# Competition Dynamics: Policy and Institutional (Governance) Reforms

Arvind Virmani

[Views are Personal]

# Introduction: Growth Issues

- Puzzle: Small reforms(80s) large impact vs. Large reforms(90s) small impact!
- Effect of Specific policies or combination of policies (regimes) on Growth (paths).
  - Theorising about Transition dynamics
- Does the impact depend on Institutional macro and micro structure (governance)?
  - Role of Entrepeneurship
- Case Study of India to shed some light (suggest hypothesis)

# Introduction: Miracle economies

- Global Growth experience: Inter-period corellation low- mean reversion to 0.
  - Asian exception: Miracle economies
  - Policy variation: Free trade (Sg, Hk), Low protection (Ma,Th, Indo), moderate (Korea, Taiwan)
- 1980s Reform: Import Substitution (IS) to Export Promotion (EP) a la East Asian Miracle.

# Indian Reforms 1980+

- Domestic price/production/investment de-control and liberalisation
- Gradual reduction in general import licensing
  - 32% of all imports on OGL by 1987-8
  - CG OGL list 76 in 1979 to 1939 in April 1990
- Tariffs raised gradually to gain revenues
  - ERPs increased 80-5 to 86-90 for Manuf
- QRs declined between 80-85 & 86-90:
  - Capital(95->77),Cons(99->88), Tot(98->92).
  - Real XR(Pt/Pnt): +0.7%/yr to -0.3%/yr(80+)
- Lower Rents, Rent seeking and DUP

# Export Promotion(1980+)

- Exporters: Neutralization of Trade/domestic distortions
  - Imported inputs & capital goods
    - Special schemes increase availability substantially.
    - Inputs duty free, CG at lower duty
  - Neutralisation of domestic input taxes (e.g. excise),domestic raw materials at world prices
  - Exemption from investment/production licensing
  - Special credit facilities
  - Lower income tax
  - Export Promotion Zones
- Comparable to E. Asian neutralisation

# POLICY REGIMES AND GROWTH

| Phase=> | I: Indian Socialism | II: Market Reform | I B: IS | II A: EP |
|---|---|---|---|---|
| Period=> | 1951-2 to 1979-80 | 1980-1 to 2003-4 | 1965-6 to 1979-80 | 1980-1 to1991-2 |
| GDP at factor cost | 3.5% | 5.8% | 2.9% | 5.5% |
| World rank: GDP growth | 60/74* | 9/88 | 63/74 | 12/88 |
| Per capita GDP | 1.3% | 3.7% | 0.6% | 3.2% |
| World rank: PCGDP gr | 66/76* | 9/88 | 67/74 | 14/88 |
| Poverty rate (HCR) | 0.20% | -0.80% | 55.4% | 38.0% |
| GDPgr:Co-eff of Variation | 1.0 | 0.3 | 1.5 | 0.5 |
| Rainfall: Diffrnce from mean | 0.5% | -1.8% | -2.7% | -1.7% |
| Contribution to GDP grth | -0.03% | -0.08% | -0.48% | -0.08% |
| **Total Factor Prod Gr** | **0.9%** | **2.7%** | **0.2%** | **2.6%** |
| Investment: Total | 6.1% | 6.3% | 4.5% | 5.0% |
| Investment: Private | 3.6% | 8.7% | 3.8% | 7.3% |
| Investment: Fixed | 4.8% | 6.2% | 3.2% | 5.6% |
| Machinery | 6.6% | 8.8% | 3.7% | 8.5% |
| Structures | 4.4% | 4.5% | 3.2% | 3.7% |
| Private (fixed) | 3.6% | 8.7% | 3.8% | |
| **REER** (35 country, trd wtd) | -2.3% | -1.0% | **-0.6%** | **-2.7%** |
| **Relative Price of Machinery** | **3.6%** | **-1.6%** | **2.2%** | **-0.8%** |
| Real Exchange Rate:**Pt/Pnt** | 0.3% | -0.3% | **0.7%** | **-0.3%** |
| Real Interest Rate: SBI | -1.7% | 7.8% | -4.1% | 7.9% |

Propelling India from Socialist Stagnation to Global Power, Academic Foundation 2006.

# Embodied Technology: CG Quality

- Dated Capital gds & Machine tools (USSR) => Modern Western machinery & equipment
  - Quality adjusted price (hedonic indices)
- Helpman and Krugmen (1985):
  - Access to foreign suppliers => Access to specialised capital goods =>Expanded assortment (CG & inputs) =>
  - Production efficiency/Investment => TFPG
- Levine and Renalt (1992): Exports/GDP positive effect on growth. Indian export/GDP up from 4.1% in1965-6 to 1979-80 to 4.9% in 1980-1 to 1991-2.
  - Effect of exports disappears when investment included. Implies that trade acts through its effect on investment

# Technology and Exports

- Frankel and Romer decomposed the effect of trade on income into their indirect effect through capital deepening, education and TFP and found the greatest impact is through TFP.
- Alesina, Spolaore & Wacziarg (2003): Positive effect of openness on growth of income per capita. Effect larger in smaller countries.
- Wacziarg (2001): Effect of trade policies on growth occurred through investment (primary factor) and technology transmission.

- *Conclusion:* Liberalisation of production, investment and Imports (+ more efficient tariffs) combined to accelerate growth through higher TFPG.
  - Similarities & differences from other Asian countries: Wide Variation in experience, particularly in trade policy & reform.

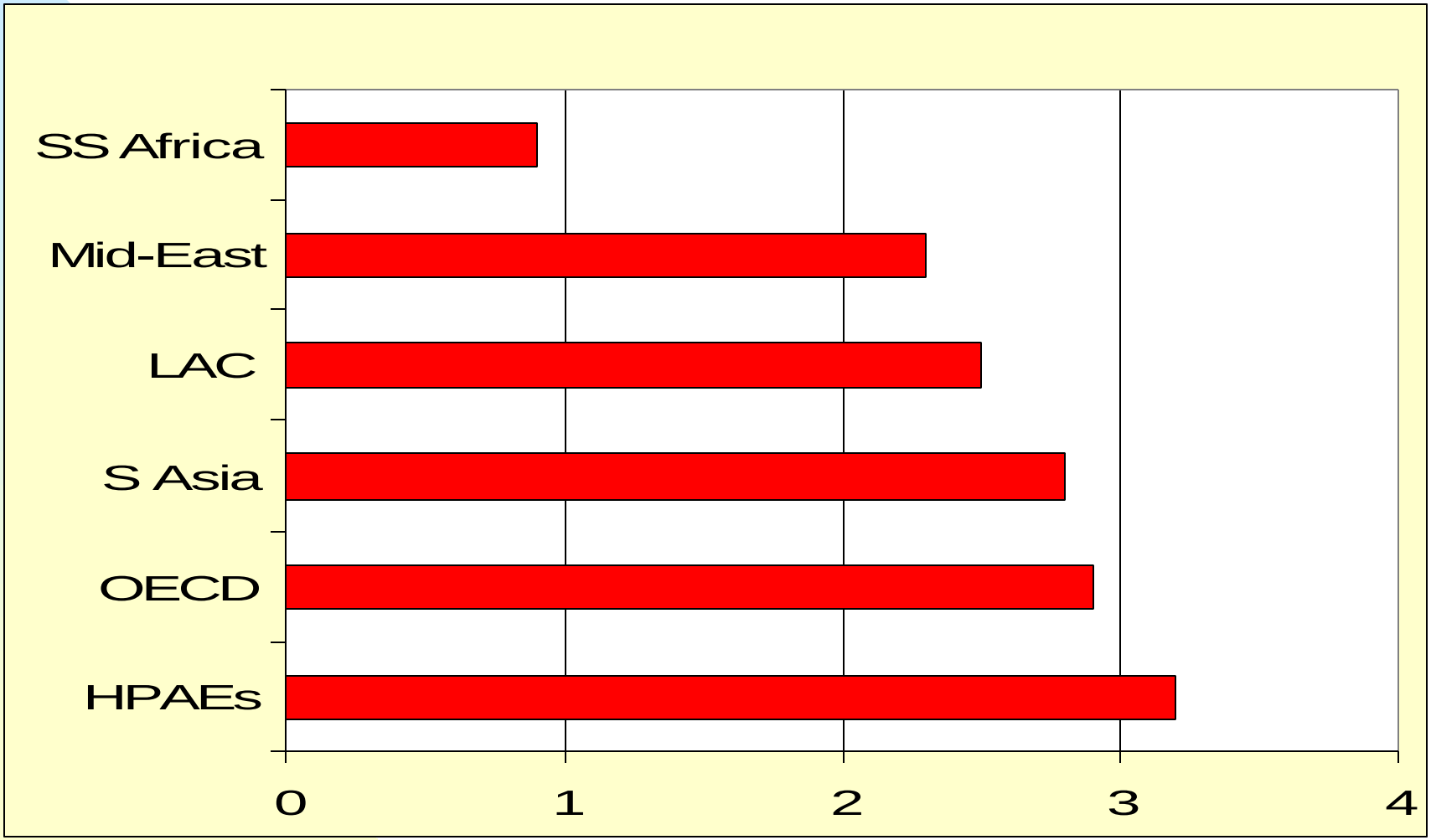
# ASIAN MIRACLE: IS to EP

- Balassa (1991), Krueger (1993), Hughes (1992): Openness to international trade, based on largely neutral incentives (i.e. neutralizing for exporters), was the critical factor in East Asia's rapid growth.
- Hong Kong and Singapore: Essentially free trade stances early in their development.
- Other HPAEs began with a protectionist orientation and gradually moved toward increasingly free trade.
  - Taiwan: "Tariffs and import controls *were gradually reduced*, *especially for inputs to export*."
  - Indonesia: "A*bolished* comprehensive import licensing, though little change was made to tariffs."

# ASIAN MIRACLE: IS to EP

- Tariff based ERPs declined in EP phase
  - India very different
- Depreciation of exchange rate or already undervalued: India is similar
- Import controls/QRs reduced by some.
  - India similar
- Net effect depends on timing and interaction?

# Figure: Dollar(1990) Index of Outward Orientation



# IS to EP: Asia

- Index of Outward Orientation Dollar(1990)
  - Thailand  ranked in top decile.
  - Hong Kong, Malaysia, Singapore in top two deciles
  - Indonesia is in the top third
  - Japan, Korea, and Taiwan, China, rank in fifth & sixth deciles below India & Pakistan
- Easterly(1994): Percentiles (ie % worse than)
  - Deviation of Investment Deflator from US(1960): Korea (16%), Taiwan(49%), HK(48%), Sg(39%)
  - Trade/GDP(60-88): Korea(43%),HK/Sg(98/99%)
  - Black Mrkt Prem(60-89): Korea(49%),Sg(77%).

# Alternative Index of Openness

Table : Effective Rate of Protection (ERP) in Manufacturing

(based on comparison of domestic and world prices)

| | 1971 | 1974 | 1975 | 1978 | 1981 | 1983 | 1985 | 1987 | 1990 |
|---|---|---|---|---|---|---|---|---|---|
| Indonesia | | | 74% | | | | | 68% | 59% |
| Thailand | 87% | 79% | | 70% | 77% | 67% | 66% | | |
| Malaysia | All individual sectors decline (total unavailable) | | | | | | | | |

Sources: (World Bank(1993); Bhattacharya & Pengetsu(1993)

Brimble(1993), Salleh, Yeah and Meyanathan (1993).

# Growth Impact of shift: IS to EP

| Economy | Change Year X | 1960 to X* | X+1 to Y | End year Y | Growth Spurt |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5=3-2 |
| Indonesia | 1966 | 0.0 | 5.1 | 1973 | 5.1 |
| Singapore | 1966 | 4.8 | 8.4 | 1979 | 3.7 |
| China | 1979 | 4.9 | 7.7 | 1991 | 2.7 |
| India | 1979 | 0.6 | 3.3 | 1991 | 2.6 |
| Korea, S. | 1960 | 3.3 | 5.7 | 1970 | 2.3 |
| Thailand | 1980 | 4.1 | 6.2 | 1992 | 2.1 |
| Taiwan,China | 1957 | 5.0 | 6.7 | 1972 | 1.7 |
| Malaysia | 1970 | 3.5 | 4.4 | 1985 | 0.9 |
| | | 1986 | | | |
| Indonesia | 1975 | 4.5 | 5.5 | 1996 | 0.9 |

Notes: *=data for S. Korea in this column is for 1960-64(WDI 60+)

# Other (miracle) Growth Drivers

- Education (primary,secondary), Skills
- Equipment Investment (De-Long & Summers)
  - I/GDP => $I_{egp}$/I in Gr Reg: Co-efficient highly significant. $R^2$ higher. $U_t$ less for miracle Ecs.
- FDI/DFI vs Domestic Entrepreneurship
  - Substitute(Sg,Idn,Ma,Th,Ch) Complement (Tiw)
- Externalities (EOS) & Co-ordination
  - Rapid Ec. change->Predicting future difficult => Un-developed markets -> Govt. co-ordination facilitation / institution creation.

# Wider Reform: India 1990s

- Growth Impulse: Allocative / static efficiency
  - Tax reform (PIT,CIT); fiscal deficit
  - Money and Credit controls; Private banks
  - Equity Market: Reallocation within existing set (so far!)
- Higher Growth path: Dynamic Efficiency / Sustained competition
  - Freedom to compete (priority)
    - Production de-control, Investment de-licensing
  - Pressure (ability) to compete
    - Import de-control, tariff reduction
  - Ability/means to compete
    - Exchange rate depreciation
    - Factor markets (capital, technology, labor)
    - Entrepreneurs (nos/qual): Domestic/Foreign/ Govt.(?)

# Institutions and Governance

- 1950-75: Controls=>Evasion => Corruption/ Governance deterioration (Krueger, Bhagwati).
- 1970s: Governance paradox [Virmani (2004b, 2005a)] = Governance deterioration (creeping) => Controls rigour(-) => Productivity & growth(+).
- Both processes can also interact in highly unusual/ unpredictable ways.
- 1980s: Small reduction in controls, signalling credible change in approach => Control system legitimacy collapse => sharp deterioration in governance => disproportionate effect on efficiency & growth.

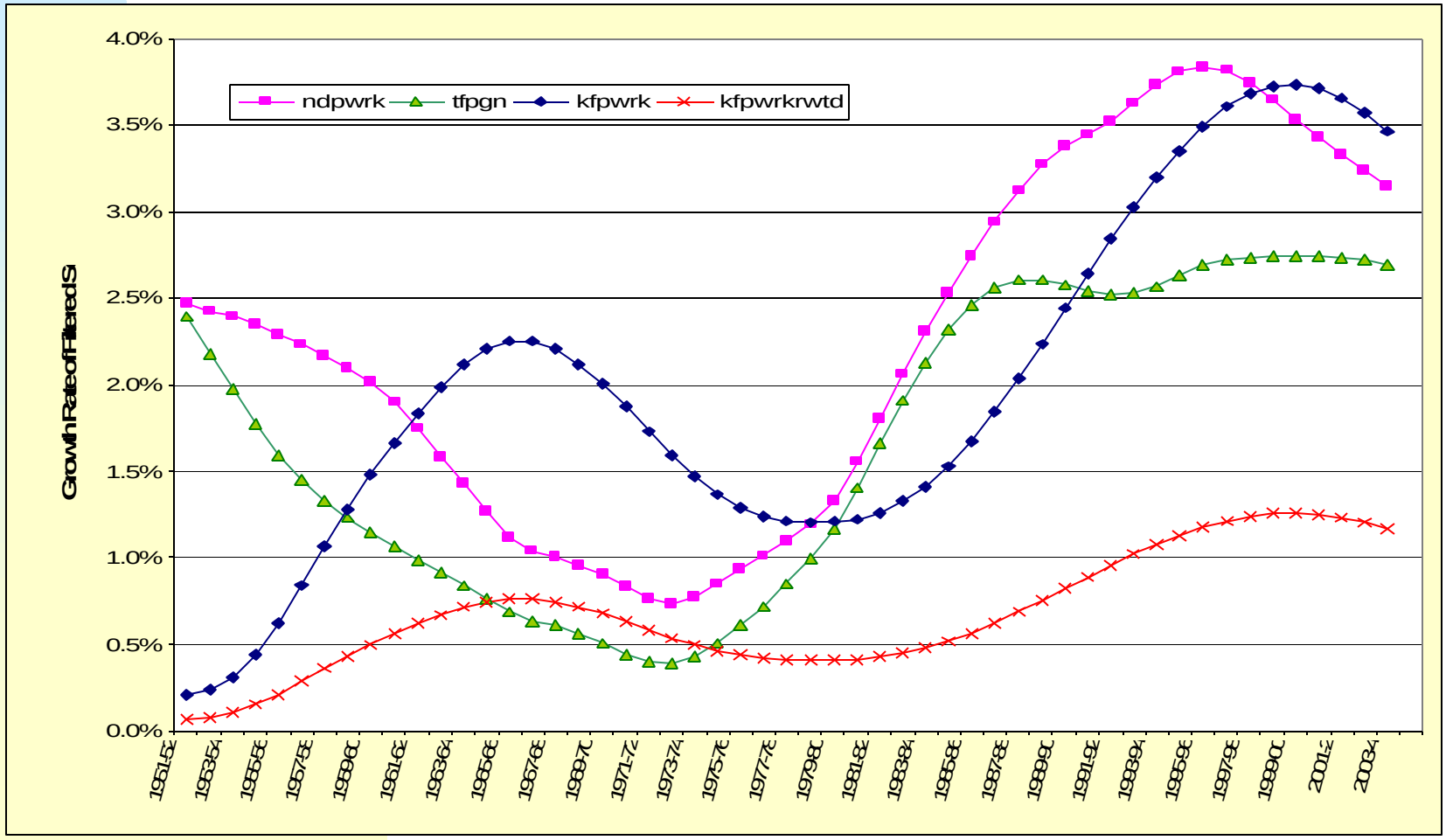
# Dynamics of Competition: Trade

- Import Controls: Threat of Imports eliminated
- Equivalent tariffs: Strong effect in (large) India
  - Balance: Pressure to compete (output) vs means to compete (inputs, CG) => Rents/transaction cost => Effect quick.
- Transition: Inputs & CG before Cons gds
- Capital goods: Embodied Technology (2nd )
- Inputs: New product/process bundle(cg)
- World Share of Exports: 0.5% to 0.8% (1%)

# Dynamics of Competition: FDI

- Effect of FDI greatest where
  - Domestic (private) entrepreneurship weak
  - Technology frontier moved most =>gap highest
- International knowledge spill-overs critical to growth particularly less advanced countries (LaCs).
  - Coe, Helpman and Hoffmaister (1997): Foreign capital stock explained 20% of TFP variation of LaCs.
  - (Caselli and Coleman (2001): Education improves absorptive capacity (LaCs) would raise TFP levels.
  - Hejazi and Sefarian (1999): International spill over from FDI to TFP $\geq$ from trade to TFP.
  - Kellor (2001) decomposed innternational spill over: 70% through trade, 15% through FDI & 15% language skills.
- **Banga**(2003a,b,c,d): Positive effect of FDI in India on exports (own), on export spill over (to domestic firms in industry) and efficiency/ productivity of non-traditional industries

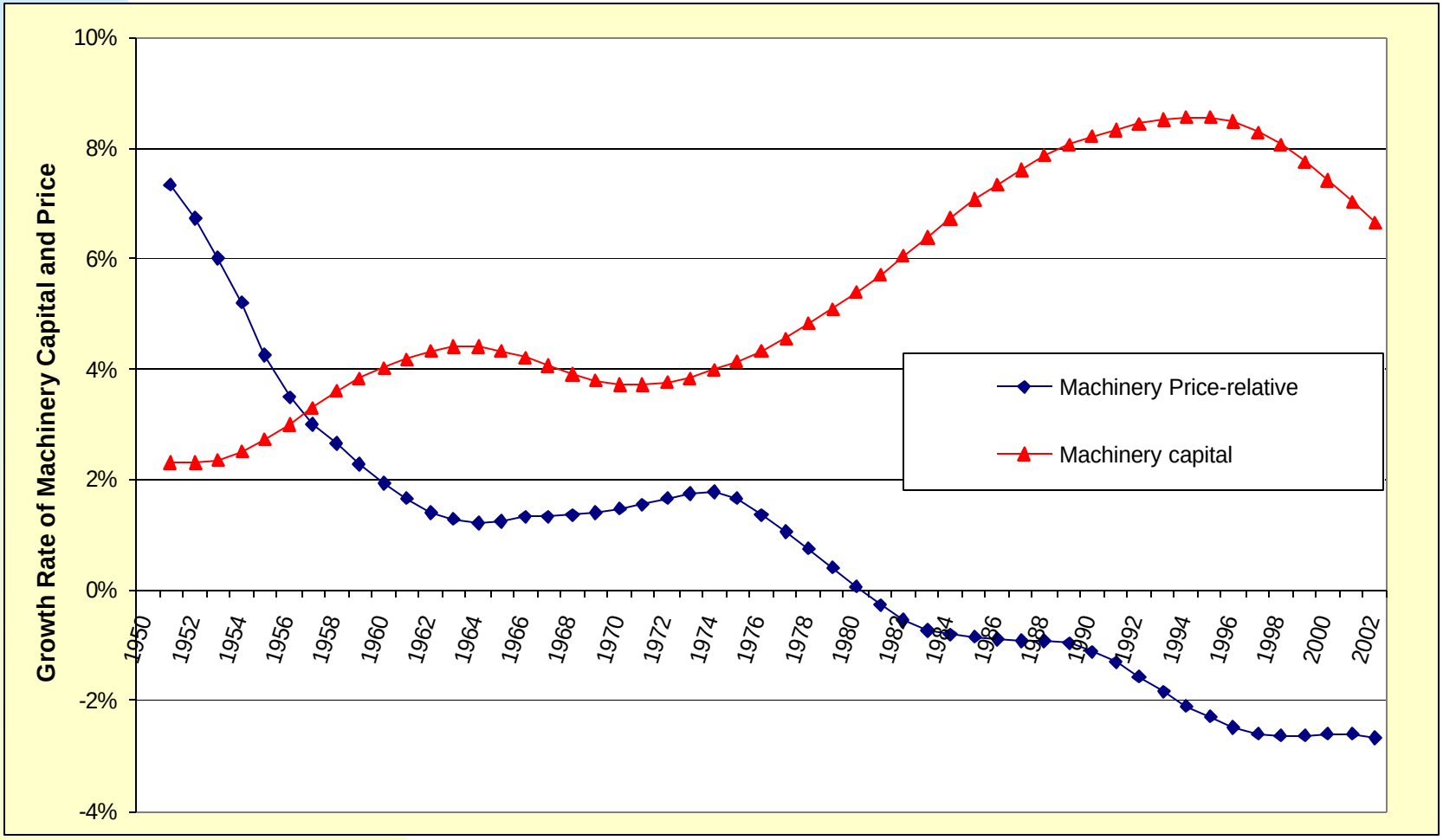
# Trends in Productivity till 2003-4



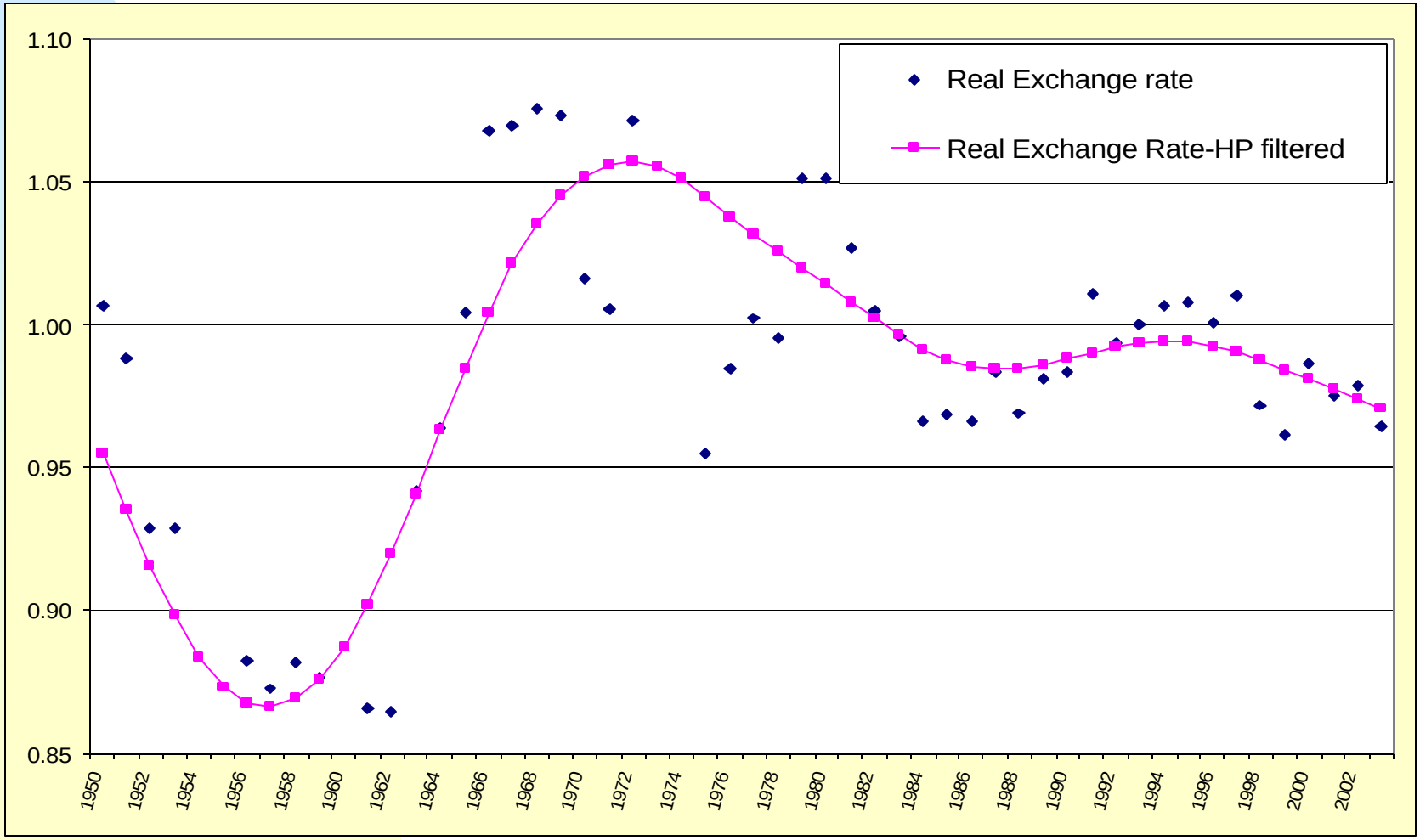
# J Curve: Import Liberalisation & Productivity Change

- In a heavily protected economy
- Major import liberalisation => Relative prices & comparative advantage change drastically.
- New products, process (innovation literature)
  - Initial slowdown in measured productivity
    - Capital immobility: Drawdown = Depreciation
    - New unfamiliar tech, HR adopting/adjusting
  - Acceleration only after a lag: New investment-embodied capital (S curve of diffusion);
    - Learning by working new tech, adaptation

# Machinery Price and Investment



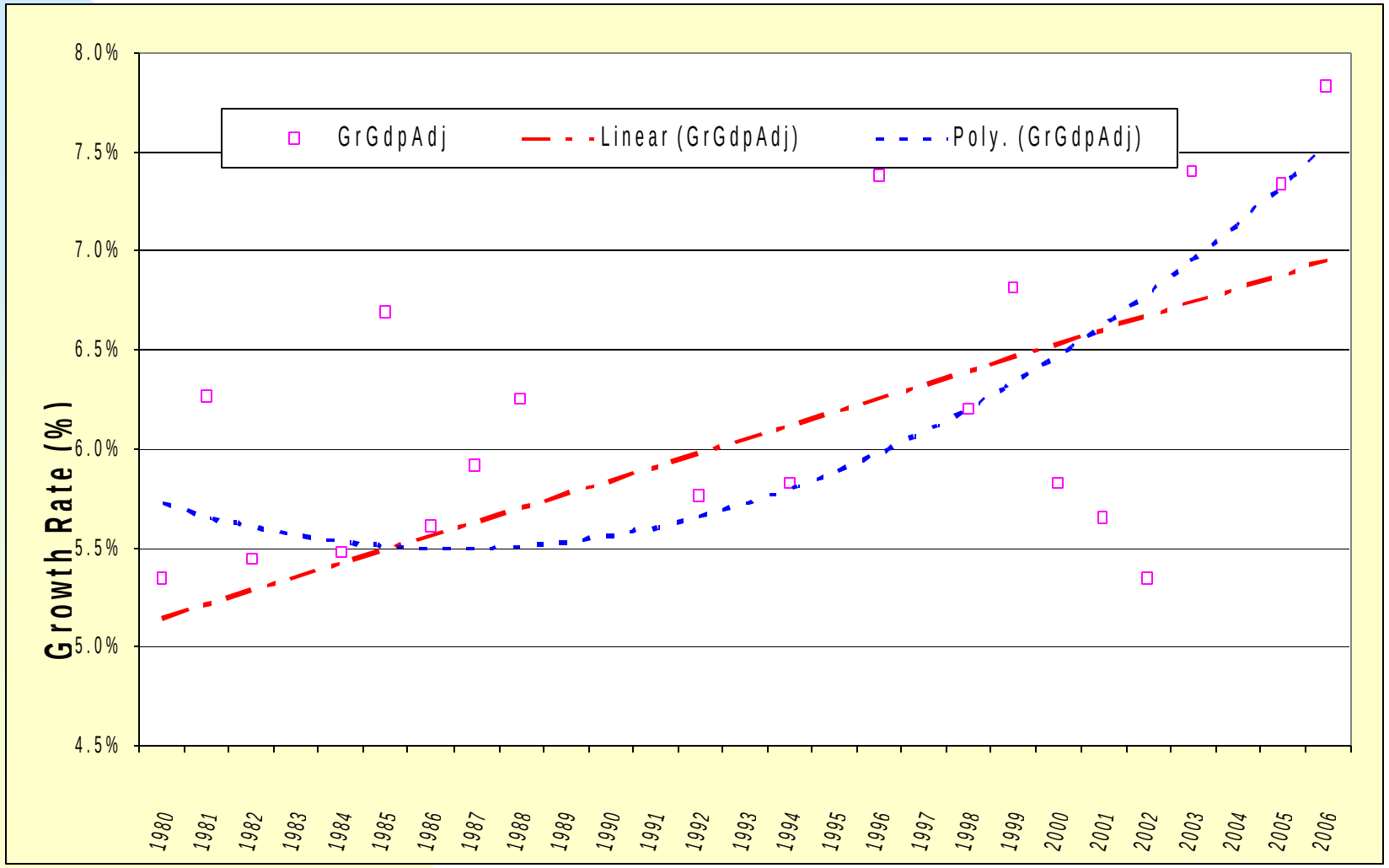
# Real Exchange Rate (Pt/Pnt)

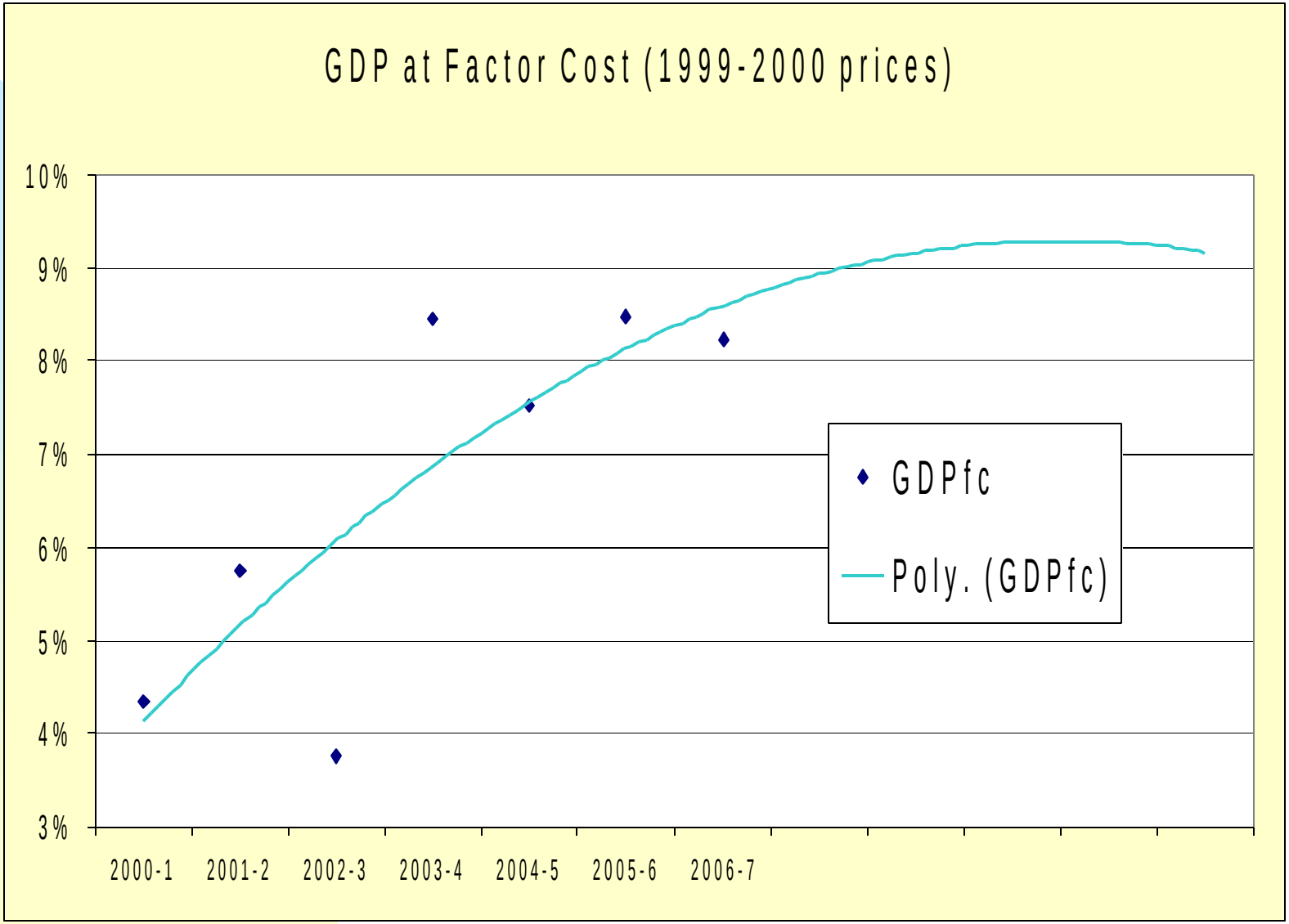


# Indian Reforms & Growth

- Pre-1980 growth rate = 3.5%
- Policy shift (IS to EP): Growth rate rose by 2% points in 1980s to 5.5%
- 1990s reform: Growth rate rose in mid-1990s by 1.3% points to 6.8%
  - GrY = 0.035 + 0.02 D80 + 0.013 D95 + 0.185 drain -0.0974 drain(-1);
- New Base (1999-2000): +0.5%
  - Underlying Growth rate: 7.3%

# Rising Growth Trend: Market Reform




GDP at Factor Cost (1999-2000 prices)
10%
9%
8%
7%
6%
5%
4%
3%
2000-1
2001-2
2002-3
2003-4
2004-5
2005-6
2006-7
GDPfc
Poly. (GDPfc)

# Conclusion: Governance

- Agriculture investment may not contribute to overall growth, but better knowledge, water management and roads could reduce poverty.
- Government expenditure have not historically enhanced growth. Can do so iff
  - Focused: Public & QP goods & services(Grole)
    - Operational plans: Urban plan, Land use
    - Basic education, water, sewerage, sanitation
  - Quality & efficiency enhanced (governance)
    - Public accountability information system (PAIS)
    - Integrated Smart Card System (ISCS): UID

# Conclusion: Structural Reform

- Supply of education & modern skills
  - Policy & Regulatory overhaul (Info asymmetry)
    - Free entry, Mandatory information disclosure (accounts, fees): Help buyer judge quality, real cost/price.
    - Compulsory rating of education providers
    - Standardisation & certification of skills
- Independent Professional regulators
  - Electricity Access cross-subsidy; T&D losses.
- Structural Distortion: Labor laws, rules, procs
- Capital/Credit: New investors, entrepreneurs

# Conclusion: Policy Reforms

- Industrial  de-control
  - Sugar, Fertiliser, Drugs/Pharma, Petro refining
- Govt monopolies => Competition-pvt entry
  - Railway, Coal, Urban land develop
- Rent control act
- FDI in retail; insurance, banking; Pension
- Small scale reservation (500+)
- Tariff: non-ag(12.5->5%, agricultural)