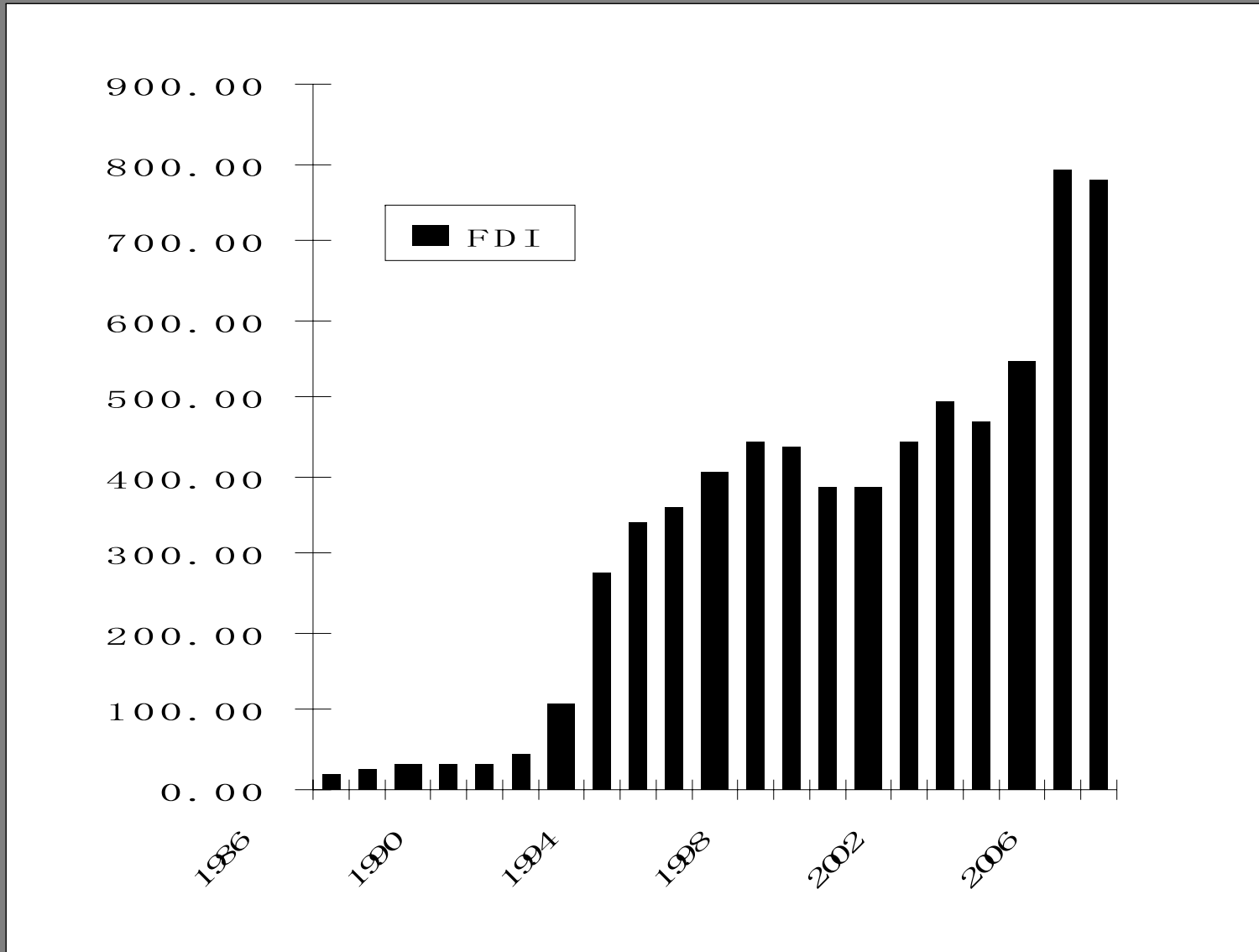


Investment Ratio and FDI

a Comparative Analysis of Return to Capital
among China, US and Japan

October 24, 2009

Sun Wenkai, Renmin University of China
Xiao Geng, Brookings-Tsinghua Center
Yang Xiuke, Peking University

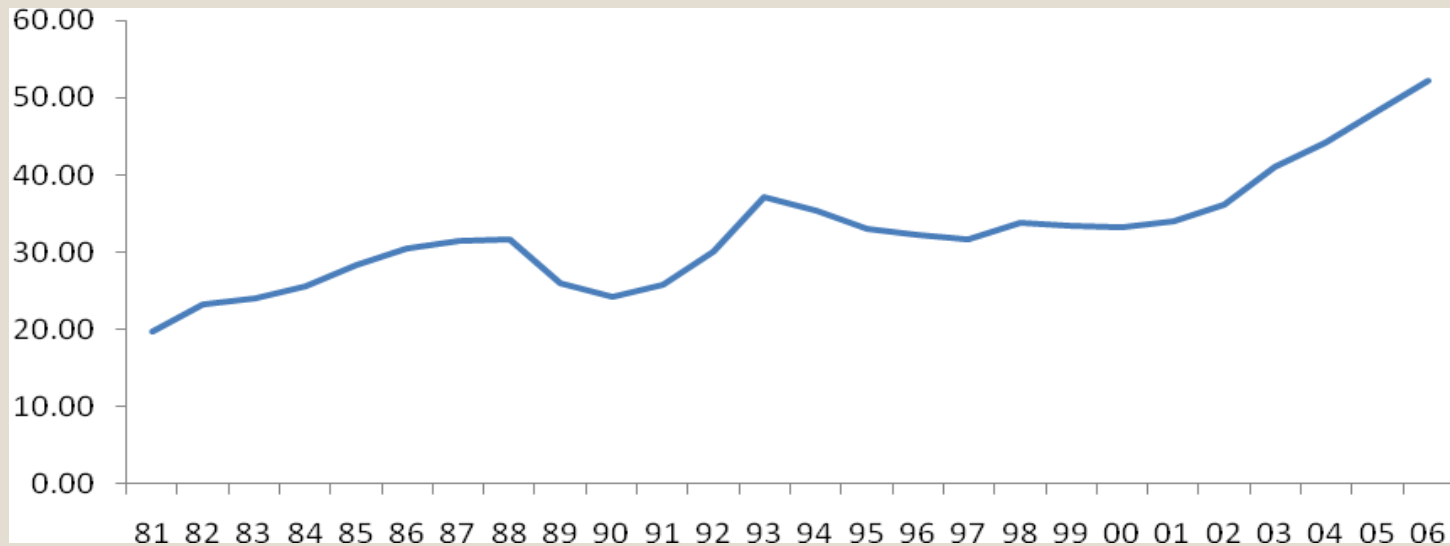


Data source: China Statistical Yearbooks

China

- Capital stock
 - Investment in fixed assets sharply increases from about 20% (1981) to above 50% (2006)

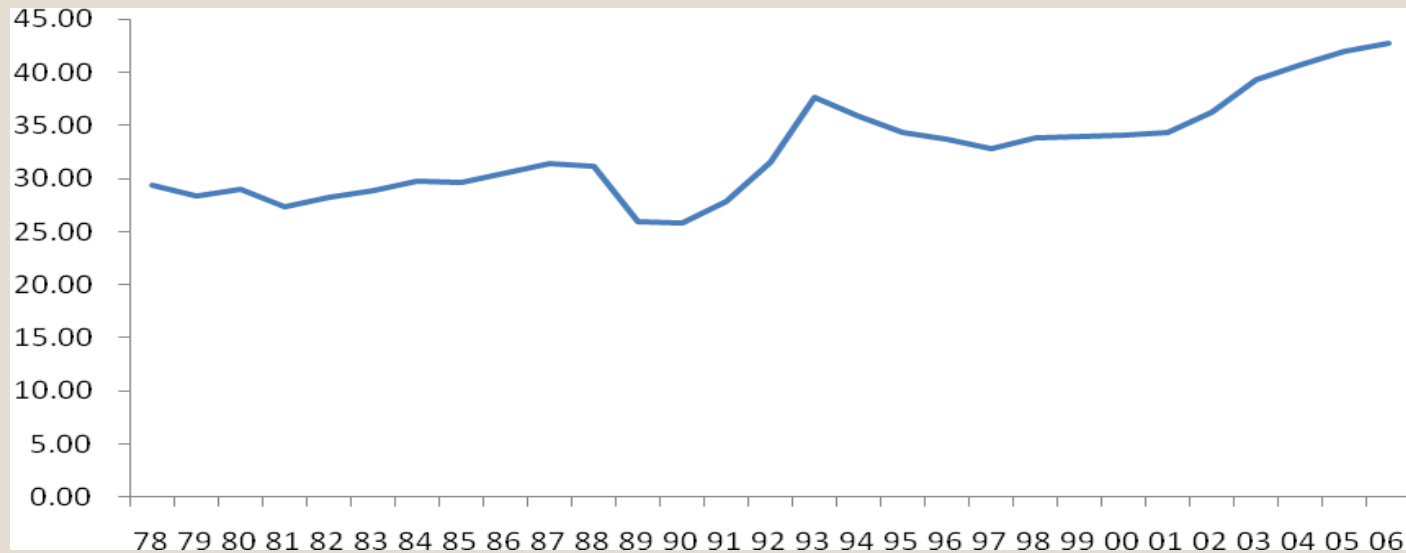
Investment in Fixed Asset in China (% of GDP)



China

- Capital stock
 - Gross fixed capital formation increases from 29.46% (1978) to 42.75% (2006)

Gross Fixed Capital Formation (% of GDP)



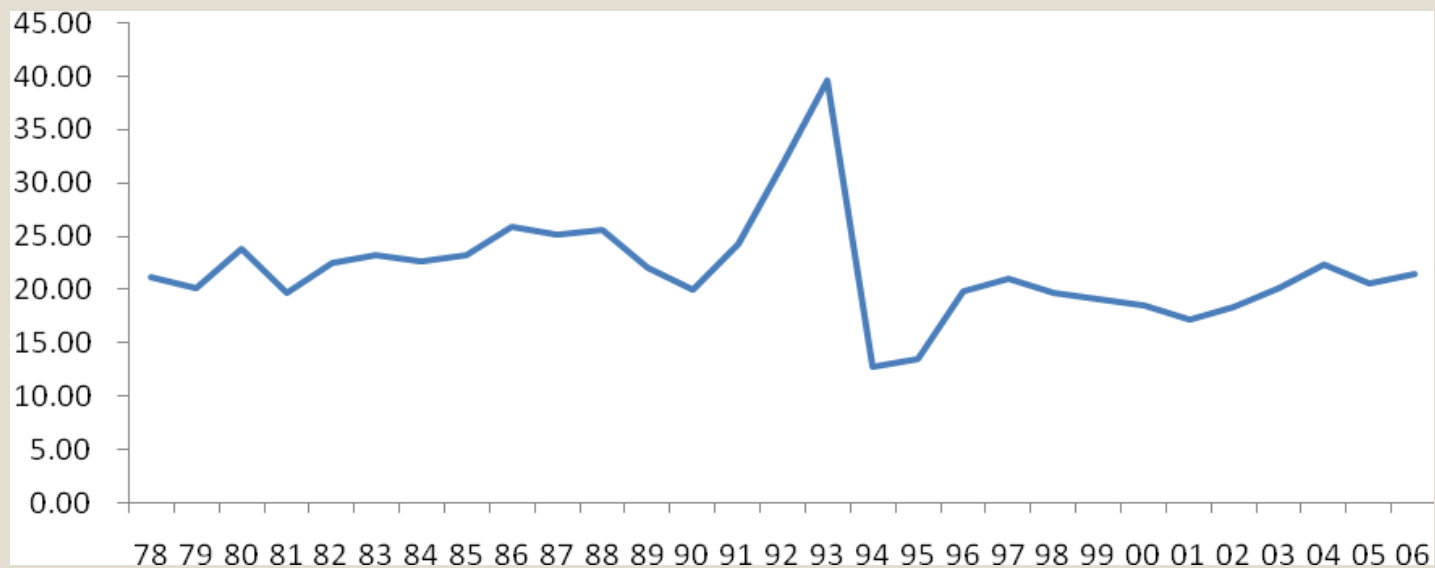
Direct Method

$$r(t) = \frac{1 - \frac{W(t)L(t)}{P_Y(t)Y(t)}}{K(t)P_K(t)/P_Y(t)Y(t)} + \left(\hat{P}_K(t) - \hat{P}_Y(t) \right) - \delta(t) \dots (5)$$

The Return to Capital in China

- The return to capital in China averages as high as 21.9% during the last three decades

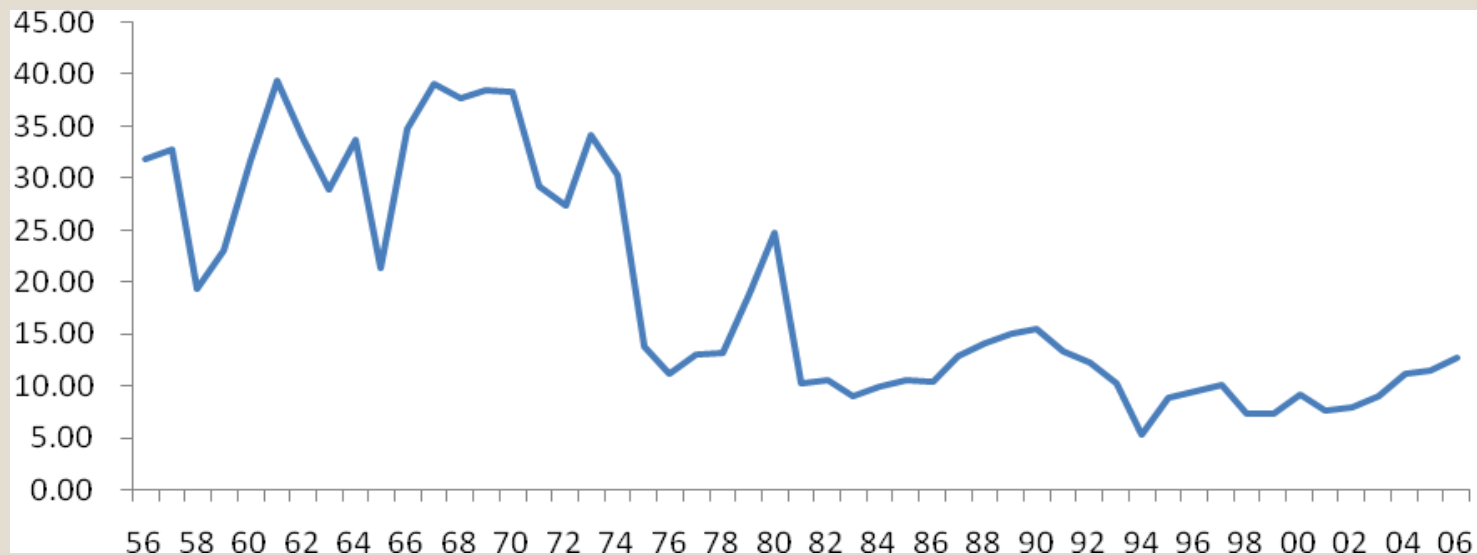
Return to Capital in China (%)



The Return to Capital in Japan

- The return to capital in Japan is extremely volatile during the period of 1956 to 2006

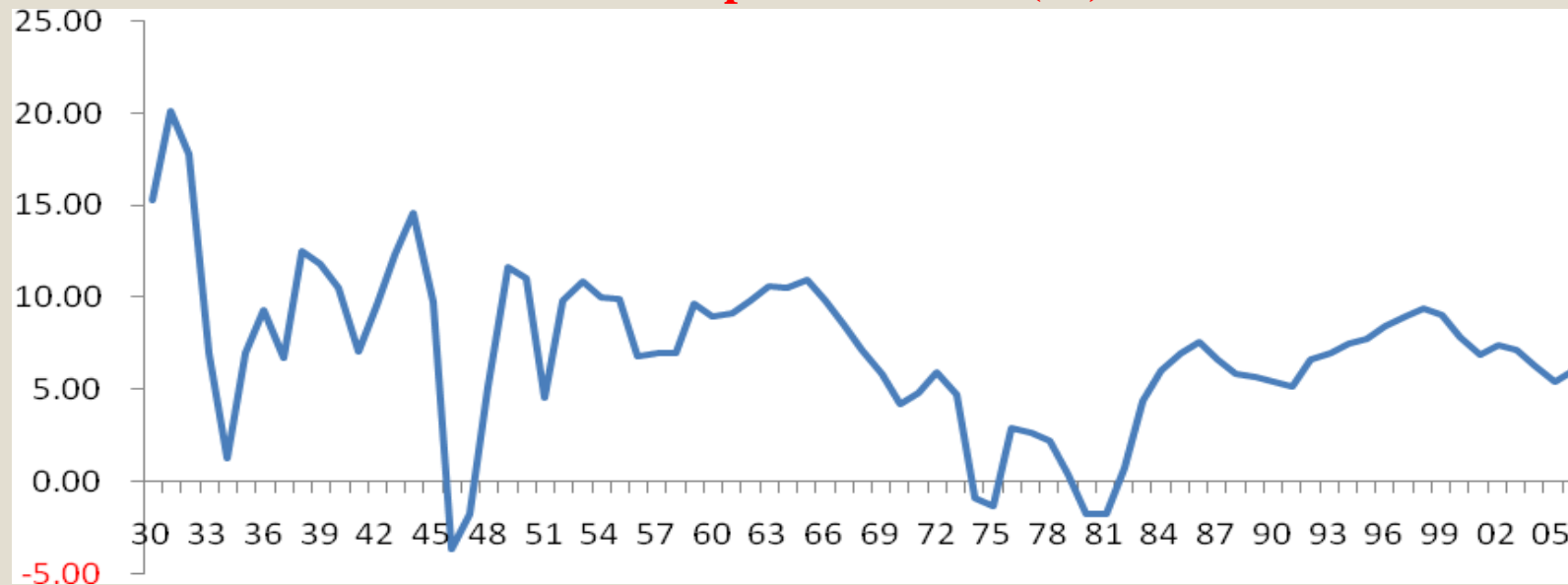
Return to Capital in Japan (%)



The Return to Capital in The US

- The return to capital in the US decreases from around 15% to around 5%

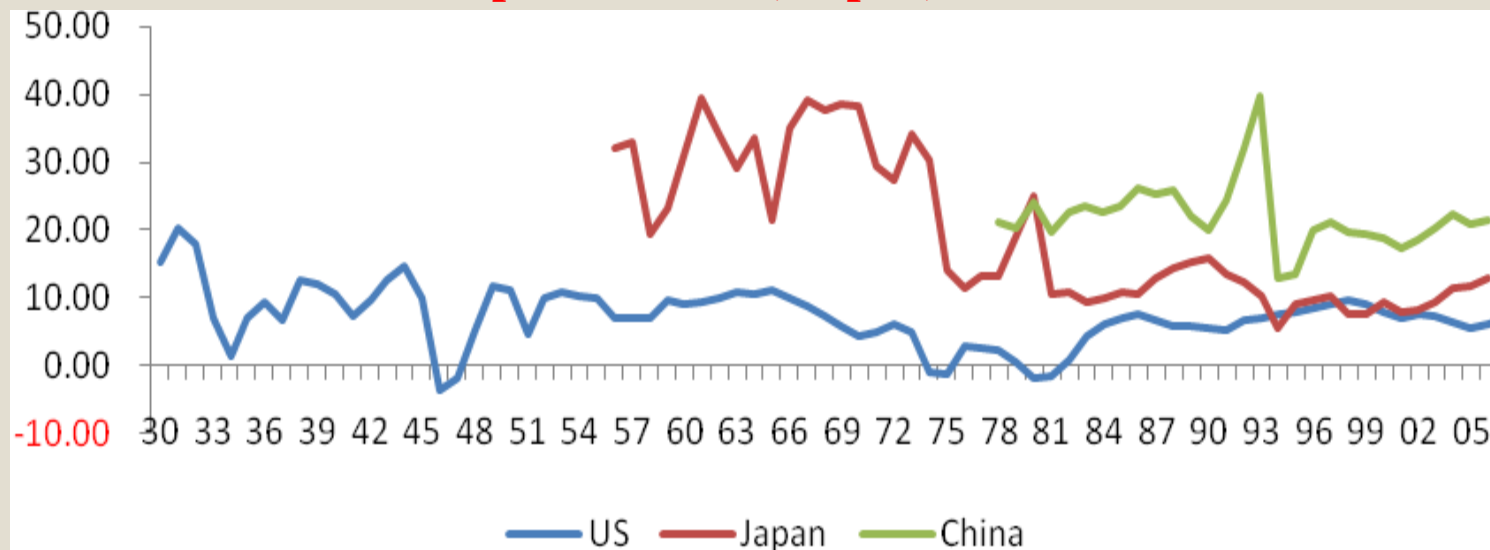
Return to Capital in the US (%)



The Trends of Return to Capital

- Return to capital seems to decline from a higher level to a lower level in the long run

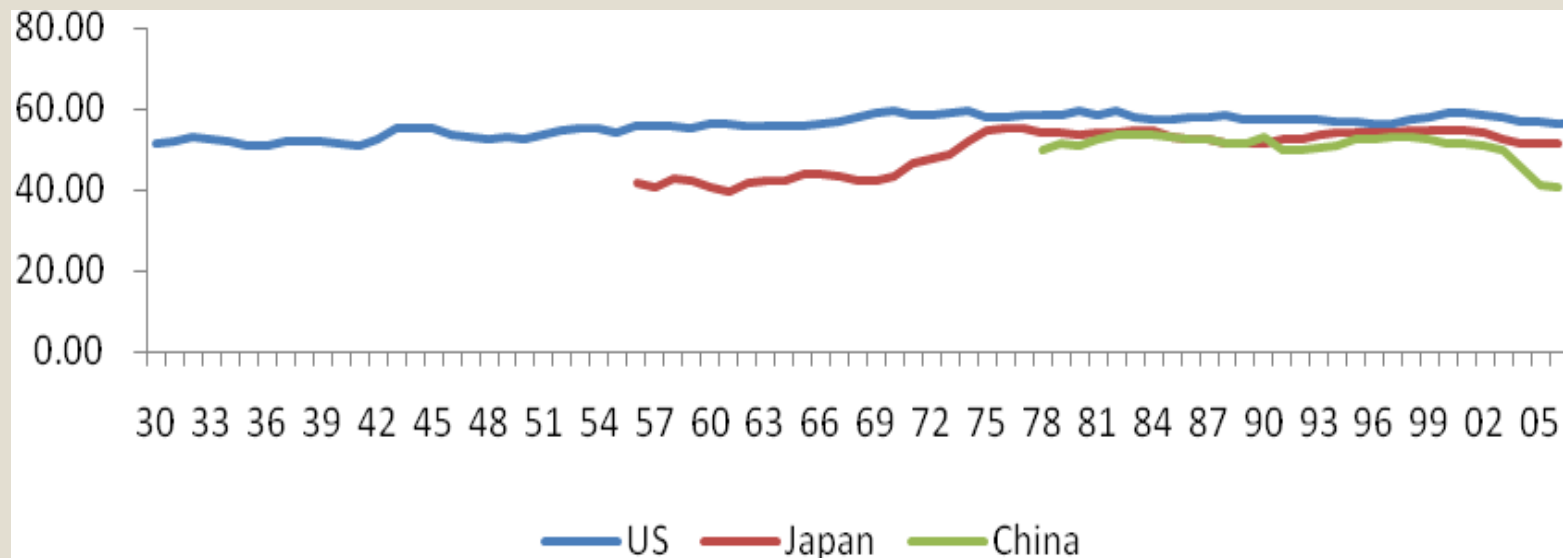
Return to Capital in China, Japan, and the US (%)



Factors that Affect Return to Capital

- Labor's share
 - Labor's share increases in the long run

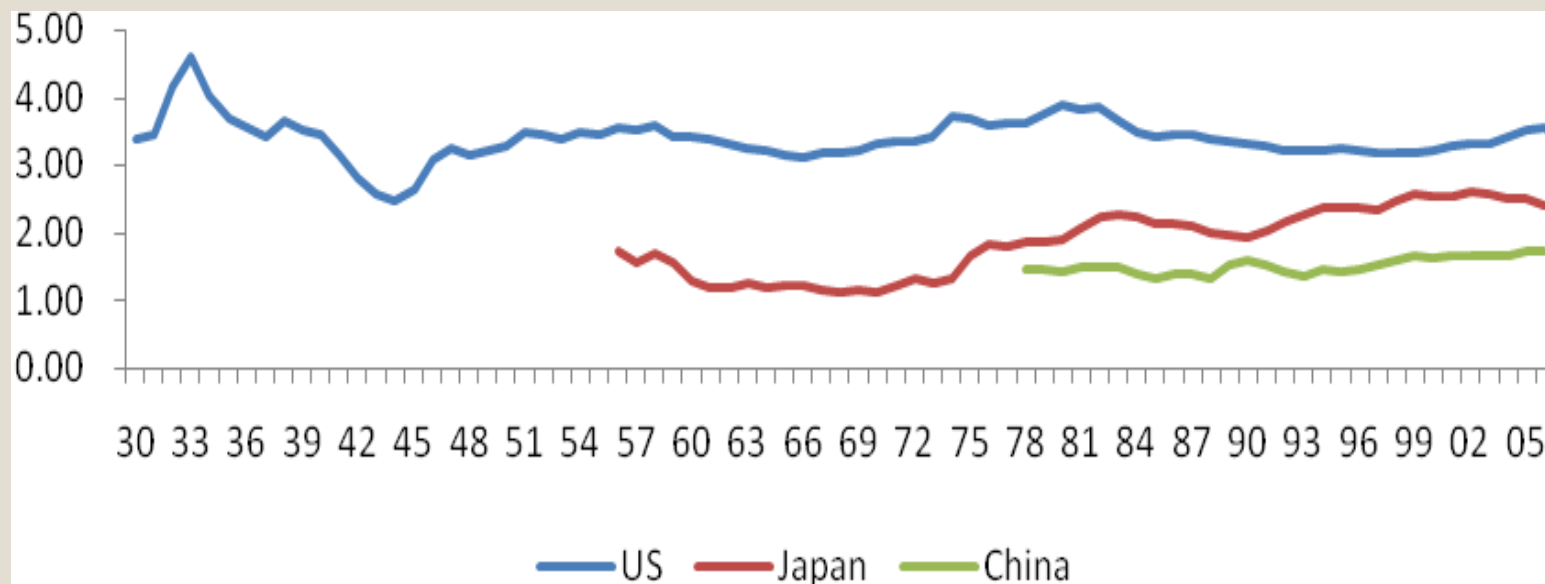
Labor's share in China, Japan, and the US (%)



Factors that Affect Return to Capital

- Capital-output ratio
 - Capital-output ratio increases in the long run

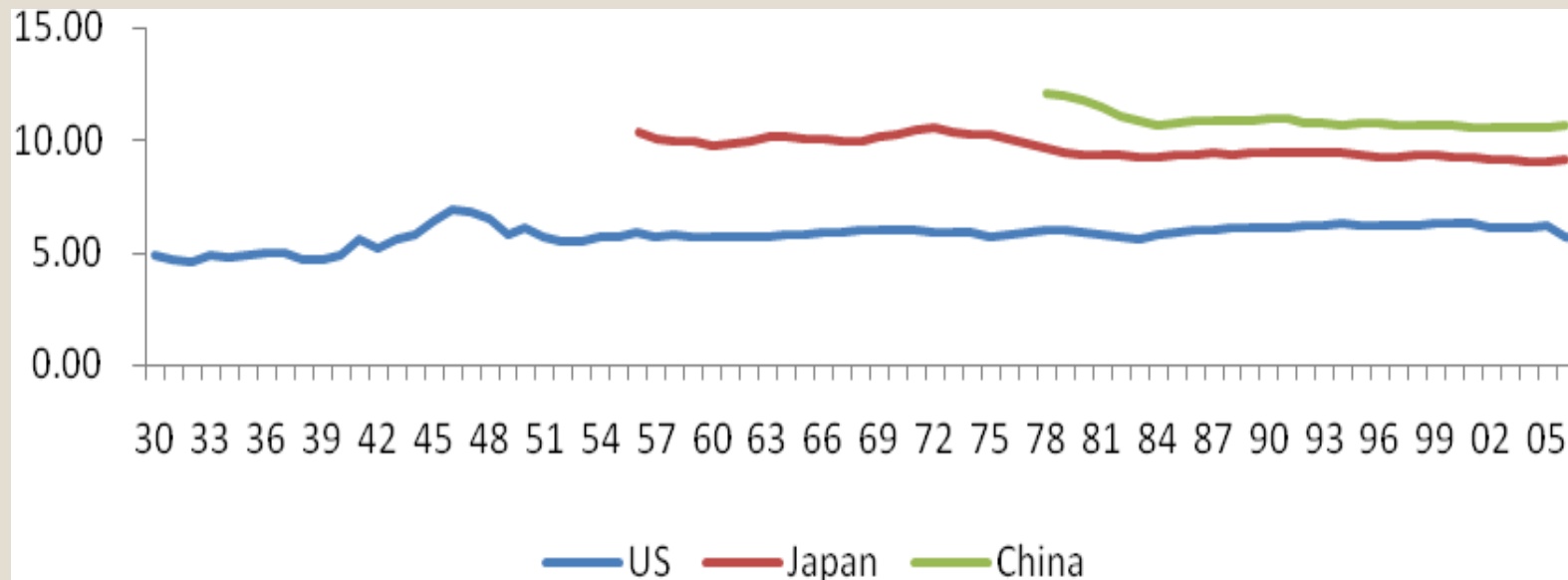
Capital-output ratio in China, Japan, and the US (%)



Factors that Affect Return to Capital

- Depreciation rate
 - Depreciation rate remains relatively more stable

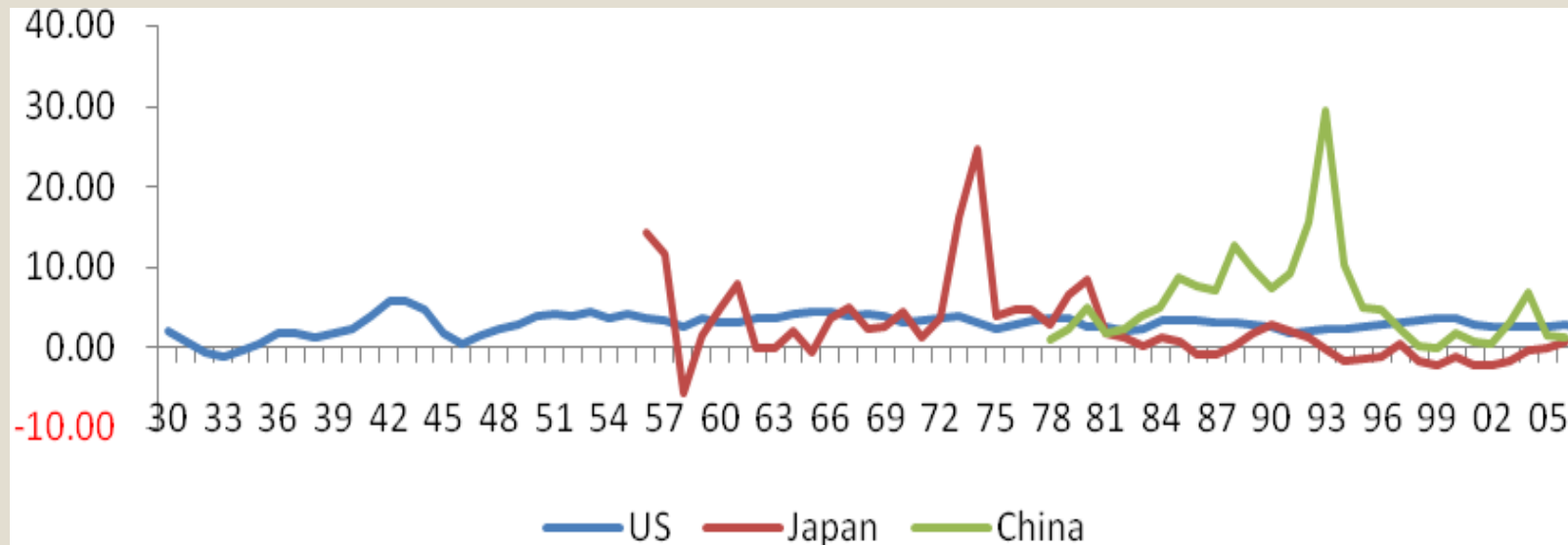
Depreciation rate in China, Japan, and the US (%)



Factors that Affect Return to Capital

- Growth rate of investment goods deflator
 - The growth rates of investment goods deflator are extremely volatile in Japan and China

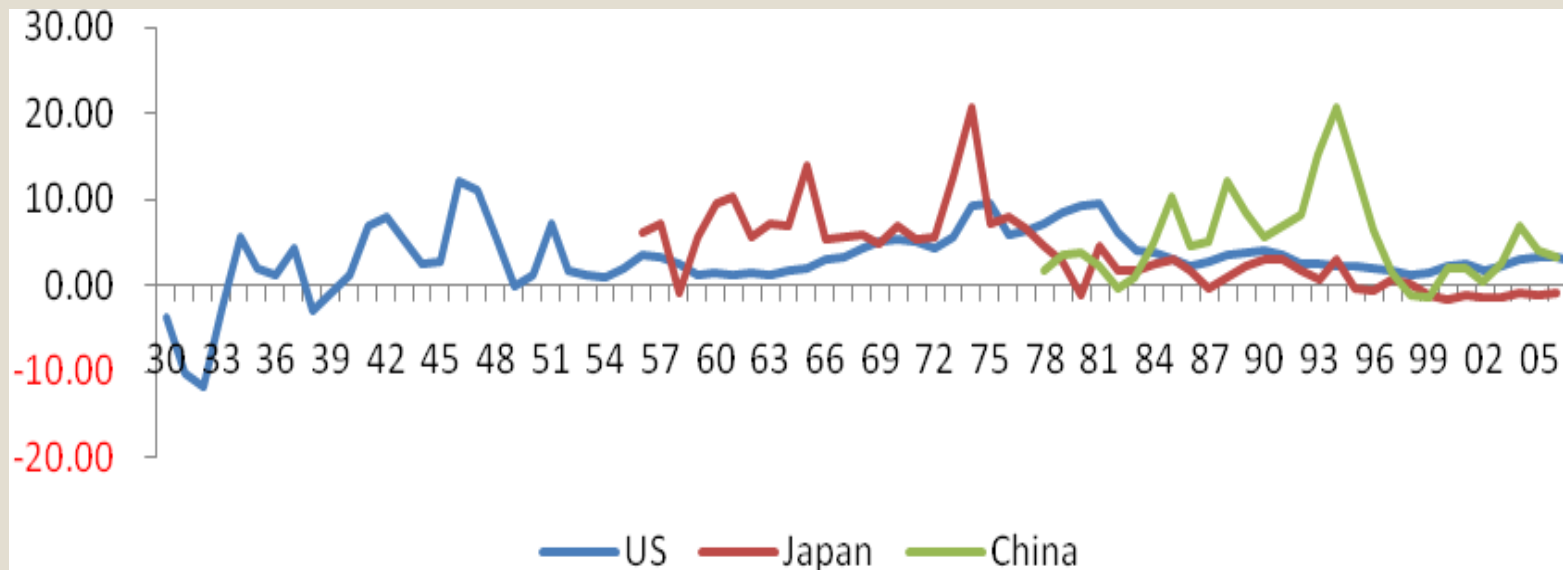
Growth rate of investment goods deflator in China, Japan, and the US (%)



Factors that Affect Return to Capital

- Growth rate of GDP deflator
 - The growth rate of GDP deflator is extremely volatile

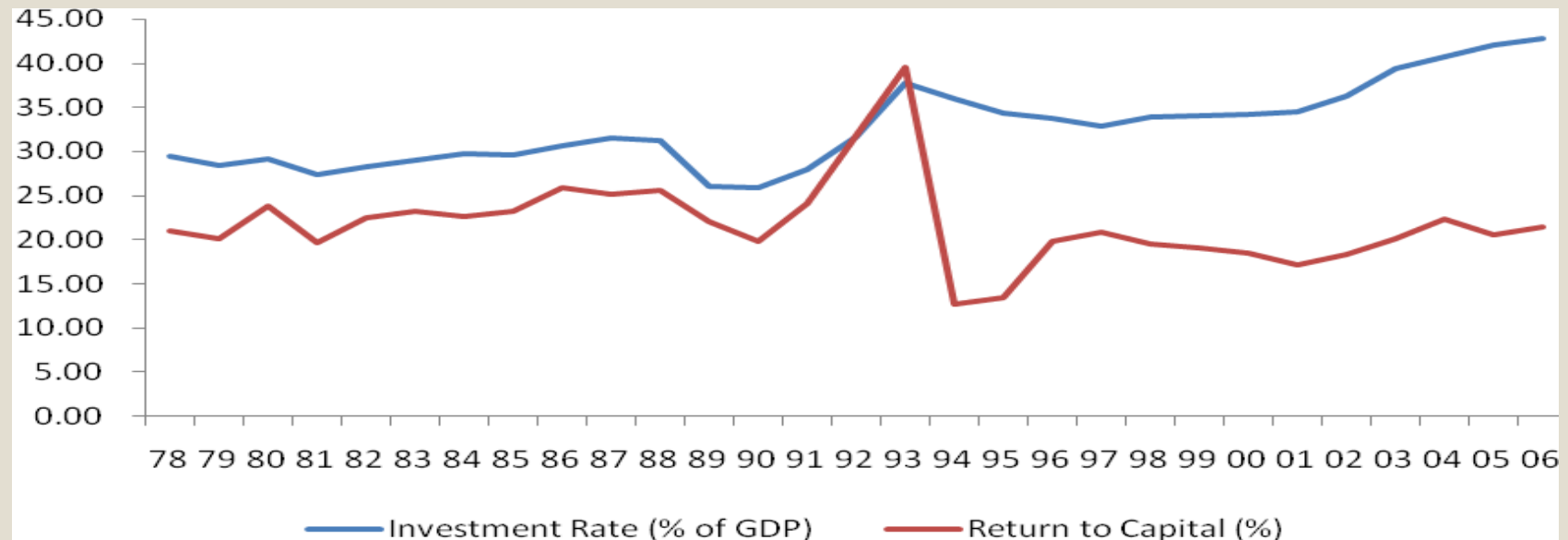
Growth rate of GDP deflator in China, Japan, and the US (%)



The Impacts of Return to Capital on Investment Rate

- The investment rate in China
 - Increased from 29.46% in 1978 to 42.75% in 2006, averaged as high as 32.68%

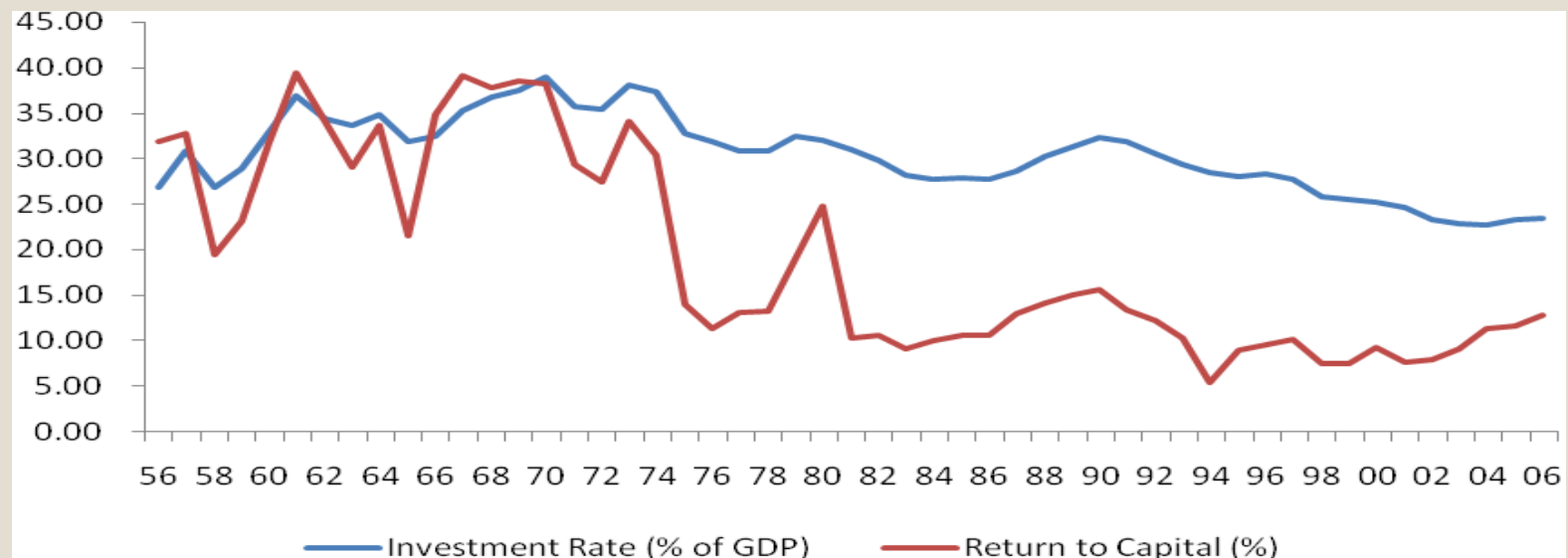
The Investment Rate in China (%)



The Impacts of Return to Capital on Investment Rate

- The investment rate in Japan
 - Increased from 26.80% in 1956 to 39.02% in 1970 and declined to 23.46% in 2006

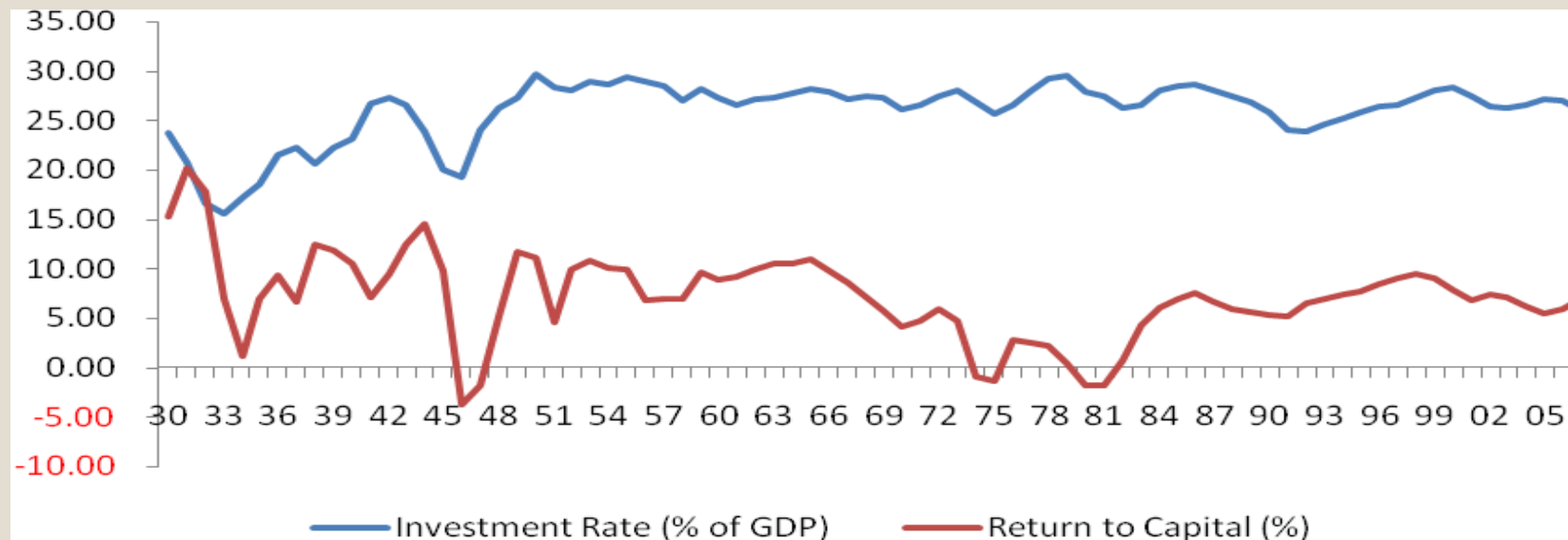
The Investment Rate in Japan (%)



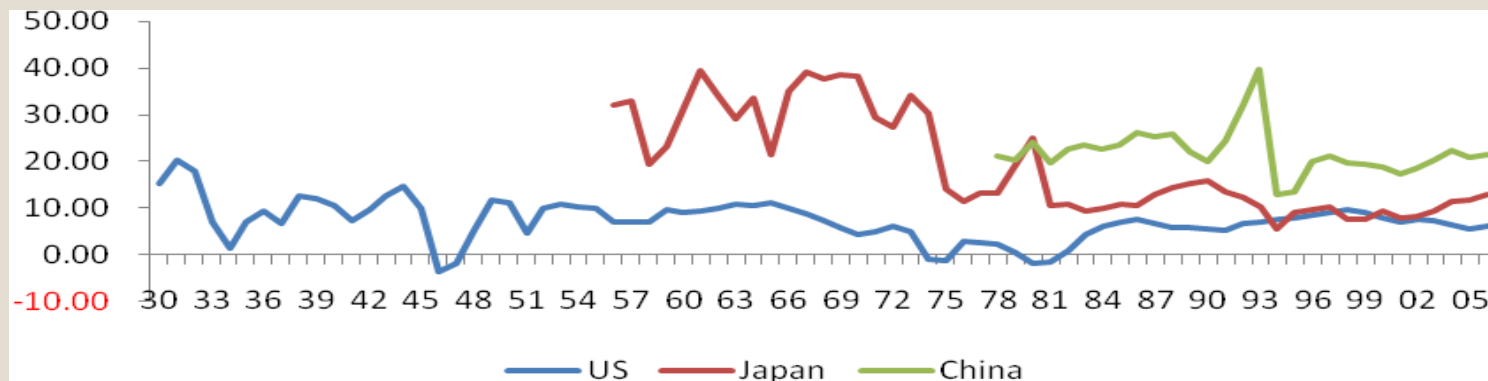
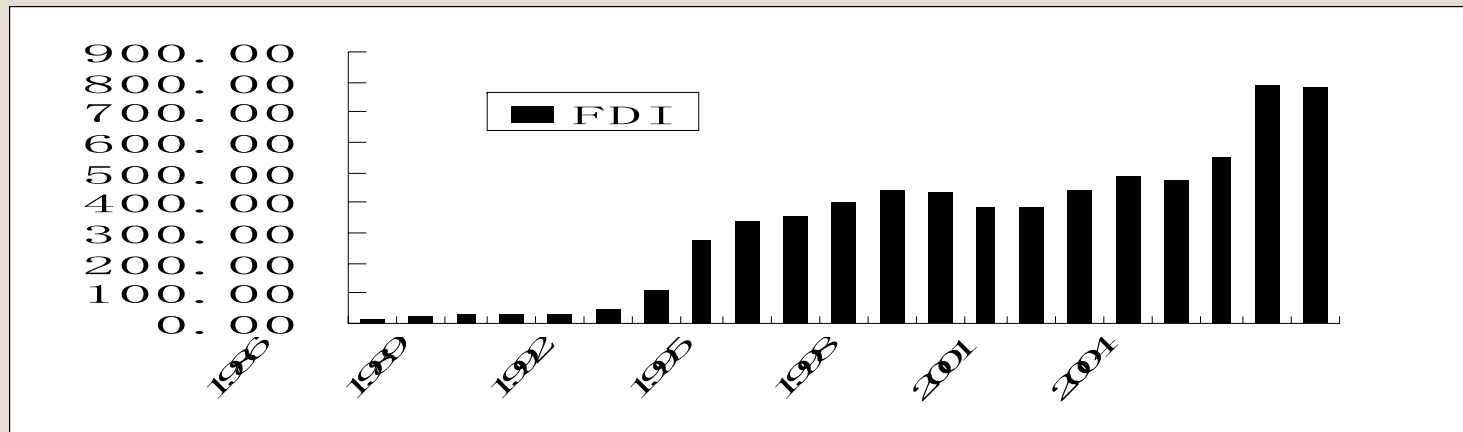
The Impacts of Return to Capital on Investment Rate

- The investment rate in the US
 - Experienced sharp decline during the early 1930s and increased to the highest level in 1950

The Investment Rate in the US(%)



The Impacts of Difference of Return to Capital on FDI



Corr Coefficients = 0.799 and 0.819 between the FDI growth rate and the difference of return to capital respectively with US and JP;

FDI of High-tech has higher growth rate

- According to the Report on Foreign Direct Investment in China (2003-2007), FDI in China increases by 13.3%, -0.5%, and 4.46% respectively in 2004, 2005, and 2006.
- FDI in high-tech industries increases by 4.09%, 22.8%, and 32.64% respectively. FDI in high-tech industries accounted for 15% of the total FDI in China in 2003, increases to 21.6% in 2006.

FDI of High-tech has higher growth rate

- the high-tech products exported by foreign invested companies account for 77% of the total high-tech products export in 2003, increases to 88% in 2006
- the high-tech products exported by foreign invested companies increase by 64.8%, 57.6%, 32.8%, and 29.1% respectively during 2003 to 2006, while that of total high-tech products export increase by 76%, 38.9%, 31.8%, and 28.9%.

Summary and discuss

- The Return to Capital
- The investment rate and return to capital
- FDI and the return to capital
- The key factors for return to capital
- The trend of return to capital
- The high-tech products