

# The Emergence of Private For-Profit Medical Facilities and their Roles in Medical Expenditures in China

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# The Evolution of Public hospitals in China

Maoist' era  
largest national  
public medical  
institutions'  
network,  
Government  
financing


Market oriented  
reform:  
government  
financing is  
largely replaced  
by OOP

Now  
Majority public  
hospitals  
behaves profit-  
driven

# Objectives

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1. what has incubated a new organizational form – private forprofit or proprietary – in health sector in a transitional and socialist country?
2. Why not non-profit hospital in China?
3. Empirical Evidence on for-profit hospitals on the medical expenditure



**WHAT HAS INCUBATED A NEW  
ORGANIZATIONAL FORM –  
PRIVATE FOR-PROFIT OR  
PROPRIETARY – IN HEALTH  
SECTOR IN CHINA?**

# Evolution of favorable market conditions

- \* **Excess and differentiated demand with inadequate supply**
  - \* Weisbrod (1980)
  - \* Increased demand for medical services due to income increase, change in disease profile, etc.
  - \* Differentiated demand due to increased inequality
  - \* Relatively, inadequate supply, particularly at the higher end



# Evolution of favorable market conditions

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- \* **Existence of profit margin**

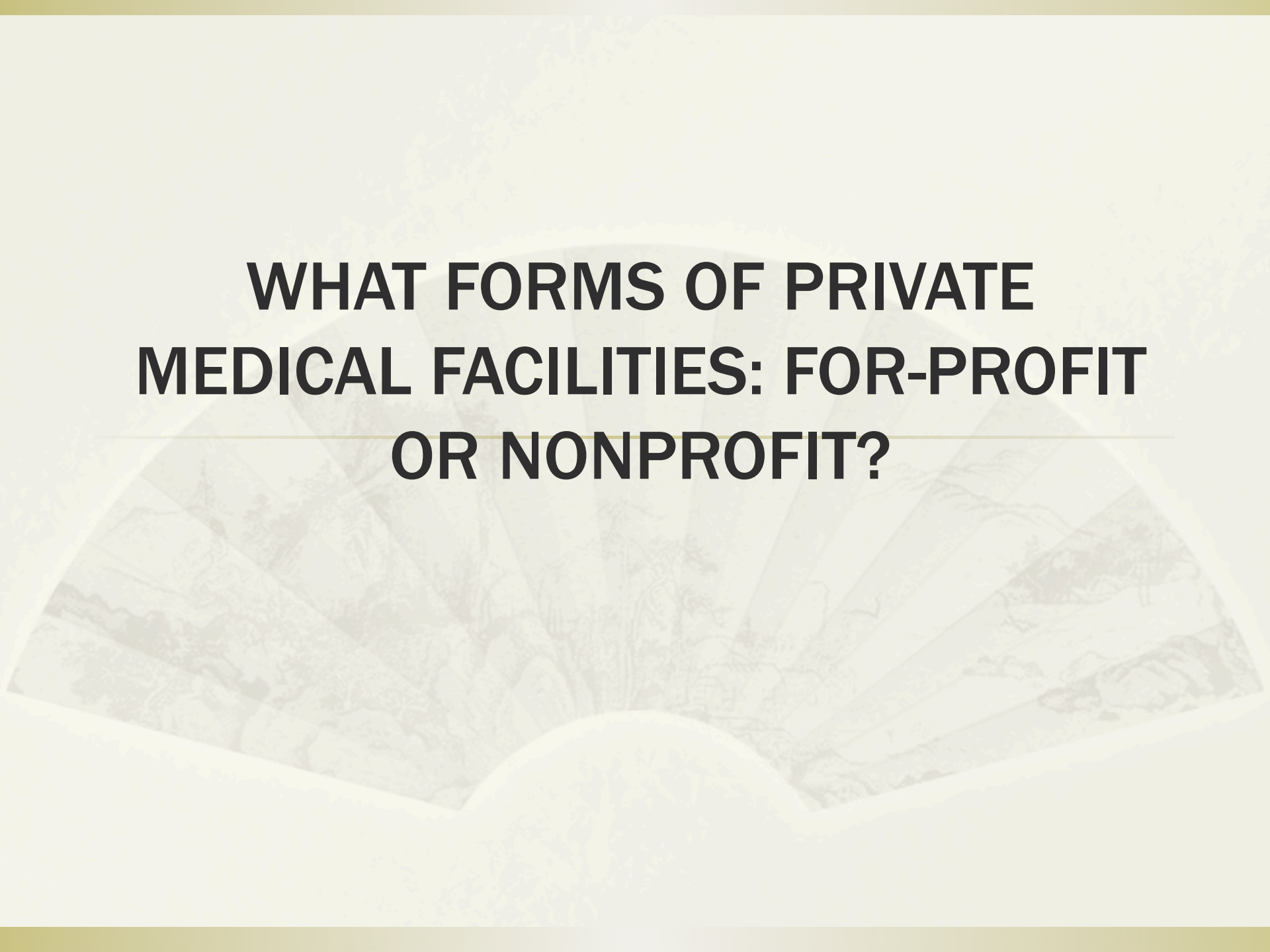
- \* Public hospitals are operated under regulated prices for most services
- \* Proprietary medical facilities can set their own prices.

- \* **Existence of capital**

- \* Private capital
- \* Foreign investment
- \* Domestic loans

# Evolution of favorable government policy

- \* In 1980, the State Council approve the MOH's request to permit private practice
  - \* This has significantly affected rural areas where private clinics flourished in the countryside
- \* In 1989, MOH issued “Regulations on Hospitals and Clinics for Foreigners and Overseas Chinese and the Practice in China of Foreign Doctors”
- \* In 2000, the Chinese government issued regulations on nonprofit and for-profit health care organizations
- \* ....



**WHAT FORMS OF PRIVATE  
MEDICAL FACILITIES: FOR-PROFIT  
OR NONPROFIT?**



# Why NOT Non-Profit

- \* **Lack of “traditional” venture capital in nonprofit health sectors in China**
  - \* such as religious funds, philanthropy, and government funding
- \* **Lack of “accountability” mechanism**
  - \* the legal structure of nonprofit distribution and the prohibition of managers and board members from appropriating any surplus the organization generates
  - \* focuses on capital investment rather than operating revenues.
  - \* through the parent non-profit organization.

# **EMPIRICAL EVIDENCE ON FOR- PROFIT HOSPITALS ON THE MEDICAL EXPENDITURES**

Joint work with Gordon Liu, Lin Li, et.al .

# Data and Variables

## \* Data

- \* Main Sources: China Health Statistics Yearbook
- \* Other: China Labor and Social Security Yearbook; FBS (CPI data)
- \* Provincial level
- \* limited to 2002 to 2006

## \* Dependent Variables

- \* medical expenditures per visit for outpatient services
- \* medical expenditures per discharge for inpatient services in public general hospitals

# Measuring “Penetration” of For-profit hospitals

- \* ***Proportion of for-profit hospitals:***
  - \* number of for-profit hospitals divided by total number of hospitals
  - \* indicating the market share of for-profit hospitals at the provincial level
- ***Relative size of for-profit hospitals***
  - \* ratio of the average number of beds (total number of beds divided by total number of hospitals) in for-profit hospitals over the average number of beds in nonprofit hospitals;
- ***Proportion of patients discharged from for-profit hospitals***
  - \* number of discharged patients from for-profit hospitals divided by total number of discharged patients from all hospitals).

Note: Non-profit hospitals include public hospitals and private non-profit hospitals.



# Methods

## \* Fixed Effect Model

$$Y_{it} = \alpha + \beta (FPH)_{i,t-1} + \gamma X_{it} + \eta_i + \varepsilon_{it},$$

$(FPH)_{i,t-1}$  - the indicators for penetration of for-profit hospitals (lagged)

$X$  : vector of other independent variables;

$\eta_i$  : provincial fixed effect



# The slowly growing for-profit hospitals

	2002	2003	2004	2005
Proportion of for-profit hospitals <sup>2</sup>	.1 (.041)	.113 (.048)	.139 (.059)	.158 (.066)
Relative size of for-profit hospitals <sup>3</sup>	.348 (.139)	.35 (.159)	.337 (.159)	.33 (.19)
Proportion of discharges from for-profit hospitals <sup>4</sup>	.027 (.022)	.033 (.03)	.029 (.015)	.033 (.017)
Number of Observations	30	30	30	30

# Fixed Effect Model of the Impact of Penetration of For-Profit Hospitals on Outpatient and Inpatient Expenditures

	Outpatient expenditures	Outpatient expenditures	Outpatient expenditures	Inpatient expenditures	Inpatient expenditures	Inpatient expenditures
	(1)	(2)	(3)	(4)	(5)	(6)
Indicators for penetration of for-profit hospitals (2002-2005)						
Proportion of discharges from for-profit hospitals	-182.0** (79.9)	-191.9** (77.6)	-192.5** (92.8)	-3247 (3069)	-3217 (2520)	-1039 (2381)
Proportion of for-profit hospitals		18.69 (59.8)	18.96 (67.8)		-56.03 (2331)	-1048 (2448)
Relative size of for-profit hospitals			0.247			-909.6*

# Fixed Effect Model Regression: Disaggregated to Drug Expenditures and Diagnosis-Treatment Expenditures

		Dependent variables			
Indicators for penetration of for-profit hospitals (2002-2005)		Outpatient diagnosis-treatment expenditures (1)	Outpatient drug expenditures (2)	Inpatient diagnosis-treatment expenditures (3)	Inpatient drug expenditures (4)
Proportion of discharges from for-profit hospitals	of	-45.86 (41.7)	-97.02** (42.3)	-19.13 (1700)	-1215 (899)
Proportion of for-profit hospitals	of	2.830 (22.4)	4.681 (37.4)	250.7 (1095)	-711.3 (1025)
Relative size of for-profit hospitals	of	-2.693 (6.19)	1.253 (11.1)	-306.9 (311)	-464.7** (177)

Notes : 1 Other variables included in these regressions but not presented in the table are: doctors per 1,000 people, proportion of people 65 years old and above, urban employee health insurance coverage rate, per capita GDP, proportion of first-class hospitals and 3 year dummies; 2. clustered robust standard errors are in parentheses; 3\*\*\* p<0.01, \*\* p<0.05.

# Conclusion

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- \* The entry of for-profit hospitals has not contributed to health cost inflation in China.
  - \* Market Competition ?
- \* However,
  - \* Regulation of both public and private hospitals
  - \* Governance of public and private hospitals