



Industrial Policy & Competitiveness

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Overview

- Eco growth theories- what do we really know?
- The technical progress black box: competing theories of innovation
- Competitiveness- Porter's Diamond Model
- What role for science & technology policies- NIS system

Eco Growth Theories

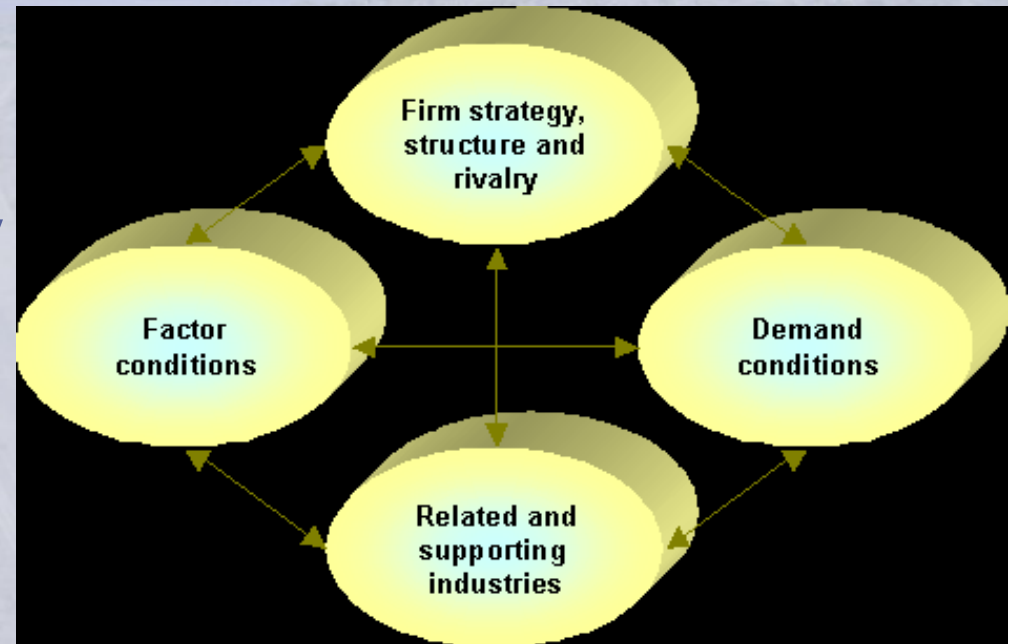
- Growth from surplus
- Growth from factor development (L, K)
- Growth from productivity gains
 - could be HK, technology, management, etc
- What do we really know about eco growth?
 - the large N studies
 - convergence hypothesis
 - process vs. pdct innovation
- Innovation and growth
 - importance for developing countries

Theories of Innovation

- HK approach (T Schultz)
- Schumpeter- entrepreneurs + bus cycles
 - evolutionary ecos (Nelson- 1st mover advs)
- North- enterpre + inst'ns, property rts (IPR)
- NIS- triple helix (Etkiowicz)
 - role of each partner
 - prob of externalities of basic research
 - prob of creating applied research
 - policy networks approach
- Which theories apply to developing world?

Porter- Natl Competitiveness

- Industry is approp unit of analysis
- continual change is key
- Govt's optimal role?
- role of chance, timing
- Others:
value/commodity chain analysis;



Porter's Five Forces Model
Supplier Power, eg:
Competitive Advantage

New Market Entrants,

- entry ease/barriers
- geographical factors
- incumbents resistance
- new entrant strategy
- routes to market

Supplier Power, eg:

- brand reputation
- geographical coverage
- product/service level quality
- relationships with customers
- bidding processes/capabilities

Competitive Rivalry, eg:

- number and size of firms
- industry size and trends
- fixed v variable cost bases
- product/service ranges
- differentiation, strategy

Buyer Power, eg:

- buyer choice
- buyers size/number
- change cost/frequency
- product/service importance
- volumes, JIT scheduling

Product and Technology Development, eg:

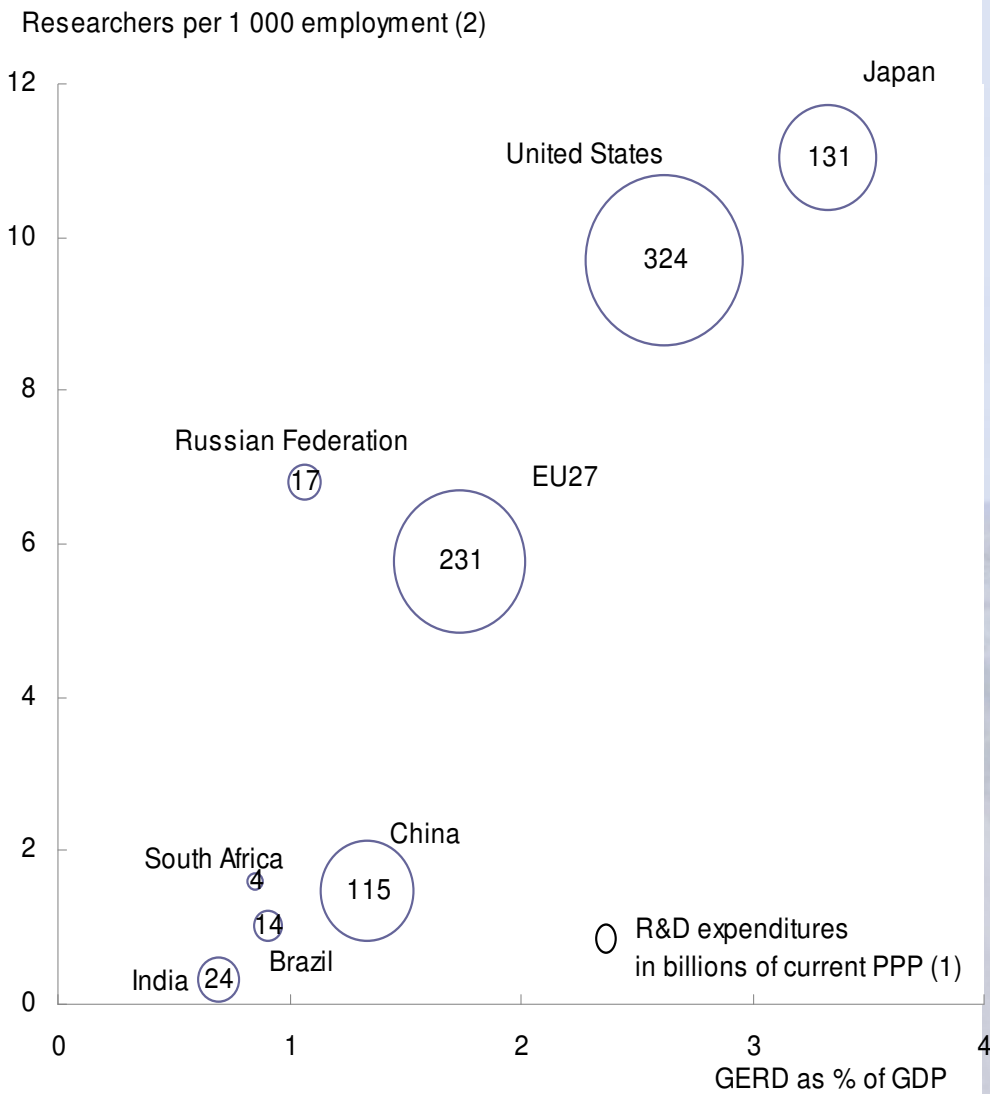
- alternatives price/quality
- market distribution changes
- fashion and trends
- legislative effects

© alan chapman 2005, based on [Michael Porter's Five Forces of Competitive Position Model](#).

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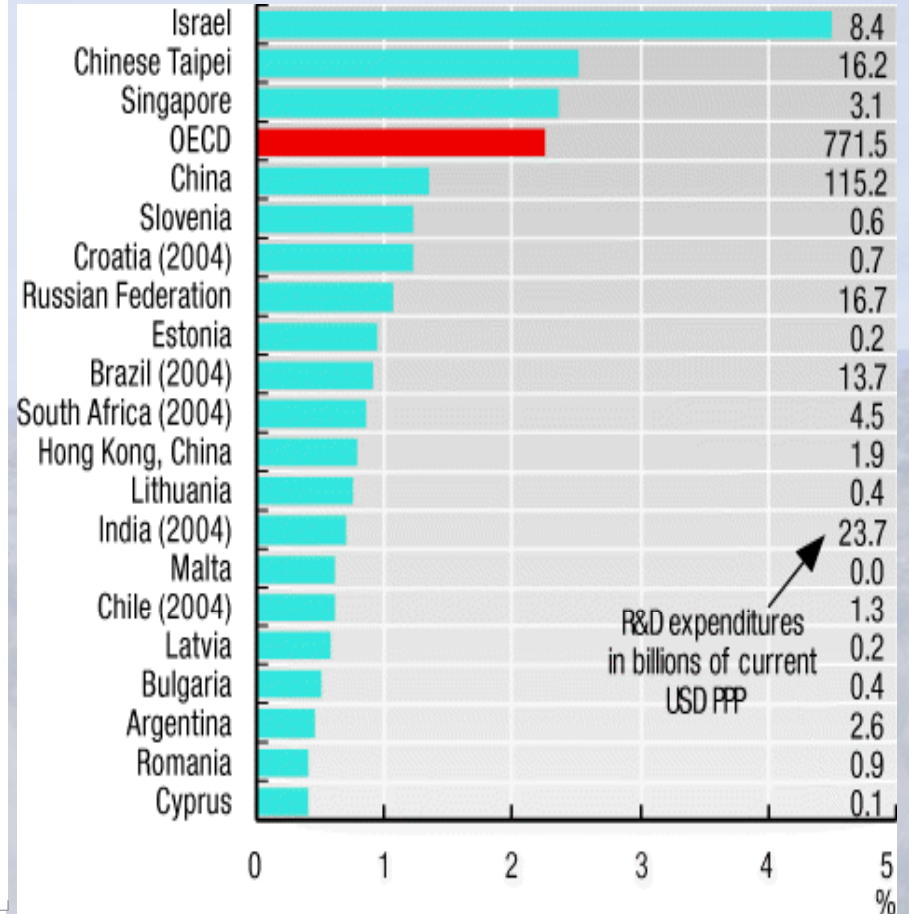
Technology Policy Issues

- Clusters approach
- Techy Diffusion/communication
- Learning approach
- sci/tech- NIS approach
- pub vs. private sector leadership
- fragmentation of global production platforms
- s&t: educational issues
- s&t: issues of multinationals and tech transfer
- s&t: key technologies + key industries + key educ competency areas



Gross expenditure on R&D (GERD), 2005

As a percentage of GDP, in billions of current USD PPP



Source: oecd 2007 STI Scoreboard

Discussion

- What are Velho's basic findings? What are their implications?
- Is the emphasis on s&t misplaced? S. we emphasize instead, basic needs, and grass-roots initiatives?
- What policies are appropriate for different LA states? Think of some examples about how your strategy would differ depending on the state.