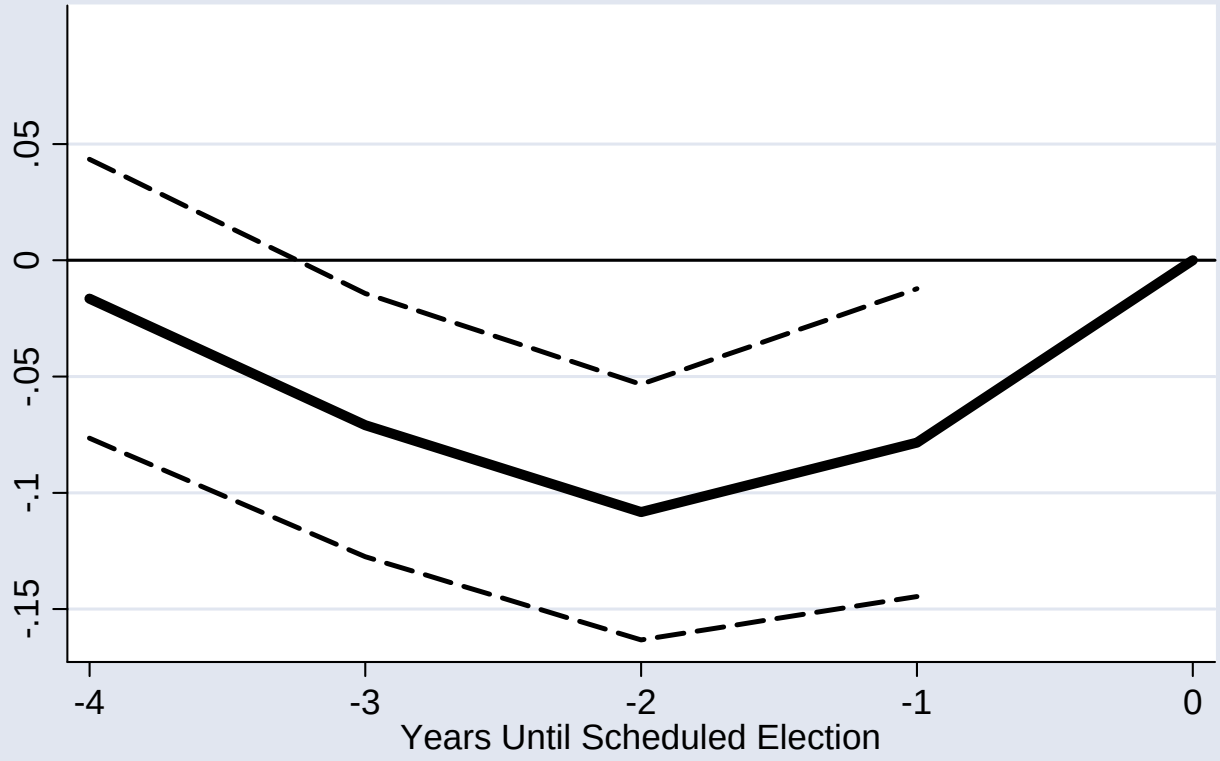
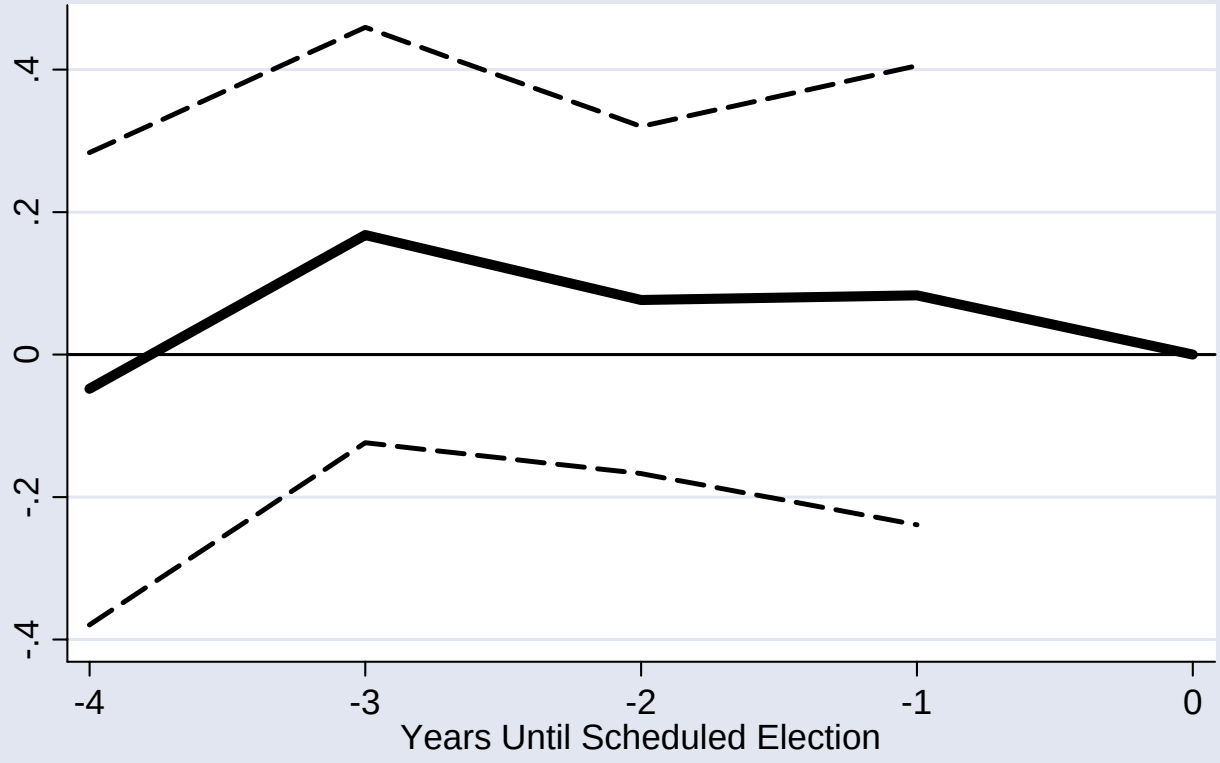
Political Lending Cycles in India

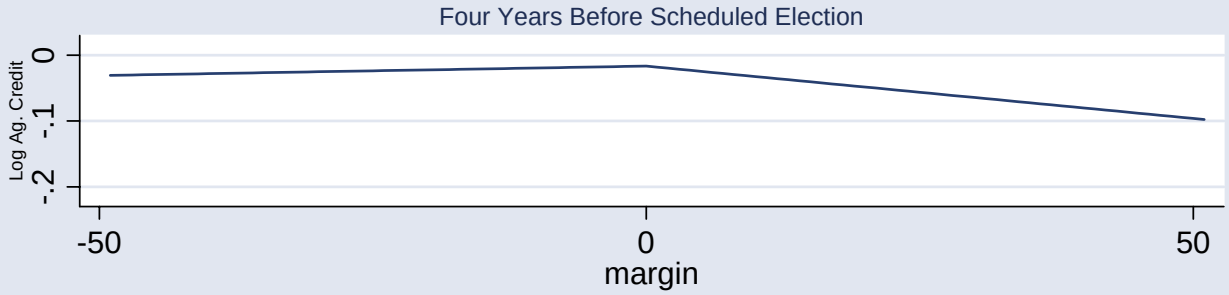
Public Sector Banks

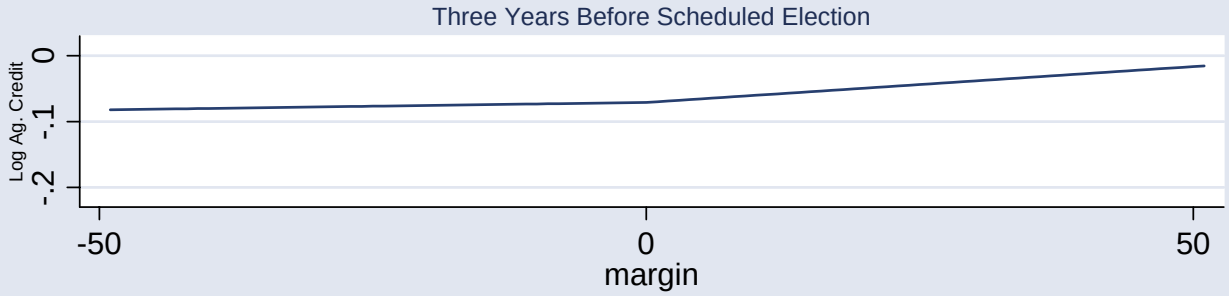


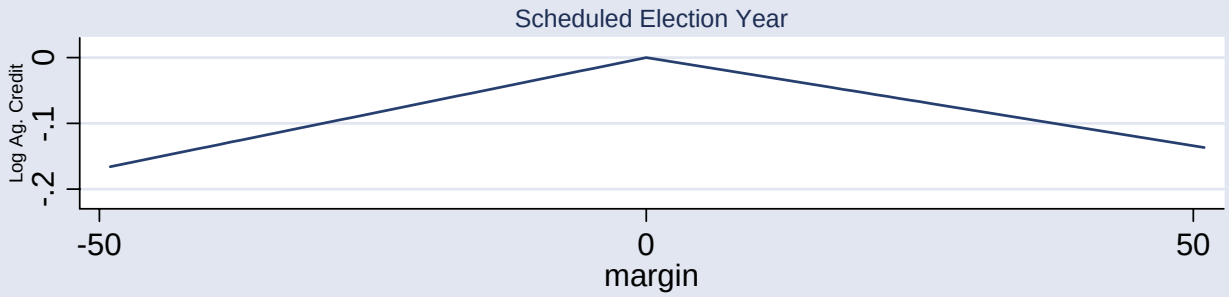
Private Banks



Public Banks: Targeted Lending through the Election Cycle







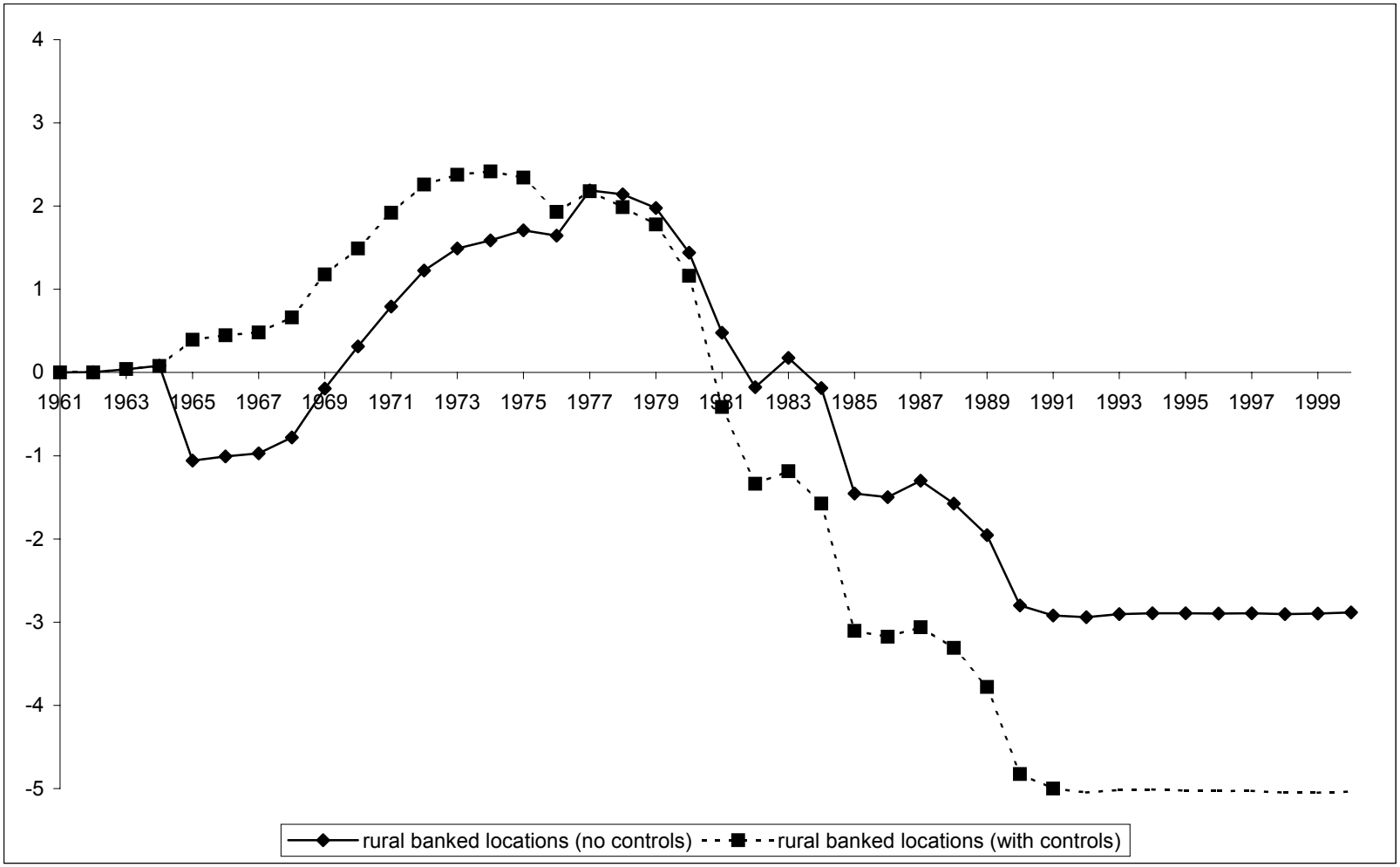


FIGURE 5: INITIAL FINANCIAL DEVELOPMENT AND BRANCH EXPANSION INTO RURAL UNBANKED LOCATIONS

Notes: This figure graphs the coefficients for two regressions. The series **"Rural banked locations (no controls) " graphs** the set of "number of banked locations in 1961" Xyear interaction terms from the regression given in Equation (1), and the series **"Rural banked locations (with controls)" graphs** the corresponding set of interaction terms from the regression in Equation (2) which includes population, income and location controls,

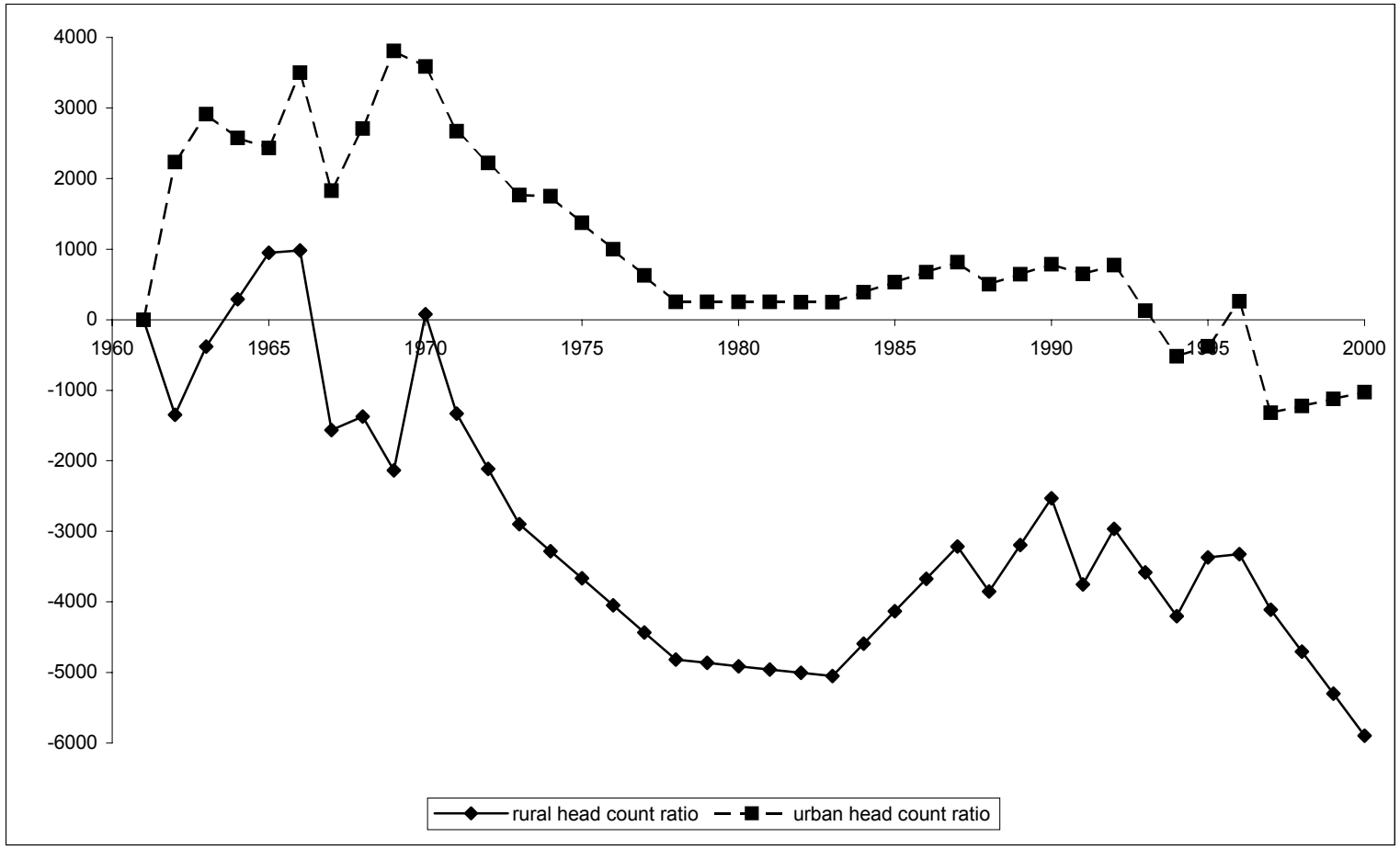


FIGURE 8: INITIAL FINANCIAL DEVELOPMENT AND POVERTY

Notes: This figure graphs the coefficients for two regressions. The series **"Rural head count ratio" graphs** the set of "number of banked locations in 1961" Xyear interaction terms from the regression in which the dependent variable is rural head count ratio, and series **"Urban head count ratio" graphs** the corresponding set of interaction terms from the regression in which the dependent variable is urban head count ratio. Both regressions include population, income and location controls,

TABLE 4: BANKING, POLITICS AND POLICY AS A FUNCTION OFINITIAL FINANCIAL DEVELOPMENT

	Banking outcomes					Politics and Policy outcomes				
	Number bank branches in:		Rural banks share		Rural cooperative	Congress legi-	Center-state	Education	Health	Cumulative
	rural unbanked	already banked	of credit	of saving	credit share	slator share	alignment	expen.share	expen.share	land reform
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Number of banked locations	0.20**	0.40***	5.29***	-0.245	1.19*	-3.66**	-9.58***	-0.41*	0.15	-8.45
in 1961 per capita *1961-77	[0.09]	[0.04]	[1.60]	[0.61]	[0.66]	[1.44]	[3.59]	[0.22]	[0.11]	[12.28]
Trend										
Number of banked locations	-0.75***	-0.21***	-8.22***	-2.12***	0.33	-0.49	1.4	0.01	-0.2	-4.16
in 1961 per capita*Post-77	[0.13]	[0.05]	[1.63]	[0.66]	[1.00]	[3.15]	[5.37]	[0.31]	[0.15]	[19.03]
Trendbreak										
Number of banked locations	0.54***	0.28***	2.17***	0.67	1.14	-0.31	8.76	-0.65	0.07	12.61
in 1961 per capita*Post-90	[0.18]	[0.08]	[0.58]	[0.55]	[7.15]	[4.17]	[15.59]	[0.56]	[0.16]	[218.27]
Trendbreak										
State and year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Other controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R-squared	0.94	0.99	0.85	0.87	0.73	0.46	0.48	0.74	0.75	0.73
F-test 1	37.36	40.08	83	89.6	4.12	2.18	4.23	3.24	0.27	0.75
	[0.00]	[0]	[0]	[0]	[0.04]	[0.14]	[0.04]	[0.07]	[0.6]	[0.38]
F-test 2	0	41.5	2.53	12	0.14	2.1	0	4.26	0.03	0
	[0.94]	[0]	[0.11]	[0.00]	[0.7]	[0.14]	[0.96]	[0.03]	[0.86]	[1]
Number observations	632	632	508	508	487	630	536	593	577	504

Notes: Robust standard errors in parentheses. The explanatory variables are (row-wise) the number of banked locations in 1961 interacted with (i) a time trend (t) (ii) an indicator variable which is equal to one if the year is 1977 or after interacted with a post 1977 time trend (t-1977) (iii)an indicator variable which is equal to one if the year is 1990 or after interacted with a post-1990 time trend (t-1990). F-test 1 measures whether the sum of the first two terms differs from zero, and F-test 2 whether the sum of all three terms differs from zero. All regressions also include interaction terms between the indicator variables for 1977 and 1990 and number banked locations in 1961. All banked location variables are deflated by population in 1961 respectively. The set of `other controls' include state population, log state income per capita and per capita number of rural locations; all measured in 1961. Each control variable enters the regression in exactly the same way as the number of banked locations in the state. The sample covers 16 states and 40 years (1961-2000). Punjab and Haryana enter the sample in 1965 giving a total of 632 observations. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

TABLE 5: BANK BRANCH EXPANSION AND POVERTY AND STRUCTURAL CHANGE: REDUCED FORM EVIIDENCE

	Poverty outcomes					Structural change outcomes					
	Head count ratio				Agri.	Total	Non-agri.	Agricult-	Manufacturing		Non-agri
	Rural	Urban	Rural-Urban	Aggregate	wages	output	cultural	ural	Unregi-	Regis-	labor
			diff				output	output	stered	tered	share
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Number of banked locations	-257.40***	-28.2	-229.20***	-227.08***	2.10*	2.82***	6.59***	-1.75	9.30***	2.822	26.65***
in 1961 per capita *1961-77	[63.24]	[50.16]	[68.85]	[54.89]	[1.22]	[0.72]	[0.91]	[1.17]	[2.47]	[2.269]	[3.30]
Trend											
Number of banked locations	392.65***	58.97	333.68***	352.95***	-6.98***	-6.21***	-11.64***	-1.04	-16.55***	-3.703	-29.32***
in 1961 per capita*Post-77	[71.60]	[68.16]	[86.89]	[61.83]	[1.68]	[1.07]	[1.38]	[1.71]	[4.27]	[3.432]	[5.86]
Trendbreak											
Number of banked locations	-385.40***	-245.60***	-139.79	-384.20***	15.49***	10.62***	12.66***	6.55*	9.98	18.71**	
in 1961 per capita*Post-90	[134.52]	[80.46]	[144.99]	[110.15]	[2.62]	[2.08]	[3.08]	[3.51]	[8.09]	[7.44]	
Trendbreak											
State and year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Other controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R-squared	0.83	0.92	0.61	0.87	0.91	0.98	0.98	0.93	0.87	0.93	0.89
F-test 1	16.29	0.45	3.91	19.61	17.84	18.3	23.96	4.93	4.52	0.11	0.32
	[0]	[0.5]	[0.04]	[0]	[0]	[0]	[0]	[0.02]	[0.03]	[0.73]	[0.57]
F-test 2	3.68	10.62	0.07	5.89	20.9	14.09	6.85	1.31	0.14	6.53	
	[0.05]	[0]	[0.79]	[0.01]	[0]	[0]	[0]	[0.25]	[0.7]	[0.01]	
Number observations	623	623	623	623	541	584	577	577	577	577	365

Notes: Robust standard errors in parentheses. The explanatory variables are (row-wise) the number of banked locations in 1961 interacted with (i) a time trend (t) (ii) an indicator variable which is equal to one if the year is 1977 or after interacted with a post 1977 time trend (t-1977) (iii)an indicator variable which is equal to one if the year is 1990 or after interacted with a post-1990 time trend (t-1990). F-test 1 measures whether the sum of the first two terms differs from zero, and F-test 2 whether the sum of all three terms differs from zero. All regressions also include interaction terms between the indicator variables for 1977 and 1990 and number banked locations in 1961. All banked location variables are deflated by population in 1961 respectively. The set of `other controls' include state population, log state income per capita and per capita number of rural locations; all measured in 1961. Each control variable enters the regression in exactly the same way as the number of banked locations in the state. The sample covers 16 states and 40 years (1961-2000). Punjab and Haryana enter the sample in 1965 giving a total of 632 observations. * indicates significance at 10%, ** significance at 5% and *** significan

TABLE 6: BANK BRANCH EXPANSION AND POVERTY AND STRUCTURAL CHANGE: INSTRUMENTAL VARIABLES EVIIDENCE

	Poverty outcomes					Output outcomes					
	Head count ratio				Agri.	Total	Non-agri.	Agricult-	Manufacturing		Non-agri
	Rural	Urban	Rural-Urban	Aggregate	wages	output	cultural	ural	Unregi-	Regis-	labor
			diff				output	output	stered	tered	share
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Number of bank branches opened in rural unbanked locations	-533.11***	-122.12	-410.99***	-487.67***	12.58***	8.49***	18.60***	2.54	25.13***	8.318	36.69***
	[139.29]	[92.59]	[130.94]	[122.88]	[3.30]	[1.81]	[3.57]	[2.67]	[7.47]	[5.43]	[7.80]
Number of banked locations 1961 per capita * Trend	-161.10***	-47.3	-113.80**	-147.27***	0.13	1.67**	5.23***	-1.31	6.55**	3.89**	23.62***
	[56.74]	[35.60]	[52.99]	[49.34]	[1.15]	[0.74]	[1.34]	[1.02]	[2.59]	[1.86]	[2.49]
State and year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Other control variables	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Overidentification test p-value	0.99	0.91	0.99	0.99	0.99	0.94	0.99	0.97	0.99	0.93	
Number observations	623	623	623	623	541	584	577	577	577	577	365

Robust standard errors are reported in parentheses. See the Data Appendix for details on the construction and sources of the variables. The sample covers 16 states, and 40 years (1961-2000). Punjab and Haryana enter the sample in 1965, giving a total of 632 observations. The instruments for number of bank branches in rural unbanked locations are: (i) number of banked locations in 1961 percapita interacted with a Post-77 Trendbreak, and (ii) number of banked locations in 1961 percapita interacted with a Post-90 Trendbreak. The corresponding first stage regression is reported in Table 4, column (1). The overidentification test is due to Sargan [1958]. The number of observations times the R-2 from the regression of the stage two residualson the instruments is distributed chi-squared (T+1) where T is the number of instruments.

Table 4: Individual Default
OLS, Tobit and Probit

	Dependent variable: Percent of loan in default at end of cycle					
	1st Loan Only			All Loans		
	OLS	Tobit	Probit	OLS	Tobit	Probit
	(1)	(2)	(3)	(4)	(5)	(6)
Distance from individual's home to original members of group	0.014	0.316	0.017	0.043	0.297	0.040
	(0.078)	(0.353)	(0.020)	(0.069)	(0.248)	(0.027)
	n=616	n=616	n=616	n=1801	n=1801	n=1801
Percent of original members within 10 minute walk of individual's home	-1.506 ***	-5.835 ***	-0.269 ***	-1.518 ***	-3.664 ***	-0.353 ***
	(0.391)	(1.768)	(0.080)	(0.374)	(1.070)	(0.134)
	n=616	n=616	n=616	n=1801	n=1801	n=1801
Percent of original members with same culture as individual	-0.511 *	-3.776 **	-0.178 ***	-0.364	-1.254	-0.153
	(0.297)	(1.700)	(0.065)	(0.295)	(1.058)	(0.109)
	n=616	n=616	n=616	n=1801	n=1801	n=1801

*** 99% significance; ** 95% significance; * 90% significance

Each cell is a separate specification.

Standard errors corrected for clustering at the group level in all specifications.

Individuals weighted evenly "all loans" specifications.

Individual level specifications include the following control variables (See Appendix Table 2 for results on control variables):
Distance to FINCA (town center), town dummy, neighborhood dummies, age, education, marital status, siblings, children, # in household, year, and age of group when individual joined.

Loan size estimated using approved loan amount, which is savings balance at end of prior cycle.

DONE 3/25

Table 6: Dropout
Probit

	Dependent Variable = 1 if Member Dropped Out after 1st Loan					
	(1)	(2)	(3)	(4)	(5)	(6)
Default	0.115 ***	0.112 ***	0.113 ***	-0.023	0.157 ***	0.206 ***
	(0.037)	(0.037)	(0.036)	(0.055)	(0.043)	(0.041)
Total Accumulated Savings	-0.013	-0.016	-0.014	-0.014	-0.015	-0.014
	(0.014)	(0.014)	(0.014)	(0.015)	(0.014)	(0.013)
Distance from individual's home to original members of group	0.035			0.021		
	(0.032)			(0.033)		
Distance Interacted with default				0.076 ***		
				(0.027)		
Percent of original members within 10 minute walk of individual's home		-0.007			-0.004	
		(0.006)			0.006	
Percent within 5 minute walk Interacted with default					-0.130 ***	
					(0.045)	
Percent of original members with same culture as individual			-0.189			-0.011
			(0.147)			(0.134)
Culture Interacted with default						-0.320 ***
						(0.086)
Observations	616	616	616	616	616	616
# of dropouts	148	148	148	148	148	148
Log-likelihood	-173.64	-173.75	-173.21	-173.22	-171.56	-166.73
Groups	42	42	42	42	42	42

*** 99% significance; ** 95% significance; * 90% significance

Marginal effects of probit reported.

Standard errors corrected for clustering at the group level.

Individual level specifications control variables for distance to FINCA (town center), town dummy, neighborhood dummies, age, education, marital status, siblings, children, # in household, year, and age of group.

Table 1:
Characteristics of selected leading microfinance programs

	Grameen Bank, Bangla-desh	Banco-Sol, Bolivia	Bank Rakyat Indonesia *Unit Desa*	Badan Kredit Desa, Indo-nesia	FINCA Village banks
Membership	2.4 million	81,503	2 million borrowers 16 million depositors	765,586	89,986
Average loan balance	$134	$909	$1007	$71	$191
Typical loan term	1 year	4 - 12 months	3 - 24 months	3 months	4 months
Percent female members	95%	61%	23%	--	95%
Mostly rural? Urban?	rural	urban	mostly rural	rural	mostly rural
Group-lending contracts?	yes	yes	no	no	no yes
Collateral required?	no	no	yes	no	no
Voluntary savings emphasized?	no	yes	yes	no	yes
Progressive Lending	yes	yes	yes	yes	yes
Regular repayment schedules	weekly	flexible	flexible	flexible	weekly
Target clients for lending	poor	largely non-poor	non-poor	poor	poor
Currently financially sustainable?	no	yes	yes	yes	no
Nominal interest rate on loans (per year)	20%	47.5-50.5%	32 - 43%	55%	36-48%
Annual consumer price inflation, 1996	2.7%	12.4%	8.0%	8.0%	--

Sources — Grameen Bank: through August 1998, www.grameen.com; loan size is from December 1996, calculated by author. BancoSol: through December 1998, from Jean Steege, ACCION International, personal communication. Interest rates include commission and are for loans denominated in bolivianos; base rates on dollar loans are 25-31%. BRI and BKD: through December 1994 (BKD) and December 1996 (BRI), from BRI annual data and Don Johnston, personal communication. BRI interest rates are effective rates. FINCA: through July 1998, www.villagebanking.org. Inflation rate: World Bank *World Development Indicators 1998*.

Grameen Bank, Bangladesh

The 16 Decisions of Grameen Bank

1. We respect the four principles of the Grameen Bank - we are disciplined, united, courageous and workers - and we apply them to all our lives.
2. We wish to give our families good living standards
3. We will not live in delapidated houses. We repair them and work to build new ones.
4. We cultivate vegetables the whole year round and sell the surplus.
5. During the season for planting, we pick out as many seedlings as possible.
6. We intend to have small families. We shall reduce our expenses to a minimum. We take care of our health.
7. We educate our children and see that they can earn enough money to finance their training.
8. We see to it that our children and homes are clean.
9. We build laterines and use them.
10. We only drink water drawn from a well. If not, we boil the water or we use alum.
11. We will not accept a marriage dowry for our son and we do not give one to our daughter at her marriage. Our centre is against this practice.
12. We cause harm to no one and we will not tolerate that anyone should do us harm.
13. To increase our income, we make important investments in common.
14. We are always ready to help each other. When someone is in difficulty, we all give a helping hand.
15. If we learn that discipline is not respected in a centre, we go along to help and restore order.
16. We are introducing physical culture in all centres. We take part in all social events.

Source:
Grameen Bank booklets

Return to the Grameen Bank Page

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Return to the Virtual Library on Microcredit

Morduch "Does micro finance really help the poor"

Table 6

Average logarithm of consumption per capita, Difference-in-difference using *de facto* classifications (n = 1798)

	Grameen	BRAC	BRDB		Difference		
	(1)	(2)	(3)	Control	(1)	(2)	(3)
"Eligible"	4.23	4.24	4.18	4.24	-.01 (.33)	0 (.16)	-.06** (1.98)
"Not eligible"	4.50	4.53	4.60	4.51	-.01	.02	.08
Difference	-.27	-.29	-.42	-.27	0 (.05)	-.02 (.12)	-.14 (1.54)

Absolute values of t-statistics of differences in parentheses; ** (*) significant with 95% (90%) confidence.

Table 7

Average logarithm of consumption per capita, Difference-in-difference using *de jure* classifications (n = 1562)

	Grameen	BRAC	BRDB		Difference		
	(1)	(2)	(3)	Control	(1)	(2)	(3)
Under 0.5 acre	4.17	4.21	4.17	4.24	-.07** (2.12)	-.03 (1.08)	-.07** (2.33)
Over 0.5 acre	4.51	4.54	4.61	4.51	0	.03	.10
Difference	-.34	-.33	-.44	-.27	-.07 (.75)	-.06 (.65)	-.17* (1.91)

Absolute values of t-statistics of differences in parentheses; ** (*) significant with 95% (90%) confidence.

ex and age of the household head as

Women's Assets

impact of participation in credit
n of total weekly expenditure per
survey data. All three WESML-LIML-
re positive and statistically significant
ture, with no t-statistic less than 3.8,
3) = 19.03, $p = .00$). In contrast, none
has a t-statistic over 2.0, and the hy-
lit parameters are zero cannot be re-
ficance ($\chi^2(3) = 4.11$, $p = .25$). The
s are approximately double the male
credit program.[13] There are not sub-
ng the three credit programs. At the
of credit provided women adds 0.18
l expenditure, as compared with 0.11
litional credit is supplied to men. The
sts that one reason for the difference
reater production inefficiency associ-
sult of an absent women's wage labor
ss to credit.

ter estimates of the determinants of
ble 2 demonstrate the importance of
estimation. Women's credit effects are
ML, and all three male credit parame-
AC and Grameen) are statistically sig-
es presented in columns 1 and 2 of
timate the positive effects of program
diture. The effects of women's
ameen Bank are underestimated by a

in the household and no adult males in the
's because the adult education variables highest
n the household and highest grade completed
e undefined when there are no adults (defined
age or older) of that sex in the household.
ber of one sex in the household, the relevant
s coded zero. The no adult variable thus picks
ro as the highest number of years of schooling
having any adult of that sex in the household.
e differences is large, the female credit parame-
om the male credit parameters ($\chi^2(3) = 3.39$).

TABLE 2

ALTERNATIVE ESTIMATES OF THE IMPACT OF CREDIT ON PER CAPITA EXPENDITURE AND WOMEN'S NONLAND ASSETS

	LOG OF WEEKLY TOTAL PER CAPITA EXPENDITURE				LOG OF WOMEN'S NONLAND ASSETS				
EXPLANATORY VARIABLES	Unweighted OLS	WESML-OLS	WESML-LIML	WESML-LIML-FE	Unweighted Tobit	WESML-Tobit	WESML-LIML	WESML-FE	WESML-LIML-FE
Amount borrowed by female from BRAC	.007	.007	.0340	.0394	.277	.182	.0425	.1151	.0318
	(3.048)	(2.847)	(2.291)	(4.237)	(4.359)	(2.834)	(2.302)	(2.003)	(.356)
Amount borrowed by male from BRAC	.010	.010	−.0161	.0192	.141	.110	.2589	.0878	.1005
	(2.906)	(2.835)	(−1.658)	(1.593)	(1.615)	(1.214)	(2.367)	(1.007)	(.468)
Amount borrowed by female from BRDB	.002	.003	.0258	.0402	.078	−.096	.0473	.2172	.1257
	(.573)	(.906)	(1.723)	(3.813)	(1.040)	(−.949)	(.300)	(2.408)	(1.043)
Amount borrowed by male from BRDB	.007	.007	−.0155	.0233	.234	.138	3.8329	.0244	.0334
	(3.118)	(2.253)	(−1.788)	(1.936)	(3.934)	(1.608)	(3.340)	(.426)	(.141)
Amount borrowed by female from Grameen Bank	.003	.004	.0371	.0432	.232	.195	1.3484	.1989	.1131
	(1.400)	(1.765)	(2.174)	(4.249)	(4.402)	(3.318)	(1.452)	(3.950)	(1.317)
Amount borrowed by male from Grameen Bank	.001	−.0225	−.2291	.0179	.125	.096	.3377	−.0603	−.0457
	(.252)	(.325)	(−2.291)	(1.431)	(1.676)	(1.029)	(2.386)	(−.878)	(−.200)
ρ (women)			−.3897	−.4809			−.0168		.1136
			(−2.056)	(−4.657)			(−.198)		(1.325)
ρ (men)			.2999	−.2060			−.7656		−.0148
			(2.998)	(−1.432)			(−36.311)		(−.053)
Observations	4,567	4,567	5,218	5,218	1,517	1,517	1,757	1,757	1,757

NOTE.—Figures in parentheses are asymptotic t-ratios.

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Table 1

Percentage of Borrowers by Classification

(weighted, n = 1498)

	Grameen	BRAC	BRDB
Borrowing by "eligible" households:			
under 0.5 acre (prior)	39	40	25
over 0.5 acre (prior)	60	55	83
By de facto eligibility status:			
"Eligible"	44	42	29
"Not Eligible"	0	0	0
By holdings prior to participation:			
Under 0.5 acre	38	39	24
Over 0.5 acre	19	22	11
By holdings at the time of the survey:			
Under 0.5 acre	38	40	25
Over 0.5 acre	18	20	10

Note: Data on land-holdings prior to 1991-92 only available for borrowers; "before" data for others is replaced with 1991-92 data. Landholdings comprise total land held by household.

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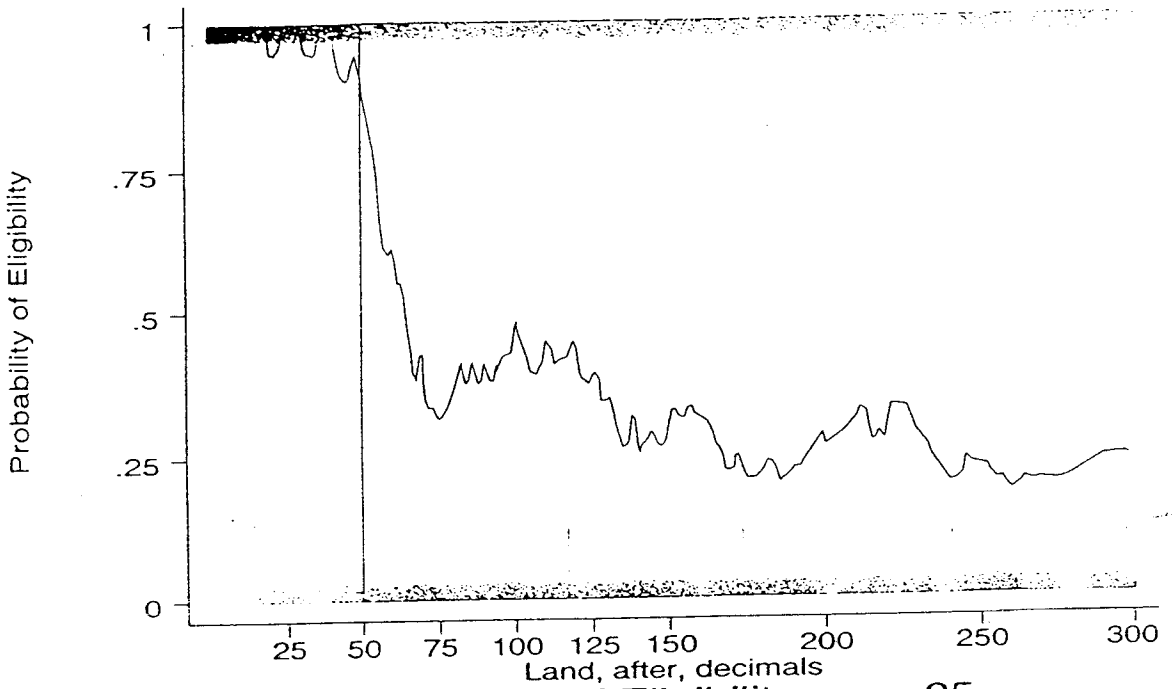

Fig 2. Probability of Eligibility, nn = 25

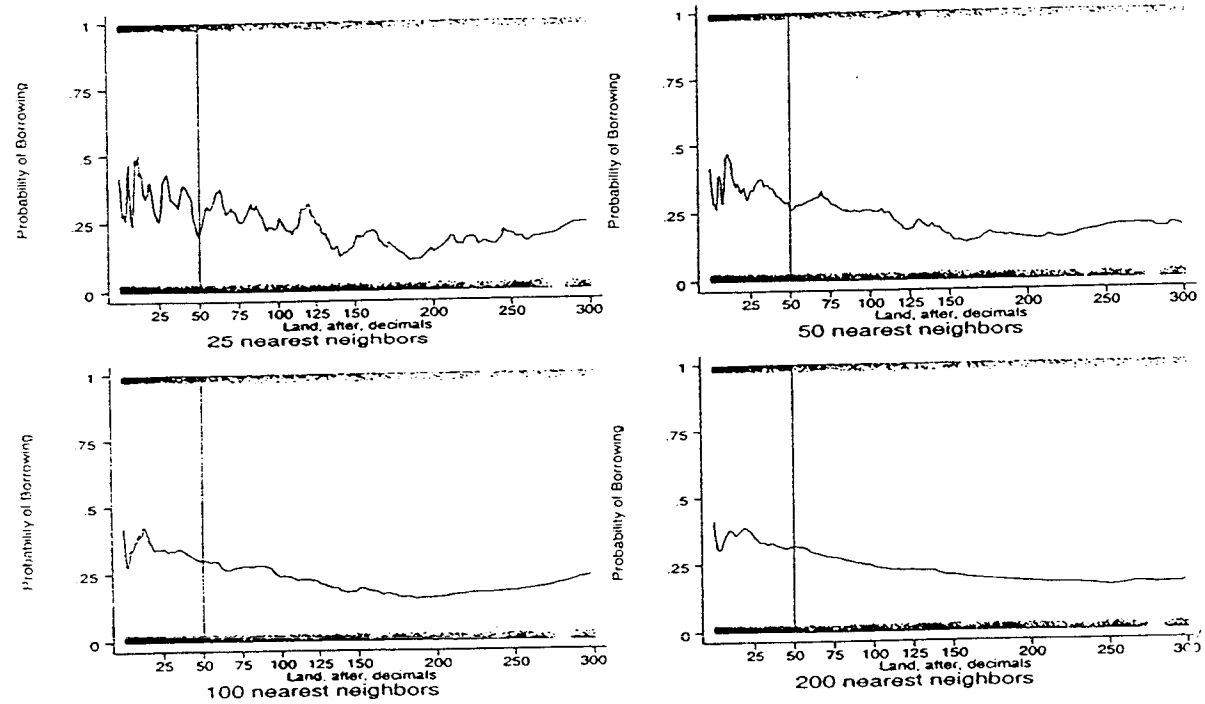

Fig 3. Probability of Borrowing