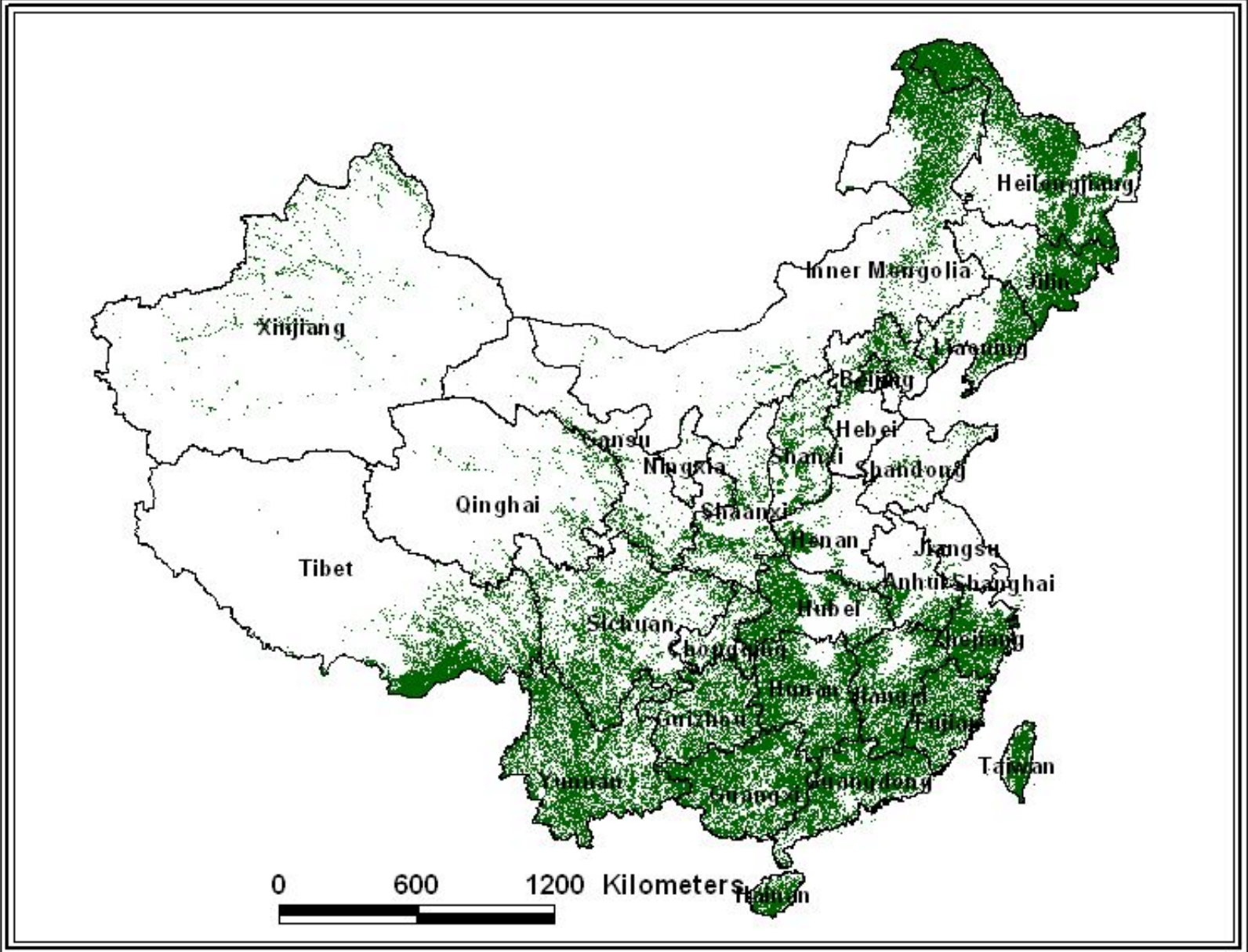


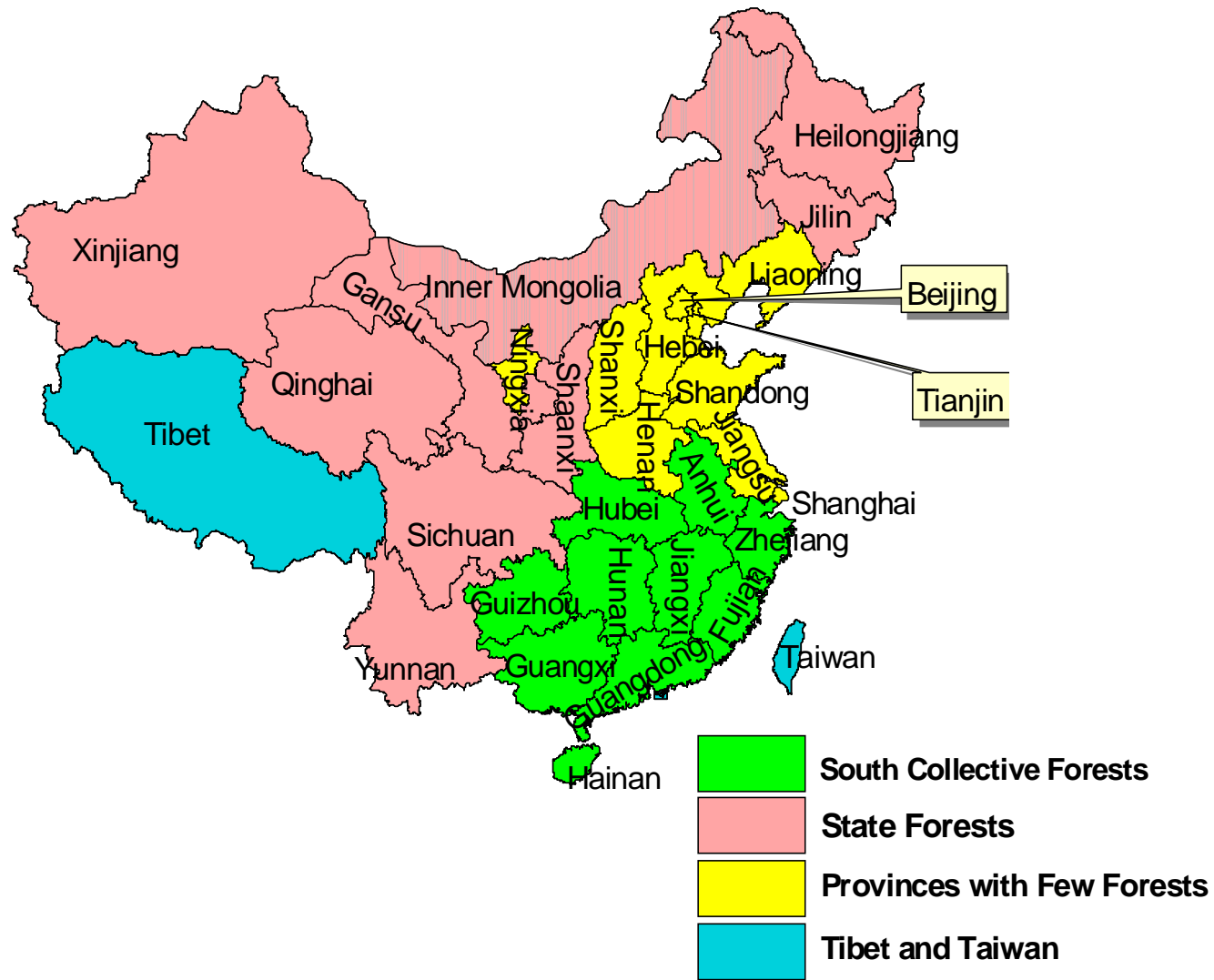
Understanding Forest Tenure Reform in China
集体林区林权改革模式经济分析

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2006年21日





Background 研究背景

- 80年代早期的农村联产承包制的改革,吹响了中国经济体制改革的号角
- Agricultural Land Reform (HRS) in early 1980s ignited China's transition toward a market oriented economy
- 农业生产得到了极大提高
- Dramatic growth in agricultural productivity
- 农村改革带来民营经济、私有经济的极大发展
- Tremendous contribution from private sector to the whole economy
- 当前,政府仍然致力于加强农民土地权利的政策方向
- Strengthening farmer land rights still main focus of policy trend (ALCL, RRL, etc)

Forest Sector in China 中国林业

- 在林业部门，政府管制程度高于大多数经济部门
- Forest sector remains most tightly controlled by government and administration
- 采伐、运输、林地利用方面的约束性政策还大量存在
- Control in logging, shipping, land use, etc.
- 天然林保护工程 Logging ban
- 政府主导型林业建设项目
- Lots of government programs
- And.....

Forest Tenure in China 林权制度

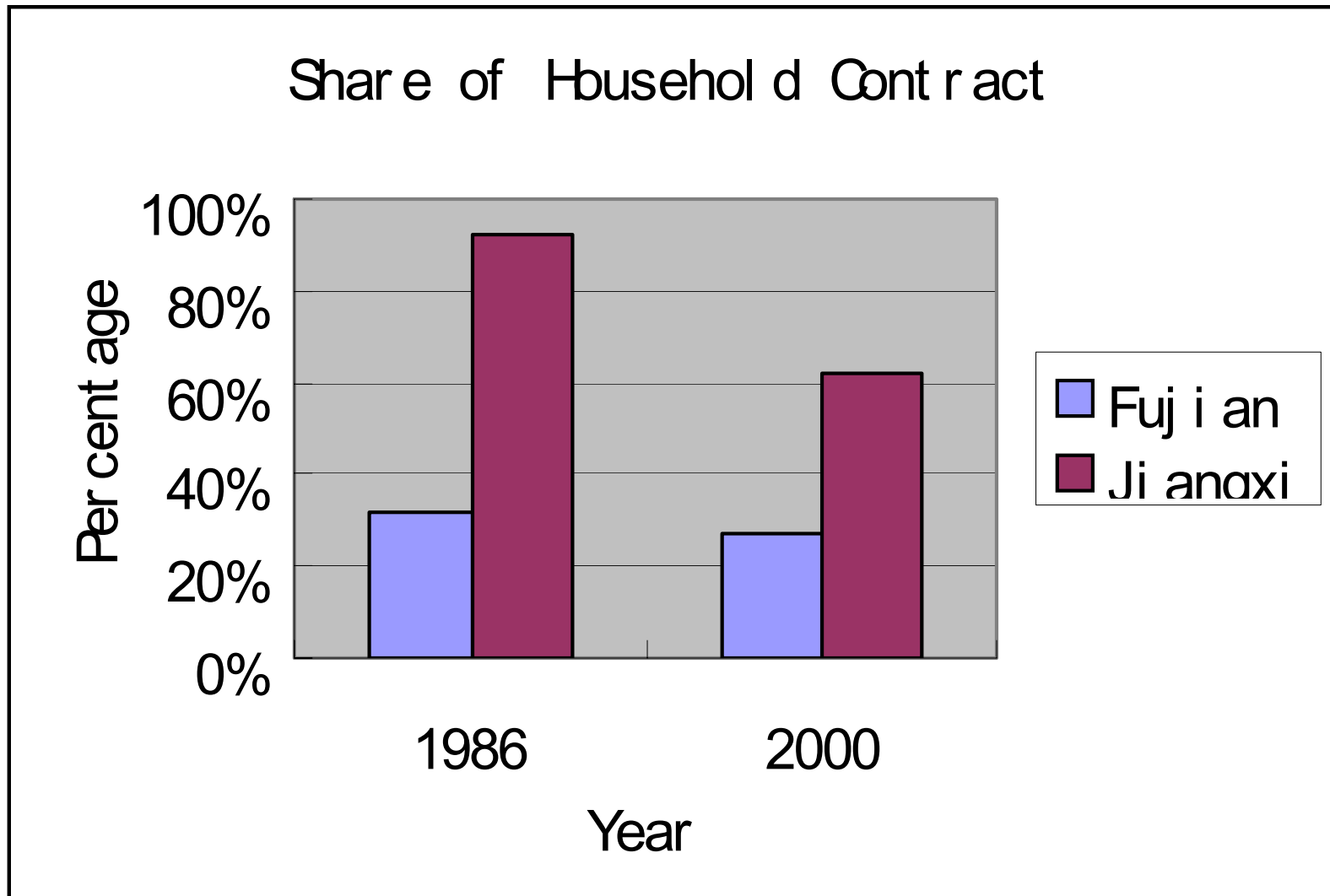
- 两种所有制形式 Two ownership types
- State: 国有
 - ~42% forest area and 68% volume;
 - Managed by state forest enterprises and farms
- Collective 集体所有
 - 58% area and 32% volume
 - Growing share of timber production
 - Many management arrangement

Collective Forest Tenure 集体林区

- 村集体是集体林地的法定所有人
- Village collectives as legal owners
- 农户、联户、各种经济组织可以通过承包的形式经营集体所有的森林
- Farmer households, a group of farmers, outsiders, all entitled to contract and manage collective owned forestland
- 林业管理方面的放权让利的改革时有反复
- Decentralization of management was slow and not smooth since 1981.
- 截止到1986年，约70%的集体林地实行了农户承包经营
- By 1986, around 70% household managed
- 1987年以后，有所反复
- Then setback in 1987~.

Household-Contracts in Fujian and Jiangxi, 1986 and 2000

农户承包经营比例



第二次林权改革：更深入的改革

Process of tenure reform

- 以福建省为发源地 Fujian
 - pilot in 2002
 - 2003 provincial policy
 - Village representative committees decision makers
 - Land contract fee
- 江西省 Jiangxi
 - Commence in 2004
 - Village representative committees making decisions
 - No Land contract fee allowed

本研究的目的是

Purpose of this study

- 解释林权改革中新的林权模式产生的影响因素
- 对林权改革的绩效进行评价
- 为决策提供研究支持
- Explain the process and outcome of tenure reform
- Understand determining factors for different types of tenure arrangement
- Answer the questions of optimal forest management system in collective forests
- Evaluate performance of tenure reform against the set criteria
- Identify areas of policy improvement in new tenure system

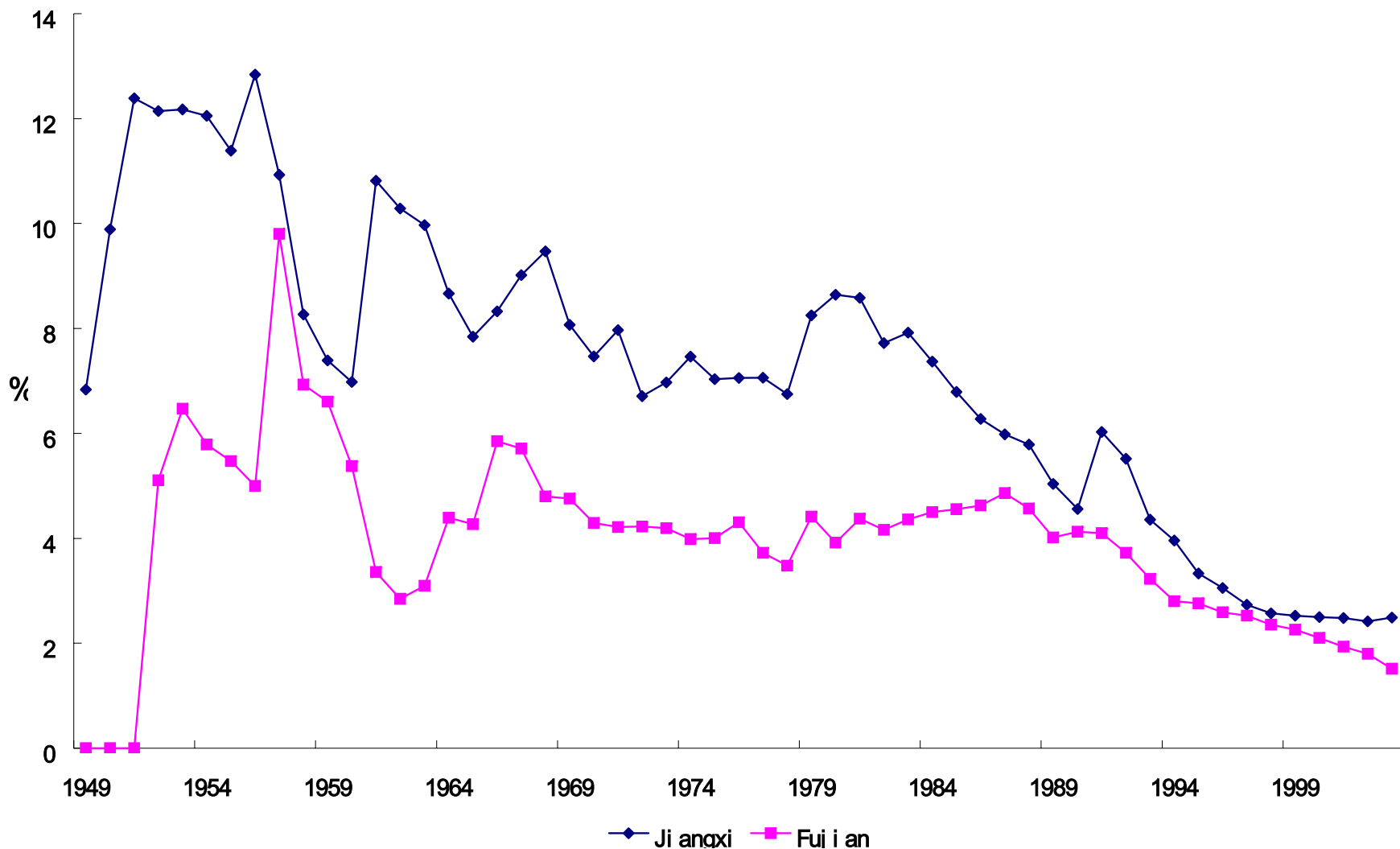
调查省份的基本情况

Studied Areas-Basic Facts

		For est ed Ar ea		For est vol ume		For est cover age
		mill ion ha	%	mill ion m ³	%	%
Fuj i an	t ot al	7. 65	4. 53	496. 71	3. 75	62. 96
	st at e- owned	0. 85	1. 21	94. 33	1. 06	
	col l ect i ve	6. 80	6. 88	402. 38	9. 25	
Ji angxi	t ot al	9. 31	5. 51	374. 35	2. 82	55. 86
	st at e- owned	1. 47	2. 10	93. 56	1. 05	
	col l ect i ve	7. 84	7. 93	280. 80	6. 45	
Nat i onal	t ot al	169. 02	100	13259. 36	100	18. 21
	st at e- owned	70. 16	100	8907. 59	100	
	col l ect i ve	98. 86	100	4351. 77	100	

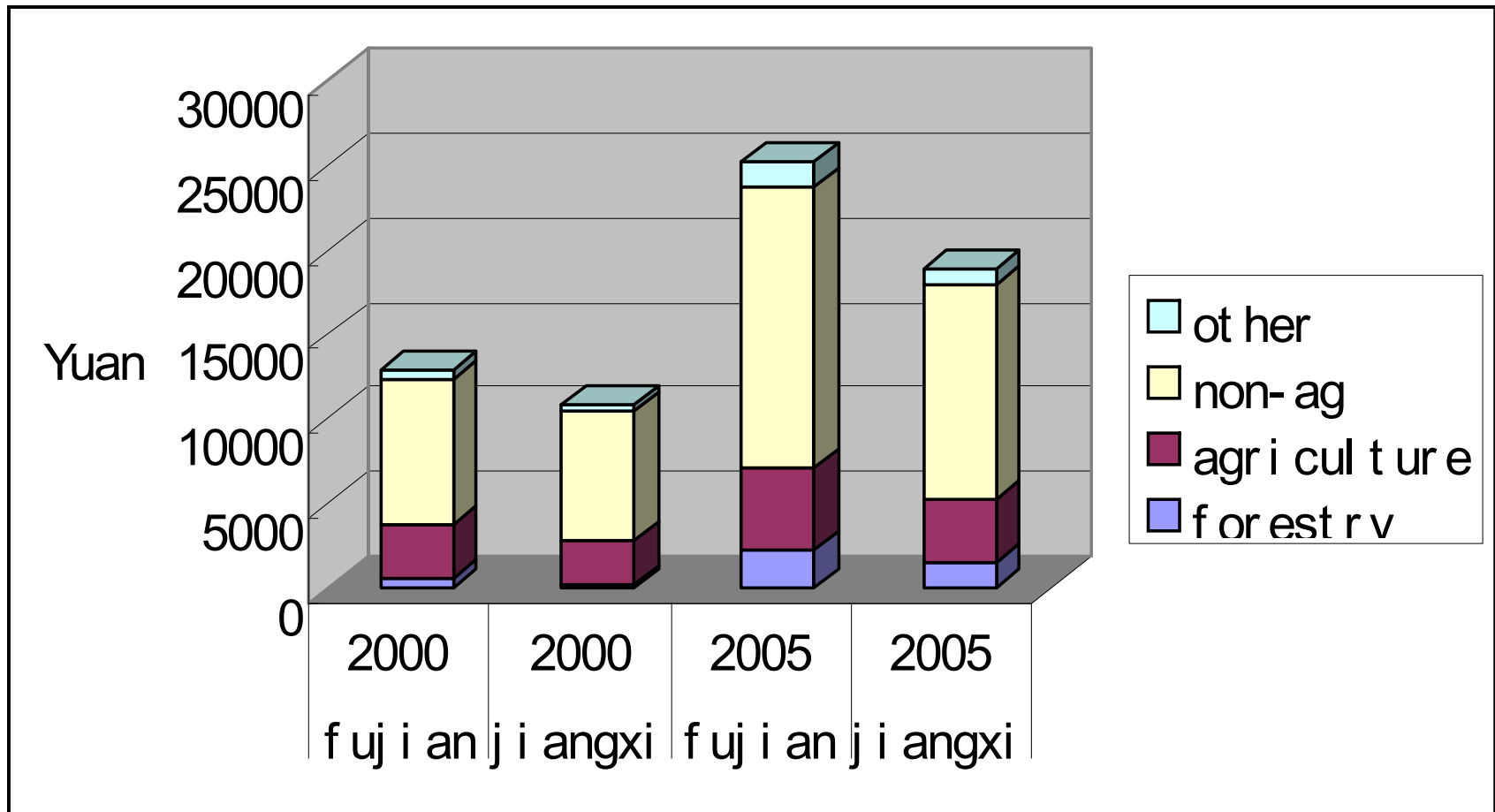
林业在全省GDP中的比重

Forestry Share in GDP 1950s-1999



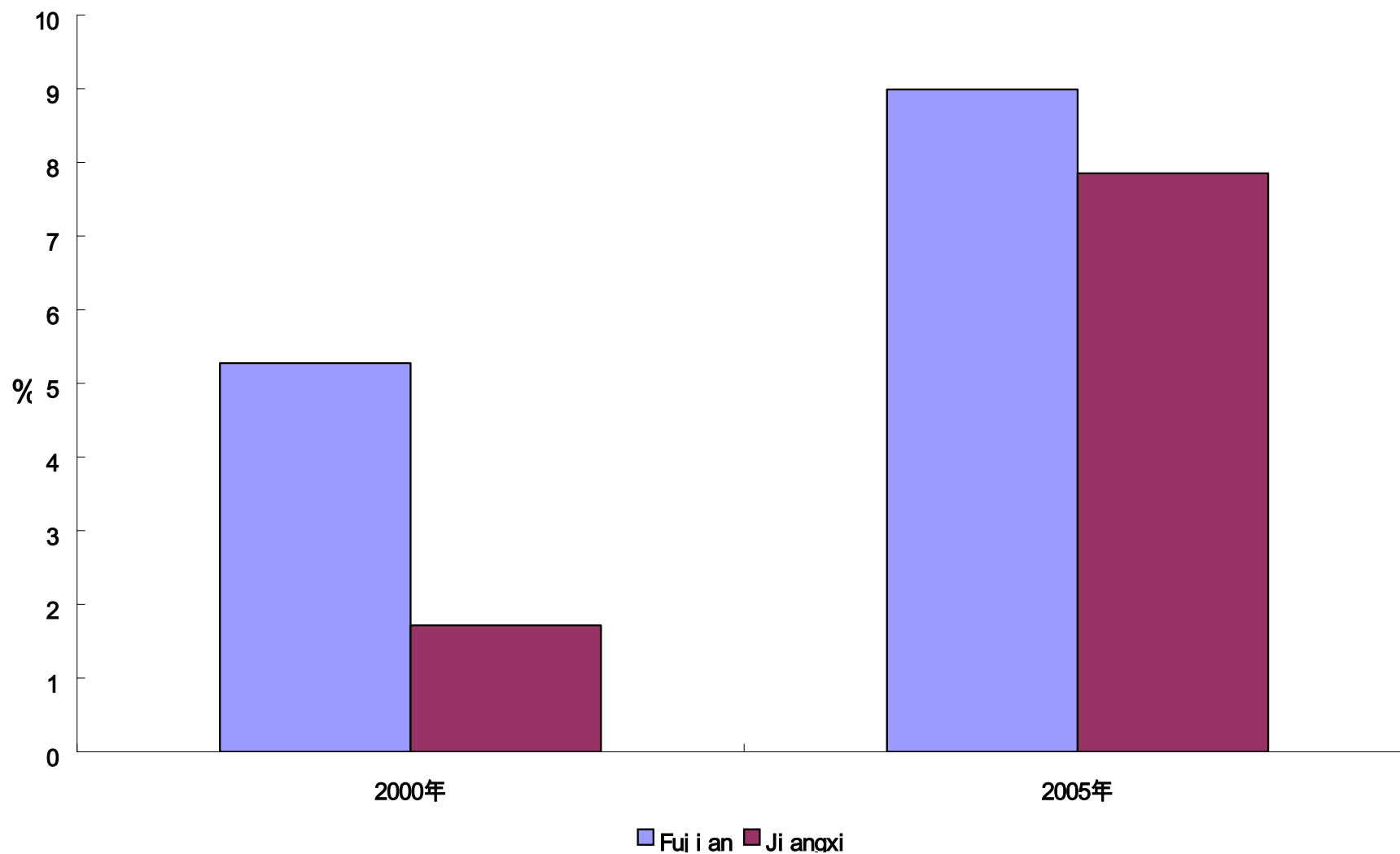
林业收入占农民家庭总收入的比例

Forestry Share in Household Revenue (1)



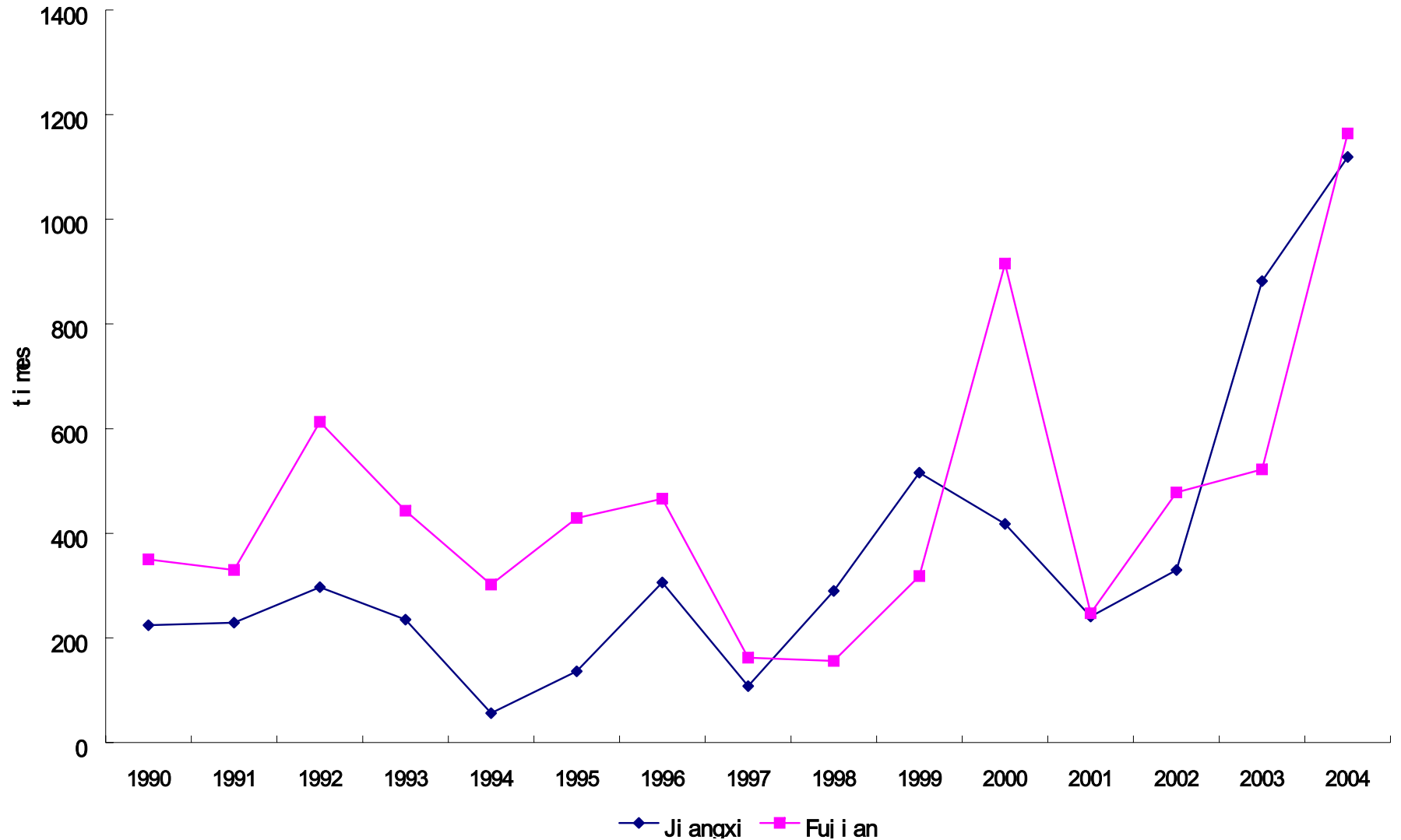
林业收入占农民家庭总收入的比例

Forestry Share in Household Revenue (2)



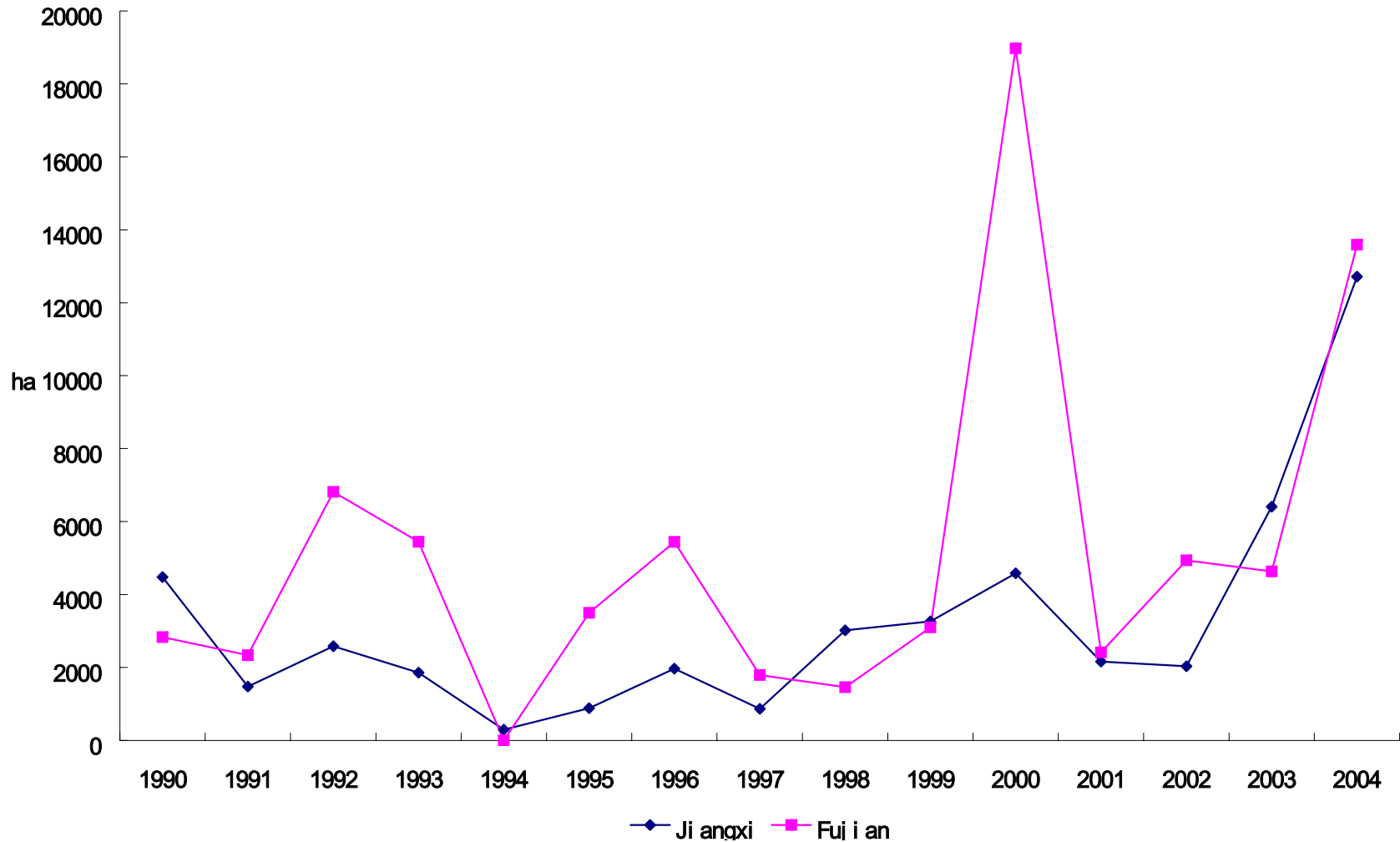
森林火灾率 (次数)

Forest Fire Incidence 1990-2004



火灾影响面积

Forest Fire Affected Area 1990-2004



产权改革调查 Survey Scope

- 村级和入户调查
- Survey conducted in April-June 2006
- 福建：10个县，30个乡、60个村、600户农户
- Fujian: 10 counties, 30 townships, 60 villages, 600 households
- 江西：5个县、15个乡、30个村、300户农户
- Jiangxi: 5 counties, 15 townships, 30 villages, 300 households
- Period of 2000-2005

森林经营权类型划分

Categories of tenure types

- **五种主要类型** Five types of tenure arrangement
 - 自留山 Private plots
 - 单户经营 Village household contract
 - 联户经营 Village household partnership
 - 林权转让经营 Market allocated plots
 - 集体经营 Collective management
- **生态公益林** Ecological forests
 - Formally established around 2001

假说 Hypotheses

- 由于村民代表大会是林权改革的决策单位，村民代表大会的决策能力将决定林改的质量，一般来说，村级民主较为健全的地方，林改较为深入，村民在林改中获得的经营权利较多，而集体经营的比例越小。
- Since village representative committees are making the call, the outcome of tenure reform is dependent on the quality of these rural committees. In more democratic villages, decentralization is deeper, more households contract instead of outsider market allocation, collective management, etc.
- 良好的社会资本有益于联合管理模式的形成
- In villages with good social capital, more partnership, less individual management
- 多种经营、非农就业机会发展好的地方，对林地的需求较小
- In villages with good alternative income (off-farm job, higher ag productivity, etc.), lower demand for forest land => more collective, market allocation, less individual and partnership(?)
- 较为贫困的地方对林地的需求较高
- Lower per capita income lead to higher demand for forestland
- 政府干预越多，林农经营林地的积极性越低
- In areas with tight government control, less demand for forestland (or more transfer-out afterwards)
- 产权不稳定会导致农民经营林地的积极性降低
- Tenure insecurity is negatively affecting individual contracts (adjustment, eco-forests, etc.)

不同产权模式形成的影响因素分析

Determinants of tenure types

- 对产权类型比例变化的系统方程的估计
- -Estimation of a system of tenure share change

	Private	Household	Partnership	Market	Collective
Village Characteristics					
Labor Share	3.185	23.838*	-2.364	1.947	-36.628***
Villager Education	0.223**	0.371	-0.345	0.113	-0.108
Ag Productivity	-1.155	-0.804	-4.284	-1.294	6.061
Slop	0.051	0.03	0.068	-0.331***	0.128
Market Development, alternative income					
Distance to County Seat	-1.264*	1.914	-0.722	0.769	-0.941
Off-Farm Labor Rate	-0.046	-0.309*	0.186	0.003	0.217
Commercial Rate of Crop	0.114**	0.009	0.196**	-0.032	-0.031
Rise Price	-6.628	-12.78	17.304	-3.974	4.996
Cropland p.c.	2.407	4.183	-4.452	-1.989	-5.083
Tenure Security and Policy					
Eco-Forest Share	-0.113***	-0.221***	-0.161**	0.034	-0.125
Land Adjustment	-0.017	-0.68**	0.67***	0.134	0.06
Quota Index	0.013	-0.001	-0.017	0	-0.052
Village Leader Quality					
Service Oriented	-0.085	-0.102	0.168	-0.082	0.2
Fareness	0.083	0.075	-0.184	0.099*	-0.114
Social Capital					
Informal Credit	0.014	-0.121	0.219*	0.007	-0.09
Land Rent or Not					
Jiangxi	5.373	10.934	-18.402**	-5.464*	14.206*

结果讨论 Discussion of Results

- 产权不稳定，政府干预较多的地方，农民经营林地的积极性较低
- Tenure insecurity, government interference reduce demand of individual farmers for forestland
- 替代收入增加会降低对林地的需求
- Alternative income reduces demand for forestland
- 市场条件改善会提高农民的林地的需求
- Improved market access increases private management
- 社会资本良好会促进联户经营
- Better social capital leads to more partnership
- 限制收取土地承包费会降低农民获得林地的机会，事实上不利于农民真正获得林改所提供的福利改善
- Restriction on collective rent seeking reduces share of land allocated to individual farmers and increases share of land kept by collectives(sad reality)

林改的近期效果

Immediate impacts of tenure reform

- 家庭经营比例增加
- Increased individual management
- 木材采伐和人工造林都有所增加
- Afforestation increased
- 农民的林业收入增加
- Forest income increased due to increased harvest

福建林权改革成果

Outcome of Tenure reform in Fujian

	2000		2005	
	area (ha)	percentage (%)	area (ha)	percentage (%)
Private Plot	3,630.45	6.59	3,699.61	6.71
Household	20,382.34	37.02	24,232.72	43.92
Partnership	3,803.33	6.91	7,409.47	13.43
Market Allocation	2,361.33	4.29	2,604.33	4.72
Collective	16,117.53	29.27	7,602.72	13.78
Eco-Forest	8,769.53	15.93	9,619.73	17.44
Total Forest	55,064.52	100.00	55,168.59	100.00

江西林权改革成果

Outcome of Tenure Reform in Jiangxi

	2000		2005	
	area (ha)	percentage (%)	area (ha)	percentage (%)
Private Plot	6,213.14	25.62	5,806.99	23.65
Household	8,884.27	36.63	9,895.15	40.29
Partnership	2,730.90	11.26	1,715.58	6.99
Market Allocation	1,332.85	5.50	2,445.29	9.96
Collective	4,337.55	17.88	3,050.44	12.42
Eco-Forest	755.93	3.12	1,645.45	6.70
Total Forest	24,254.64	100.00	24,558.91	100.00

木材生产 Timber harvest afterwards

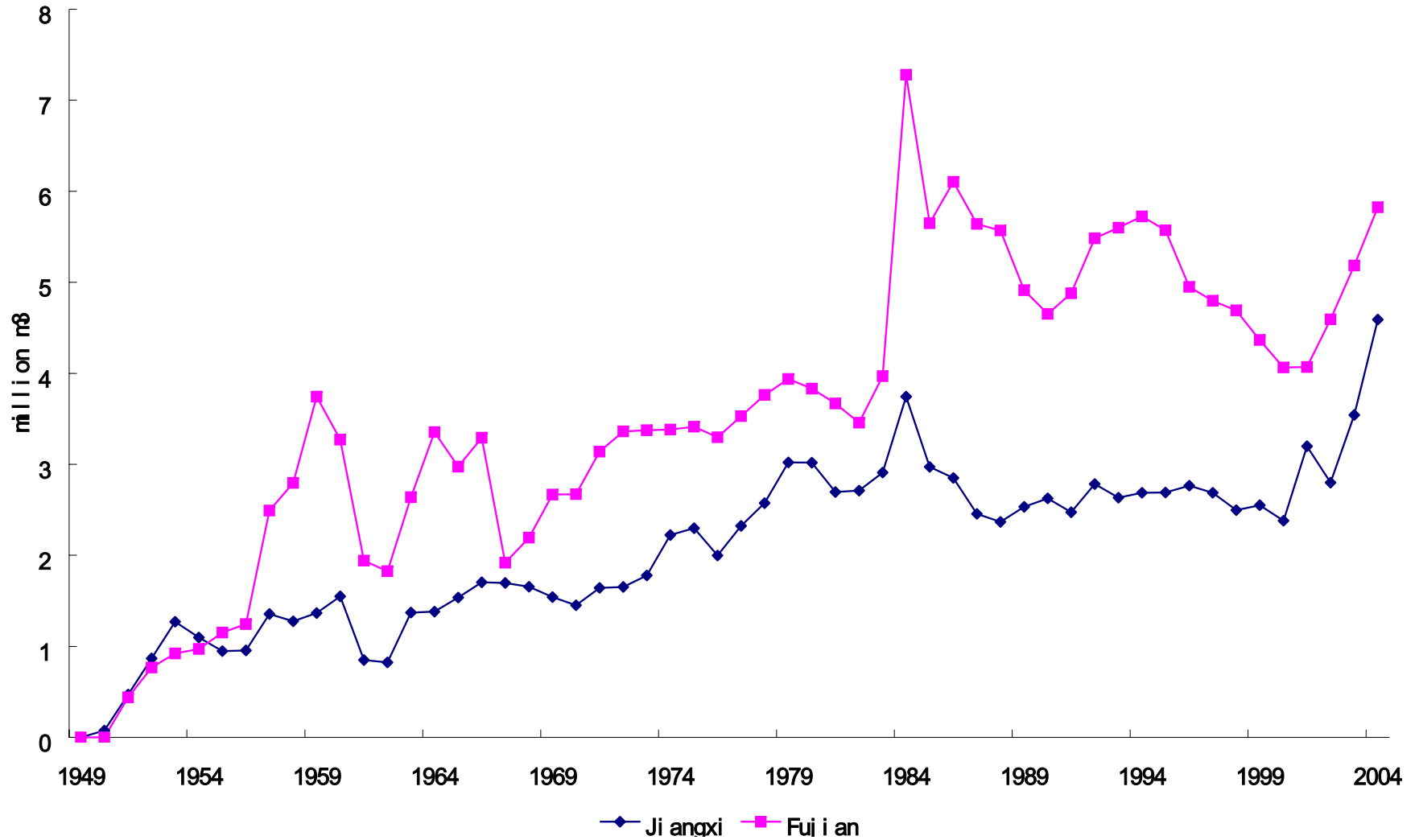
Fuji an	2000	2003	2005
Private Plot	115	126	6513
Household	4523	3776	3931
Partnership	1304	6505	8353
Market Allocation	2075	2004	9642
Collective	4416	3251	4274
Eco- Forest			
Total Forest	12433	15662	32713
Jiangxi	2000	2003	2005
Private Plot	1159	913	1361
Household	523	518	675
Partnership	315	20	79
Market Allocation	100	100	
Collective	60	15	100
Eco- Forest			
Total Forest	2157	1566	2214

造林面积 Afforestation after tenure reform (ha)

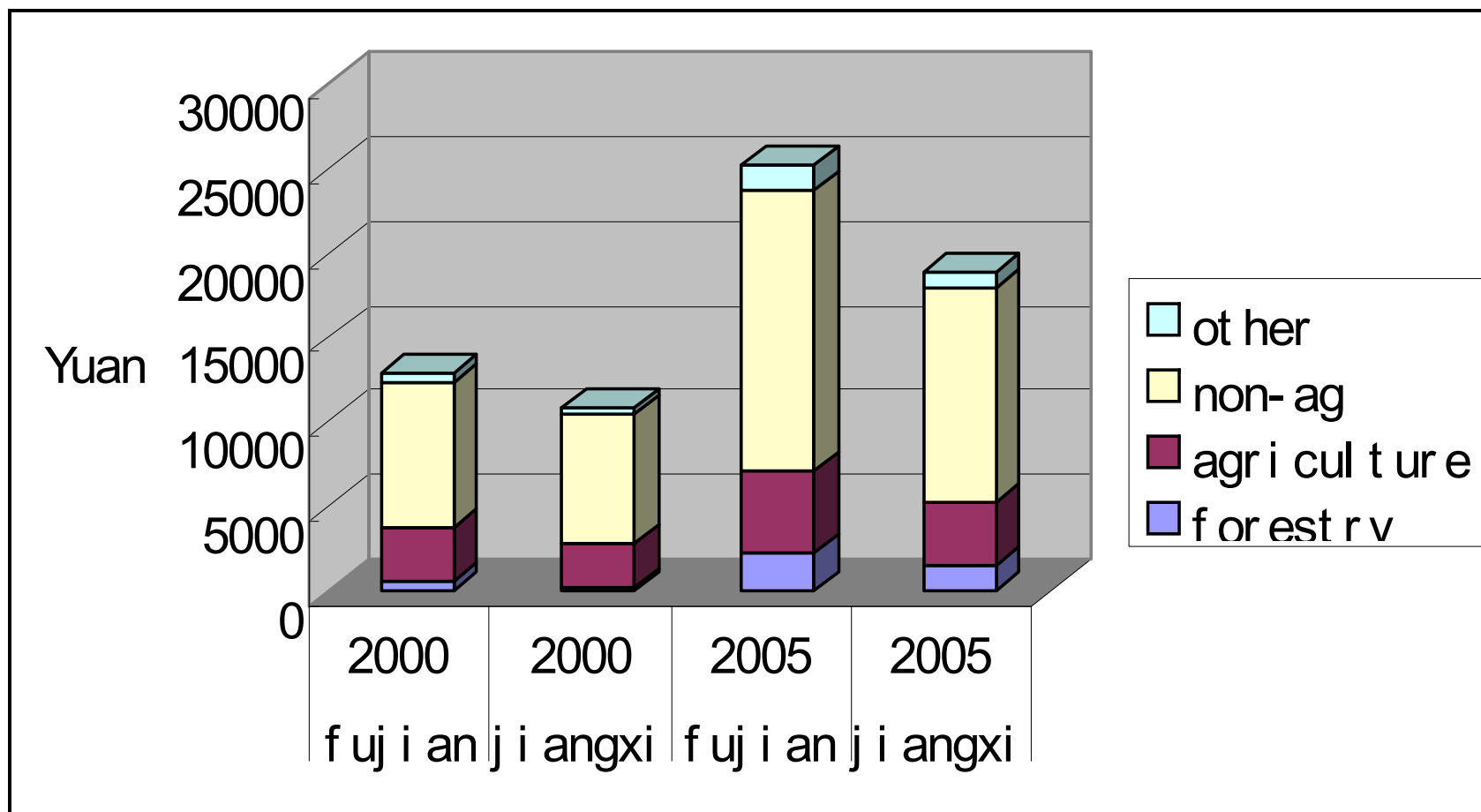
Fujian	2000	2003	2005
Private Plot	12.33	7.40	46.47
Household	98.60	205.27	382.33
Partnership	127.00	50.73	243.27
Market Allocation	19.67	12.67	153.00
Collective	262.93	75.13	571.67
Eco-Forest	19.67	0.00	0.00
Total Forest	540.20	351.20	1396.73
Jiangxi			
Private Plot	96.93	123.47	121.20
Household	74.40	104.11	141.47
Partnership	-	54.00	-
Market Allocation	-	22.00	8.00
Collective	16.67	23.39	10.00
Eco-Forest	-	-	-
Total Forest	188.00	326.97	280.67

木材生产长期趋势

Timber Production Trends

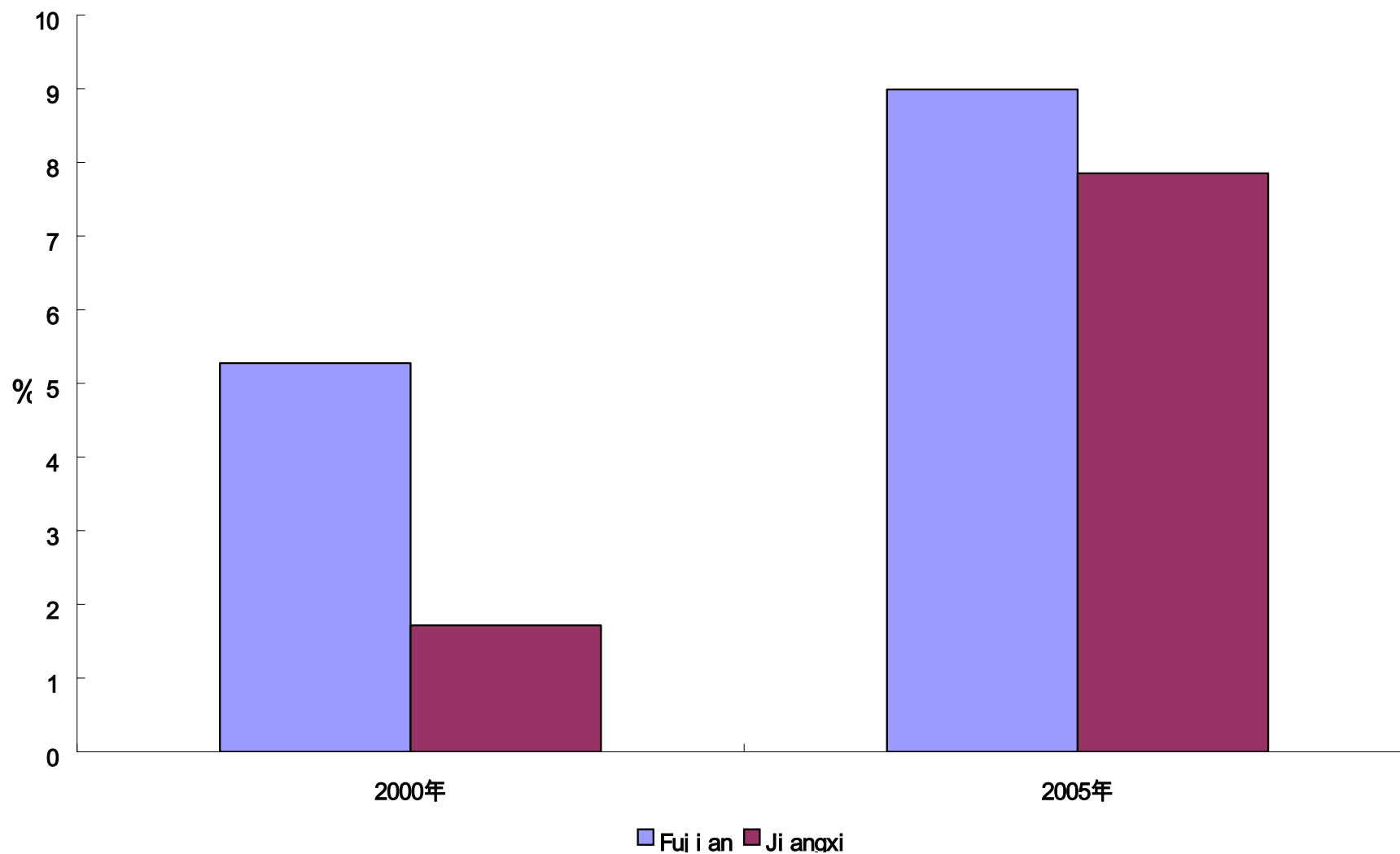


林业收入占农民家庭总收入的比例 Forestry Share in Household Revenue (1)



林业收入占农民家庭总收入的比例

Forestry Share in Household Revenue (2)



结论 Concluding Remarks

- 在本次林改中，家庭经营，农民自主经营的比例增加
- Increased household-based management is the main trend in this round of tenure reform by collective choices
- 社区集体管理适宜于社会资本较好的地方-如少数民族地区
- Community-based management will be more suitable where social capital is solid (tribal areas)
- 改善产权稳定性，减少政府干预可以调动农民经营林业的积极性
- Improved tenure security and reduced government interference can induce higher private farmer interests in forest management, therefore higher welfare for farmers and better conservation
- 林权改革也是一个渐进的过程，很难一步到位，与既得利益进行妥协，可以加快改革步伐，更快实现改革目标
- Forestland tenure reform is a process of compromises, policy should be formulated in a more thoughtful way so that reform benefit is to be maximized.

Next

- 更大范围的调查
- Expansion of survey to 9-10 provinces
- 林权改革的绩效分析
- Performance analysis
- 对配套林业政策改革的研究
- Direction for policy adjustment

Household-Contracts in the southern collective forest region (1986)

Province	Area of collective forestland (million ha)	Area of households managed forestland (million ha)	Household managed forests (%)
Zhejiang	5.73	4.37	76%
Anhui*	3.79	2.80	74%
Fujian	8.19	2.65	32%
Jiangxi	9.27	8.58	92%
Hubei	7.04	5.75	82%
Hunan	11.14	8.33	75%
Guangdong	9.27	8.17	88%
Yunnan	20.31	11.17	55%
Total	74.76	51.81	69%