



Saving and Investment Dynamics in Asian Economies

Presentation

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Structure of the Paper

- ◆ Introduction
- ◆ Stylized Facts of Growth, Investment and Saving in Asia
- ◆ Literature Review
- ◆ Empirical Analysis
- ◆ Conclusions



Important features of East Asian Economies

- ◆ Faster Growth before Asian Crisis
- ◆ Post Asian Crisis: Significant Growth Moderation
- ◆ Decline in investment faster than saving
- ◆ Exception: India and China



Coverage of the Study

- ◆ Eight Countries;
 - Crisis: Indonesia, Korea, Malaysia, Philippines and Thailand;
 - Non-Crisis: China, Japan and India
- ◆ Period : 1992-2008
 - Pre-Crisis :1992-1996
 - Crisis:1997-2001
 - Post crisis: 2002-2008



Stylised facts: Growth

- ◆ The recovery process not uniform
- ◆ Some countries have recovered
- ◆ Some countries yet to achieve pre-crisis growth



Stylised facts: Growth

- ◆ India and China exceptions
- ◆ India: growth not only recovered but accelerated
- ◆ China: reverted to double digit growth, but lower than pre-crisis level



Stylized Facts : Growth in Asia

Table 1: GDP Growth Rates of Selected South East Asian Countries

	Pre-crisis Period	Crisis Period	Post Crisis Period	Variation Col 4 over Col 2
Country/Year	1992-96	1997-2001	2002-2008	
1	2	3	4	5
Thailand	8.1	-0.1	5.1	-3.0
Philippines	3.5	2.8	5.3	1.8
Malaysia	9.6	3.1	5.8	-3.8
Korea	7.4	4.7	4.5	-2.9
Indonesia	7.6	0.2	5.4	-2.2
India	6.5	5.5	7.8	1.3
China	12.4	8.3	11.0	-1.4
Japan	1.3	0.5	1.4	0.1

Source: Asian Development Bank



Stylised Fact : Investment

- ◆ India: acceleration in investment in post crisis period
- ◆ China: investment remains steady
- ◆ Other countries: witnessed a decline; with some experiencing faster decline in investment than saving



Stylised Fact : Investment

Table 2: Select Macroeconomics Ratios

Investment as a ratio to GDP of Selected East Asian Countries

	Pre-crisis Period	Crisis Period	Post Crisis Period	Variation Col 4 over Col 2
Country/Year	1992-96	1997-2001	2002-2008	
1	2	3	4	5
Thailand	40.8	24.3	27.2	-13.6
Philippines	23.2	20.8	15.9	-7.3
Malaysia	40.2	28.7	21.7	-18.5
Korea	36.9	29.8	29.9	-7.0
Indonesia	31.1	20.9	24.9	-6.2
India	24.2	24.3	32.5	8.3
China	41.3	36.6	41.9	0.6
Japan	29.1	25.9	23.4	-5.7

GDP: Gross Domestic Product

Source: Asian Development Bank



Stylized Facts : Saving

- ◆ Both India and China registered a significant increase in their saving level during the post crisis period
- ◆ Other countries: some witnessed decline, some witnessed increase



Stylised Fact : Saving

Table 3: Select Macroeconomics Ratios

Saving as a ratio to GDP of Selected East Asian Countries

	Pre-crisis Period	Crisis Period	Post Crisis Period	Variation Col 4 over Col 2
Country/Year	1992-96	1997-2001	2002-2008	
1	2	3	4	5
Thailand	36.0	33.3	32.2	-3.8
Philippines	14.5	15.1	20.2	5.7
Malaysia	39.6	45.6	42.6	3.0
Korea	36.4	34.4	31.6	-4.8
Indonesia	32.1	27.8	27.0	-5.1
India	22.9	23.6	32.1	9.2
China	38.3	38.6	46.4	8.1
Japan	30.3	26.6	23.7	-6.6

GDP: Gross Domestic Product

Source: Asian Development Bank



Stylised Facts: Current Account

- ◆ India exception: had current account deficit during post crisis period
- ◆ China and all other countries had current account surplus during post crisis period



Stylised Fact : Current Account Deficit

Table 4: Select Macroeconomics Ratios

Current Account Deficit/Surplus as a ratio to GDP of Selected East Asian Countries

	Pre-crisis Period	Crisis Period	Post Crisis Period	Variation Col 4 over Col 2
Country/Year	1992-96	1997-2001	2002-2008	
1	2	3	4	5
Thailand	-6.3	6.6	1.8	8.1
Philippines	-4.2	-2.4	2.2	6.4
Malaysia	-6.0	8.0	13.9	19.9
Korea	-1.5	3.8	1.3	2.8
Indonesia	-2.3	3.0	1.9	4.2
India	-1.1	-0.6	-0.4	0.7
China	0.4	2.4	6.5	6.1
Japan	2.4	2.5	3.6	1.2

GDP: Gross Domestic Product

Source: Asian Development Bank



Literature: Key determinants of Investment and Saving

- Income (GDP) Growth
- Lagged income growth
- Income volatility
- Industrialization
- Demographic factors (age and youth dependency)
- Real capital cost
- Financial development
- Trade openness
- Capital mobility
- Labor productivity
- Terms of trade
- Debt-equity ratio



Empirical Analysis - Panel Data

Period : 1992-2008

Explanatory Variables:

- Income growth
- Income volatility
- Share of Manufacturing
- Demographic factors
- Interest rate
- Financial development (M2/GDP ratio)
- Trade openness

Method:

Pooled Generalized Least Squares (GLS) with fixed effects. under co-integrating framework (ECM)



Empirical Analysis : Major determinants of Investment

- ◆ Positive factors:
 - Income growth
 - Trade openness
- ◆ Negative factor:
 - Income volatility
 - Interest rate



Empirical Analysis : Major determinants of Saving

- ◆ Positive factors:
 - Income growth
 - Income volatility
 - Trade openness;
 - Interest rate
 - Share of manufacturing
- ◆ Negative factor:
 - Demography factor (age dependency)



Empirical Findings : India and China

- ◆ Determinants of Investment: India
 - Income growth
 - trade openness
 - lagged gross domestic saving
 - current account balance
- ◆ Determinants of Investment: China
 - Current account balance



Empirical Findings : India and China

- ◆ Determinants of Saving: India
 - Income growth
- ◆ Determinants of Saving: China
 - Age dependency
 - lagged investment rate



Conclusion

- ◆ Determinants of Investment
 - Income growth
 - Trade openness
- ◆ Specialization and economies of scale



Conclusion

- ◆ Determinants of Saving
 - Income growth
 - Age dependency
 - Trade openness
- ◆ Negative and significant error correction term: steady long run relationship
- ◆ Growth, investment and saving are mutually reinforcing
- ◆ Greater role of trade openness



Thank you