Do rural banks matter? Evidence from the Indian social banking experiment
Burgess and Pande AER 2005

Relation between credit expansion and poverty

  positive effect

    Alleviate financial constraints, and therefore, can enable individuals
    to alter their production and employment choices

  Negaive effect

    many believe that subsidized credit typically does not reach the poor,
    and promotes inefficient rent seeking behavior

Question:

  Can market itself ensure efficient level of credit expansion?

How can we measure the effect of credit expansion in reducing poverty?

Typically, credits are expanded by private money lending entities in profitable areas, leaving behind underdeveloped areas.

Hard to find exogenous variation in credit expansion

Rural bank expansion program in India between 1977-90

Background

1949: Bank regulation act requires private banks to acquire license from the central bank for operation

1969: Bank nationalization. 14 largest banks are nationalized and came under direct supervision of the central bank.

Credit expansion:

rural lending rates are kept below the urban lending rate

rural savings rates are higher than urban savings rate

Monitoring lending portfolios (targetting credit to small business, small scale entrepreneurs, and to agriculture)

1977: 1:4 branch licensing policy

1990: Liberalization; licensing policy is discontinued

Between 1961 and 2000, branches in rural unbanked location increases from 105 to 29109 (80% during 1969-1990)

Suppose we like to measure the effect of branch expansion (or credit expansion) on poverty

A naive model specification

$$y_{it} = \alpha_i + \beta_t + \phi B_{it}^R + \varepsilon_{it}$$

Relation between branch expansion and financial development

$$B_{it}^R = \alpha_i + \beta_t + \gamma_t \times B_{i1961}$$
$$+ \delta_t \times X_{i1961} + \varepsilon_{it}.$$

A linear trend break model

$$B_{it}^R = \alpha_i + \beta_t + \gamma_1 (B_{i1961} \times [t - 1961])$$
$$+ \gamma_2 (B_{i1961} \times [t - 1977])$$
$$+ \gamma_3 (B_{i1961} \times [t - 1990])$$
$$+ \gamma_4 (B_{i1961} \times P_{1977})$$
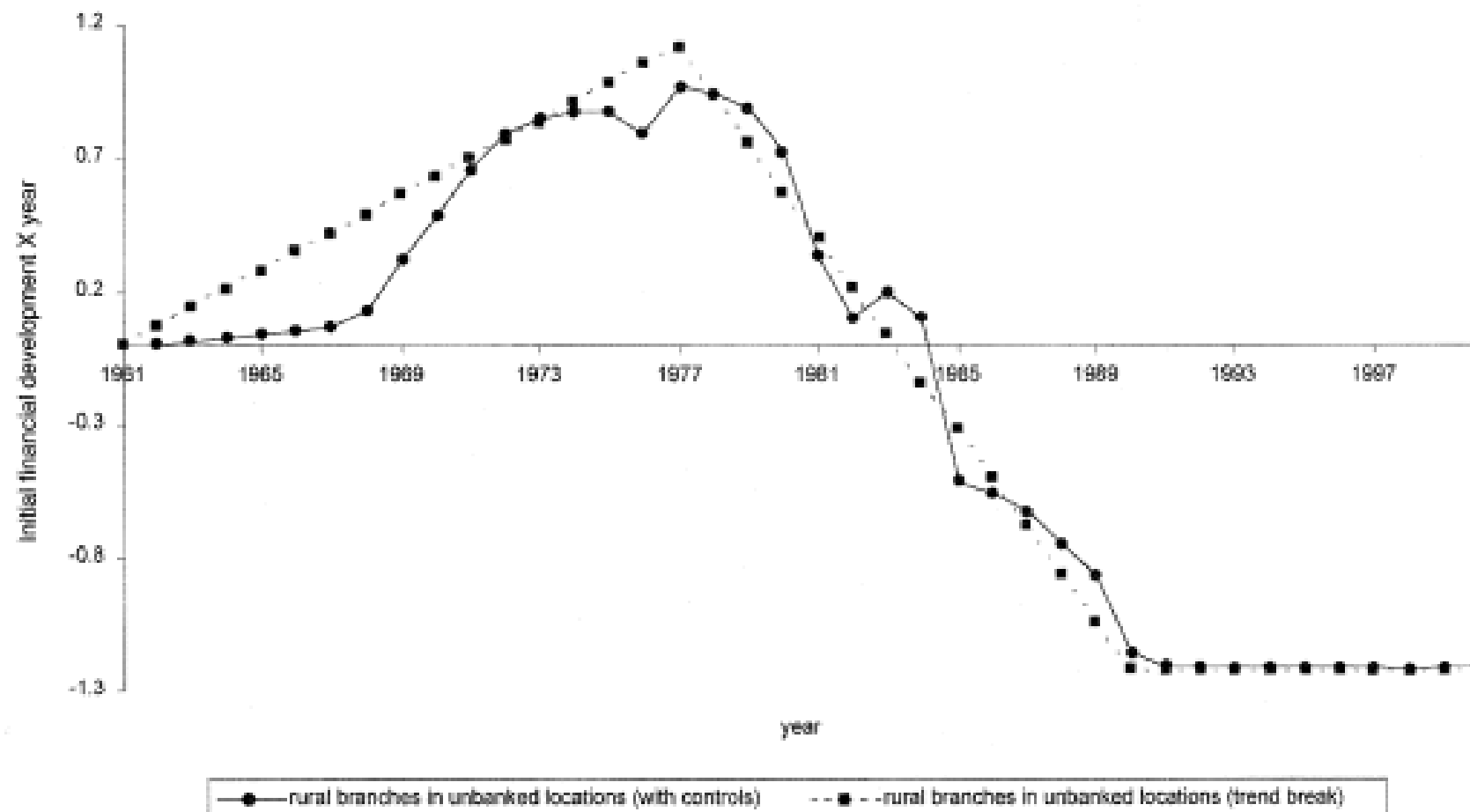$$+ \gamma_5 (B_{i1961} \times P_{1990}) + \varepsilon_{it}.$$

FIGURE 1. INITIAL FINANCIAL DEVELOPMENT AND RURAL BRANCH EXPANSION

TABLE 1—BANKING AS A FUNCTION OF INITIAL FINANCIAL DEVELOPMENT

| | Branches in rural unbanked locations | Rural bank | | Branches in banked locations | Credit share | |
| | | Credit share | Savings share | | Priority sector | Cooperative |
	(1)	(2)	(3)	(4)	(5)	(6)
Number of bank branches per capita in 1961*(1961–2000) trend	0.07** (0.03)	0.18 (0.21)	−0.03 (0.24)	0.14*** (0.01)	−0.08 (0.62)	0.41 (0.34)
Number of bank branches per capita in 1961*(1977–2000) trend	−0.25*** (0.03)	−1.09** (0.43)	−0.82*** (0.25)	−0.07*** (0.02)	0.08 (0.86)	−0.02 (0.42)
Number of bank branches per capita in 1961*(1990–2000) trend	0.17*** (0.04)	0.87*** (0.26)	0.43* (0.23)	0.10** (0.04)	−0.18 (0.33)	0.03 (1.00)
Post-1976 dummy*(1977–2000) trend	0.34 (0.25)	−0.30 (1.50)	−0.17 (0.78)	0.53** (0.19)	−3.37 (2.40)	−3.64 (2.22)
Post-1989 dummy*(1990–2000) trend	−0.24 (0.15)	1.95 (1.49)	0.44 (0.53)	−0.40*** (0.10)	−0.05 (1.86)	−3.15 (2.61)
State and year dummies	YES	YES	YES	YES	YES	YES
Other controls	YES	YES	YES	YES	YES	YES
Adjusted R-squared	0.96	0.88	0.87	0.98	0.86	0.81
F-test 1	16.87 [0]	12.8 [0]	25.67 [0]	8.97 [0]	0 [0.99]	5.75 [0.03]
F-test 2	0.49 [0.49]	0.1 [0.76]	9 [0]	27.22 [0]	1.79 [0.20]	0.17 [0.69]
Observations	636	512	512	636	512	491

Relation between poverty and
initial development

$$y_{it} = \alpha_i + \beta_t + \lambda_t \times B_{i1961} + \delta_t \times X_{i1961} + \varepsilon_{it}$$

Relation between the effect of initial
development on branch expansion and
the effect of initial development on
poverty

$$\lambda_t = a + b\gamma_t + c_1 P_{1977} + c_2 P_{1990} + \varepsilon_t$$
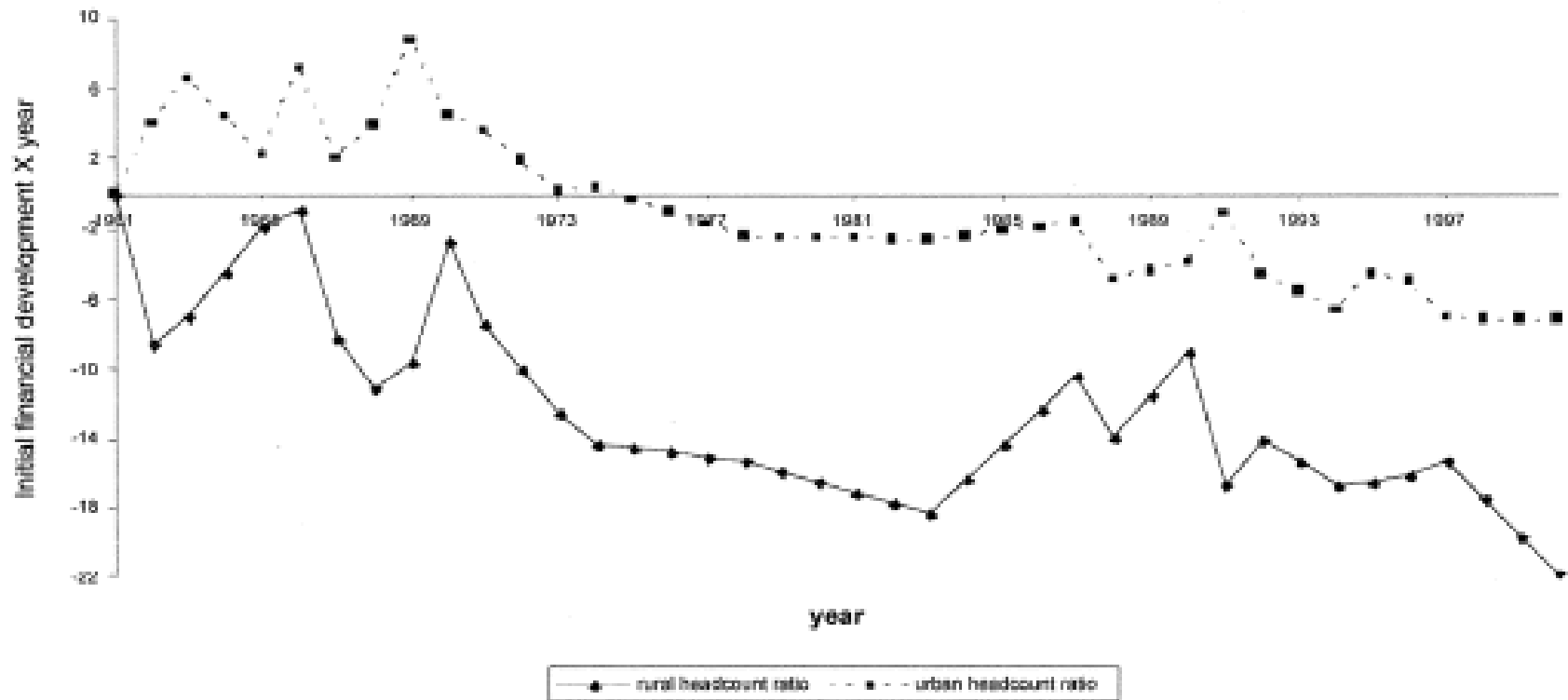
FIGURE 3. INITIAL FINANCIAL DEVELOPMENT AND POVERTY

TABLE 2—BANK BRANCH EXPANSION AND POVERTY: REDUCED FORM EVIDENCE

	Annual coefficients rural headcount ratio	Headcount ratio			Wage	
		Rural	Urban	Aggregate	Agricultural	Factory
	(1)	(2)	(3)	(4)	(5)	(6)
Annual coefficients for branches in rural unbanked locations	−4.71*** (1.01)					
Number of bank branches per capita in 1961*(1961–2000) trend		−0.77*** (0.23)	−0.27 (0.24)	−0.71*** (0.22)	−0.004 (0.006)	0.01 (0.02)
Number of bank branches per capita in 1961*(1977–2000) trend		1.15** (0.42)	0.15 (0.26)	0.99*** (0.33)	−0.01 (0.01)	−0.01 (0.02)
Number of bank branches per capita in 1961*(1990–2000) trend		−1.15*** (0.34)	−0.31 (0.38)	−1.04*** (0.31)	0.05** (0.02)	−0.02 (0.01)
Post-1976 dummy*(1977–2000) trend		−3.77* (1.94)	−2.76 (2.29)	−3.53* (1.71)	0.09* (0.05)	0.04 (0.05)
Post-1989 dummy*(1990–2000) trend		1.2 (2.39)	0.5 (0.96)	0.62 (1.82)	−0.03 (0.05)	0.01 (0.02)
State and year dummies		YES	YES	YES	YES	YES
Other controls		YES	YES	YES	YES	YES
Adjusted R-squared		0.84	0.91	0.88	0.90	0.70
F-test 1		1.5 [0.24]	0.37 [0.55]	1.76 [0.20]	23.95 [0]	0.23 [0.64]
F-test 2		2.97 [0.11]	3.95 [0.07]	4.15 [0.06]	1.88 [0.19]	6.07 [0.03]
Observations	39	627	627	627	545	553