

# The East Asian Miracle

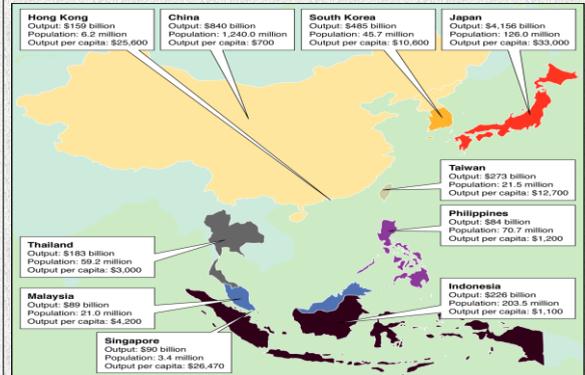
## Economies of East Asia ECON 377

### The East Asian Miracle



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## East Asia (1997)



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## What Went On In East Asia: From Miracle to Meltdown

From the perspective of international economics and business, the defining event of the 1990s decade has been the miracle and meltdown of East Asian growth, just like the Latin American debt crisis was in the 1980s and the oil shock in the 1970s

- ❖ What was the Latin American Debt Crisis?
- ❖ What do we mean by the Oil Shock?

We will briefly look at the concept of economic growth

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## Traditional View of Growth Process

- **Industry/manufacturing sector** grows, creates employment, offers higher wages, and draws labour from agriculture and low-productivity jobs in rural areas
  - share of employment in agriculture ↓
  - share of manufacturing and related services ↑
- **Productivity and farm size in agriculture** ↑  
Larger rural market expands demand for industrial products

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# The East Asian Miracle

## Economic Growth and Development

- What is the difference?
  - ◆ development includes improvements across several dimensions
    - 'quality of life': health, education, 'human rights' and political rights
    - income distribution
- Development and freedom to exercise choices:
  - ◆ Per capita income growth necessary but not sufficient

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## The Basic Model of Economic Growth

- Output or production (Q) is usually measured as Gross Domestic Product (GDP)
- Q depends on quantities of *factors of production* and *technology*  $Q = f(K,L)$
- For economies to grow, however, factors of production must increase and/or there must be technical progress (productivity growth)

$$Q = Af(K,L)$$

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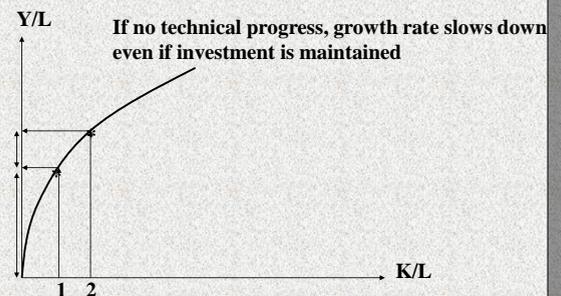
## Economists Look at Growth in Per Capita Output

- Why do we emphasise per capita output/income?
- If no technical progress, per capita output will grow only if:
  - ◆ Increase in per capita availability of factors of production
- If capital stock per capita  $\uparrow$ , output per capita  $\uparrow$ , but we have the 'law of diminishing returns'
- Thus, as capital stock per capita  $\uparrow$ , *rate of growth of per capita output falls*

*Can you give an example?*

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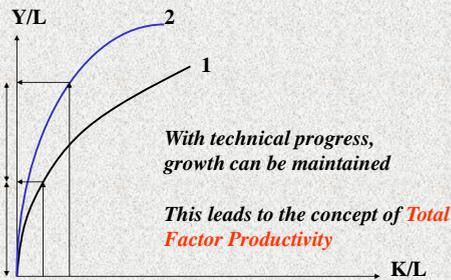
## Output Per Capita (Y/L) and Capital Per Capita (K/L)



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## Output Per capita (Y/L) and Capital per Capita (K/L)



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## Total Factor Productivity

$$\text{Total Factor Productivity (TFP)} = A = Y/f(K,L)$$

Basically, TFP is a 'catch-all' for anything that effects output other than K and L.

- ◆ Workweek of labor and capital
- ◆ Quality of labor and capital
- ◆ Regulation
- ◆ Infrastructure
- ◆ Competition
- ◆ Specialization
- ◆ Innovation
- ◆ Strategy (Entrepreneurial methods/new management techniques)

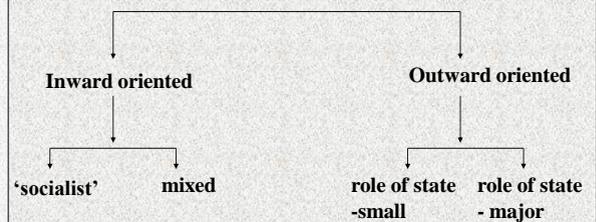
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## The Virtuous Circles of Economic Growth

- Decline in Population Growth
- Turn to Export Manufactures
- High Saving and Investment
- Declining Resource Costs
- Increases in Scale of Production
- Introduction of Technology

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## Development Strategies



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## Inward Oriented Strategies: Emphasis on Domestic markets

- Sources of growth:
  - ◆ Investment using domestic savings
  - ◆ labour released from agriculture provides workers for industry/manufacturing
  - ◆ technical progress, rely primarily on domestic innovations and 'purchased' foreign technology

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## Import Substitution

- Development of domestic industry to substitute for imports
- Trade barriers, subsidies, and exchange controls necessary to protect domestic producers: state intervention replaces market prices
- Benefits: short-cut, coordination, synergies
- Problems: low level of competition, "inappropriate" factor inputs, administrative costs, current account deficits, interest groups

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## Outward Oriented Strategies: Emphasis on Export Markets

### Trade policy is Critical: Why?

- export growth  $\Rightarrow$  funds to purchase foreign made capital goods and 'embodied' technology and other needed inputs

But trade policy is not the only important factor!

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## Export Orientation

- Development based on exploitation of comparative advantages
- Gradual diffusion of wealth to other sectors
- Benefits: foreign exchange, competition, technology transfer
- Problems: information, incomplete markets, market access, diffusion of benefits

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# The East Asian Miracle

## East Asia and the Asian Miracle

### The Asian Miracle

- **The four tigers: Hong Kong, Singapore, Korea, Taiwan**
  - ◆ 1970 - 1997 growth rates of 8%
  - ◆ Hong Kong and Singapore per capita output about equal to U.S.
- **Remaining Asian countries**
  - ◆ High growth rates 1970 - 1997
  - ◆ Per capita output was low but rising rapidly

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## Output Growth in East Asian Countries, 1990 - 1997

1970-1997 (in percent)

\*Data for other countries unreliable

Hong Kong	7.5
Singapore	8.2
Korea	8.4
Taiwan	8.3
Indonesia	6.8
Malaysia	7.4
Philippines	3.6
Thailand	7.5
China	9.1

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## East Asia: The Miracle

- **The East Asian Economic Miracle**
  - ◆ Until 1997 the countries of East Asia had very high growth rates as was shown.
  - ◆ What were the ingredients for the success of the East Asian Miracle? (General Consensus)
    - High saving and investment rates
    - Strong emphasis on education
    - Stable macroeconomic environment
    - Free from high inflation or major economic slumps
    - High share of trade in GDP

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## Roots of East Asian Development: States or Markets?

- **Increasing consensus that growth has largely been export-led (although several countries exhibit periods of import substitution)**
- **Disagreement about the relative role of state intervention and market signals.**

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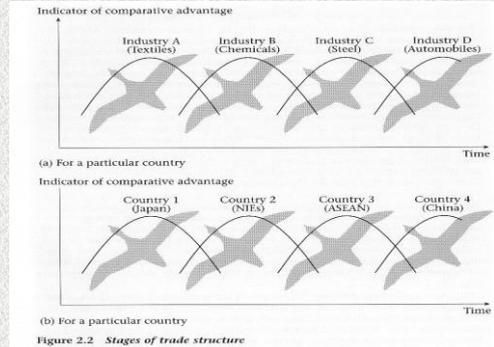
# The East Asian Miracle

## The Economic Environment (Development)

- Much of the East Asian success started from export-oriented strategies, benefiting from growth in the international economy since the 1950s.
- Wave of FDI in Asia (“Flying Geese Pattern”)
  - ◆ Japan→4 Tigers→3 NIEs→China→(?)
  - ◆ As each wave of development ensued it displaced exports of prior wave, compelling restructuring.
    - Internal causes: exchange rate appreciation, wage increases, ...
    - Restructuring: labor intensive→capital intensive→knowledge

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## Flying Geese Model of Trade Structures in East Asia



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## “Asian Dynamism”

- Geographic diffusion of industrialization
- Within each country, industrialization proceeds from low-tech to high-tech
- Clear order and structure (with a possibility of re-formation)
- Specialization on comparative advantage
- Requires successive stages of comparative advantage
- Supported by export subsidies which are only given temporarily

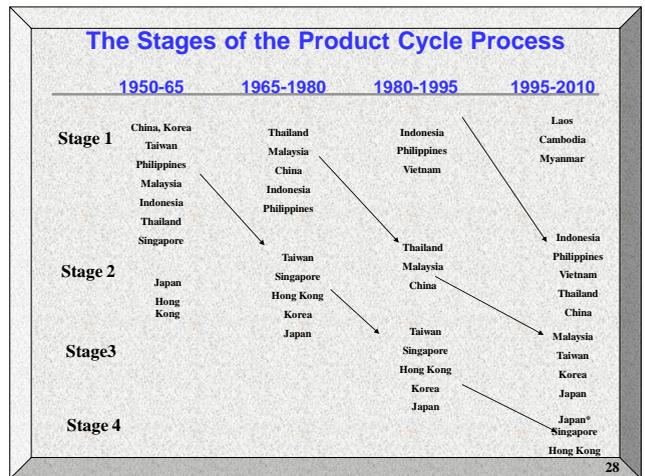
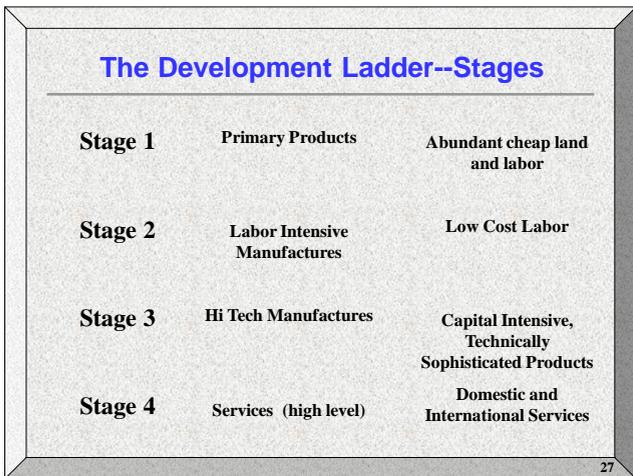
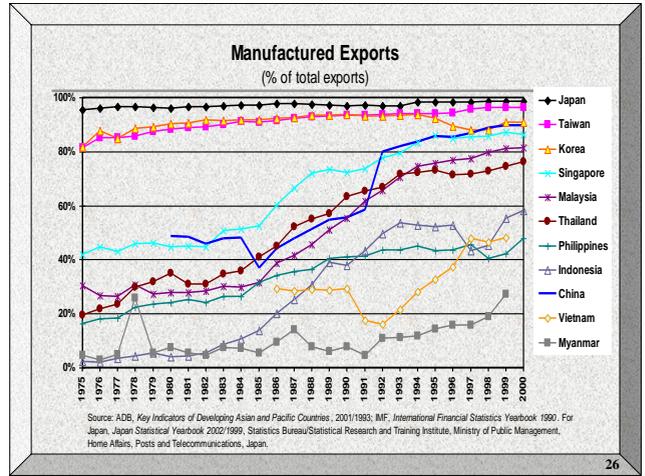
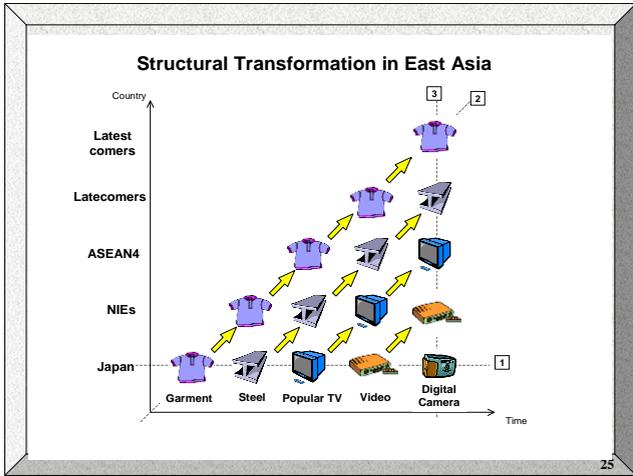
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## Successive Stages of Comparative Advantage in East-Asian Trade Structure

- 1) Primary import-substitution: replace labour intensive manufacturing imports with domestically produced goods
- 2) Primary export-“substitution”: replace agricultural exports by labour-intensive manufacturing exports
- 3) Secondary import-substitution: production of intermediate and capital goods for domestic market
- 4) Secondary export-“substitution”: shift from labour-intensive to capital- and knowledge intensive production

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# The East Asian Miracle



# The East Asian Miracle

## Fundamentalists and Assimilations

Economists attempting to understand the sources of East Asia's growth tend to fall in 2 camps: Fundamentalists and Assimilationists.

- **Fundamentalists** (e.g. Paul Krugman): Growth was mainly input driven. The efficient allocation of resources played a big part in the success story. Input driven growth is not sustainable because there are limits to efficient resource allocation and because incremental growth in inputs is subject to diminishing returns. *What model can we use to explain this?*
- **Assimilationists** (e.g. Paul Romer): Growth was mainly driven by the acquisition and mastery of technology and the capacity to put ideas into practice. *What model can we use to explain this?*

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## Paul Krugman's Classic Article on Asia

Summary:

Pundits point to the awesome growth of East Asia's economies and fret that the West cannot compete. But there is nothing miraculous about the successes of Asia's "tigers." Their rise was fueled by mobilizing resources - increasing inputs of machinery, infrastructure, and education - just like that of the now-derided Soviet economy. Indeed, Singapore's boom is the virtual economic twin of Stalin's U.S.S.R. The growth rates of the newly industrialized countries of East Asia will also slow down. The lesson here for Western policymakers is that sustained growth requires efficiency gains, which come from making painful choices.

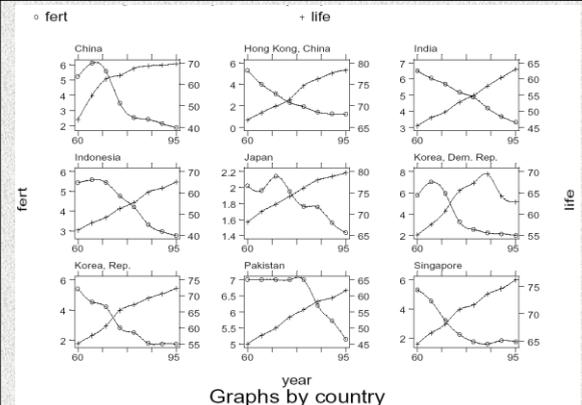
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## We Cannot Forget the Importance of Demographic Transition

- **Demography:**
  - ◆ Changes in birth and death rates and life expectancy  $\Rightarrow$  changes in population growth rate: low to high to low (even falling) - 'demographic transition'

What are the Implications?

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# The East Asian Miracle

## The East Asian Miracle ~ Explanation According to the World Bank

“getting the fundamentals right”, with highly selective interventions”

### Fundamental

- Macroeconomic stability
- High investments in human capital
- Stable and secure financial systems
- Limited price distortions
- Agricultural development
- Openness to foreign technology

### Selective

- Mild financial repression
- Directed credit
- Selective industrial promotion
- Export-push trade policies

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## Causes of the Miracle: Public Policy (World Bank Report)

- Rapid Accumulation (of human & physical capital)
  - ◆ Developing human capital
    - Primary and secondary education was emphasized
    - Tertiary education funds mostly for hard sciences
    - Female literacy → more workers, lower fertility rates
  - ◆ Creating effective and secure financial systems
    - Increased savings: (including “forced” savings)
      - promoted by the integrity and accessibility of postal banks
    - Increased investment:
      - investment-friendly environment; creating infrastructure
      - easy credit through “financial repression”

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## Causes of the Miracle: Public Policy (World Bank Report)

- Efficient Allocation of capital
  - ◆ Letting markets work: flexible labour markets
    - governments less responsive to organized labour
      - Productivity-driven wage rises, even downward
      - No minimum wage
    - emphasis on creating jobs; high employment levels
  - ◆ Assisting the market: credit for priority areas
    - Industrial policies: targeting winners
      - criteria: growth, productivity, spillover
    - Credit directed against strict performance criteria
      - “contests”, thru deliberative councils
    - Most subsidy small, but a signal to capital markets.

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## Causes of the Miracle: Public Policy (World Bank Report)

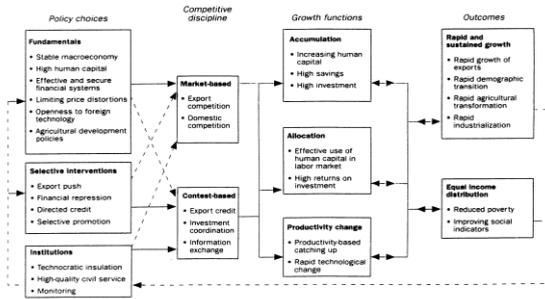
- Technology catch-up and high productivity
  - ◆ actively seeking foreign technology
  - ◆ industrial policy promoted high-tech sectors
  - ◆ encouraging exports
- other special features of East Asian growth
  - ◆ the principle of shared growth
  - ◆ macroeconomic stability
  - ◆ cooperative competition (led by technocratic elite)
    - business-friendly environment, led by private investment
    - state interventions addressed market failures
      - allocated by “contests”

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# The East Asian Miracle

## World Bank (1993), *East Asian Miracle, Economic Growth and Public Policy*, Washington D.C.

### A Functional Approach to Growth



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## The Role of Policy

- Macro Policies For Stability
- Basic Government Services
  - ◆ Infrastructure investment
  - ◆ Education and technology
  - ◆ Environmental Policies
  - ◆ Legal Structure and Property Rights
  - ◆ Supervision of Banking System
- Selective Industrial Policies

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## Investment and Technology: Role of Foreign Capital

- Foreign direct investment (FDI)
- International capital market and investment capital
- Global sources of technical progress: technology transfer

*What is the role of each?*

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## Human Capital and Social Capital

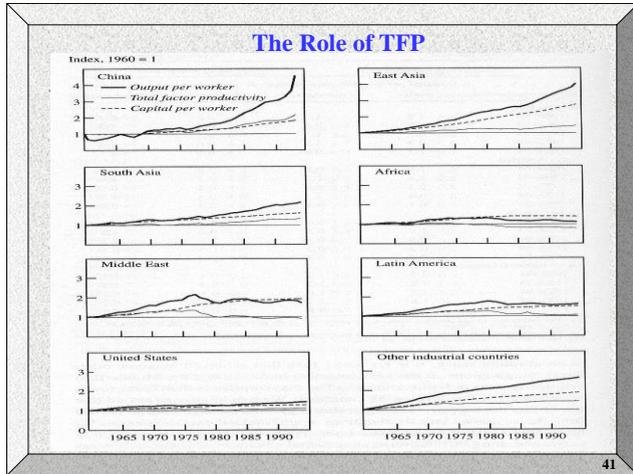
- Capital should include *human capital*, not only tangible objects
- Also, there is evidence that *social capital* contributes to growth

*What is meant by social capital?*

<http://www.nber.org/papers/w5470>

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# The East Asian Miracle



- ### The Role of Government
- East Asian countries adopted sound fundamental policies.
- Control inflation
  - Manage internal and external debts
  - Resolve macroeconomic crises quickly
  - Invest in education
  - Maintain stable and secure financial systems
  - Limit price distortions
  - Open up to foreign trade and investment
  - Promote exports
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- ### The Role of Openness
- An outward-oriented policy has long been seen as a centrepiece of East Asia's economic success.
- Integration into the world economy provides firms to access to a large variety of goods and services which embody new technologies.
  - It enables a country to adopt or adjust foreign technologies for domestic uses. By doing so, a country's productivity in imitation and innovation will be enhanced.
  - Exposure to international competition may bring about higher-quality products and alleviate duplication of R&D efforts.
  - More open economies can take advantage of larger markets, increasing their degree of efficiency (economies of scale) and their rates of growth.
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- ### Was East Asian Growth Miraculous?
- Yes
    - ◆ Growth was very rapid (more than 7% p.a.)
    - ◆ A large productivity factor (4-5% p.a.)
    - ◆ Obvious shifts to advanced technology
  - No
    - ◆ Krugman--input based growth and diminishing returns
    - ◆ Not if we take into account the contribution of knowledge and the interaction between investment and technology
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# The East Asian Miracle

## Was Government Policy Responsible for the East Asian Miracle?

### ■ No -- Neoclassical - Free Market

"Just get prices right" "Growth would have been even faster if reforms had enabled intervention to be reduced."

### ■ Yes -- Revisionist, - State-Led

The Developmental State" "the existence of a state apparatus..that used its power to pursue the goals of military strength and national economic wealth.

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## Was Government Policy Responsible for the East Asian Miracle?

### World Bank

■ "Fundamentally sound development policy was a major ingredient in achieving rapid growth:..Macro management, saving promotion policies, education, agricultural productivity, .. But these do not tell the whole story. Government intervened..targeting selected industries, promoting exports, low interest rates, protecting certain industries,.. ..rapid growth has at times benefited from careful policy intervention

■ ..the promotion of specific industries generally did not work.... The fact that interventions were an element of some East Asian economies' success does not mean that they should be attempted everywhere."

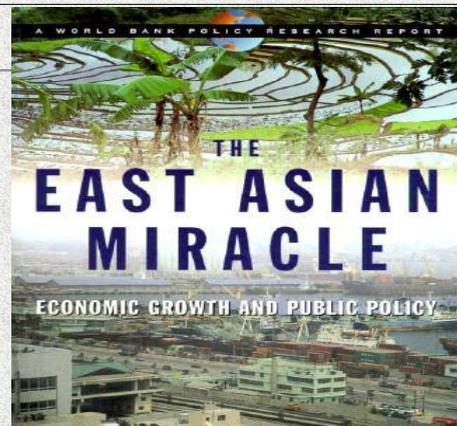
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Joseph Stiglitz on East Asia: Governments in East Asia recognised limitations of markets but confined the governments' role to:

- Ensure macroeconomic stability
- Make markets more effective, for example, by regulating financial markets
- Creating markets where they did not exist
- Helping to direct investment to enhance growth and stability
- Create atmosphere conducive to private investment and ensure political stability

<https://www.globalpolicy.org/global-taxes/42760-what-i-learned-at-the-world-economic-crisis.html>

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