

**4<sup>th</sup> ANQ Congress Singapore 2006**

**Sense of Crisis and Leadership  
Encourage People Sweat for Quality  
- Let's Review the Economic Development in Asia**

**2006/9/26**

**Singapore**

**Dr. Noriaki Kano**

*Professor Emeritus, Tokyo University of Science  
Honorary Chairperson, Asian Network for Quality*

# **Profile of Dr. Noriaki KANO**

(as of August, 2006)

**Dr. Kano is:**

- **Professor Emeritus, Tokyo University of Science**
- **Corporate Auditor of Sekisui Chemical Ltd.**
- **Honorary Chairperson, Asian Network for Quality (ANQ)**
- **Vice President of International Academy for Quality (IAQ)**
- **Adjunct Chair Professor, Chung Yuan Christian University**
- **Chairman, Deming Application Prize Committee**
- **Board Member of Japanese Union of Scientists and Engineers (JUSE);**
- **Fellow of American Society for Quality (ASQ)**
- **Advisory Professor, Tongji University( Shanghai, China)**
- **2000-2002 President, Japanese Society for Quality Control (JSQC)**

**Dr. Kano obtained Bachelor, Master and Doctor Degrees of Engineering from the University of Tokyo and Honorary Doctorate from Chung Yuan Christian University (Taiwan).**

**Dr. Kano authored:**

- **over 300 papers including “Attractive Quality”(Kano Method / Kano Model)” and**
- **nearly 40 books/ videos including “Guide to TQM in Service Industries” (in English) and “Way to Breakthrough and Creation” (in Japanese).**

**He is well known in the quality world as the creator of Attractive Quality (Kano Model) as well as Task Achieving QC Story.**

**Dr. Kano has, both domestically and internationally, been frequently invited/dispatched as lecturer by universities, international or national quality societies including ASQ, EOQ and JUSE and firms in over 40 countries..**

**Dr. Kano is the recipient of:**

- **2004 Harrington/Ishikawa Medal (Asia Pacific Quality Organization) and many others.**
- **2002 E. Jack Lancaster Medal by American Society for Quality (ASQ)**
- **1997 Deming Prize for Individuals by Deming Prize Committee (JUSE)**
- **The 1997 Deming Lecturer by American Statistical Association (ASA)**

**Dr. Noriaki Kano was retired from Tokyo University of Science (TUS) and University of Electro-Communications, Tokyo, after 35years dedication to professorship.**

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People Sweat for Quality ”**

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address: Kano Quality Research Office

Fax: +81 42 371 2800

e-mail: [nkano@kqro.jp](mailto:nkano@kqro.jp)

# **Keynote Speech for Conference Theme:** **"Towards Total Organization Excellence (TOE)"**

This theme is so wide and deep that  
any single presentation cannot cover all the aspects of this theme.

In my presentation, I will try to cover  
**its basic requirements for TOE.**

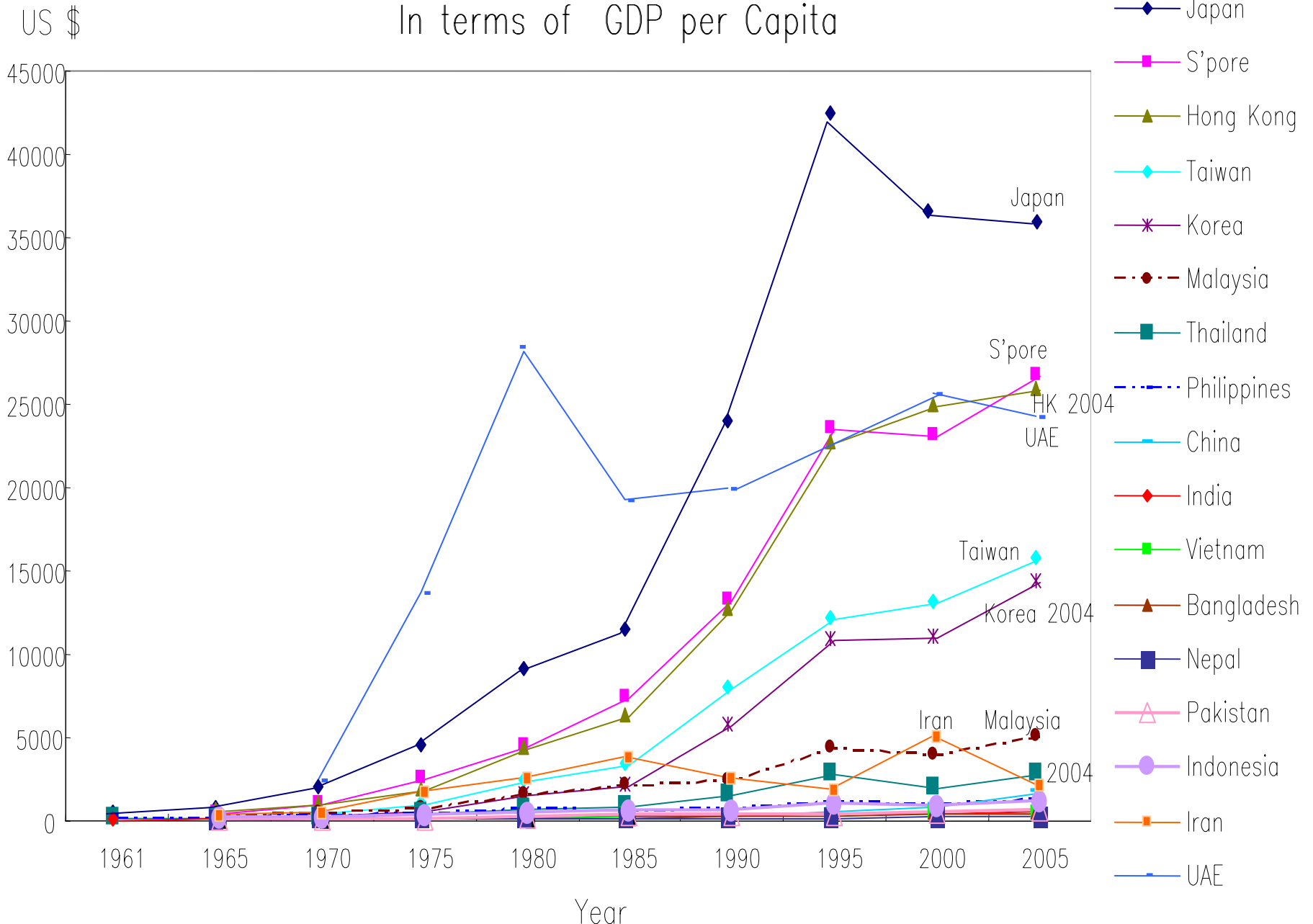
However, you can cover the wide aspects of TOE  
by listening to the great speakers who are following me,  
For example, you can hear very interesting story from  
**Mr. Masamitsu Sakurai, President of Ricoh.**

**Ricoh** is a very big company in Japan  
**with its annual revenue of nearly 20 Billion US dollars**  
and one of a few companies which  
**has already performed Total Organization Excellence.**

**Let's Review**  
**Economic Development in Asia**  
**in terms of GDP per Capita**  
**for the past 40 years**

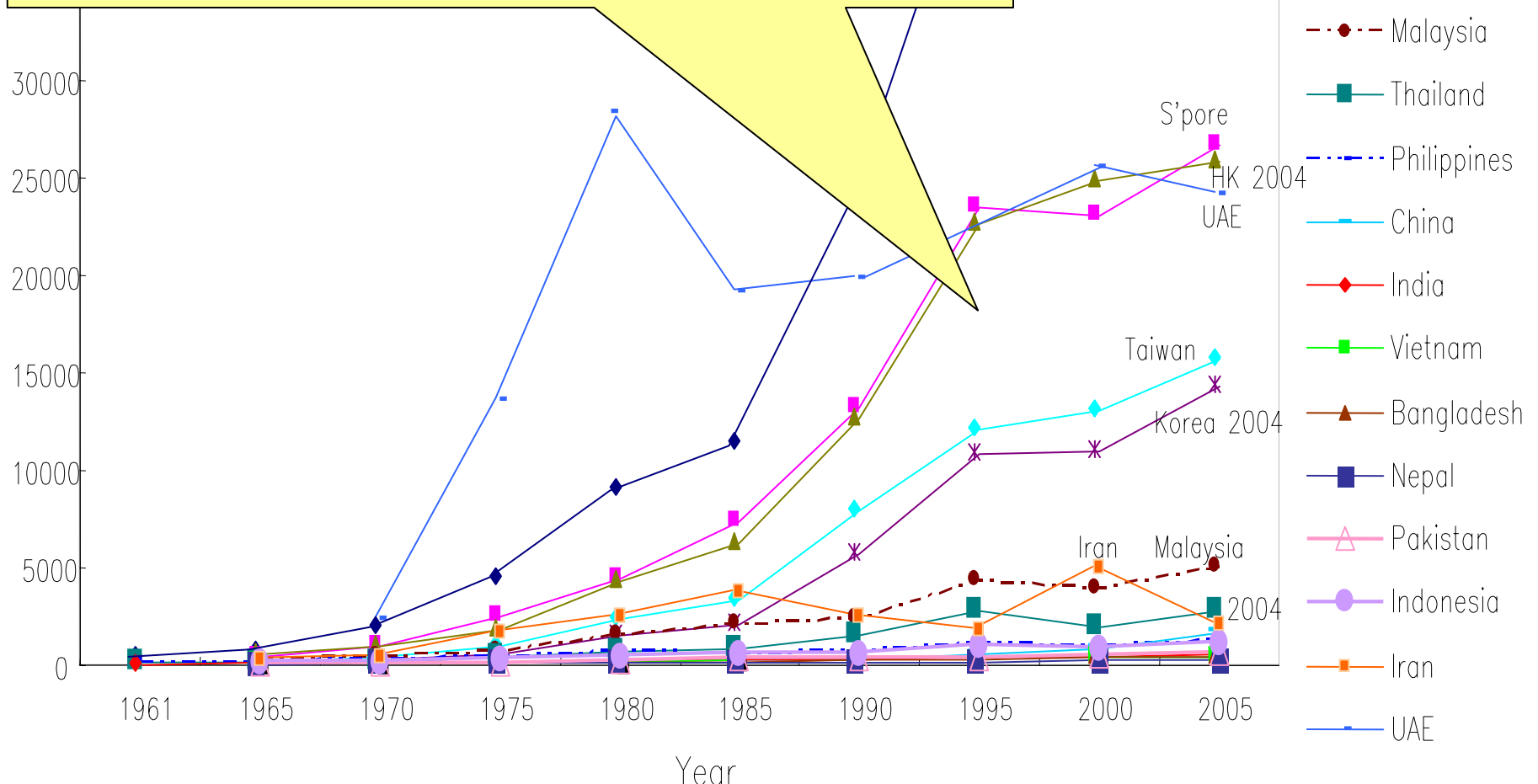
# Overview of the Economic Development in Asia

## In terms of GDP per Capita



## Very Diversified by country/region in:

- when economic development started
- which level of GDP per Capita has been attained



# Data Sources Used in this Paper

- 1) Data source of 1961; *Nihon Kokusei Zue* 1963, p. 70, *Kokusei-sha*
- 2) Data source of 1970.89; *Sekai Kokusei Zue* 1992-1993, *Kokusei-sha*, 1991, pp.148-153
- 3) Source of Asian Data for 1990.1992. *Asia Doko Nenpo* 1993, Asian Institute of Economics, 1993, pp. 6-7
- 4) Source of Western Data for 1990: Annual Report on National Accounts, Economic Planning Agency, Gov't of Japan, 1992.pp. 61-62
- 5) Data source of 1995; *Sekai no Tokei* 2003, Ed. By Statistics Bureau & Statistical Research and Training Institute, Statistics Bureau, 2003,pp102-103, Ministry of International Affairs and Communications
- 6) Data source of 2000; *Sekai no Tokei* 2006, Ed. By Statistics Bureau & Statistical Research and Training Institute 2006, pp74-75, Statistics Bureau, Ministry of International Affairs and Communications
- 7) Data source of 2000-2004 about United Arab Emirates; *Sekai Nennkan*, Kyodo Tsushinsha
- 8) Data source of 2005 ; From the website of Ministry of Foreign Affairs of Japan <http://www.mofa.go.jp/mofaj/area/index.html>



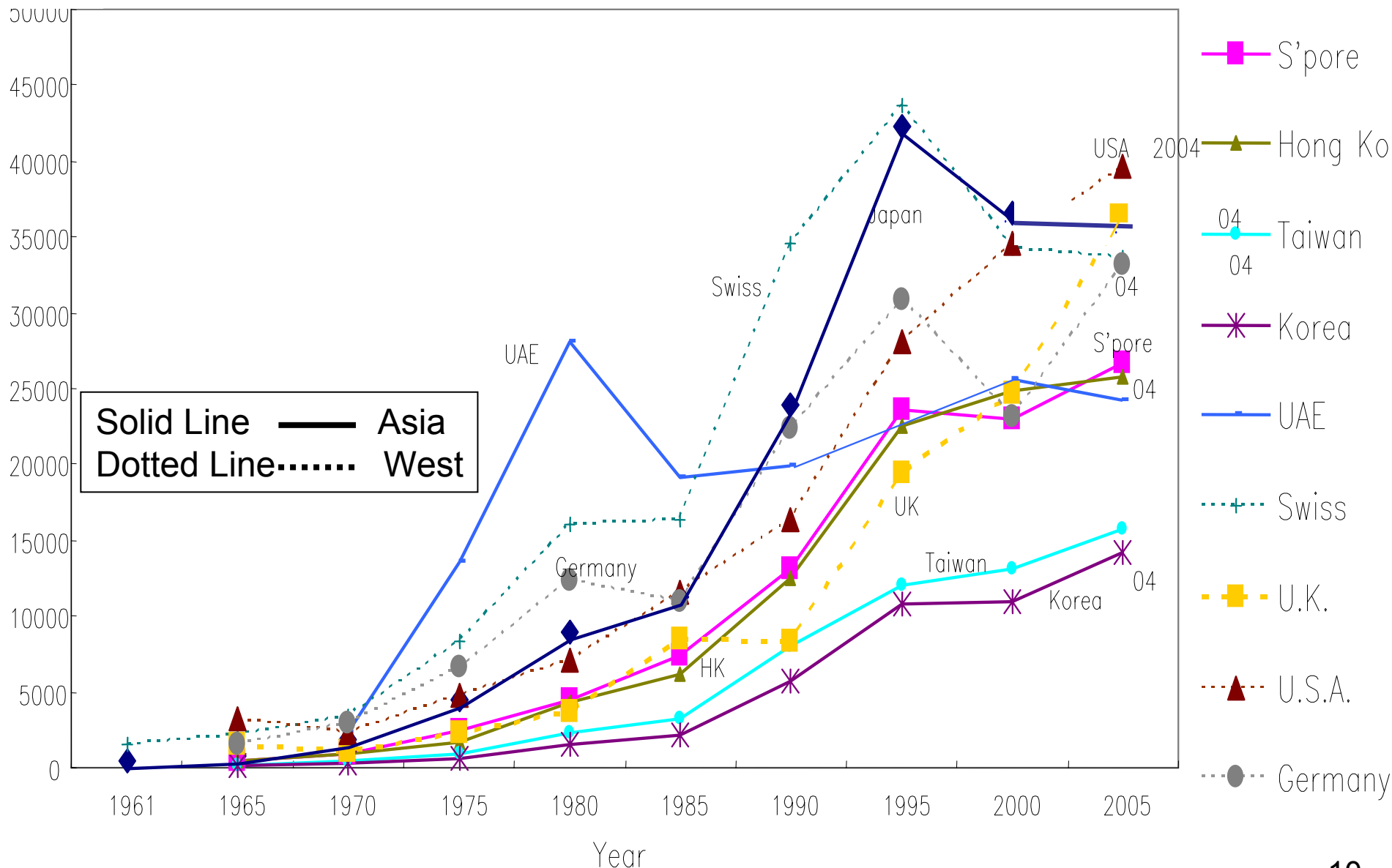
# Data Sources Used in this Paper

1) **We cannot find any single data source which covers GDP per Capita of all the countries/regions of ANQ Member Bodies for 40 years between 1965 through 2005.**

Therefore, we picked up the figures from the data sources listed in this slide.

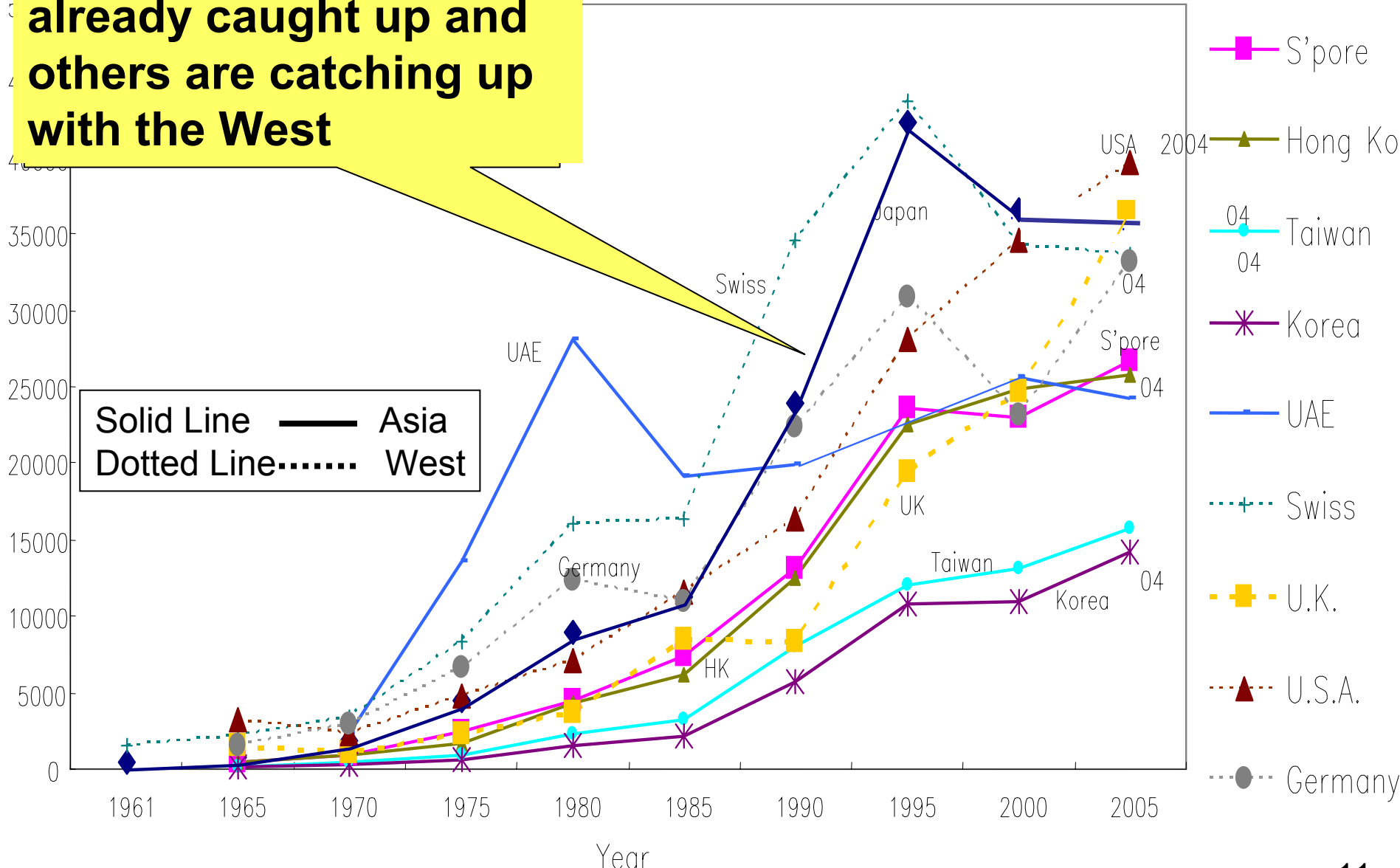
2) **Before 1995, GNP per Capita was more popularly used so that we use it as a substitute of GDP per Capita.**

# Let's Compare Early Developed Countries/Regions in Asia with Some Western Countries

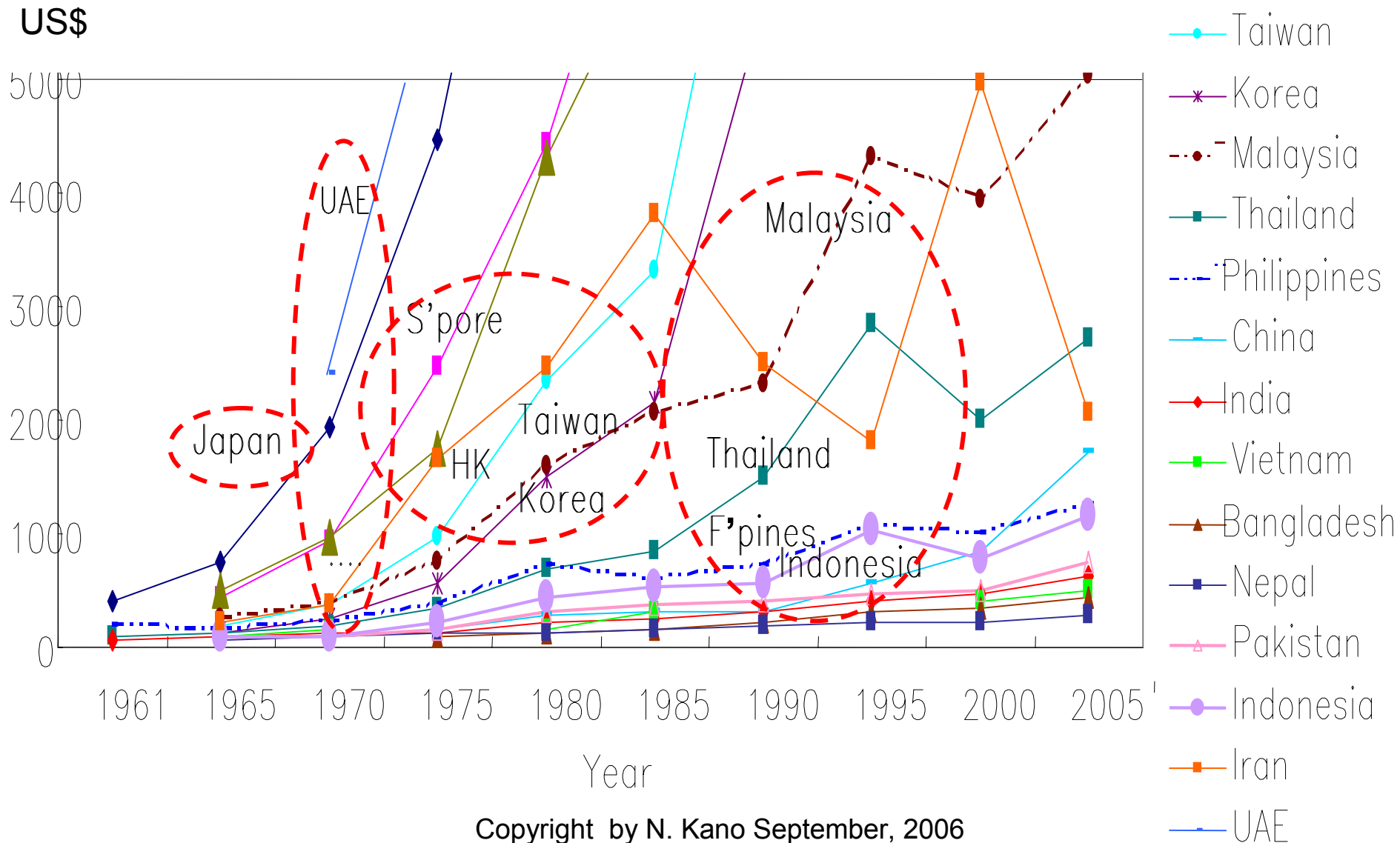


**Some early developed Countries/Regions have already caught up and others are catching up with the West**

## Developed Countries/Regions in Asia vs Western Countries



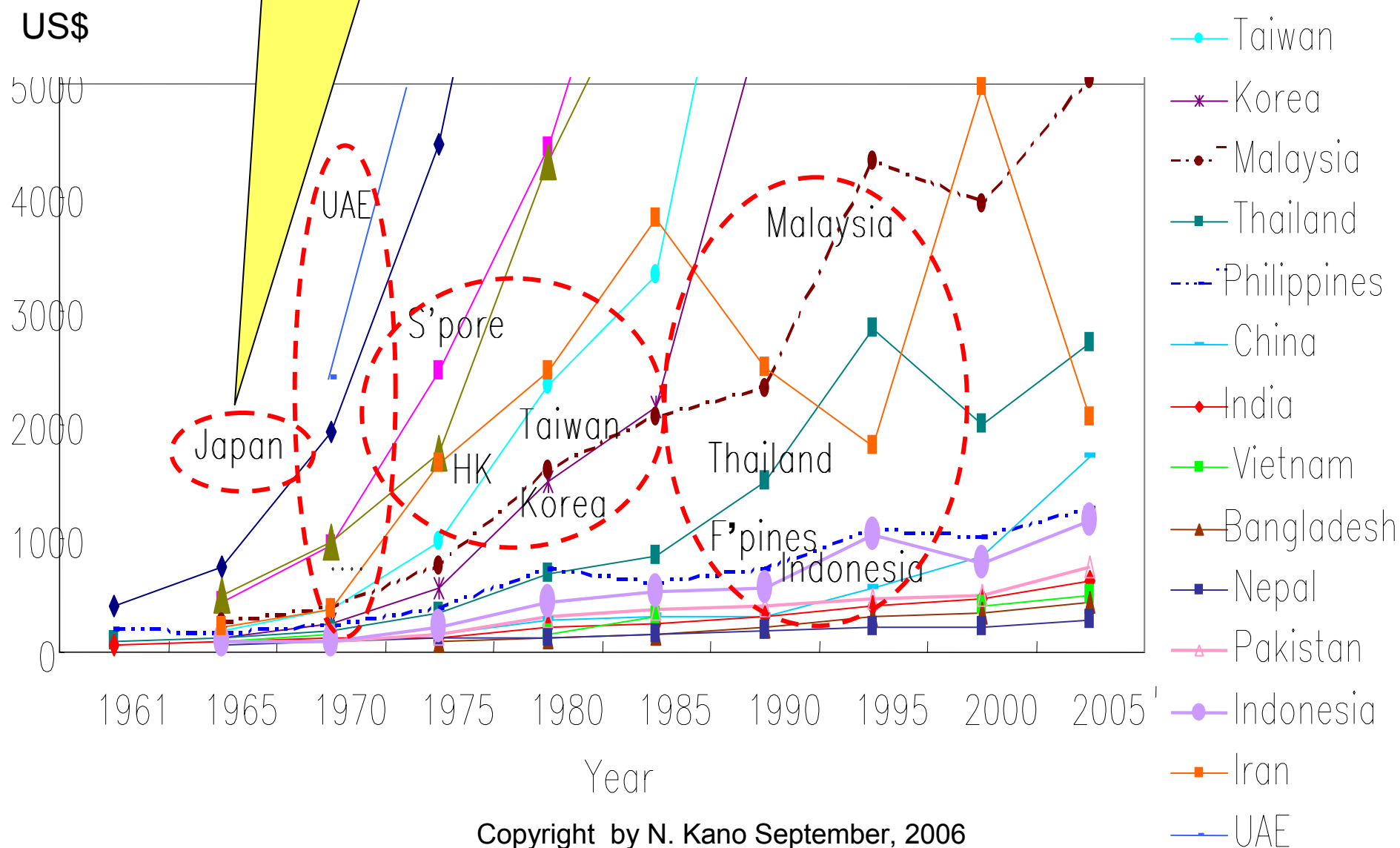
# When Did Asian Countries/Regions Start To Develop Their Economy?



**Mid 60s: First Industrially Developed in Asia such as:**

**Japan**

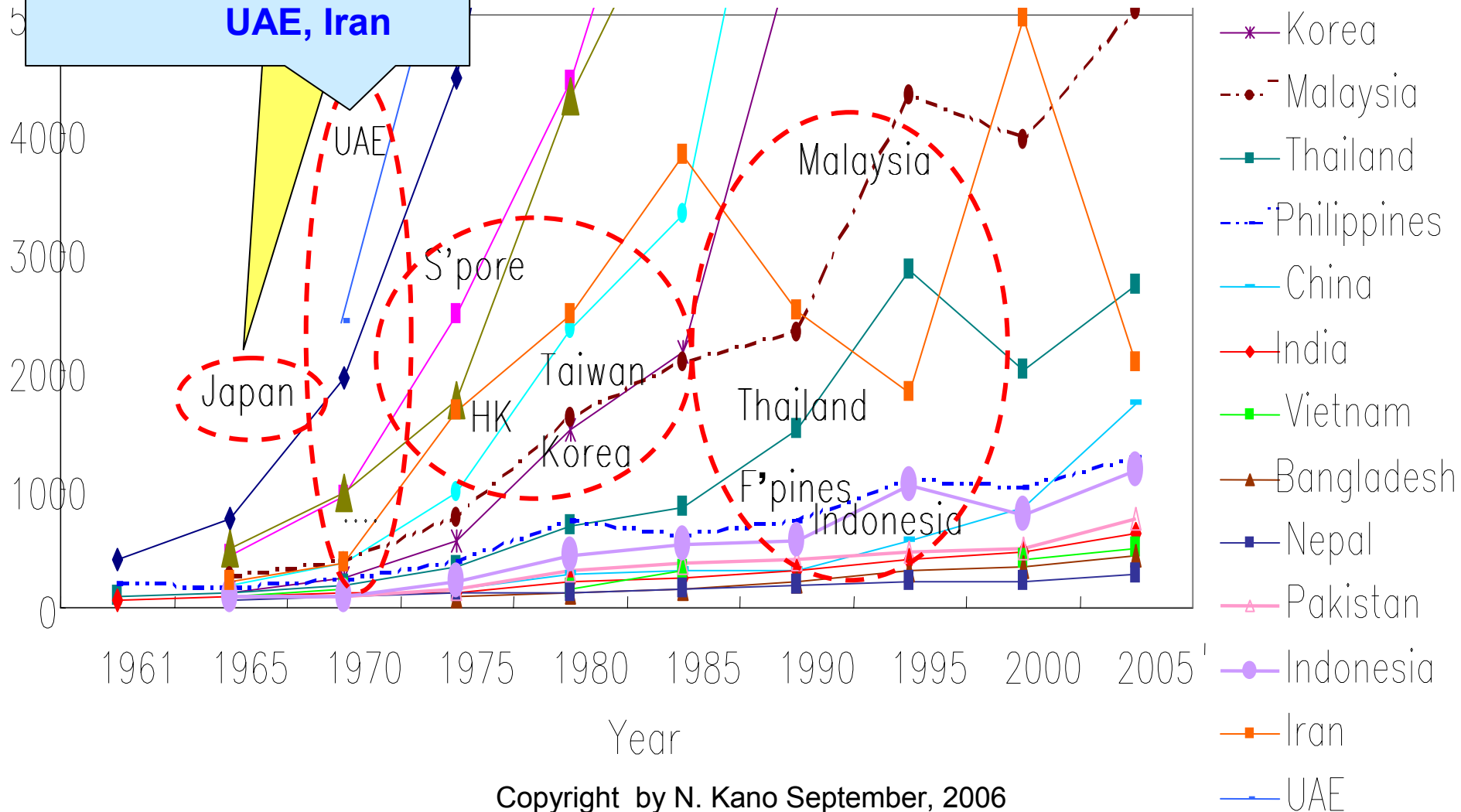
Asian Countries/Regions Start to Develop Their Economy?



**Mid 60s: First Industrially Developed in Asia such as:**  
Japan

**Early 70s: Oil Producing Countries such as:**  
UAE, Iran

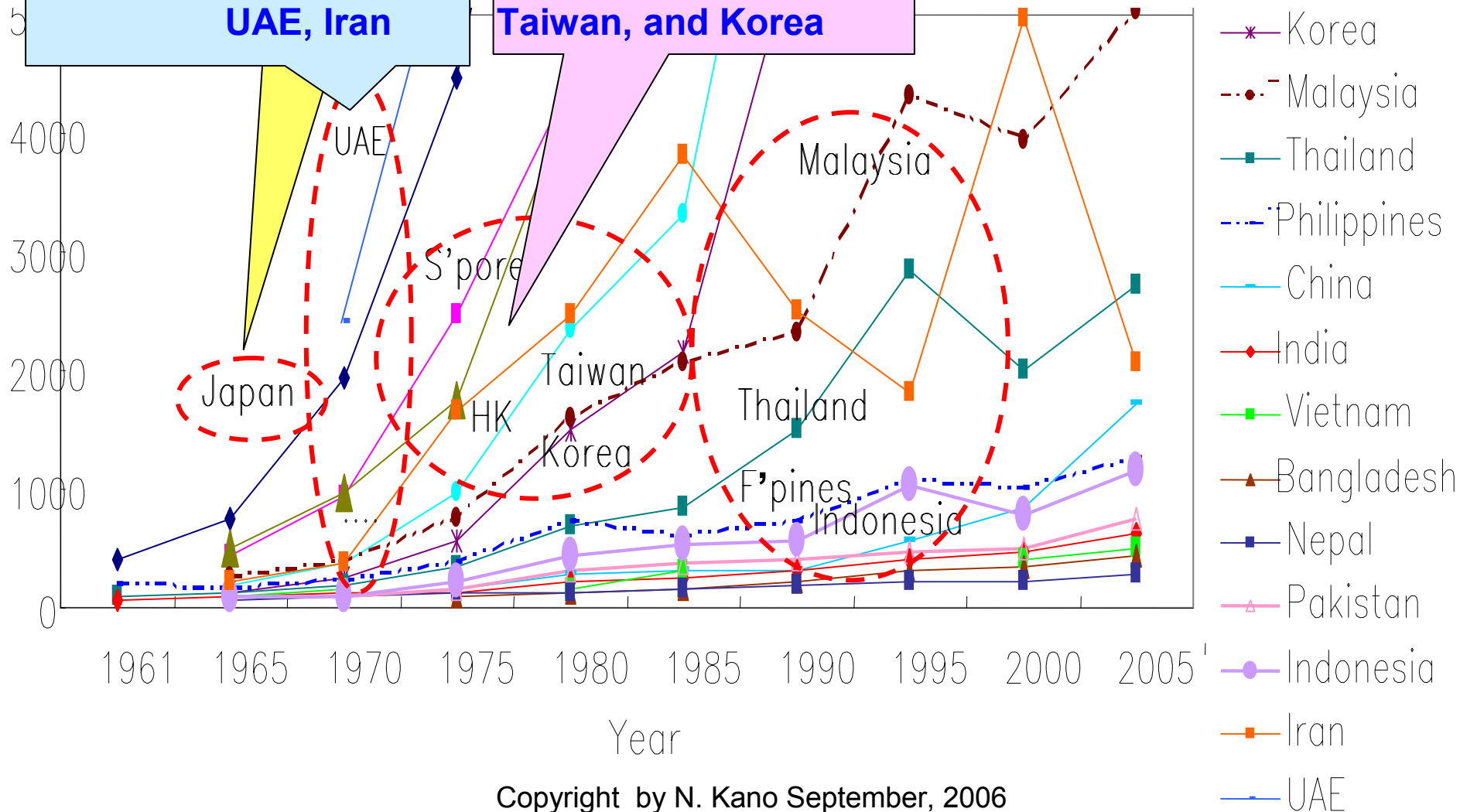
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**Mid 70s: Four Dragons such as: S'pore, H.K., Taiwan, and Korea**

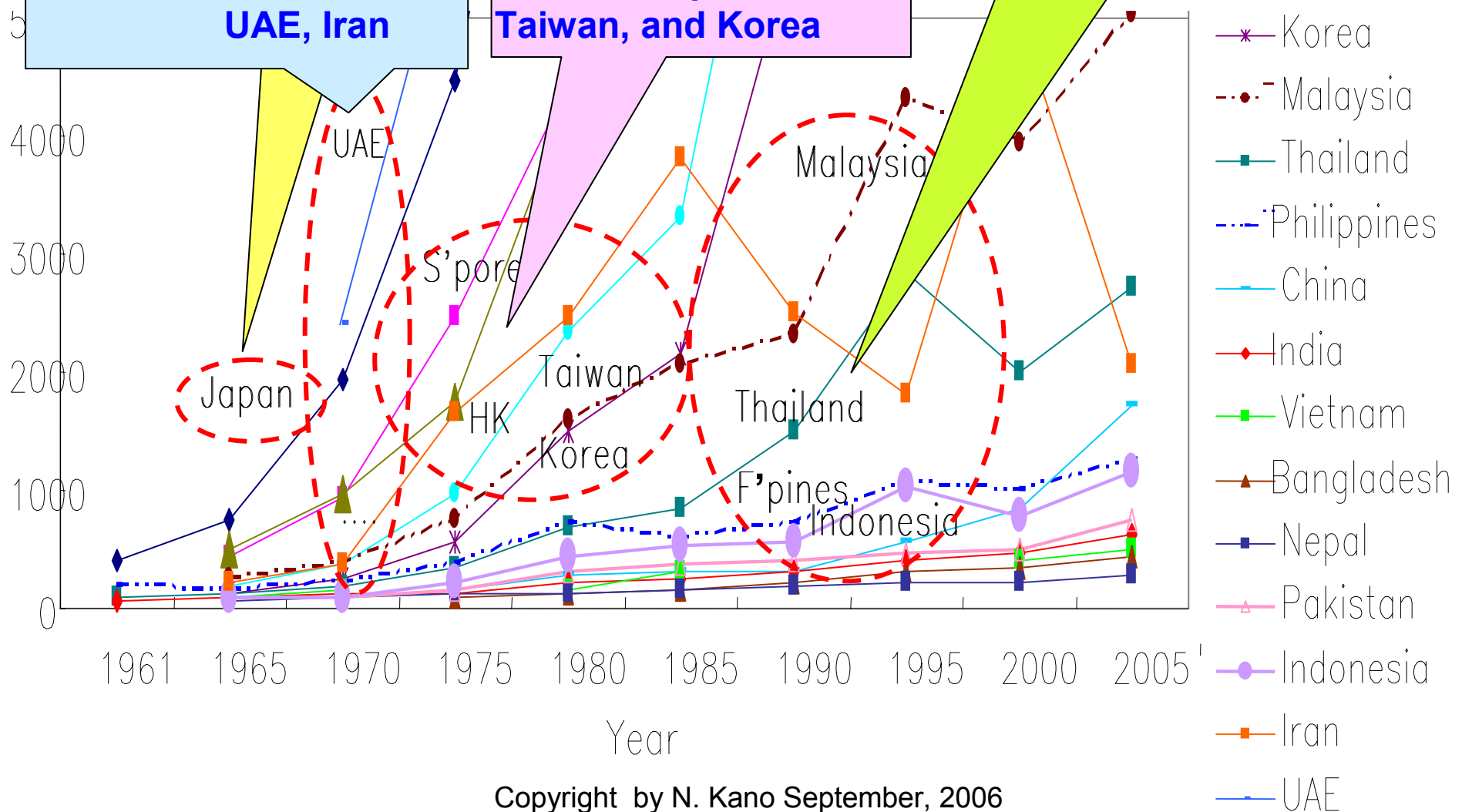


**Mid 60s: First Industrially Developed in Asia such as:** Japan

**Early 70s: Oil Producing Countries such as:** UAE, Iran

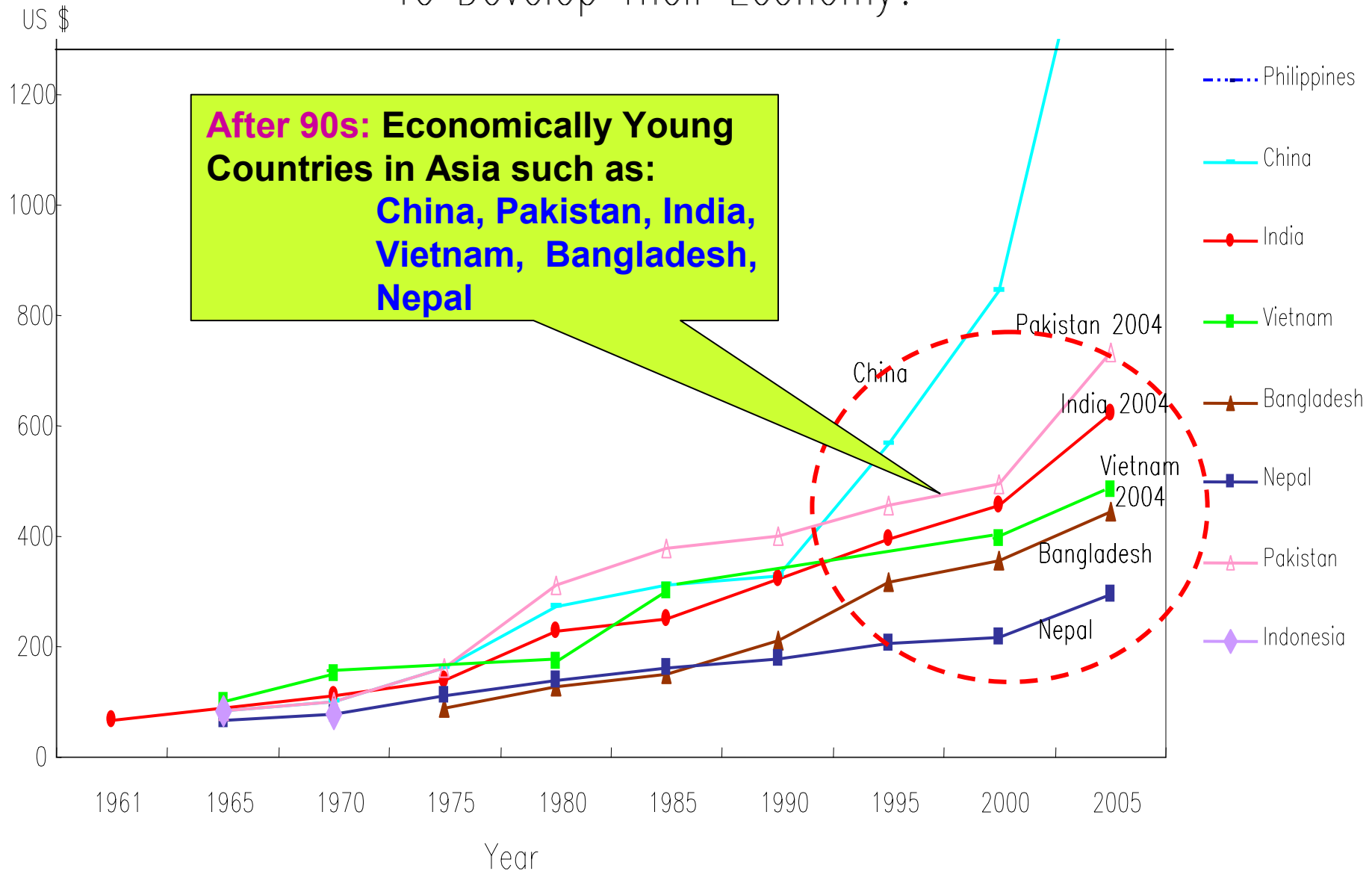
**Mid 70s: Four Dragons such as:** S'pore, H.K., Taiwan, and Korea

**Mid 80s: Original ASEAN such as:** Malaysia, Thailand, F'pines, Indonesia





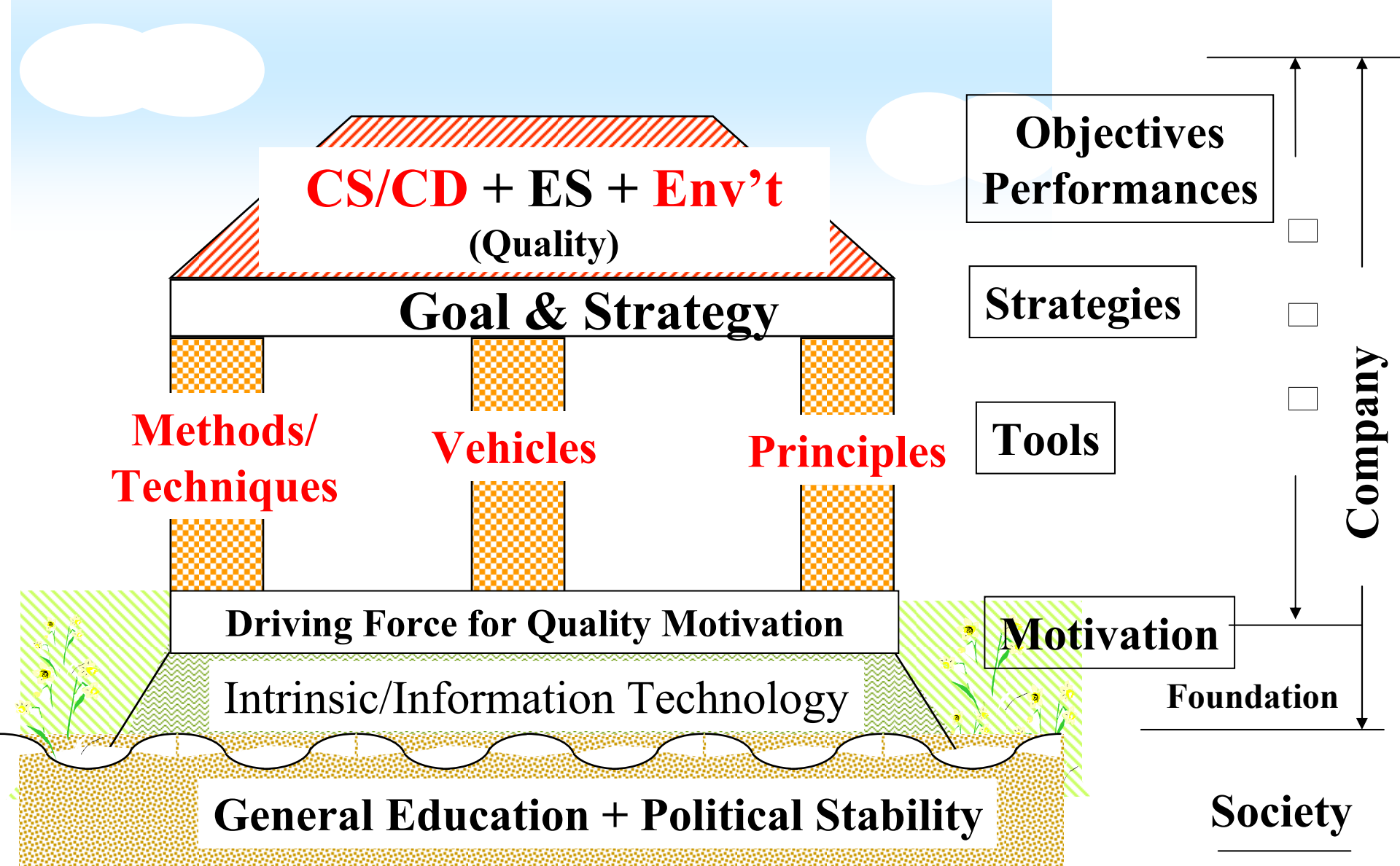
# When Did Asian Countries/Regions Start To Develop Their Economy?



# **Economic Development vs Quality Development**

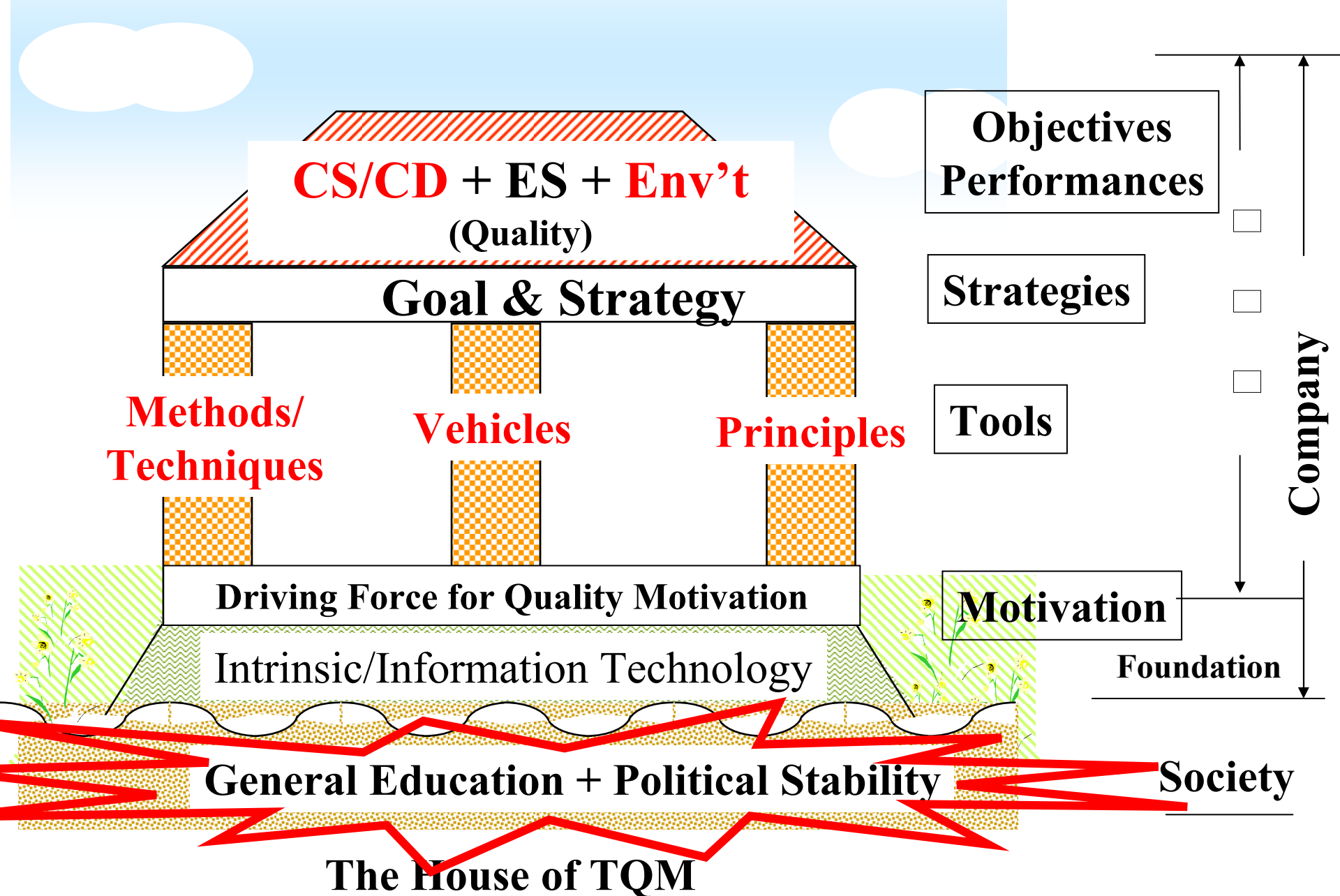
- **Economic Development** is typically based on either:
  - **Natural Resources - Like:**  
Mining, Agriculture, Forestry, Cattle Breeding etc.
  - **Development of Industry and Service**
- **Quality Development** is Essentially Necessary for **Economic Development based on growth of Industry and Service**

# **What Are The Necessary Conditions for Quality Development?**



## The House of TQM

CS: Customer Satisfaction, CD: Customer Delight, ES: Employee Satisfaction

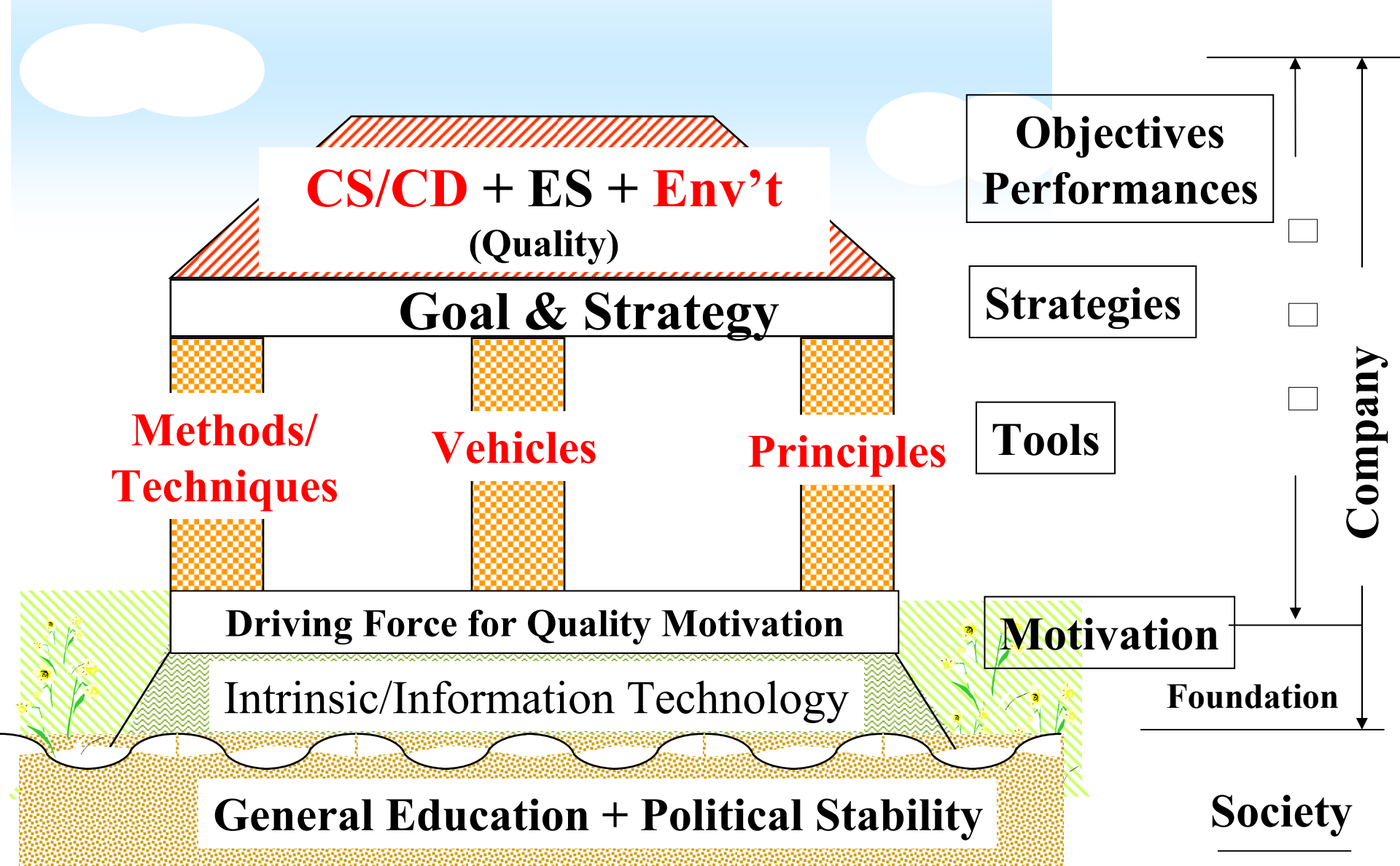


CS: Customer Satisfaction, CD: Customer Delight, ES: Employee Satisfaction

**Are there Any Examples  
by which we can explain the  
difference in development based on  
“Education and Political Stability”?**

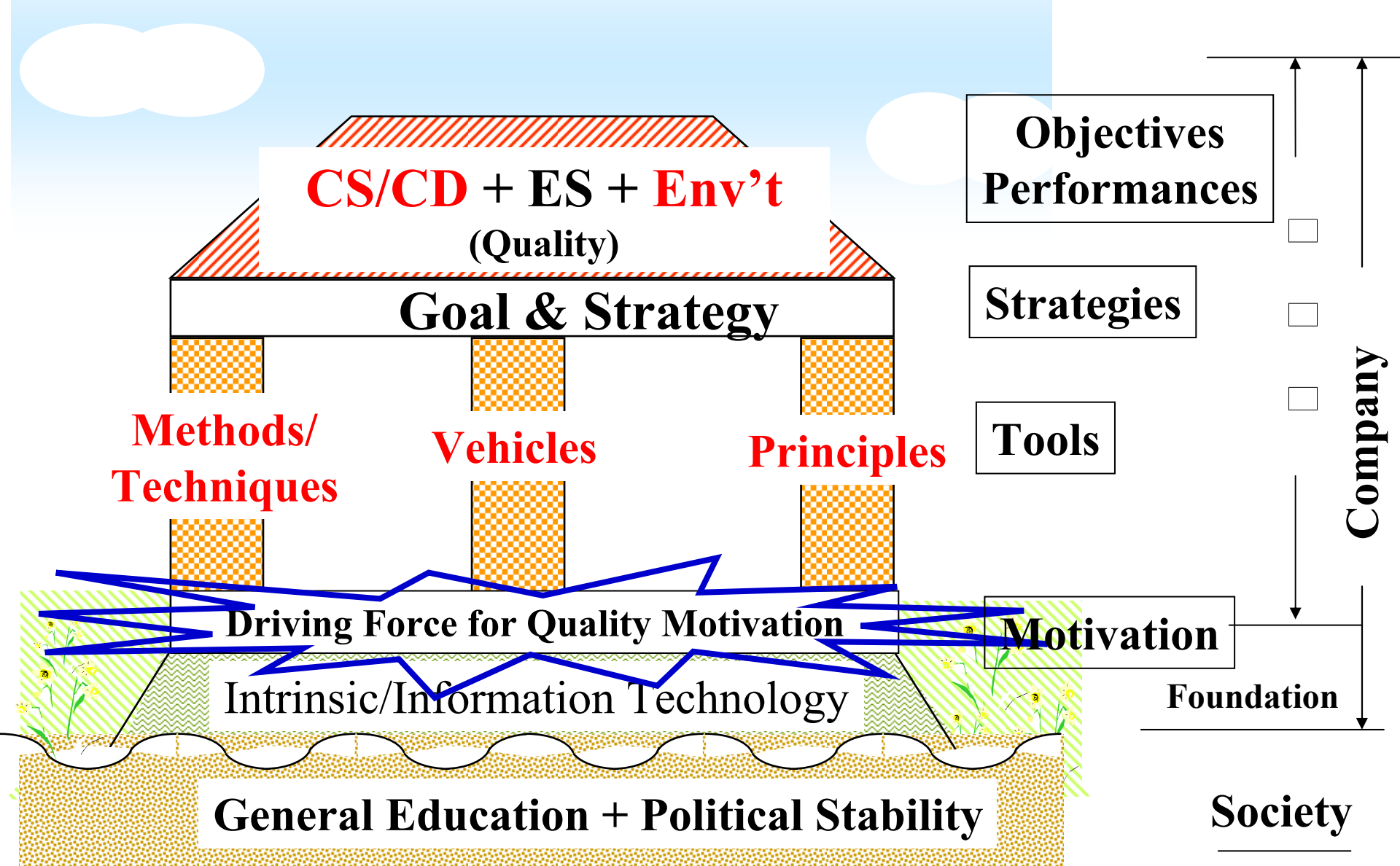
**Yes, we can.  
For example, we can explain  
why**

**South East Asia  
Developed Earlier than  
South Asia.**



## The House of TQM

CS: Customer Satisfaction, CD: Customer Delight, ES: Employee Satisfaction



## The House of TQM

CS: Customer Satisfaction, CD: Customer Delight, ES: Employee Satisfaction



# **What Is Driving Force for Quality Motivation**

**.QUALITY SWEATING THEORY.**

# What Is Quality Sweating Theory?

This is the Theory for  
*What Makes People  
Sweat for Quality.*

**Theory of Driving Force for Quality**

# Quality Development in JAPAN

After the end of W.W.II, the Japanese economy faced all sorts of crises. Specially, we had the serious food crisis.

As a strategy to overcome these crises, export promotion was called for in order to get US dollars for importing food and raw materials.

For this strategy, the quality of products - cheap but poor in quality – had to be improved.

1960's Trade and Capital Liberalization *Toyota, Komatsu etc.*  
Crisis prediction type

1970's Oil Crisis *Sekisui, Ricoh, Fuji Xerox etc.*  
Crisis overcoming type

1980's Yen's appreciation impact

## Sharp Contrast of

### Four Dragons (FD) vs. Oil Producing Countries (OPC)

**After the oil boom(1973)**, **OPC** invested huge money on their nation's industrialization.

**FD** such as **S'pore, Hong Kong, Taiwan, and Korea** **were driven** into catastrophic situation by Oil Crises (1973).

- **Small Land** for the population,
- **Poor** in natural resources,
- **At Low Level** in Technology around 1970s

**e.g. S'pore compared to Japan:**

Population 4.3 Million (1/30): Area 700k. (1/500),  
Population density 6000 psns/k. (nearly 20 times)

# Sharp Contrast of Four Dragons(FD) vs. Oil Producing Countries(OPC)

**Today**, which are more industrially developed?  
Did this depend on the power of money?  
Of course, not.

**Crises drove FD more than OPC.**

# Why **U.S. Industries** Became Enthusiastic in Quality in 1980s?

- **1950s and 1960s:** US took the world leadership in Quality
- **1970s:** Slowdown in Quality
- **1980:** NBC had a TV program with the title of  
“If Japan can..., why can’t we?”
- **1980s:** The American economy was burdened with a huge deficit in trade and many reports pointed out the weakened international competitiveness of American Products. This caused the management to develop a sense of crisis and to consequently exercise leadership through quality.

# Why **U.S. Industries** Became Enthusiastic in Quality in 1980s?

- **Toward the middle of the 1980's:**

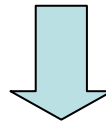
The NBC TV program was the opportunity for many companies to start **company-wide quality activity** under **the leadership of top management**, and to make some remarkable results.

e.g. **Florida Power & Light** won the Deming Prize.

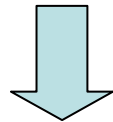
# **Crisis and Leadership Model for Quality**

## *Quality Sweating Theory*

**Sense of Crisis and Leadership**



**Executives / People  
Are Motivated for Quality**



**TQM: Company-wide Quality Activities**  
**Sweating Work**



# How Can We Overcome Crisis?

*Change Weakness to Strength*

# Change Weakness to Strength

## Example: Steel Industry in Japan

In the latter half of 1950s when I was a high school student, I learned **two reasons why Japanese steel industry could not catch up with the West.**

- a. **All the steel plants in Japan are located at the seaside** so as to import iron ore and strong viscous coal for iron making **because Japan has neither of them**, while **the steel plants in the West are located just next to mines.**
- b. All the Japanese steel plants **have been damaged by bombing during the WW2.**

# Change Weakness to Strength

Example: Steel Industry in Japan

Reference: U. Tsujita (1956) Human Geography,  
Simizu Shoin

**“It is the weakness of steel industry in Japan  
that we must Import almost all the raw materials  
such as Iron Ore and Viscous Coal.”**

# Change Weakness to Strength

## Example: Steel Industry in Japan

In the beginning of 1970s,  
Japan took the world leadership in terms of steel production.

Mass media debated **why Japan's steel industry became the strongest** and found the following two reasons:

- a. All the steel plants **are located at the seaside.**
- b. All the steel plants **have been damaged during the WW2.**

# Change Weakness to Strength

Example: Steel Industry in Japan

**It was really interesting that  
the reasons given for the success were  
exactly the same as given for the weakness  
nearly 15 years ago.**

# Change Weakness to Strength

## Example: Steel Industry in Japan

This is interpreted as follows:

- a. In order to build a very efficient plant, the key factor is the volume of blast furnace which needs more raw material.

**The plant next to the mines** finds it difficult to procure materials beyond a certain level of volume from distant places.

However **a steel plant located at seaside** can import materials from all over the world with cheap freight and then it **can build and operate very high volume blast furnace.**

# Change Weakness to Strength

## Example: Steel Industry in Japan

- b. **A steel plant which is damaged** can use most advanced technology when it is rebuilt or repaired while **a plant which is not damaged** has no reason to be replaced with new equipment.

# **Change Weakness to Strength**

## ***Mr. Janak Metha's Presentation in 2000***

*Former President of ISQ, ANQ Board Member*

*As the difficulties of India for Quality development. He pointed out about 20 weakness.*

### ***My Comment after his presentation:***

*"In near future, you will be asked what are the secrets why India has been successful in Quality.*

*I am sure you will point out many of the same factors as the reasons for success*



# Conclusion

# Conclusion

**For the basic requirements for the Conference Theme**

**"Towards Total Organization Excellence (TOE)"**

**Let me sum up my presentation as follows:**

- We need to **develop society** on the foundation of **“general education and political stability.”**
- We may need **Sense of Crisis and Leadership** as driving forces for starting the journey towards TOE.
- In order to overcome the crisis, it is encouraged **to change the weakness to the strength.**

# Acknowledgement

Let's me express my gratitude to Mr. Janak Mehta  
for his kindly brushing up  
this presentation material in English.

# **Thank you!**

**Arigato-Ohkini-XieXie-Dosha-Kamshahamnida -**

**Bayarlalaa-MahaloNui-Gamsahamnida-**

**Terimakasih-Salamat -CamOn -KobKunKrub-**

**Dhanyavaad- Dhanyabaad-Stutiya-Shukria-**

**Mamnoon-SepasGozaram-Motshakeram-Toda-**

**Shukran-AsanteSana-NaGode-TeshekkurEderim-**

**Efharisto-Grazie -Grazzi- Gracias--Obrigado-Merci-**

**Danke-DankU-Tak-Kitos -Dankie-Jinkua-Diolch**

**Ynfawr I Chi- Go Raibh Maith Agat-Spasibo-**

**KoeSoeNoem- Blagodariu-Multumesc**

**Then, Thank You Again!** (as of 2006/5)