



Why Are Saving Rates So High in China?

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China's High and Rising Savings Rate

National savings rate:

- About 35% of GDP in 1980s, but surged to 49% in 2006
- Both household and enterprise savings rose since 2000
- 2006 savings rate more than double of world average 22%

Important economic and policy questions:

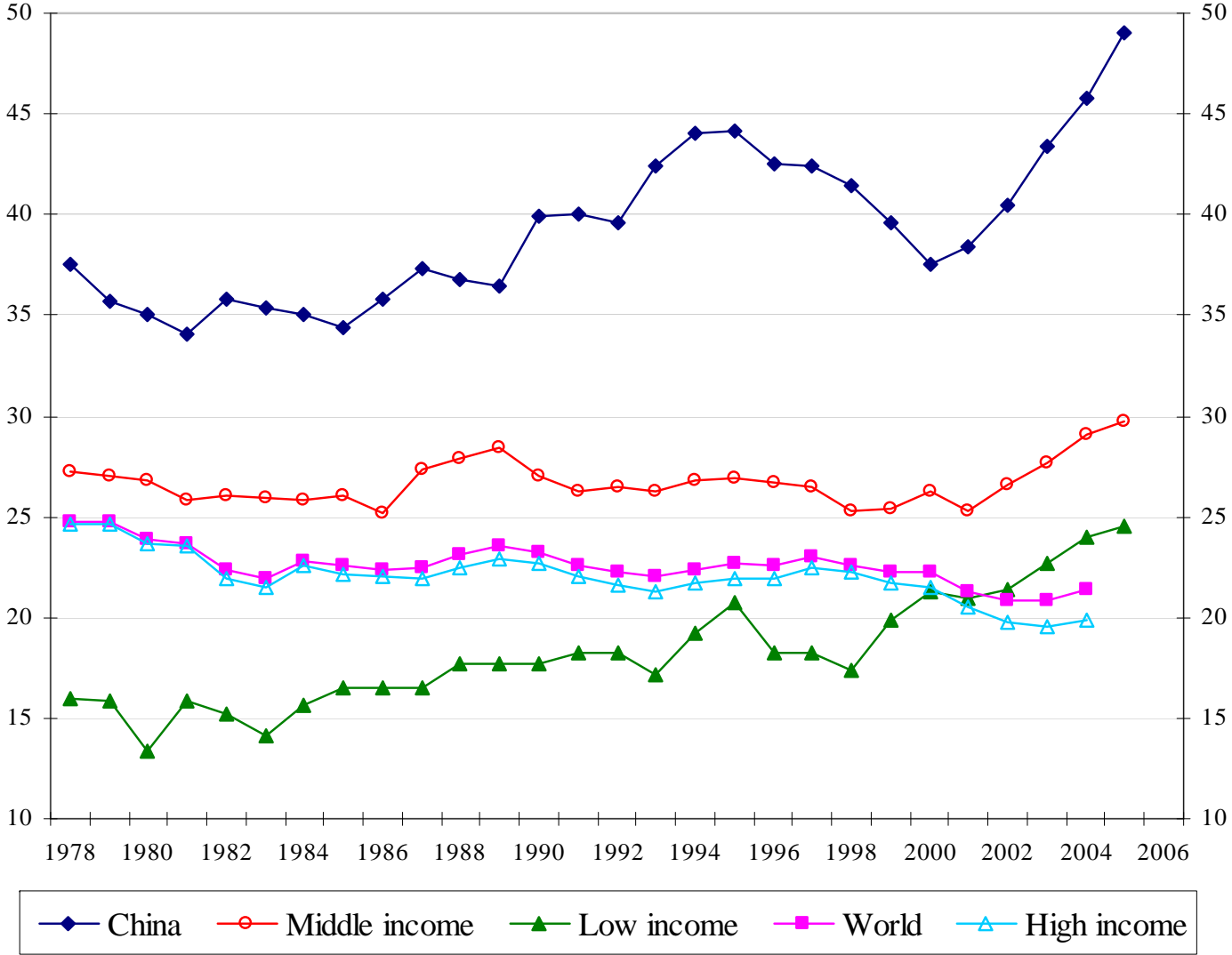
- What factors have contributed to China's high rate of savings?
- What is the role of China's unique institutions and reform process?
- Is there a saving-investment-growth link?
- Will current emphasis on stimulating consumption spur growth?
- Will China maintain high rates of saving with the evolving demographic structures?



Preliminary plans for the paper

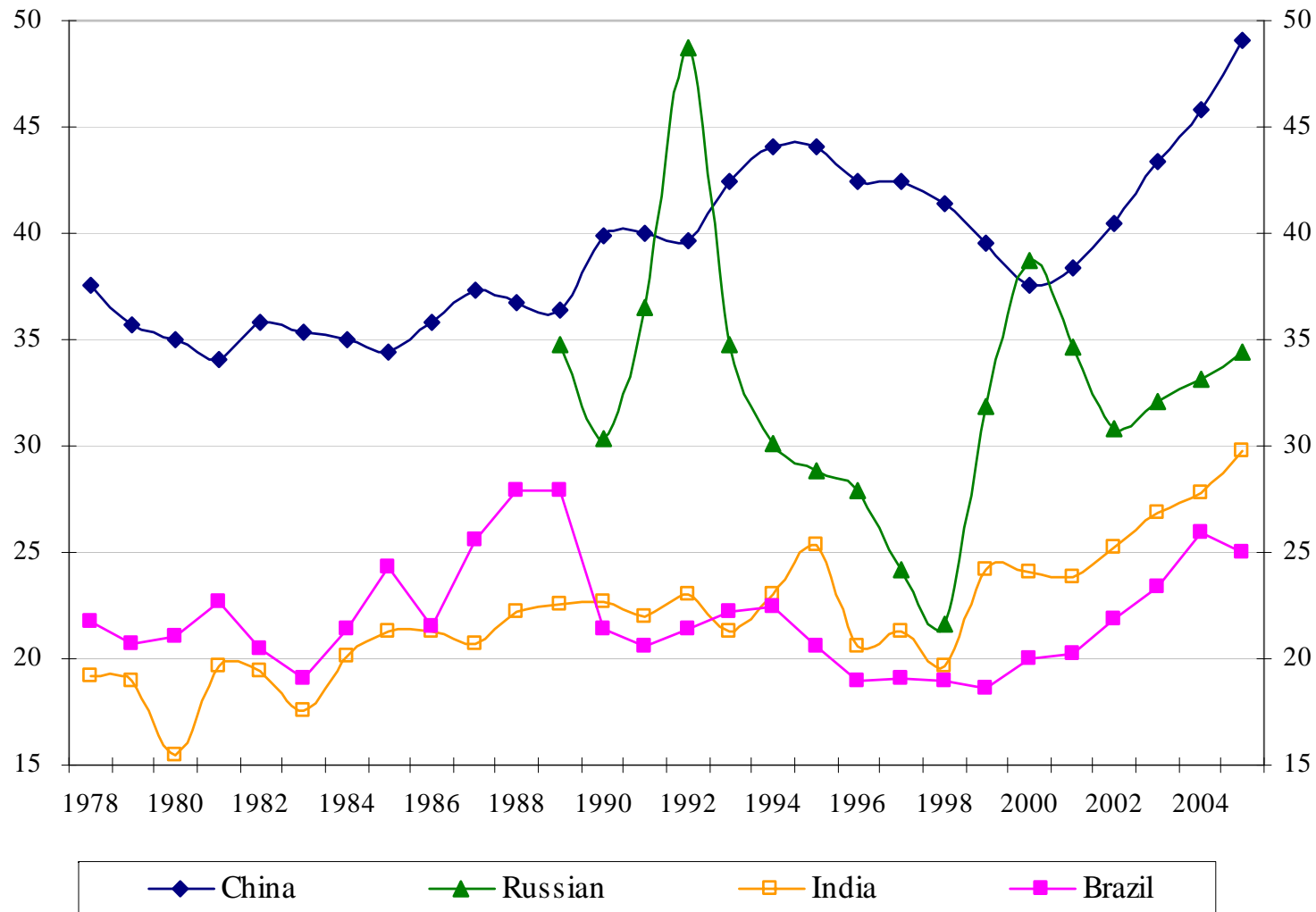
- Trends of Aggregate Saving
 - International comparisons
 - National savings by source
- Household Saving in China
 - Data: Urban Household Surveys, six provinces, 1988-2006
 - Demographic structures and saving rates
 - Saving levels by region, income level, age of household head
- Explanations for China's High Household Savings
 - Permanent income and life-cycle hypotheses
 - Demographic factors: dependency, imbalanced sex ratios
 - Factors of transition: declining public provision of education, health, and housing services
- Implications for Aggregate Saving and Policy

Gross Saving Rates: China and Other Country Groups



Gross Saving Rates: BRIC Economies

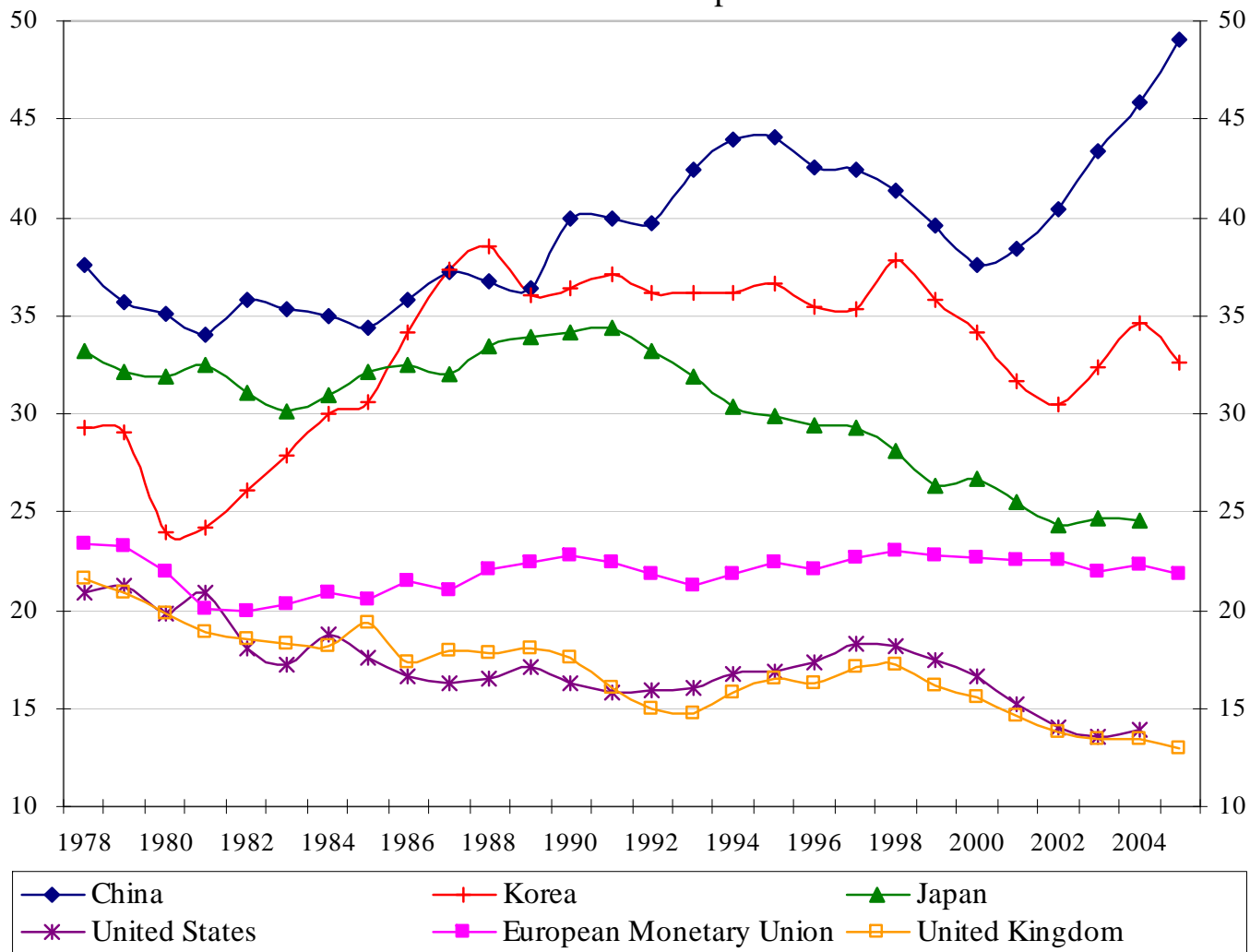
Panel A: BRIC Economies



Data: World Development Indicator, CD-ROM 2007, World Bank

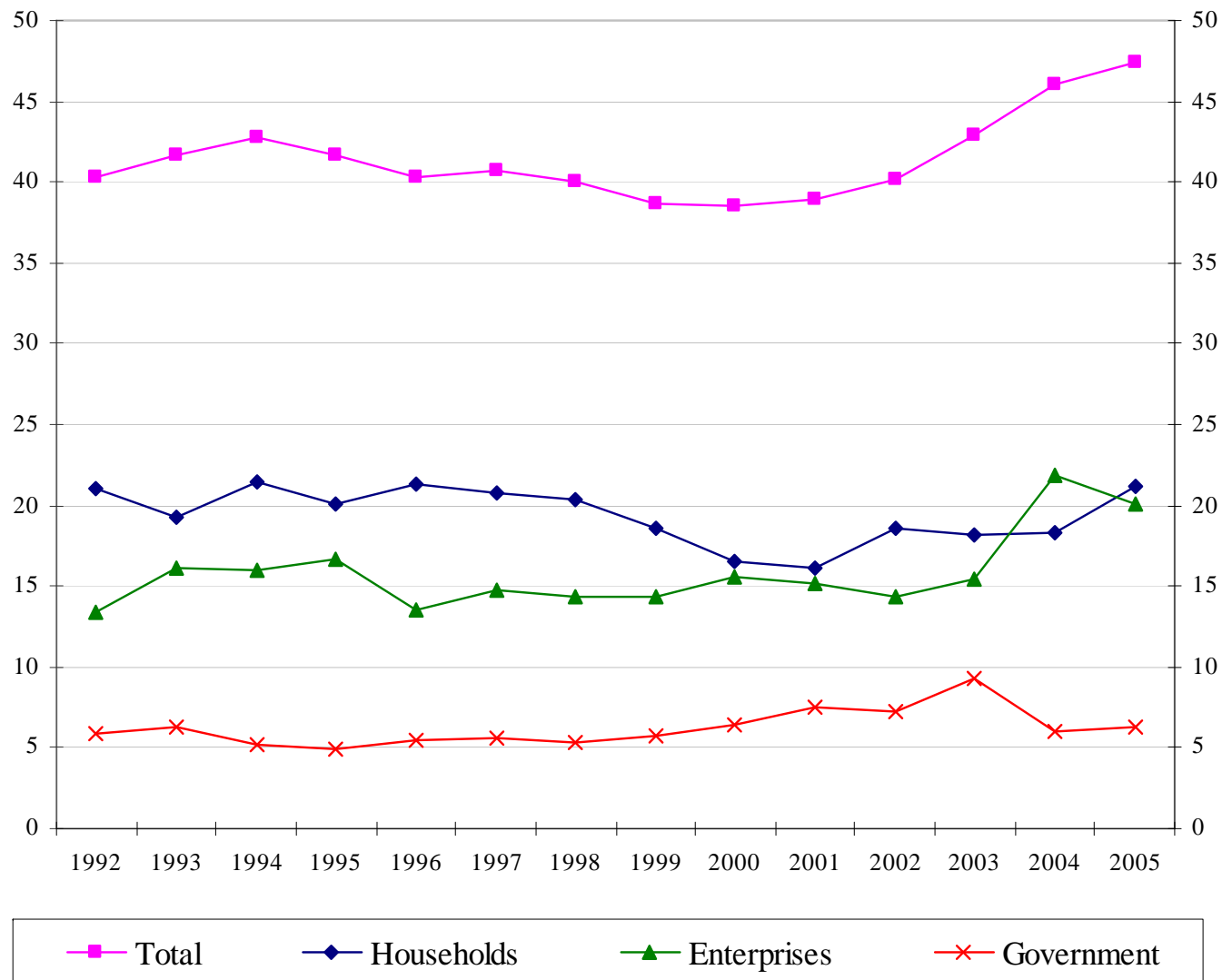
Gross Saving Rates: China and Other Developed Economies

Panel B: China and Developed Economies



Data: World Development Indicator, CD-ROM 2007, World Bank

Composition of China's Aggregate Saving Rate



Data: China Statistical Yearbook (1995-2008)



China's Aggregate Saving Rates, 1992-2005

Aggregate saving:

- 1992-2000, relatively flat; 2001-2005, rose by about 9%

Government saving:

- Limited changes throughout the period

Enterprise saving:

- 2001-2005, ratio to GDP increased by 5%
- Causes:
 - 2002-2005: share of enterprise income in GDP up from 14.3% to 20%
 - 1998-2005: profit to industrial value added up from 7.5% to 20.5%
 - Weakness in the financial sector: self-retained earnings has been a major source for enterprise investment financing

Household saving:

- 2001-2005, up by 5%; more analysis using household data



Household Saving in China

Urban Household Survey (UHS) data:

- Year coverage: standard questionnaires started in 1988
- Six provinces: Beijing, Liaoning, Zhejiang, Guangdong, Sichuan, and Shaanxi
- Sample coverage: limit analysis to households whose head between 25 and 70 years old; exclude self-employed families due to difficulties of computing incomes
- Real income: nominal series deflated by provincial price index, 2006=100

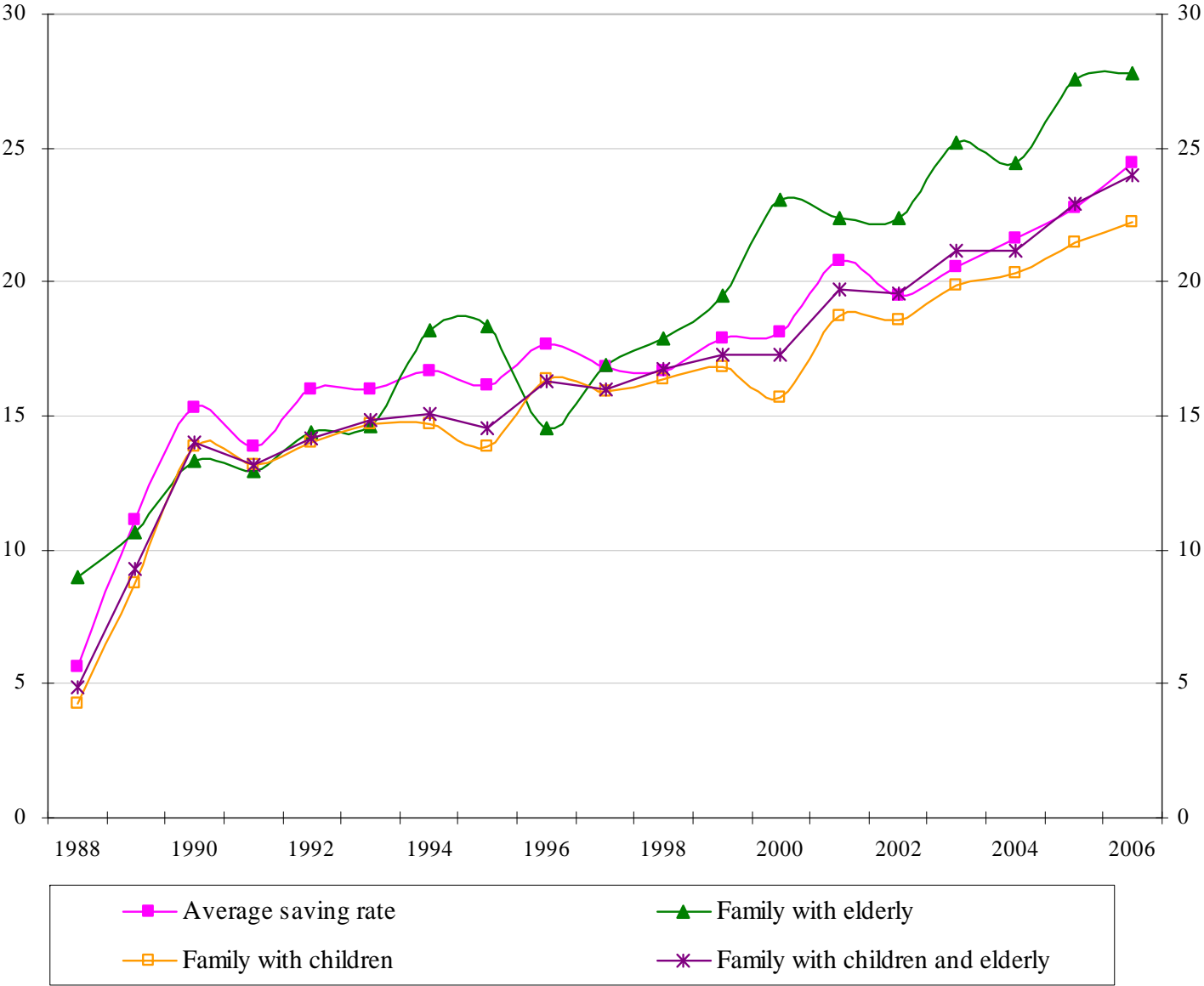
Table 1. Summary Statistics of Urban Household Samples, 1988-2006

Year	Observations	Income (2006 RMB)	Consumption (2006 RMB)	Saving rate (% of Income)
1988	2869	13600	12838	5.6
1989	2683	13231	11758	11.1
1990	2977	14083	11931	15.3
1991	2998	14984	12913	13.8
1992	3673	17277	14519	16.0
1993	3698	18472	15515	16.0
1994	3713	20399	16991	16.7
1995	3727	20954	17565	16.2
1996	3717	21630	17804	17.7
1997	3704	22378	18619	16.8
1998	3782	23498	19588	16.6
1999	3680	24099	19787	17.9
2000	4077	26602	21780	18.1
2001	3656	28959	22936	20.8
2002	9813	27358	22034	19.5
2003	10906	28714	22800	20.6
2004	12748	32192	25243	21.6
2005	14459	35569	27471	22.8
2006	14206	39422	29793	24.4

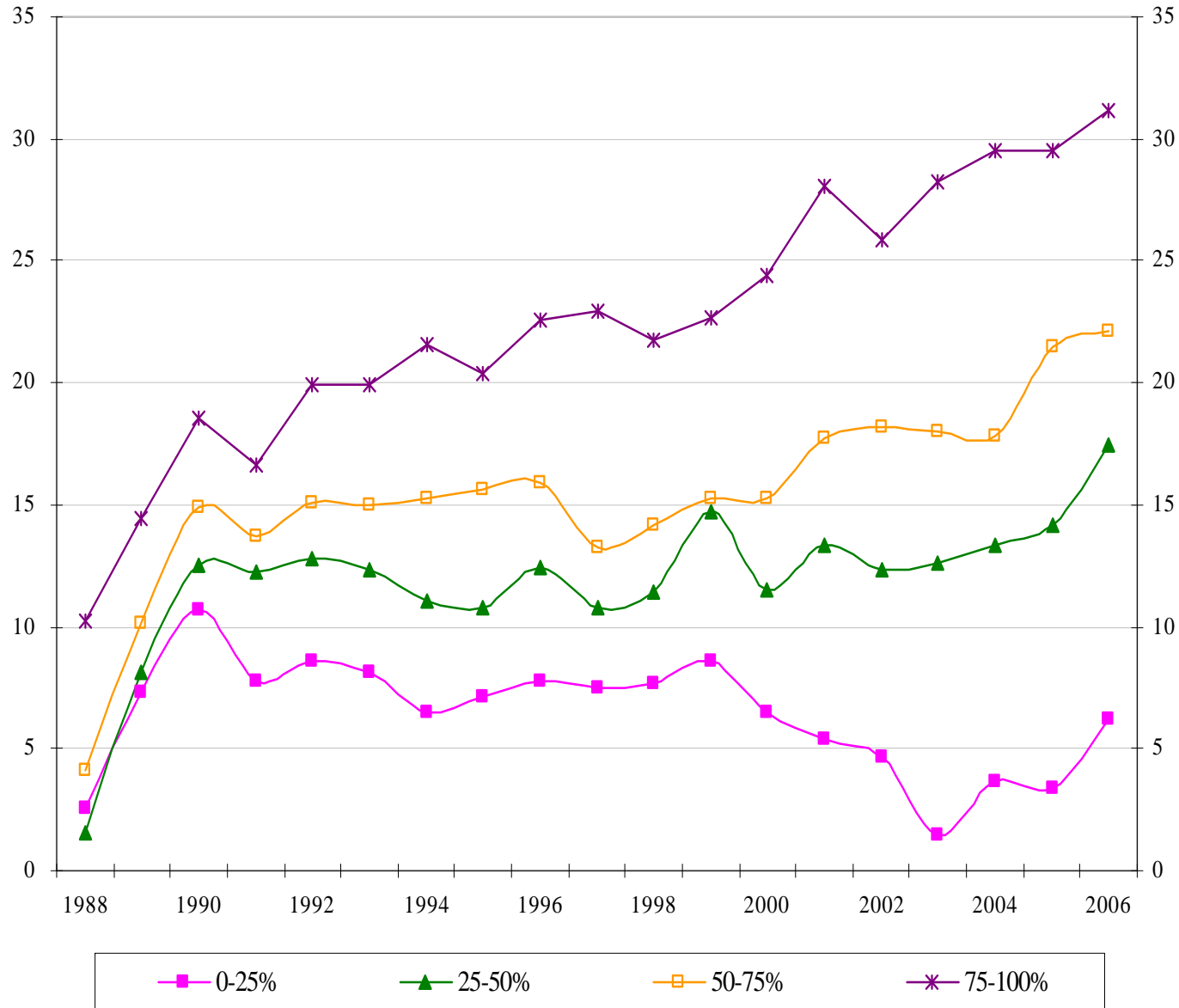
Table 2. Demographic Structures of the Households, 1988-2006

Year	Household size	Age of household head	Scholing of household head	Child dependence ratio	Old dependence ratio	Total dependence ratio
1988	3.5	43.2	10.1	64.41	10.63	69.54
1989	3.5	43.8	10.3	61.87	11.67	68.51
1990	3.4	44.5	10.3	59.12	11.08	65.44
1991	3.3	43.9	10.6	59.91	9.61	65.24
1992	3.3	44.7	10.9	57.83	10.45	63.60
1993	3.2	45.2	10.9	55.65	10.17	61.33
1994	3.2	45.7	11.0	53.38	11.63	60.27
1995	3.2	45.5	11.1	51.89	11.62	59.08
1996	3.2	46.1	11.2	48.83	12.00	56.44
1997	3.2	45.7	11.2	47.30	12.07	54.81
1998	3.2	46.0	11.3	45.03	12.56	52.67
1999	3.1	46.4	11.3	42.12	12.31	50.08
2000	3.1	47.2	11.4	40.08	13.83	49.47
2001	3.1	47.3	11.4	38.13	12.91	46.96
2002	3.0	47.9	11.4	35.05	12.23	43.59
2003	3.0	47.8	11.5	33.89	11.32	41.80
2004	2.9	48.2	11.6	31.24	12.23	40.07
2005	2.9	48.2	11.6	32.33	12.56	41.50
2006	2.9	48.3	11.7	31.12	12.05	39.88

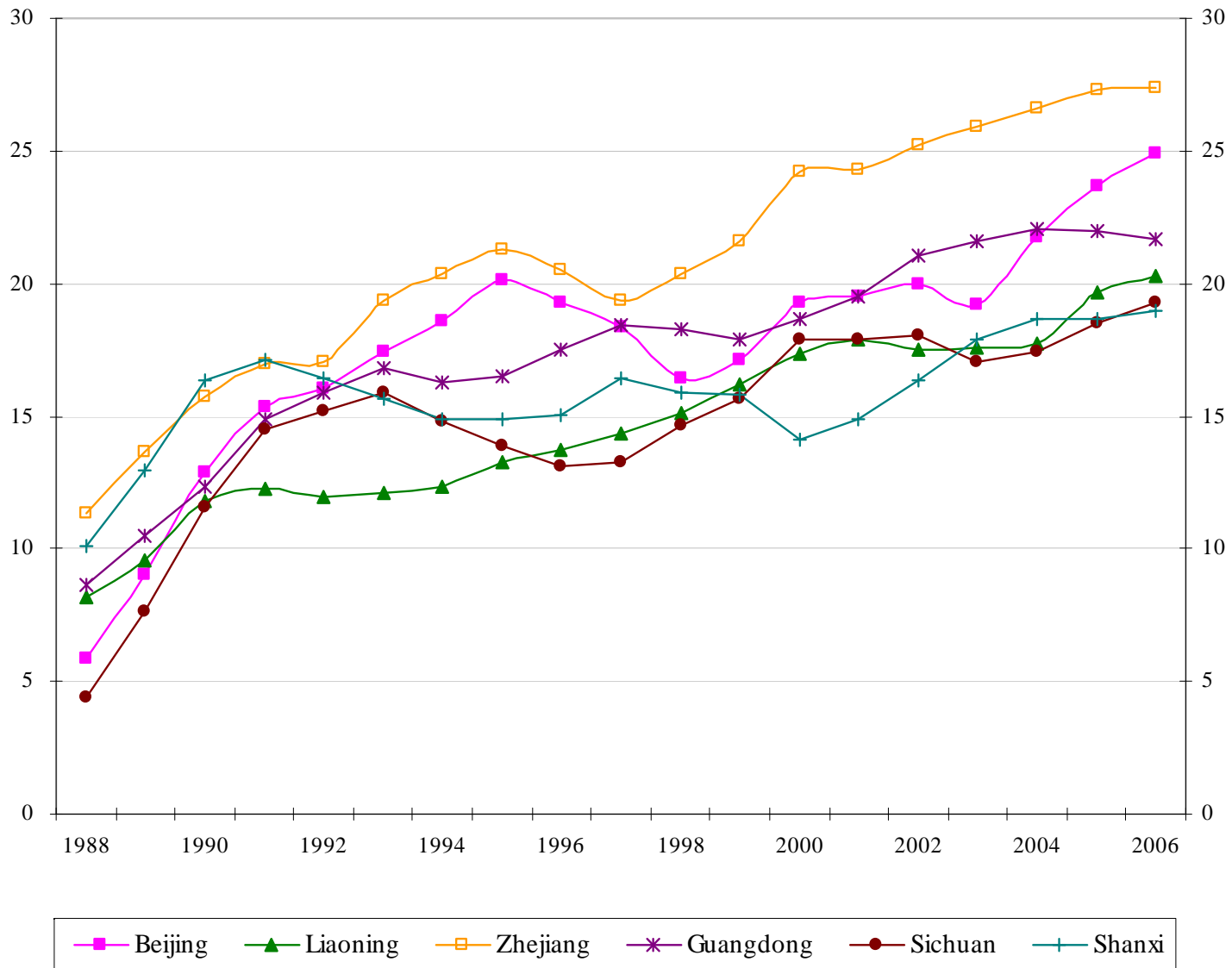
Saving Rate and Demographic Structures, 1988-2006



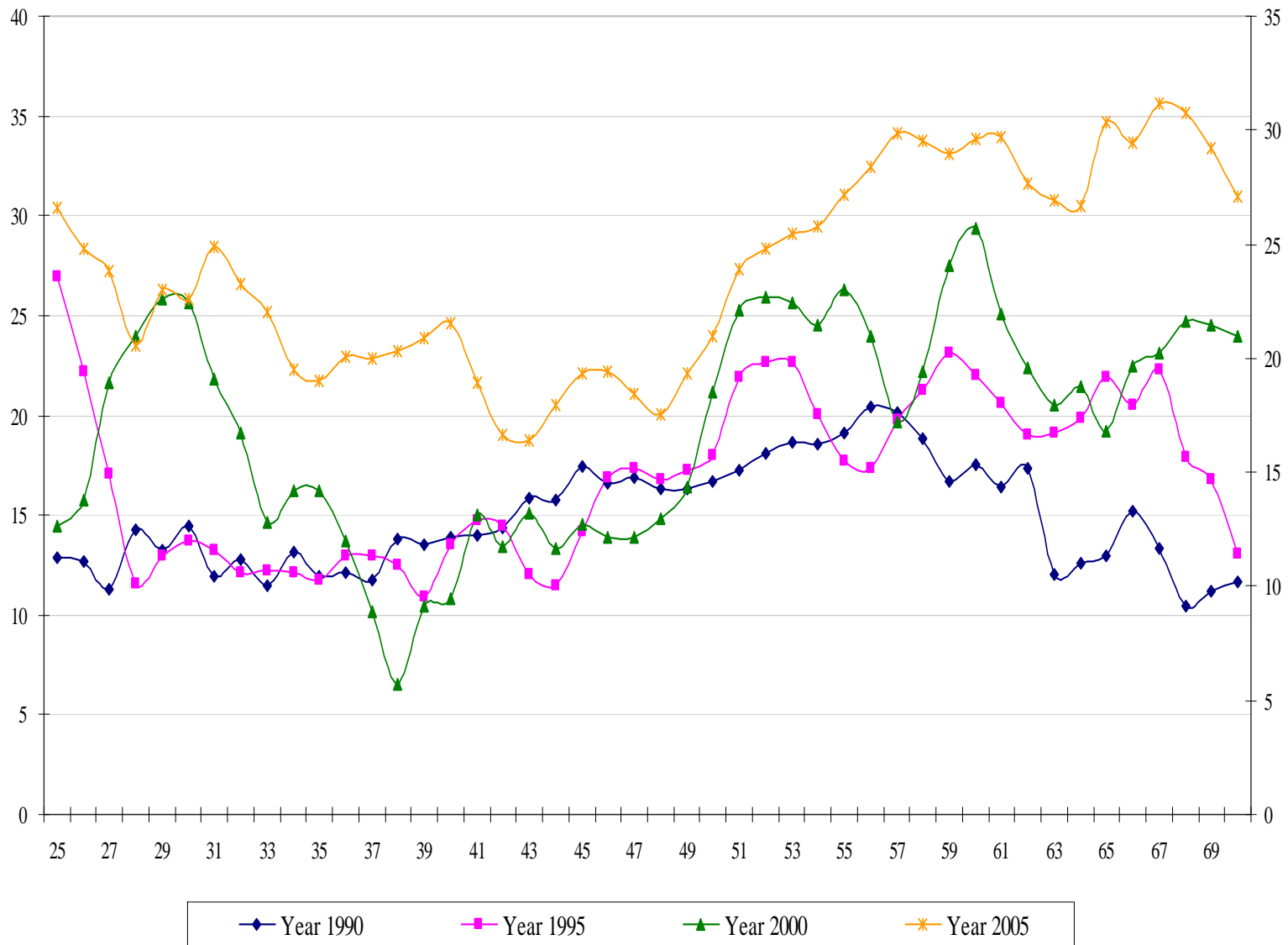
Saving Rate by Income Level, 1998-2006



3-Year Moving Average Saving Rate by Region, 1988-2006



3-Year Moving Ave. Saving Rate by Age of Household Heads





Explanations for High Household Saving

Well-known hypotheses, but not explaining China's patterns:

- *Permanent income hypothesis*: should consume more because of high income expectations, yet saving went up
- *Life-cycle theory*: predicts an inverted U-shape life time saving profile, but a different pattern in China in latest years (Chamon and Prasad, 2008)
- *Cultural norm and habit formation*: suggests persistence in saving behavior, but there have been structural breaks and rise in savings across all cohorts
- *Inefficient financial markets*: no good options to saving; however, saving rate rising with improved financial markets



Explanations Consistent with China's Saving Patterns

Income and economic growth:

- **Income growth** has a positive effect on saving: empirical evidence for China (Qian, 1988; Modigliani and Cao, 2004)
- Supported by our figure, saving rate higher for richer families

Precautionary saving motives:

- Decline in public provision of **education, health, and housing services** (Kuijs, 2006; Chamon and Prasad, 2008)
- High saving for young cohorts, preparing for future education expenses; for older cohorts, anticipating future health expenditures
- High saving responds to urban unemployment (Meng, 2003)

Demographic factors:

- **Dependency ratio**: mixed results (Kuijs, 2006; Modigliani-Cao, 2004)
- Rising **imbalanced sex ratio** raises saving: explains 68% of increase in rural saving rates, 18% in the urban rates (Wei-Zhang, 2009)



Implications for Aggregate Saving and Policy

Will China likely maintain the high saving rate?

- Aggregate dependency ratio will reach a low at 0.38 in 2012, but will surge to 0.62 by 2048 (UN Population Council)
- Demographic factors are unlikely to affect saving rates dramatically
- Slower economic growth rate may lower saving rate

Will the emphasis on stimulating consumption spur growth?

- Policies on stimulating consumption when export drops
- Higher consumption implies lower saving, effect on investment?

Macroeconomic issues:

- National saving rate will likely drop through reduced enterprise savings because of reduced profitability and decline in exports
- Domestic saving rate versus current account surplus