Healthcare in China

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Motivation

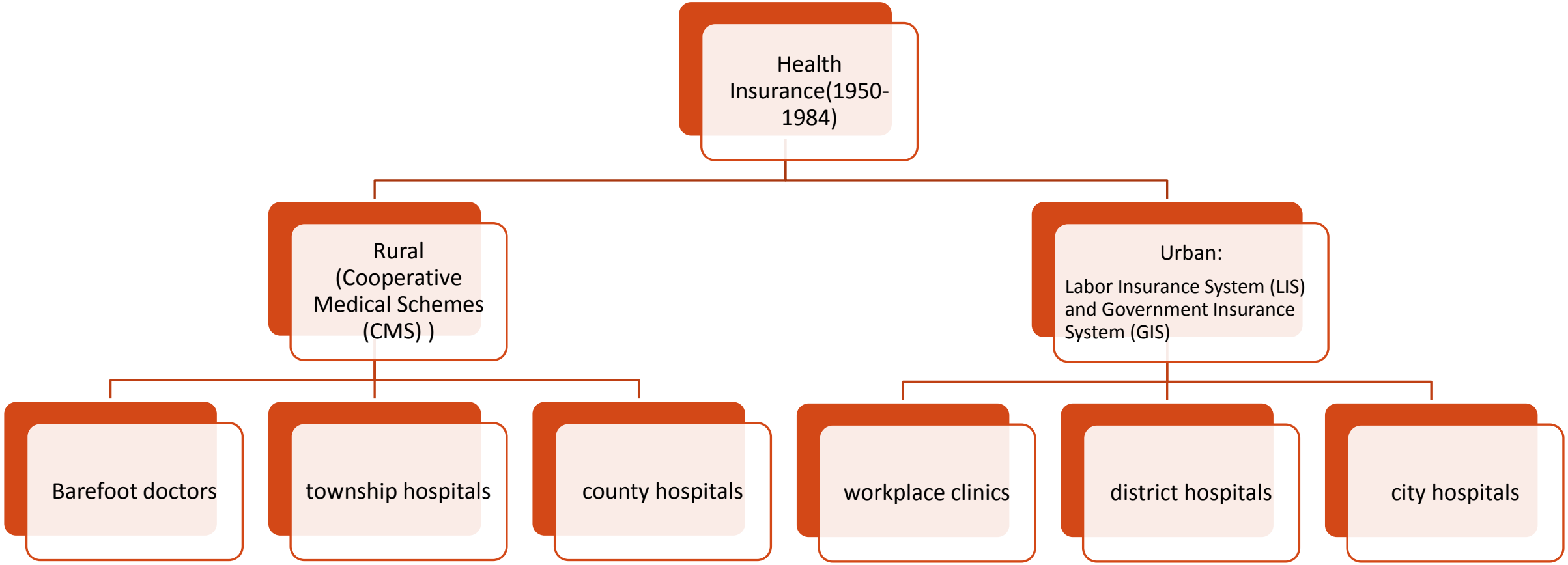
- With the world's largest population (1.3 billion), China has achieved universal health insurance coverage since 2011.

- What are the impacts of access to health insurance? What lessons can we learn from China's experience?

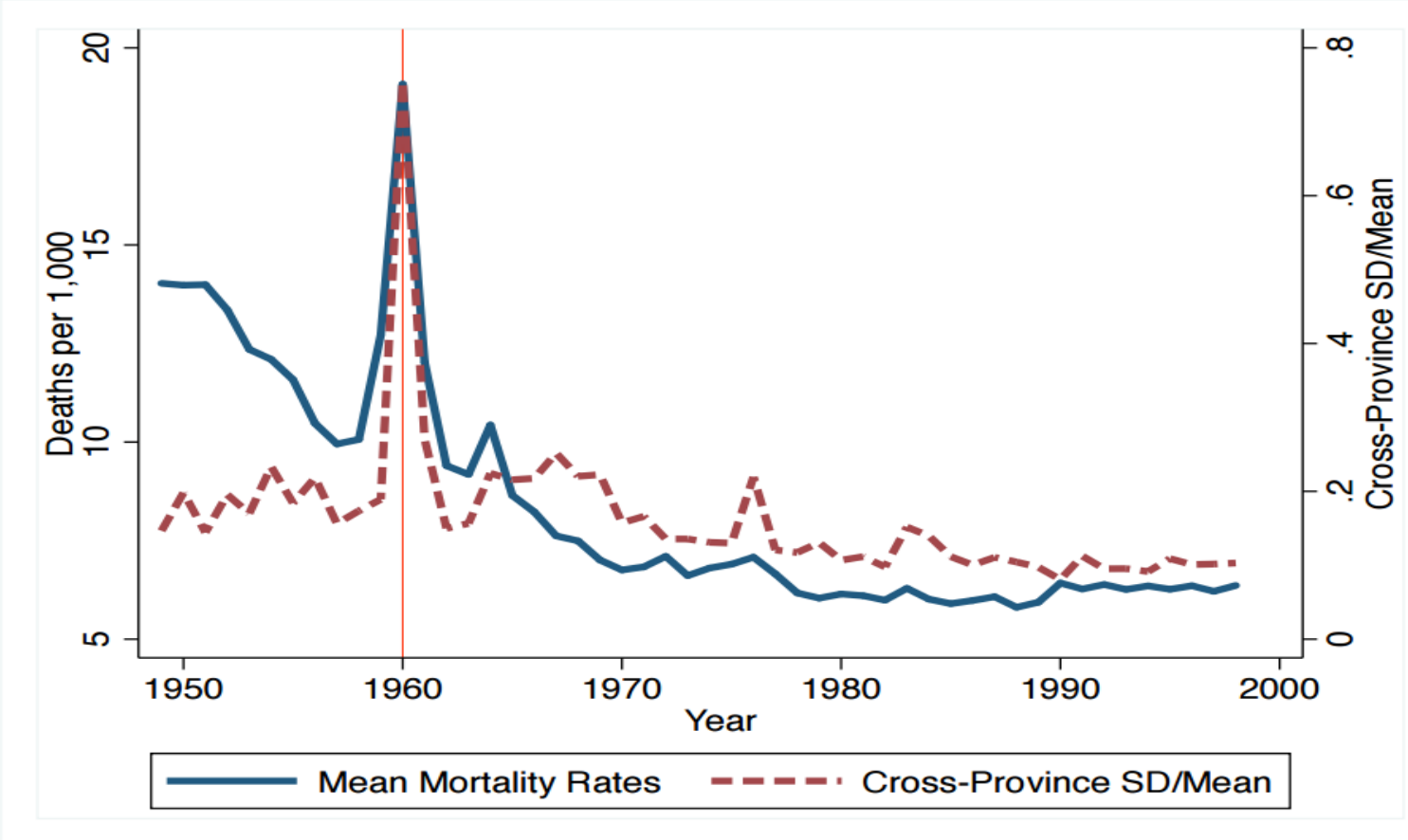
Background

- From 1950 to 1984, under the central-planned economy, the Chinese government created a state-run health care system.
- The system collapsed together with the free-market reform in 1984.
  - Majority of rural residences were uninsured from 1985 to 2003.
  - State owned enterprises (SOEs) were granted autonomy. Many employees lost their jobs and thus the health insurance coverage.
- No government funding -> over-prescription of medical services by hospitals -> high out-of-pocket expenditures.
  - Low access and low coverage
  - High medical expenditures

Background


Health Insurance(1950-1984)
Rural (Cooperative Medical Schemes (CMS))
Urban:
Labor Insurance System (LIS) and Government Insurance System (GIS)
Barefoot doctors
township hospitals
county hospitals
workplace clinics
district hospitals
city hospitals

Mortality Trends in China



Source: Meng and Qian (2014)

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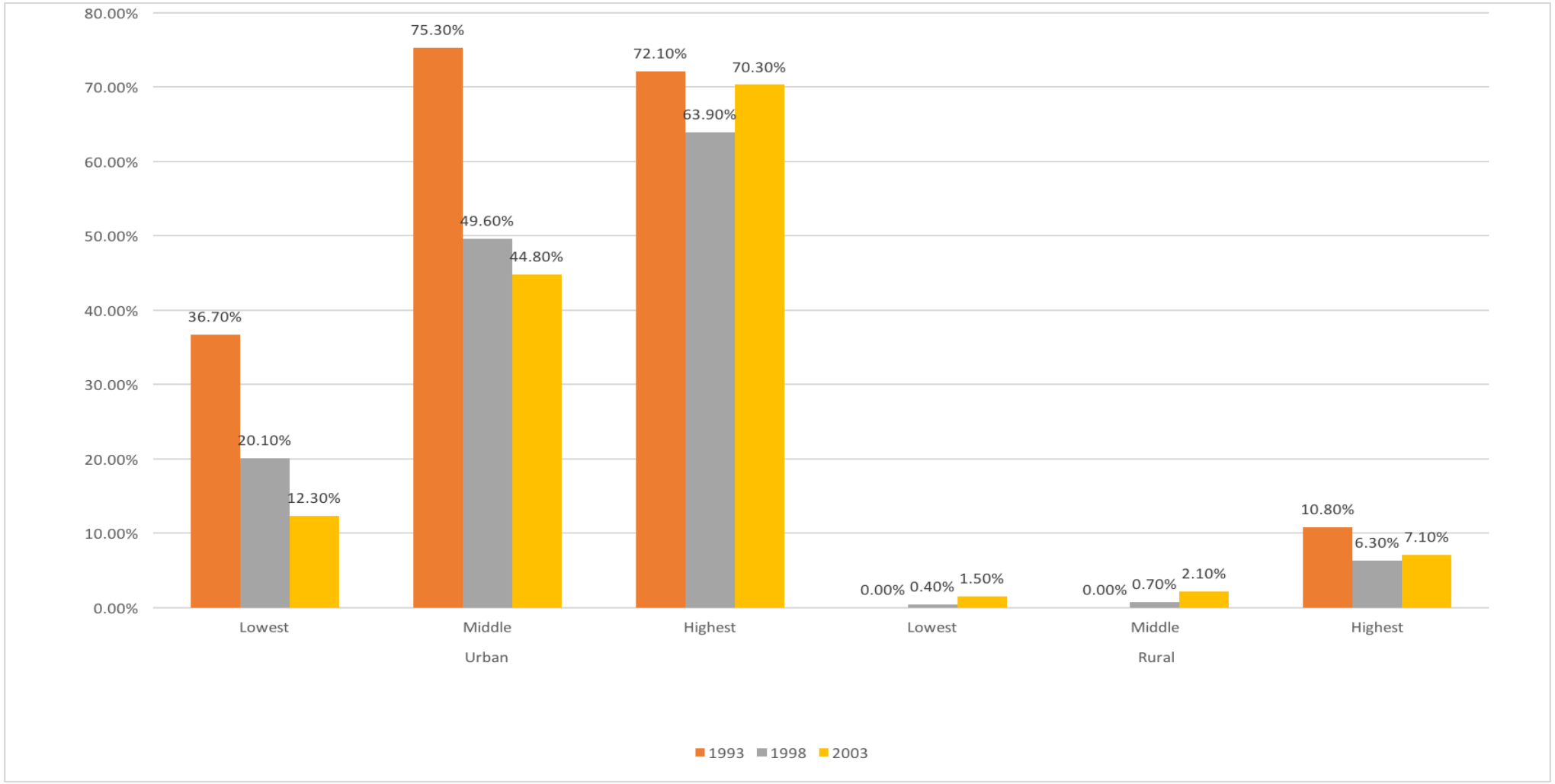
Health Insurance Coverage for Urban and Rural Residences by Income



Source: Yip and Hsaio (2008)

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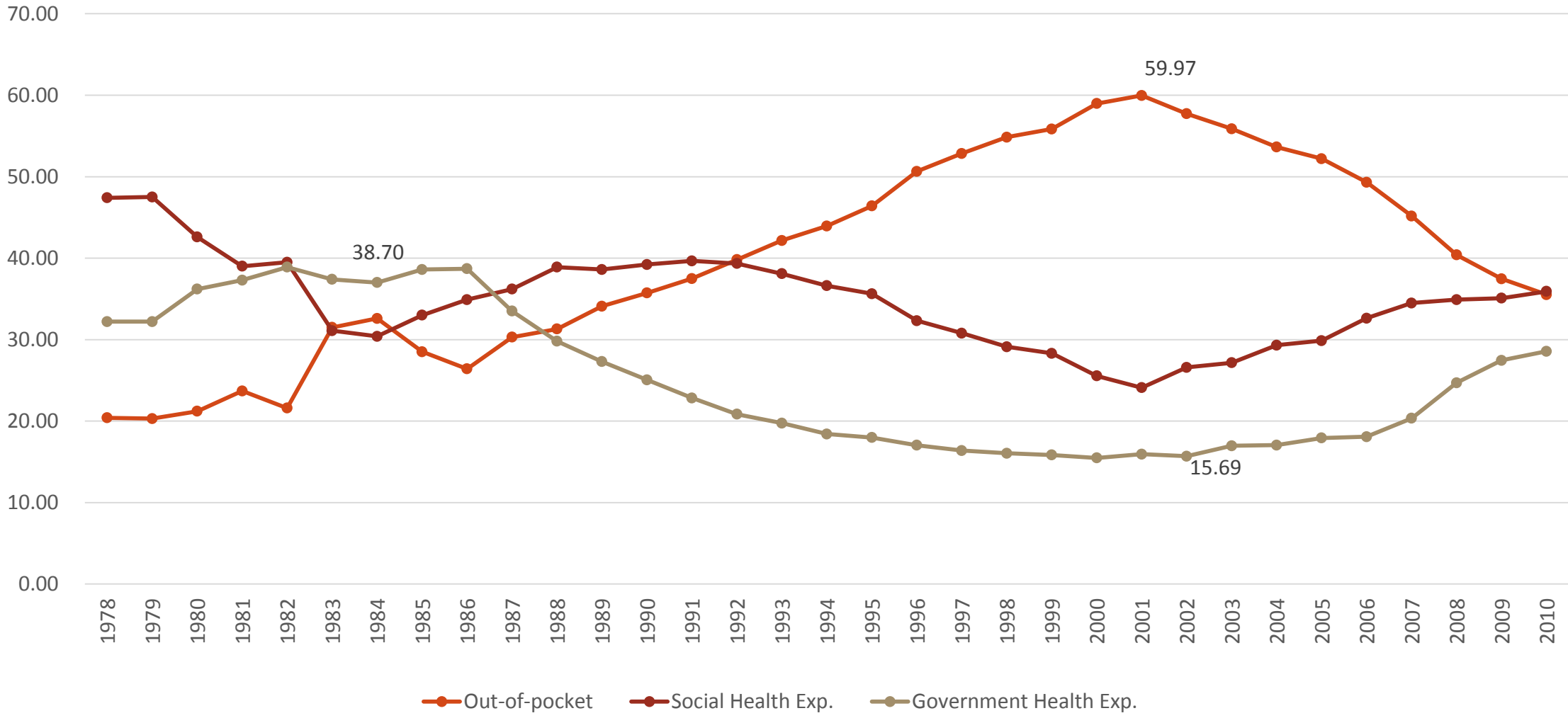
Structure of Total Health Expenditure : 1978-2010



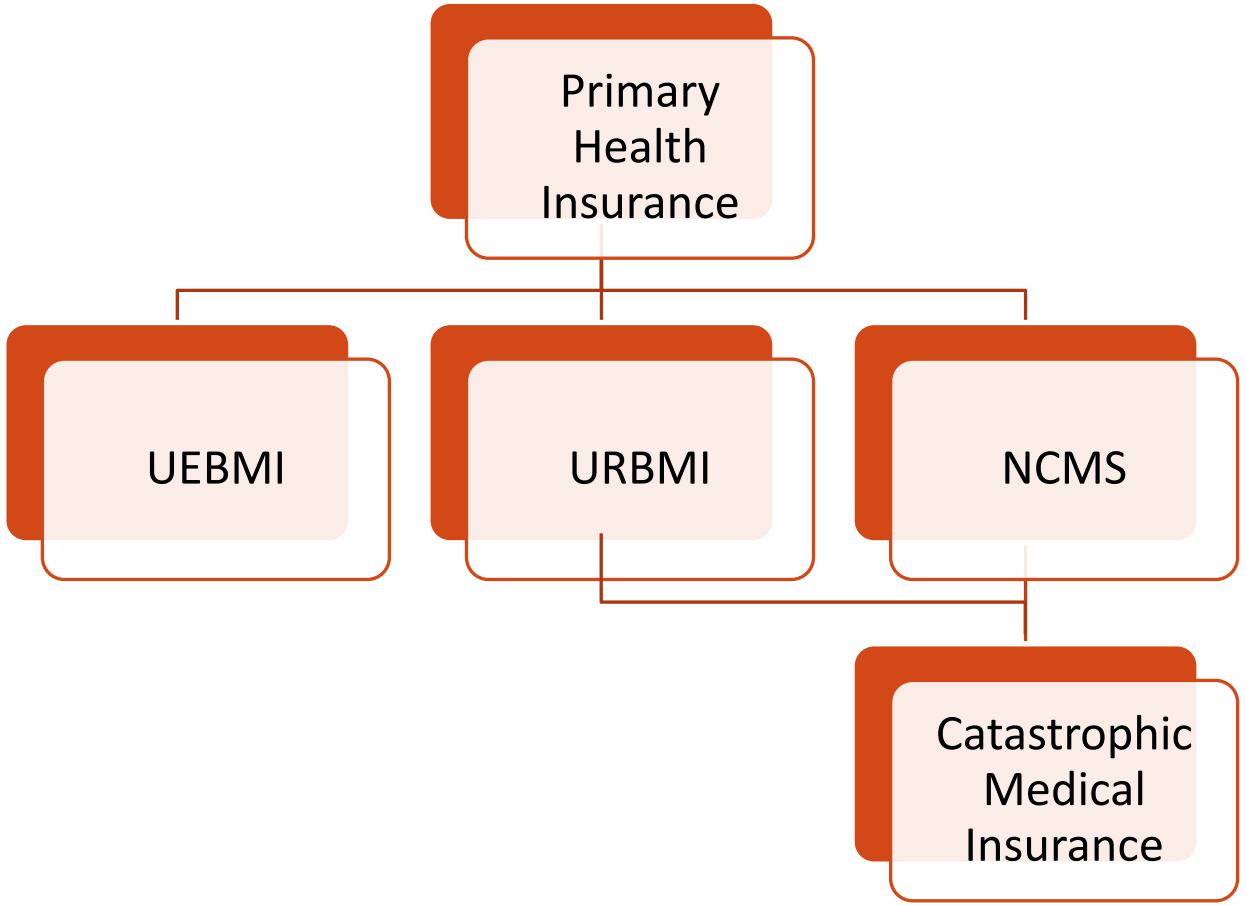
Health Insurance System

- The Urban Employee Basic Medical Insurance (UEBMI) was launched in 1998, covering urban formal sector workers.
- The New Cooperative Medical Scheme (NCMS) was launched in 2003 to provide health insurance coverage for rural residences.
  - Premium, ceiling, deductible and reimbursement rate varied across counties.
  - By the end of 2013, the NCMS included 2,489 counties, accounting for 87 percent of all rural counties in China
- The Urban Resident Basic Medical Insurance (URBMI) was launched in 2007.
  - Covering urban residents (i.e. urban hukou), mainly unemployed, elderly and children.
  - Expanded from 79 cities to 229 cities (about 50 percent of China's cities) in 2008, and to almost all cities by the end of 2009.

	UEBMI	URBMI	NCMS
Target population	Urban employees	Urban children, students, unemployed, disabled	Rural residents
Enrollment rate (%)	92	93	97
Number of enrollees (million)	252	221	832
As % of China's 1.3 billion population	19	16	62
Unit of enrollment	Individuals	Individuals	Households
Risk-pooling unit	City	City	County
Premium per person per year (US$)	240	21	24
Including government subsidy (US$)	0	18	18
Benefit coverage			
Inpatient reimbursement rate (%)	68	48	44
% of counties or cities covering general outpatient care	100	58	79
% of counties or cities covering outpatient care for major and chronic diseases	100	83	89
Annual Reimbursement Ceiling	Six-times average wage of employee in the city	Six-times disposable income of local residents	Six-times income of local farmers
Overseeing government department	MOHRSS	MOHRSS	NHFP

Source: Yu (2015)

Health Insurance System



Catastrophic Medical Insurance

- Initiated in 2012 and still in process.
- All enrollees of NCMS and URBMI are eligible.
- Pooling unit: city/county
- Premium varied by county and city.
- Source of funding: the current NCMS and URBMI fund.
- Coverage: the medical spending above the maximum coverage in URBMI and NCMS.
- Implementation and fund raising varied by counties/cities.

Impacts of the NCMS

- Increase healthcare utilization of both outpatient and inpatient cares (Lei and Lin, 2009; Wagstaff et al., 2009; Liu and Tsegai, 2011).
- Fails to improve the participants' health outcomes (Lei and Lin, 2009; Donato and Rokicki, 2016).
- Have no significant effects in reducing out-of-pocket expenditures or decreasing catastrophic spending (Wagstaff et al., 2009; Liu and Tsegai, 2011; Hou et al, 2014; Lei and Lin, 2009).
- Effects of the NCMS are shown to vary across counties and income groups (Wagstaff et al., 2009; Liu and Tsegai, 2011; Cheung and Padieu, 2015).

Impacts of the URBMI

- Increase the utilization of formal medical services (Liu and Zhao, 2012; Wang, 2014).
- No significant impact on reducing out-of-pocket expenditure (Liu and Zhao, 2012; Wang, 2014).
- Improved medical care utilization more for the elderly, the low and middle income families, and residents in the relatively poor western region (Liu and Zhao, 2012; Zhou et al., 2013; Lin et al, 2009).

Evaluations Summary

	URBMI	NCMS
Healthcare Utilization	• Increased the utilization of formal medical services (both inpatient and outpatient) • Improved medical care utilization for the elderly, for the low- and middle-income families, and for the residents in the relatively poor western region.	• Increase the utilization(both inpatient and outpatient services) • Increase usage of preventive care • Impacts varied across counties and income groups
Medical Expenditure	• Increase total medical expenditure	• Increase total medical expenditure
Out-of-pocket Spending	• No impact on reducing out-of-pocket expenditure	• No impact on reducing out-of-pocket expenditure

Welfare Evaluation of NCMS

	I Complete-information approach	II Consumption-based optimization approach	III Health-based optimization approach
Panel A. Welfare Estimates			
$\gamma(q)$	1718	1386	965
Transfer component, T	1125	959	959
Pure-insurance component, I	593	427	6
B. Benchmarks			
Welfare effects on recipients relative to:			
Gross costs, $\gamma(q)/G$	.803	.648	0.45
Net costs, , $\gamma(q)/C$	.954	.770	0.54
Moral hazard cost, G-T-N	677	843	843

Note: welfare benefits are in CNY (1 CNY = 0.15 USD)

Welfare Evaluation of NCMS

- Individual's willingness-to-pay for the NCMS is strictly below the costs.
- Enrolled individuals would rather give up the insurance than paying the government's costs.
- Low welfare value reflects the crowd-out of private insurance (e.g., relatives/friends) by public insurance.

Lessons from China Healthcare System

- The danger of the free market
  - Adverse selection leads to high premium, which excludes majority of the individuals from enrolling in health insurance.
- The importance of the government regulation and support
  - Price regulation and subsidies
- The blind spot of evaluating the healthcare system in developing countries
  - Consumption, coverage based evaluation
  - Evaluation should also take account of the reduction of individual costly-insurance measures (Liu, 2015; Chetty and Looney, 2005).

Alternative Model for Healthcare

- The Singapore model of healthcare
  - Shared responsibilities between individuals and government
  - Three pillars: Medisave, Medifund, and Medishield.

- Integrated Social Insurance System
  - A social insurance system (i.e. unemployment insurance; medical insurance) based on pension account
  - Example: Central Provident Fund (CPF) in Singapore.