



# Impacts of External Oil Supply Shocks on the Chinese Economy

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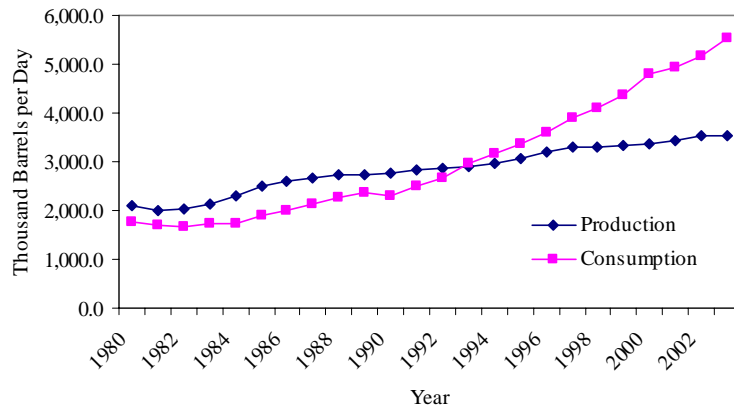
## Motivation



- Increased Importance of imported oil in China's economic growth;
- Newly constructed oil shock variable;
- Converted quarterly macroeconomic data.

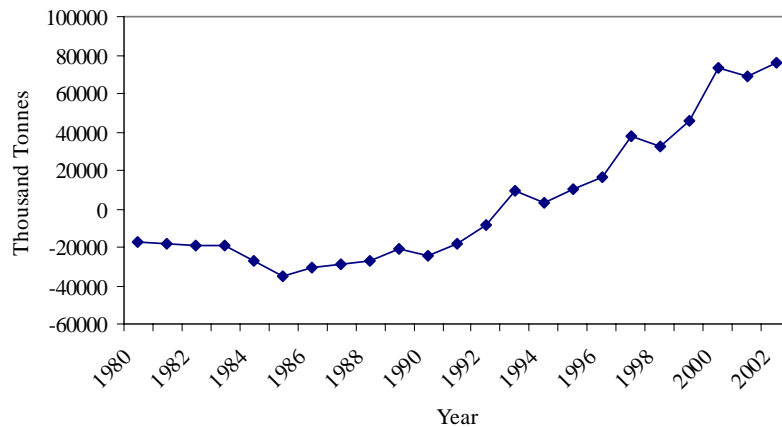
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## China's Oil Production and Consumption, 1980-2003



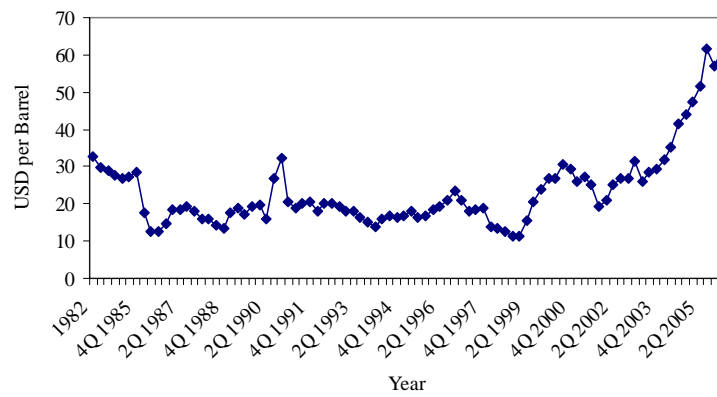
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## China's Net Imports of Crude Oil and Petroleum Products, 1980-2002



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## Brent Crude Oil Spot Prices, 1982-2005



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## Methodology



$$\Delta RGDP_t = \alpha_t + \sum_{i=1}^p \beta_i \Delta RGDP_{t-i} + \sum_{j=1}^q \gamma_j oil_{t-j} + u_t,$$

$$inf_t = \omega_t + \sum_{i=1}^r \lambda_i inf_{t-i} + \sum_{j=1}^s \eta_j oil_{t-j} + v_t,$$

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## Recent Developments



- Hamilton (2003)
- Kilian (2005a), (2005b)
- Abeysinghe & Rajaguru (2003)

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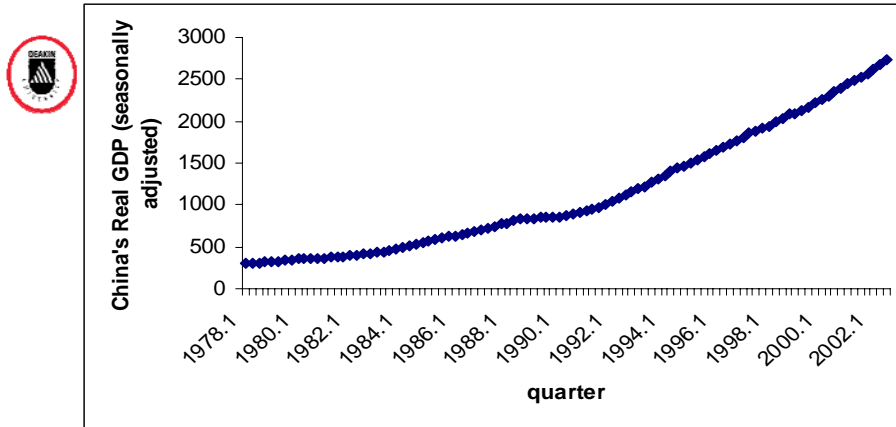
## Data



- Quarterly Data :1978Q1-2004Q3
  - China's real GDP data;
  - China's inflation data;
  - World oil production shock data.

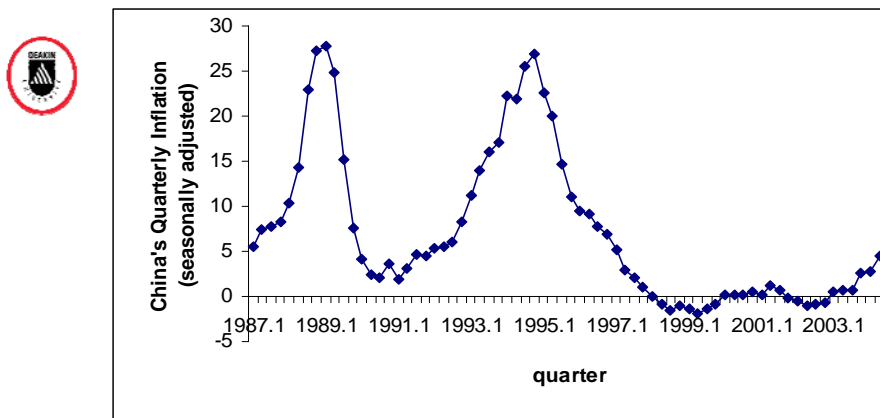
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## Recovered China's RGDP Data (Quarterly)



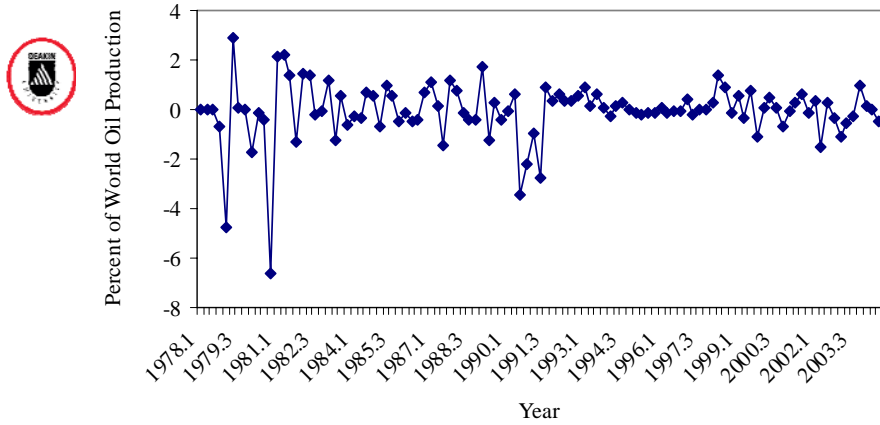
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## China's Inflation Data (Quarterly)



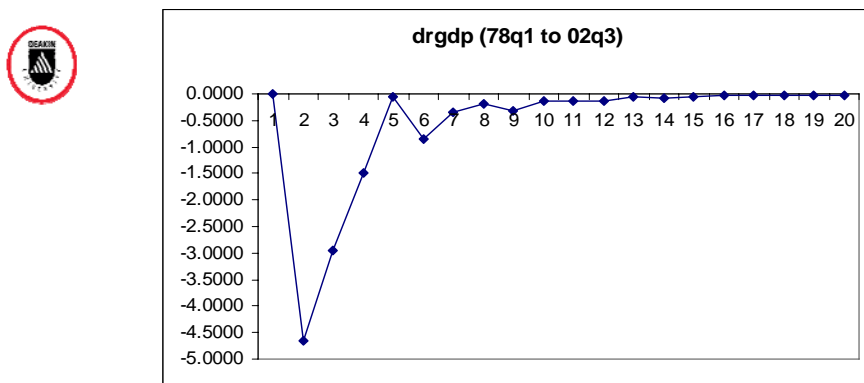
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## Kilian's Exogenous OPEC Oil Shock Series



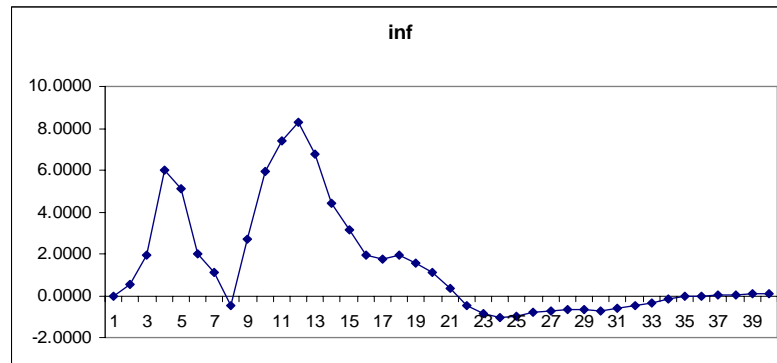
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## Impulse Response of China's Real GDP Growth Rate after a 10% World Oil Production Disruption



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## Impulse Response of China's Inflation Rate after a 10% World Oil Production Disruption



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## Conclusion



An exogenous world oil production disruption will

- have a negative impact on China's Real GDP growth in the short run (12 quarters);
- have a positive impact on China's inflation rate in the short and medium horizon.

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