### Industrial Development Lessons from East Asia

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### Good news for you!



- Japan is in trouble!
- Loosing the global competitiveness edge
- Huge cumulative national debt
- Because of the past success
- Slow, weak and fragmented leadership. The
   Prime Minister changing in every 6 month



### We have to learn each other

A pessimist sees the difficulty in every opportunity

An optimist sees the opportunity in every difficulty

(by Sir Winston Churchill)





### This is Hiroshima in 1945



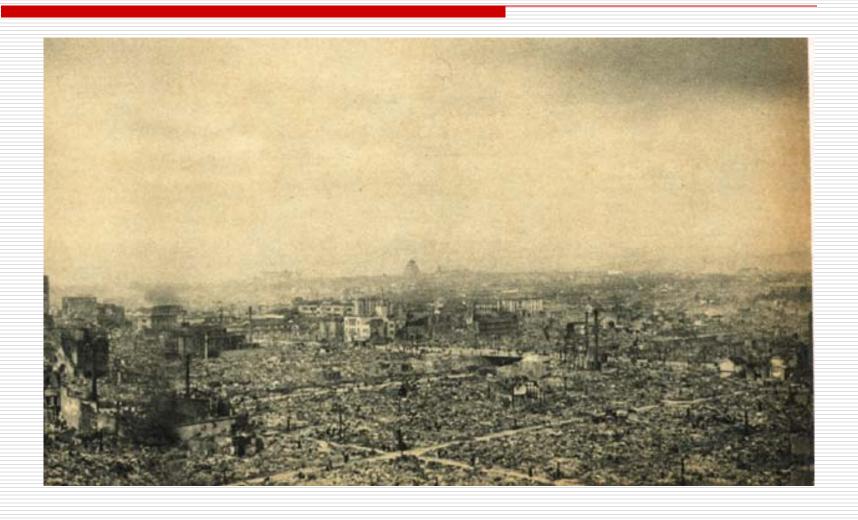


### Who could have imagined this recovery?



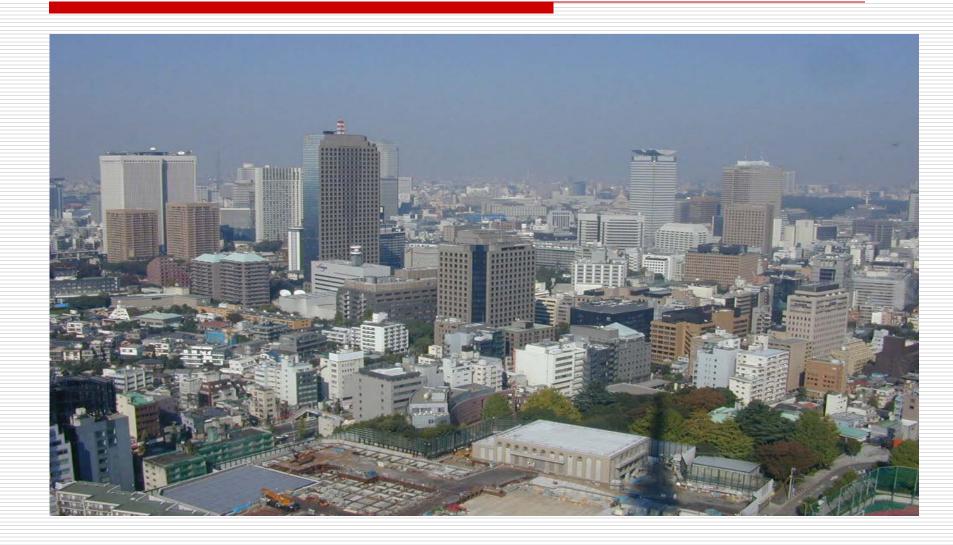


### This is Tokyo in 1945





### Who could have imagined this recovery?



### Japan's GDP per capita in 1950, Only a half of European Countries

R

Now the second largest economy in the world

	1929	1950	1987
France	2629	2941	9475
W. Germany	2153	2508	9964
Italy	2089	2323	9023
Japan	1162	1116	9756
UK	3200	4171	9178
US	4909	6697	13550
Philippine	1091	898	1519
S. Korea	749	564	4143
Argentina	2036	2324	3302
Brazil	654	1073	3417
Chile	1928	2350	3393

## Impossible to level up evenly Choose and Focus:



- Steel, Coal, Shipbuilding and Chemical (fertilizer in particular)
- Unexpectedly, the Japanese government chosen the heavy rather than the light industries!
- The light industries had a comparative advantages

### The logic of the Prioritization



- The committee was consisted of the neutral professionals. Professors, bureaucrats, industrialists, politicians and others.
- The goal was to rebuild Japan quickly.
- The complementary: The chosen industries were set to support each other. The virtuous circle
- The industrial policy was not the social welfare policy. The chosen industries must be internationally competitive.

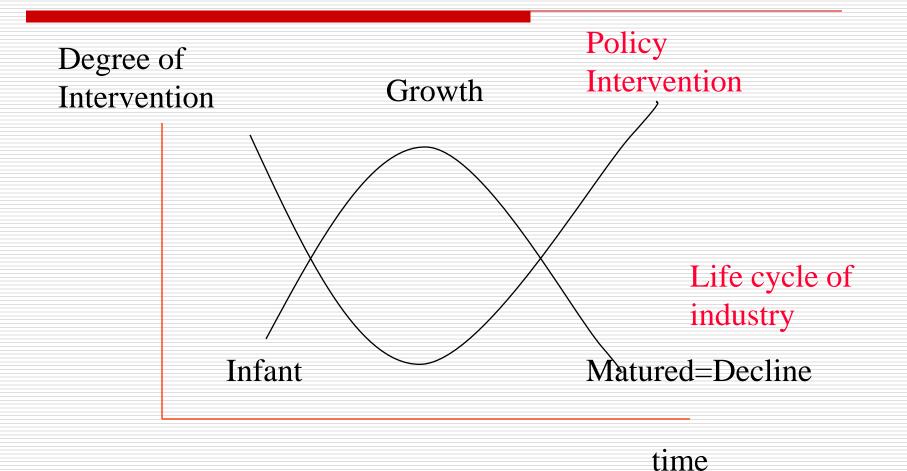
### (1) Competition First!

-A fierce competition in the domestic market

- No national champion How many automobile, computer, electronics, and steel companies in Japan?
- A competitive private firms make the industrial policy work
- Government tends to underestimated private power When Honda tried to enter the automobile, when Fujitsu tried to develop its computers, the Japanese government opposed!
- Only crazy entrepreneurs can change the World!

## (2) Intervention by Phases Over protection doesn't work

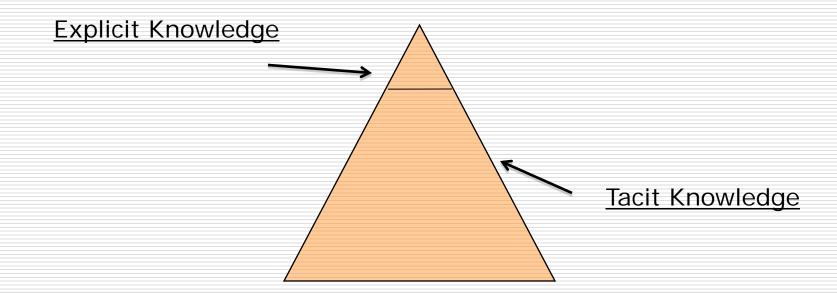






### (3) Knowledge sharing and creation

- A man knows more than what he can say.
- □ Tacit Knowledge versus Explicit Knowledge



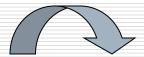
## Middle management as a knowledge creator (Dr. Nonaka)

- No top-down, No bottom-up
- Middle up-and-down management

Top management shows a vision



Middle management makes them into concrete goals Middle management gives feedback to the top

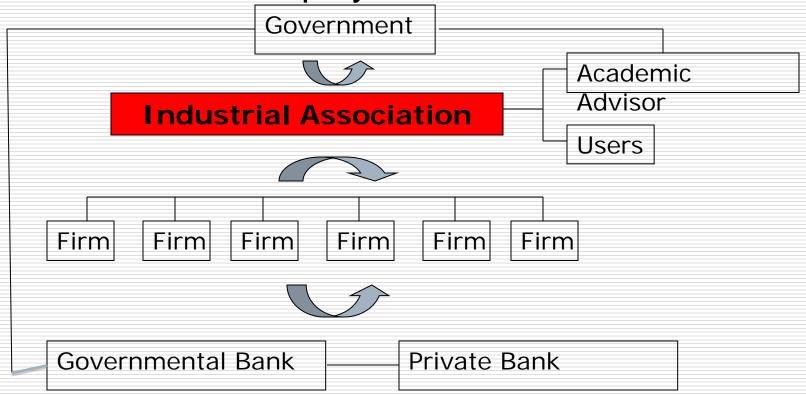


Lower management and workers make it happen



## An Industrial Association as a knowledge creator

It plays a middle up-and-down function. Consisted of various players



## It must be useful to know How Singaporean government serves

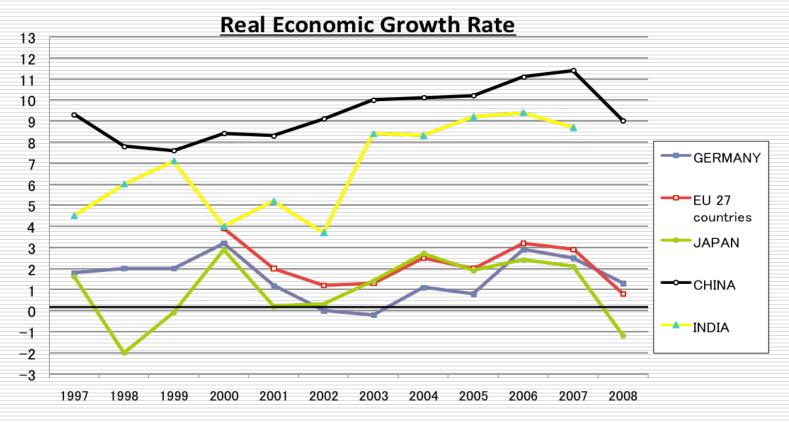
- A small and no natural resource country
- ☐ The global business is the only asset

# Gonventional government government bureaucrats industries bureaucrats firms government government bureaucrats government



### Where is the future growth?

### China and India



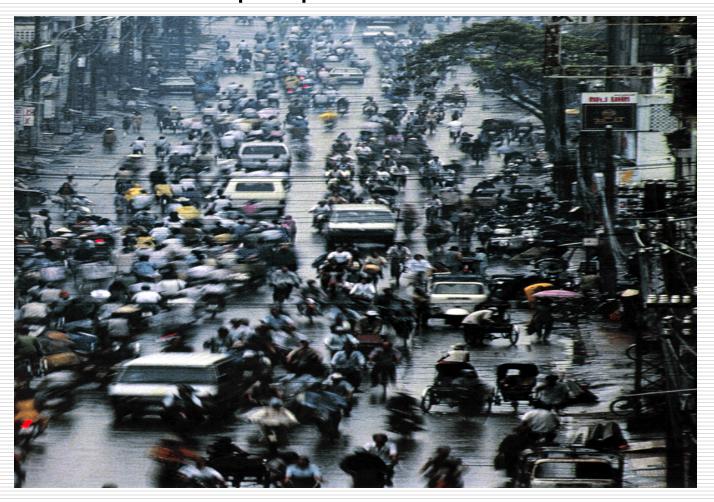
Refer to "Real GDP growth rate" by Eurostat and http://www.stat.go.jp/data/sekai/03.htm#h3-05 on Statistics Bureau of Ministry of Internal Affairs and Communications,

Japan



### However, is this sustainable?

□ If a whole Asian people drive their cars





### Can we save his life?





### Future of Iceland?

- 1. Asia meets West here in Iceland
  - A bridge between Europe and China
- 2. Environmental technology:
  - Renewable Energy (Hydro and Geothermal)
- 3. Green tourism: A tourism is an export
  - It was awful. A lot of homework



### Education and mindset

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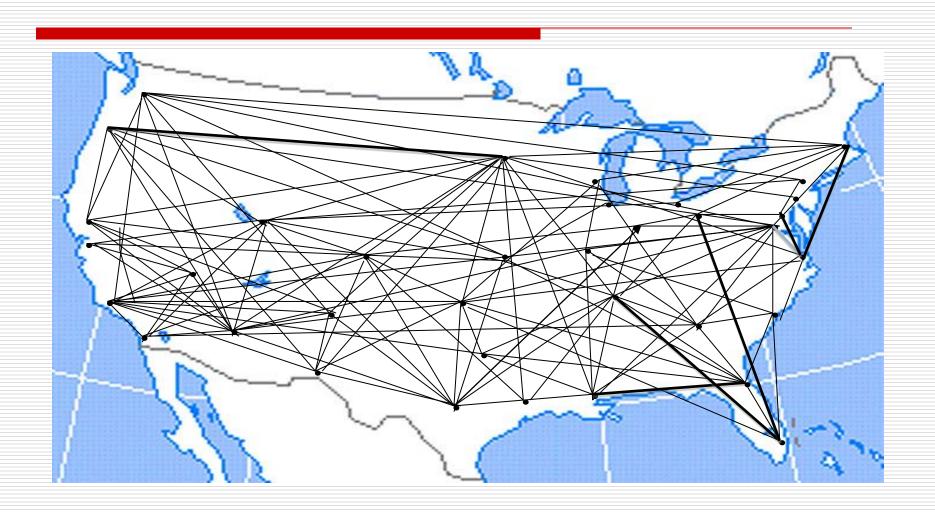


### A junior at Yale University wondered



## How many airplanes needed for the next morning delivery?

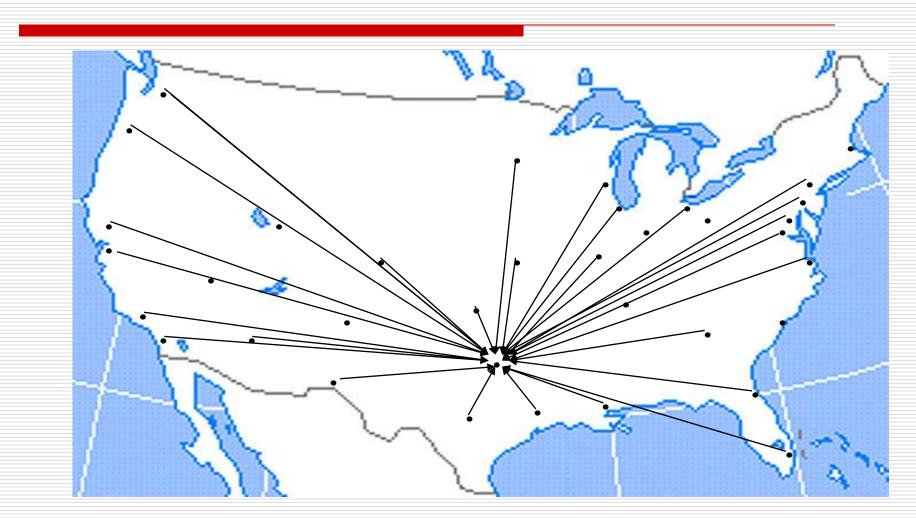




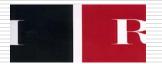
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### 149: Hub & Spoke Strategy



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## "The Perpetual Motion" Toto's "Aqua Auto Eco"



### Small but Great Innovation





### Solar School has just started





Decentralized System is necessary









### The "Keiretsu" Innovation



-Assembler and Suppliers Work Together-

In 1990, Toyota and GM (passenger cars)

Toyota: 4 million GM: 5 million

Toyota: ? GM: 770,000

■ Toyota: 78,000 GM: 770,000

■ Toyota: 30% GM: 70%

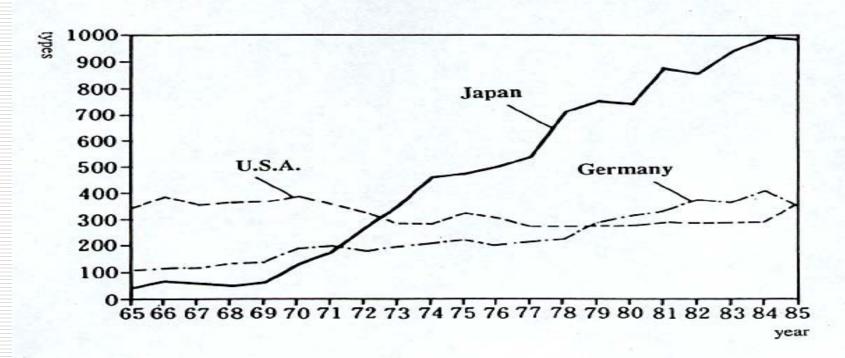
- Group Manufacturing vs. Vertical Integration
  - Co-existence of competition and cooperation

## "Just-in-Time" The Competitive Advantage



Small lot and Wide variety

Figure 2 Transition of automobile types



source: World Car Catalogue