	(.026)	(.024)
Number of adolescent girls in the village	-.000	-.000	-.000	-.000
	(.000)	(.000)	(.000)	(.000)
Enrolled full-time in school	-.135***	-.133***	-.135***	-.136***
	(.024)	(.025)	(.024)	(.025)
Age (years)	-.003	-.005	-.003	-.004
	(.003)	(.003)	(.003)	(.003)
Has children [yes=1]	.087***	.081***	.089***	.078***
	(.030)	(.031)	(.030)	(.030)
Has partner [yes=1]	-.054**	-.052**	-.048*	-.053**
	(.022)	(.023)	(.023)	(.023)
How many of your sisters would like to join	.017**			.015**
	(.008)			(.008)
Are many or all of your friends likely to join [yes=1]	.001			.002
	(.016)			(.016)
Financial skills score [0-4]		-.022*		-.023*
		(.012)		(.012)
Self-assessed entrepreneurship score [10-100]		-.001		-.000
		(.000)		(.000)
Self-assessed empowerment attitude [10-100]		.003***		.003***
		(.001)		(.001)
Position on ladder of life [1-10]		.011**		.012**
		(.005)		(.005)
Satisfaction with life as a whole [1-		.008		.008
		(.006)		(.006)
Log total monthly expenditures			-.004	-.003
			(.003)	(.003)
Number of observations (clusters)	3371 (134)	3371 (134)	3371 (134)	3371 (134)

Notes: *** denotes significance at 1%, ** at 5%, and * at 10%. The dependent variable is a dummy variable equal to one if the respondent is enthusiastic about the ADC, and 0 otherwise. An enthusiast is a respondent that reports they would join the club for sure and attend more than 3 times per week. The standard errors are clustered by village throughout. In Columns 1 to 7, marginal probit regression estimates are reported.

Participation by Enthusiasm

- Some correlation in participation choices within sisters
- Those with less financial skills but a positive attitude more likely to participate
- ADCs not captured by wealthier adolescent girls
- [Table 4 Cols 1-7]

- No evidence of anticipation/encouragement effects in to-be treated villages
  - through branch personnel or interviewer type
- [Table 4, Cols 8-9]

- Difference-in-differences across enthusiasm and treatment status mostly zero so enthusiasts in control might be a valid counterfactual for enthusiasts in treated locations
- [Tables 5A, 5B]

Table 5 Part A: Participation by Treatment and Enthusiasm

Means, standard errors in parentheses, p-value on tests of difference in brackets

	(1a) Control, Enthusiast	(1b) Control, Non-enthusiast	(2a) Treatment, Enthusiast	(2b) Treatment, Non-enthusiast	Test of Equality: Enthusiast=Non-enthusiast [p-value]	Difference-in-difference [p-value]
Enrolled full-time in school	.586	.784	.614	.747	[.000]	[.186]
	(.027)	(.011)	(.018)	(.008)		
For non-enrolled, housewife/housework [yes=1]	.194	.209	.214	.217	[.729]	[.817]
	(.034)	(.023)	(.0240	(.016)		
For non-enrolled, unemployed [yes=1]	.104	.167	.112	.174	[.163]	[.999]
	(.027)	(.021)	(.018)	(.015)		
For non-enrolled, runs a small business [yes=1]	.060	.108	.048	.091	[.145]	[.896]
	(.021)	(.018)	(.012)	(.011)		
Main benefit is to acquire new skills [yes=1]	.505	.323	.456	.344	[.000]	[.112]
	(.028)	(.013)	(.018)	(.010)		
Main benefit is to make new friends or socialize [yes=1]	.308	.477	.357	.433	[.000]	[.045]
	(.026)	(.014)	(.018)	(.010)		
Main cost is taking time from household work [yes=1]	.538	.462	.557	.477	[.158]	[.932]
	(.029)	(.014)	(.019)	(.010)		
Main cost is taking time from school [yes=1]	.377	.461	.318	.410	[.096]	[.883]
	(.028)	(.014)	(.018)	(.010)		

Notes: An enthusiast is a respondent that reports they would join the club for sure and attend more than 3 times per week. The standard errors on the difference and difference-in-difference are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village. This regression regresses the outcome against a dummy for whether the respondent is an enthusiast, whether the village is treated, and the interaction between the two. The difference is the p-value of the hypothesis that the coefficient on the enthusiast dummy is equal to zero, and the difference-in-difference is the p-value of the hypothesis that the coefficient on the interaction term is equal to zero. On the benefits of participation, respondents were asked, "If you join, what do you think will be the benefits for you?". They could then list as many of the following answers that applied - socialize/make new friends, meet with my current friends, acquire new skills, don't have anything better to do, have fun, it would make my parents happy if I join, it would make my teacher happy if I join, it would make my husband happy if I join, other (specify). On the costs of participation, respondents were asked, "what would be the difficulties/costs in joining such a club?". They could then list as many of the following answers that applied - takes time away from household work (chores), takes time away from my work outside the home, takes time away from my children, takes time away form school/school work, people would disapprove, others (specify).

Table 5 Part B: Participation by Treatment and Enthusiasm

Means, standard errors in parentheses, p-value on tests of differences in brackets

	(1a) Control, Enthusiast	(1b) Control, Non-enthusiast	(2a) Treatment, Enthusiast	(2b) Treatment, Non-enthusiast	Test of Equality: Enthusiast=Non-enthusiast [p-value]	Difference-in-difference [p-value]
How many of your sisters would like to join	2.15	2.02	2.19	1.96	[.185]	[.463]
	(.062)	(.035)	(.051)	(.025)		
Are many or all of your friends likely to join [yes=1]	.457	.465	.493	.485	[.845]	[.749]
	(.028)	(.013)	(.018)	(.010)		
Financial skills score [0-4]	1.26	1.37	1.42	1.45	[.143]	[.400]
	(.046)	(.022)	(.029)	(.016)		
Self-assessed entrepreneurship score [10-100]	77.6	73.5	75.3	71.7	[.038]	[.824]
	(1.32)	(.609)	(.868)	(.437)		
Self-assessed empowerment attitude [10-100]	77.2	70.7	73.0	70.2	[.000]	[.045]
	(.812)	(.442)	(.583)	(.316)		
Position on ladder of life [1-10]	4.51	4.40	4.52	4.45	[.397]	[.803]
	(.099)	(.048)	(.072)	(.032)		
Satisfaction with life as a whole [1-7]	3.41	2.95	3.21	2.98	[.003]	[.228]
	(.094)	(.040)	(.062)	(.030)		
Log total monthly expenditures	6.87	7.19	7.28	7.42	[.433]	[.186]
	(.215)	(.095)	(.131)	(.068)		

Notes: An enthusiast is a respondent that reports they would join the club for sure and attend more than 3 times per week. The standard errors on the difference and difference-in-difference are estimated from running the corresponding least squares regression allowing for the errors to be clustered by village. This regression regresses the outcome against a dummy for whether the respondent is an enthusiast, whether the village is treated, and the interaction between the two. The difference is the p-value of the hypothesis that the coefficient on the enthusiast dummy is equal to zero, and the difference-in-difference is the p-value of the hypothesis that the coefficient on the interaction term is equal to zero.

Individual Selection into ADCs

- With an IV for participation could estimate a LATE [Imbens and Angrist 1994]:
  - travel distance [Card 1993, Kling 2001, Currie and Moretti 2003, Cameron and Taber 2004, Attanasio and Vera Hernandez 2009]

- MTE [Heckman and Vytlacil 2000, 2005]
  - conventional treatment parameters such as the average treatment on the treated (ATT) and average treatment on the untreated (ATU) can be estimated as weighted averages of the MTE for the corresponding subpopulations

- Potential IVs?: characteristics of AL, network members and their parents…
- Can potentially validate any selection equation using those in control villages that lie in close proximity to a treated village – this subset has exogenously higher costs of participation than those in treated villages…