

The Institute of Energy Economics, Japan

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India and China's Energy Strategies in Middle Eastern Oil-Producing Nations

**(Based on the project undertaken by the Japan Cooperation Center for the Middle
East in FY2005)**

**The Institute of Energy Economics, Japan
Strategy and Industry Research Unit
Oil & Gas Strategy Group**

Masataka Osumi

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1. General de Gaulle's Prediction and the Rise of India and China

(1) General de Gaulle's Prediction

The following statement by General Charles de Gaulle (1890-1970; French President from 1958 – 1969) was made in the early 1960s and as an embodiment of foresight and vision, is of particular note.

“China has wonderful potential in view of its great past history and culture. If only they could better understand the systems operating there, then the cogs would really start to turn.”

**This statement predicts the dramatic advancements the
⇒ Chinese economy made in the 1990s.**

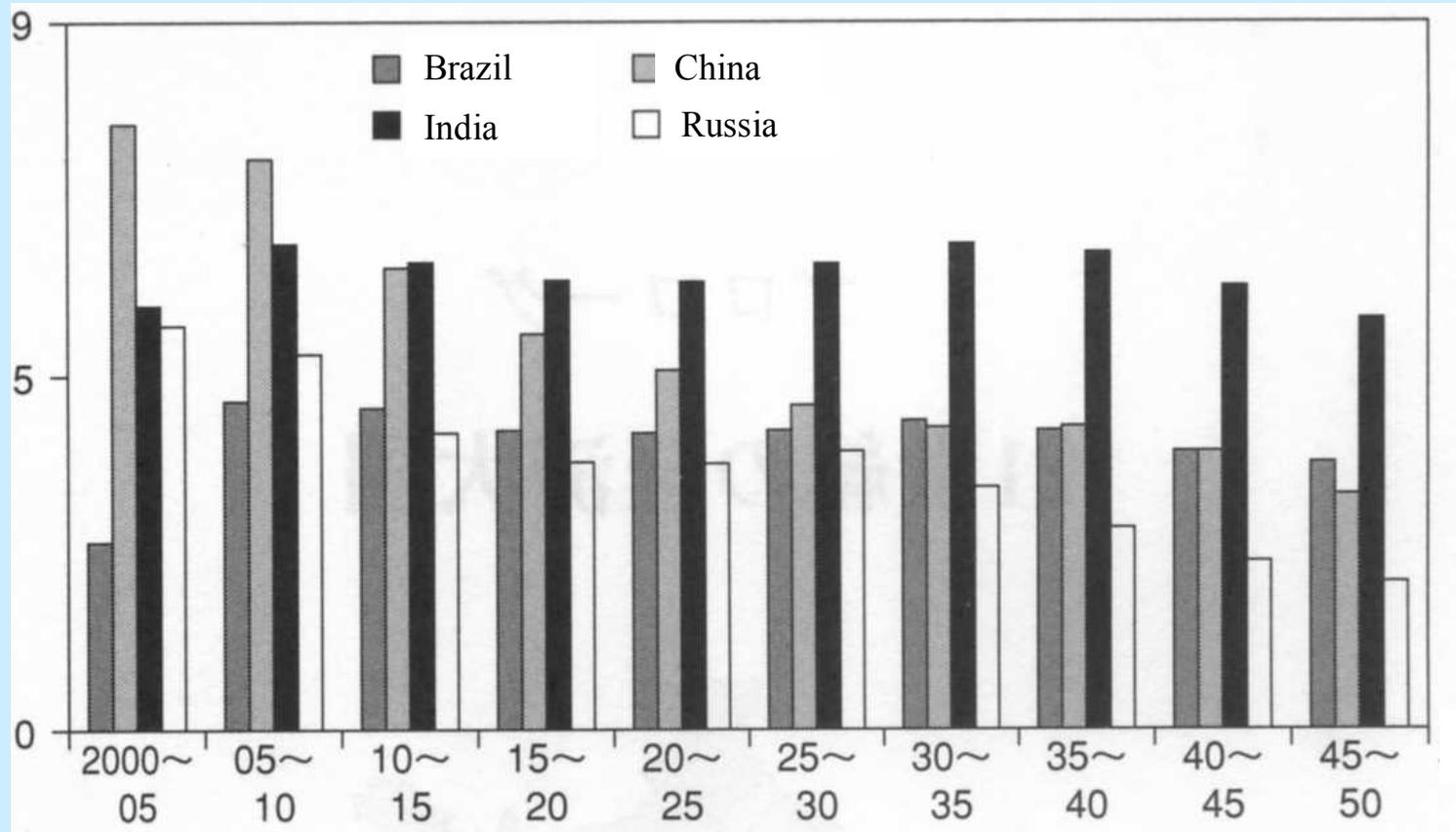
**“India” could just as easily be substituted for “China”
⇒ in the above statement too.**



(2) The Rise of India and China

- ◆ In the term BRICs (an acronym coined by the GS in 2003) the “I” stands for India and the “C” for China.
(Foreign currency reserves : BRICs > G7)
- ◆ “Chindia” (Compound word referring to both China and India).
- ◆ **“The great dragon and the great elephant will take over the world”** (The great dragon refers to China and the great elephant refers to India.)
- ◆ The populations of India and China combined account for over one-third of the world’s total population.
World’s total population: Over 6.5 billion (Feb. 25, 2006)
No. 1 – China: Over 1.3 billion people
No. 2 – India: Over 1.1 billion people
(Total populations of India and China: Over 2.4 billion people)
There is a strong chance that by 2030, India will have the largest population of any country in the world.
- ◆ **“India and China are increasingly assuming the central roles they played in the world up until the mid 19th century”** (Lee Kwan Yew)

Fig. 1 Projected Growth Rates for BRICs up to 2050



(Annual rate of growth (%))

Source: GS BRICs model projections

2. The Economies of India and China

Both India and China have managed to turn catastrophic events around to their Advantage.

- ◆ China: “The Great Cultural Revolution” (1966 -1976,Catastrophe) => Dèng Xiaopíng set out to reform and liberate China(1978)
- ◆ India: “Currency and Fiscal Deficit Crisis” (1990-1991,Catastrophe) => The New Economic Policy put forward by the Rao Government (1991)

“Where India is lagging behind China, India will get onto an economic growth trajectory by 2013.”

(1) India

1) Strong growth rates that will see India eventually overtake China.

GDP real growth rate

FY2004 (April 2004 – March 2005): 8.5%

FY2005 (April 2005- March 2006): 8.4% (Export value exceeded \$100 billion)

(Figures released by India's Central Statistical Organization at the end of May, although these differ from those shown in Fig. 2 on the next page.)

In 2032, India's GDP will overtake Japan's. (GS prediction)

2) High level of education and a cheap, plentiful supply of labor.

Strong in mathematics (discovered zero, memorized multiplication tables up to 19x19). English skills. Proficient speakers. IIT (Indian Institute of Technology).

3) Has capabilities and potential in industries such as software, ITES-BPO (IT Enabled Service-Business Process Outsourcing), pharmaceuticals, and health care; areas in which India is internationally competitive.

4) Markedly young population make-up.

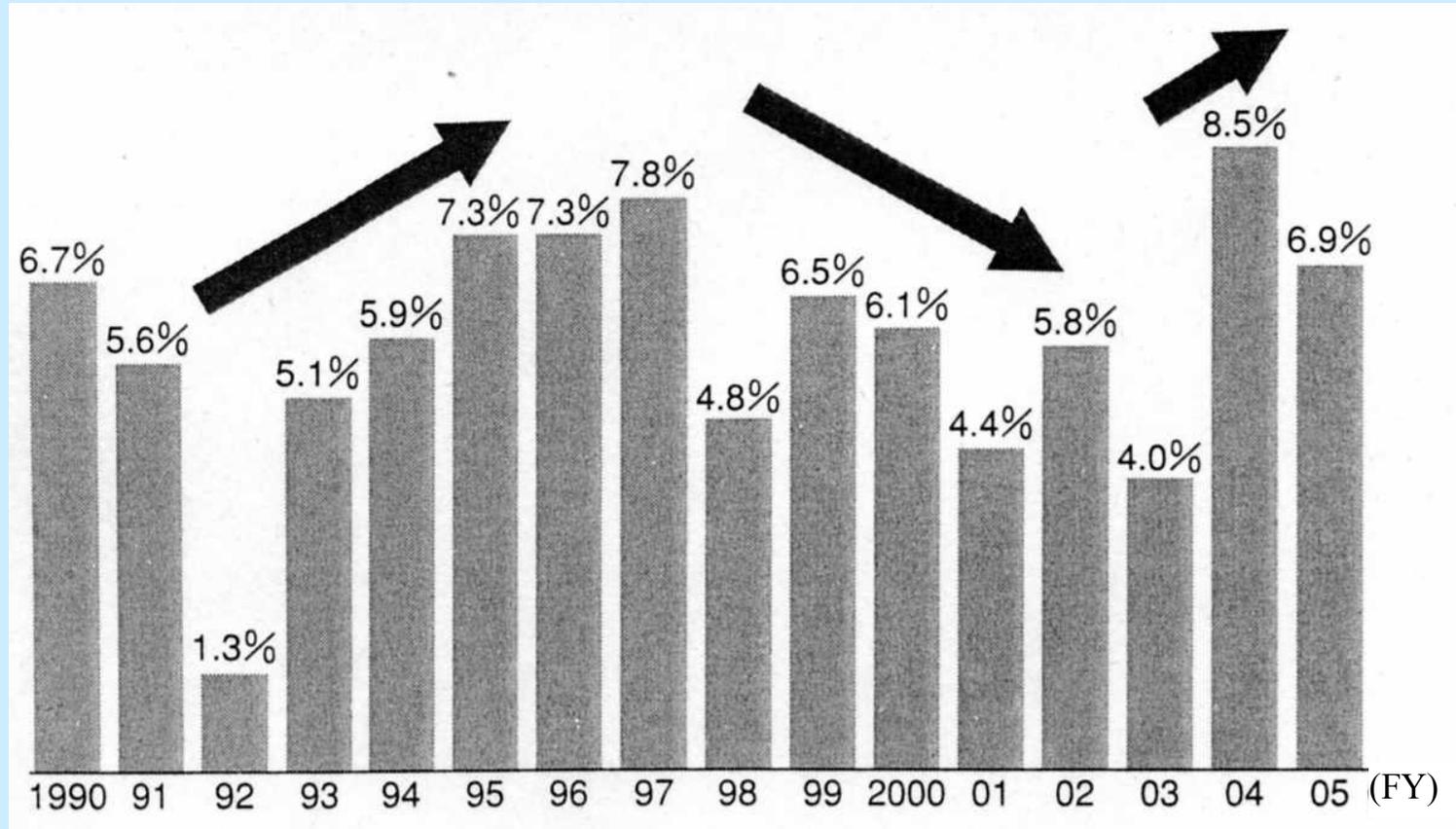
5) Current network of 25 million NRIs and PIOs (overseas).

(USA 2.5 mil., Saudi Arabia: 1.6 mil., UK: 1.5 mil., UAE: 1.2 mil., South Africa: 1.2 mil., Mauritius: 800,000, Kuwait: 500,000, Oman: 350,000, Fiji: 350,000...)

(NRI : Non Resident Indian, PIO:Person of Indian Origin)

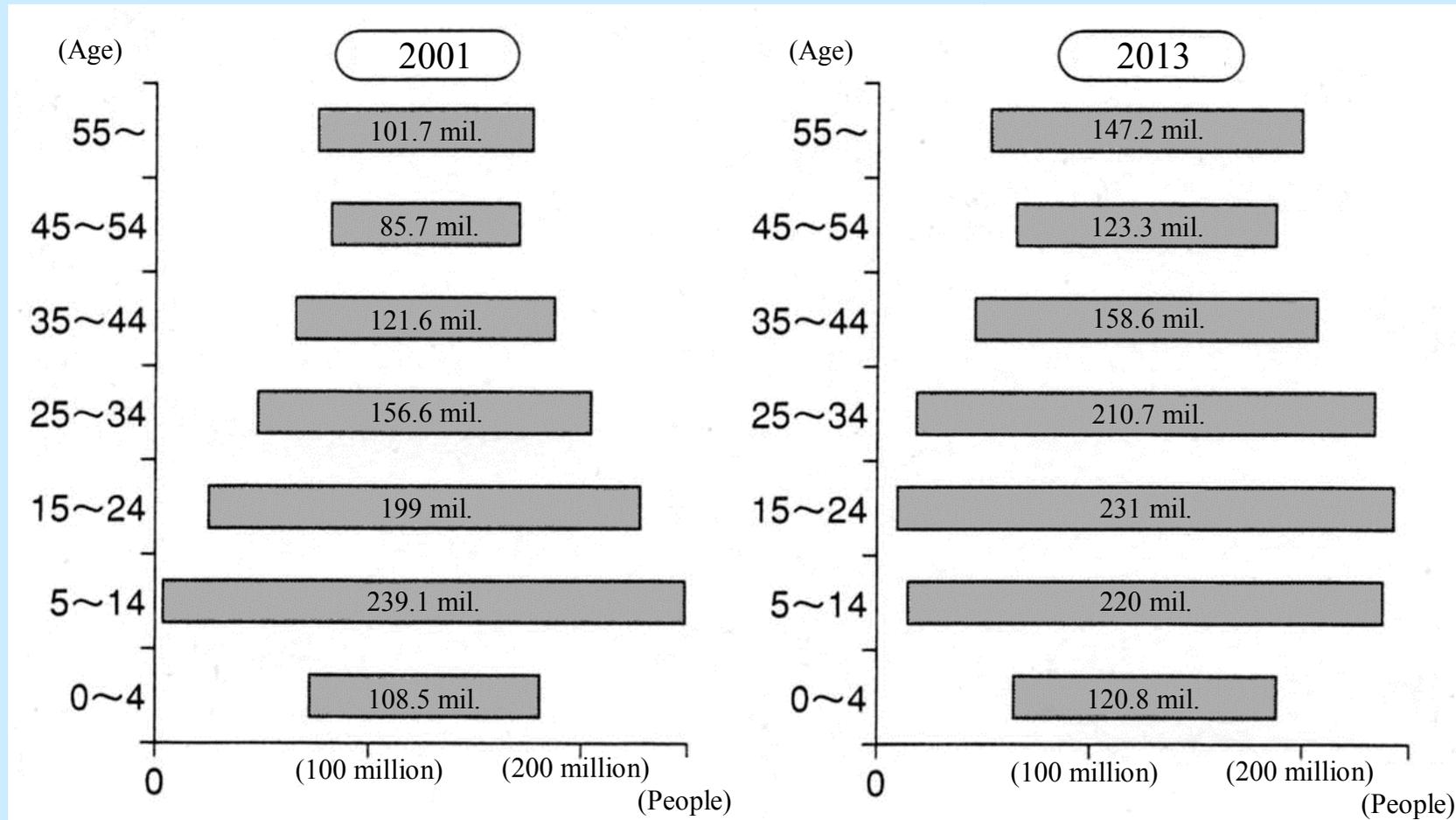
“A country slowly moving forward ” => “The great elephant breaks into a run!”

Fig. 2 India's Real Economic Growth Rate (FY1993 prices)



Source : CEIC Database

Fig. 3 India's Population Demographic



Source: Statistical Outline of India, Tata Services

Fig. 4 Leading Indian Networks Operating Internationally



<Management Executives>

Lakshmi Mittal

Arun Sarin

Sabeer Bhatia

Vinod Khosla

K.B. Chandrasekhar

Rajat Gupta

Chairman of Mittal Steel, the world's largest iron and steel manufacturer.

CEO of Vodafone

Founder of Hotmail

Founder of Sun Microsystems

Founder of Exodus Communications

Former President of McKinsey & Company



<Academics & Writers>

Amartya Sen

V.S. Naipaul

Arundhati Roy

Professor at Cambridge University. Nobel Prize winner in Economics.

Author and Nobel Prize winner in Literature.

Author and winner of the Booker Prize.

<International Organizations>

Shashi Tharoor

Praful Patel

Director of the United Nations, Department of Public Information

Vice-President, World Bank

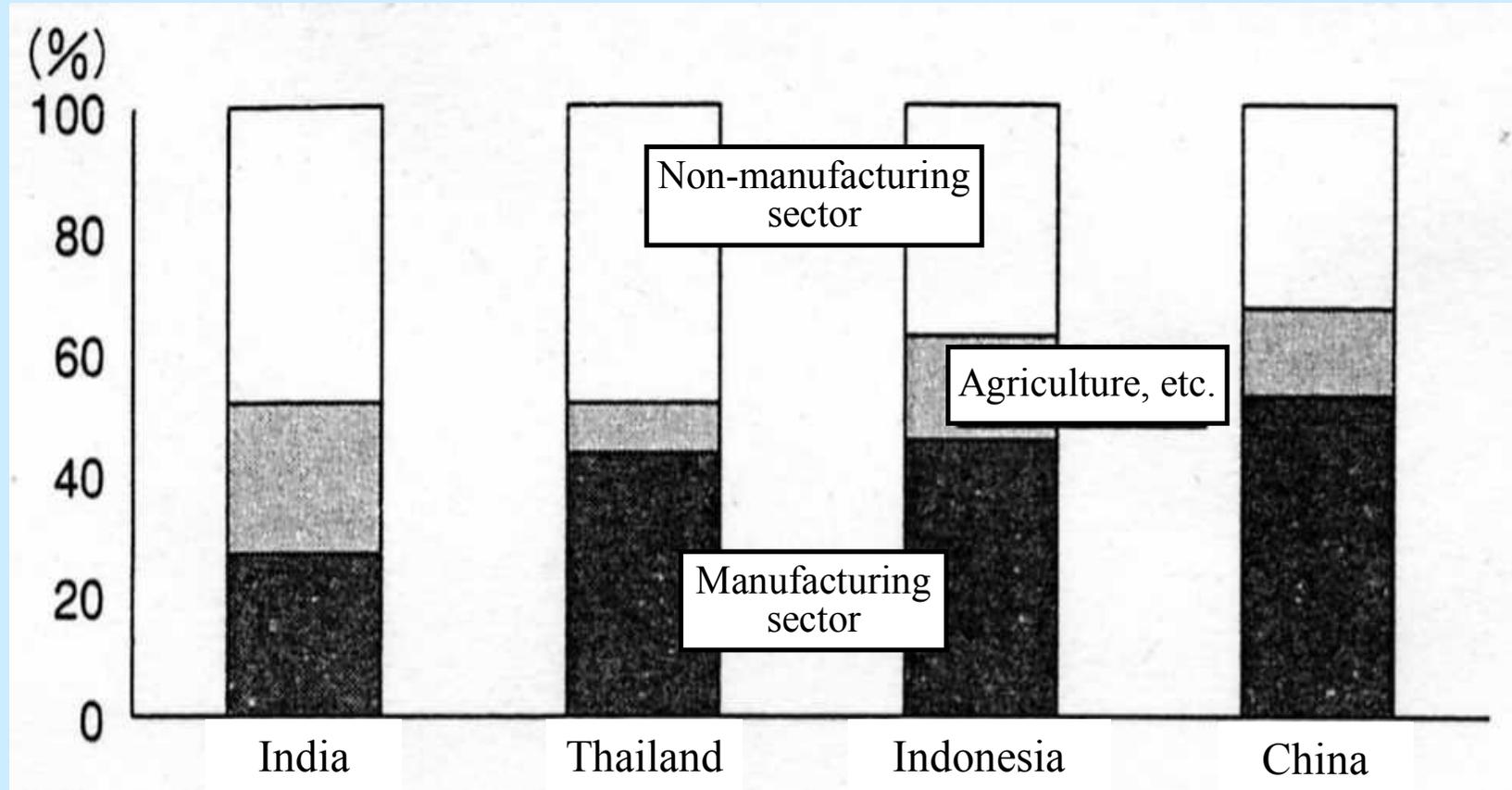
Source: *Asahi Shimbun* March 15, 2006

6) Issues

- ◆ Does manufacturing account for a lower proportion than in other emerging Asian economies?
 - ⇒ If we look at Mittal Steel in the iron and steel industry, and the movement of Korean concern POSCO into India as well as major Japanese, Korean, US and European auto manufacturers into India, undoubtedly manufacturing will only increase in prominence in the future.

- ◆ Does India have an inherent weakness in agriculture, irrigation, and power?
 - ⇒ India has an agricultural population of around 700 million people. Although India's agriculture is dependent on monsoon rains (June – Sept.), thanks to the introduction of IT, etc., the growth rate of the agricultural sector for FY2005 is expected to exceed 4%. There are definitely still power shortages, however. Even factories located in the suburbs of Delhi, namely Suzuki (Maruti Udyog) and Korea's LG, are now focusing on producing their own power. However, the Indian Government does feel the pressure that this state of affairs will only impede foreign investment inflows and economic development, and so is working on bringing large-scale power investments to fruition through private-sector capital.
In addition to starting up a 2-trillion yen project headed up by the Indian government aimed at attracting large-scale thermal power generation stations to 5 locations in India, both Indian and foreign private enterprises are also making moves to construct their own power generation facilities.
(As of April 2006: 122.275 million kw ⇒FY2012: 212 million kw)

Fig. 5 International Comparison of GDP Breakdown(2003)



Source: Asian Development Bank

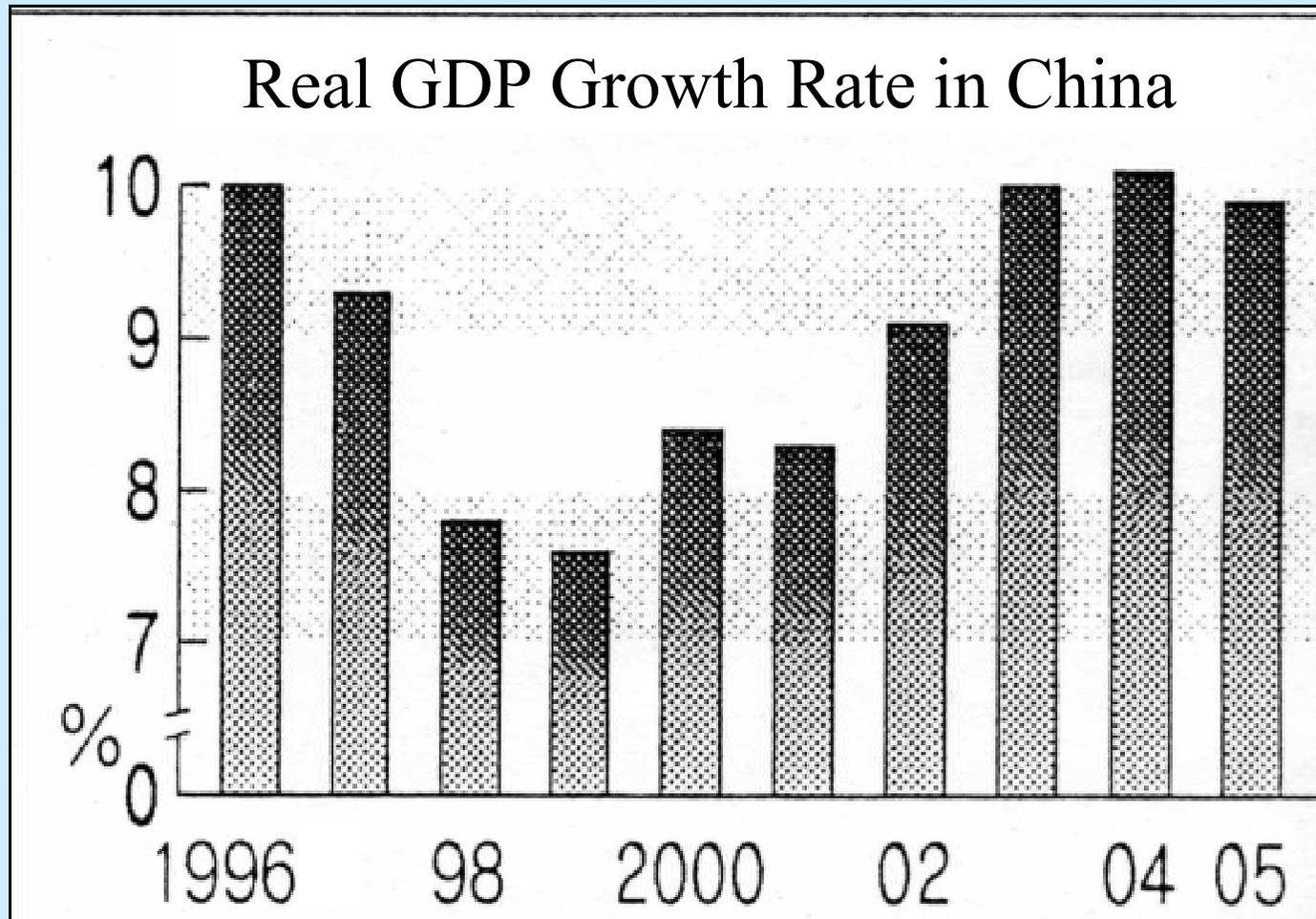
(2) China

1) 10th 5-Year Plan (2001 – 2005)

- ◆ Average annual GDP growth rate during the 10th 5-Year Plan (2001-2005): 9.5% ⇒ This greatly exceeds the initial target of 7%.
- ◆ Inconsistencies have become serious with production surpluses, resource waste, environmental pollution, and a widening income gap, etc.
- ◆ 2005 GDP: 18.23 trillion Yuan (9.9% growth compared to the previous year)
- ◆ 2005 Trade Surplus: Largest on record at 101.9 billion dollars. (Over-zealous investment has incurred production surpluses, which is the main reason that products have been diverted to export. The surplus of products domestically is the result of poor domestic consumption.)
- ◆ Energy consumption per building in China is 2-3 times that in advanced nations. The energy China needs to consume to achieve a certain level of production is also 2.4 times the world average. In a recent survey, the Chinese Academy of Sciences ranked China 54th amongst the world's 59 leading nations in terms of its resource utilization efficiency, also declaring China's energy saving efforts to still be in the very elementary stages.

- ◆ At the end of 2005, China decided on a policy to increase natural gas prices, the market price of which has been forced down by around 50% compared to the international price. China will also keep the prices of gasoline and diesel oil, which are some 30% cheaper than those in the international market, in line with market prices. China has also changed to a policy of determining electricity charges based on fuel coal prices since 2005. There are also predictions that if investment cannot be controlled, by 2010 China will have an automotive production capacity of 20 million units, with a doubling in demand.

Fig. 6



Source: *Nihon Keizai Shimbun* Feb. 28, 2006

2) 11th 5-Year Plan (2006 – 2010)

- ◆ Move economic framework away from being investment-driven and towards being consumption-driven.
- ◆ Priority fiscal expenditures will be made in the agricultural and forestry sectors, with an emphasis on raising in the income levels of agricultural workers.
(Some 800 million people out of China's population of 1.3 billion are engaged in agriculture.)
- ◆ Correct distortions that have accompanied high growth, such as the widening income gap.
- ◆ 5-Year Growth Rate Target: Annual average of 7.5%
(Results for the first half of 2006: + 10.9% ⇒ 9.1443 trillion Yuan (According to figures released by the National Bureau of Statistics of China))
- ◆ Set stricter numerical targets than growth rates for energy saving and environmental protection.
Regional governments have been asked to ensure that energy consumption per unit of GDP is cut 20% from 2005 levels by 2010 and that total emissions of the main polluting substances also be cut by 10%.

3) Issues and Future Outlook (Energy Sector)

- ◆ How effective will energy-saving programs be? The plan is to cut energy consumption per unit of GDP by 20%, but with a 44% increase in GDP envisaged on the back of an average annual growth rate of 7.5%, even the simplest estimates predict that consumption will increase 15%.
- ◆ China has plans to bolster its refining capacity by around 20% by 2010. It is also predicted that annual crude-oil imports will increase from the 2005 level of 130 million tons (approx. 2.6 million BD) to 200 million tons (approx. 4 million BD). Despite China's continued claims that it is moving towards a becoming a resource-conscious society, its hungry pursuit of world energy interests shows no signs of abating.

3. Energy Conditions in Both India and China

(1) Oil consumption in India and China

China: 2nd largest consumer in the world after the USA

(Surpassed Japan in 2002. 2005: 6.55 million BD)

India: 6th largest consumer in the world (Surpassed South Korea in 2002.

On a par with Germany and Russia for the No. 4 spot)

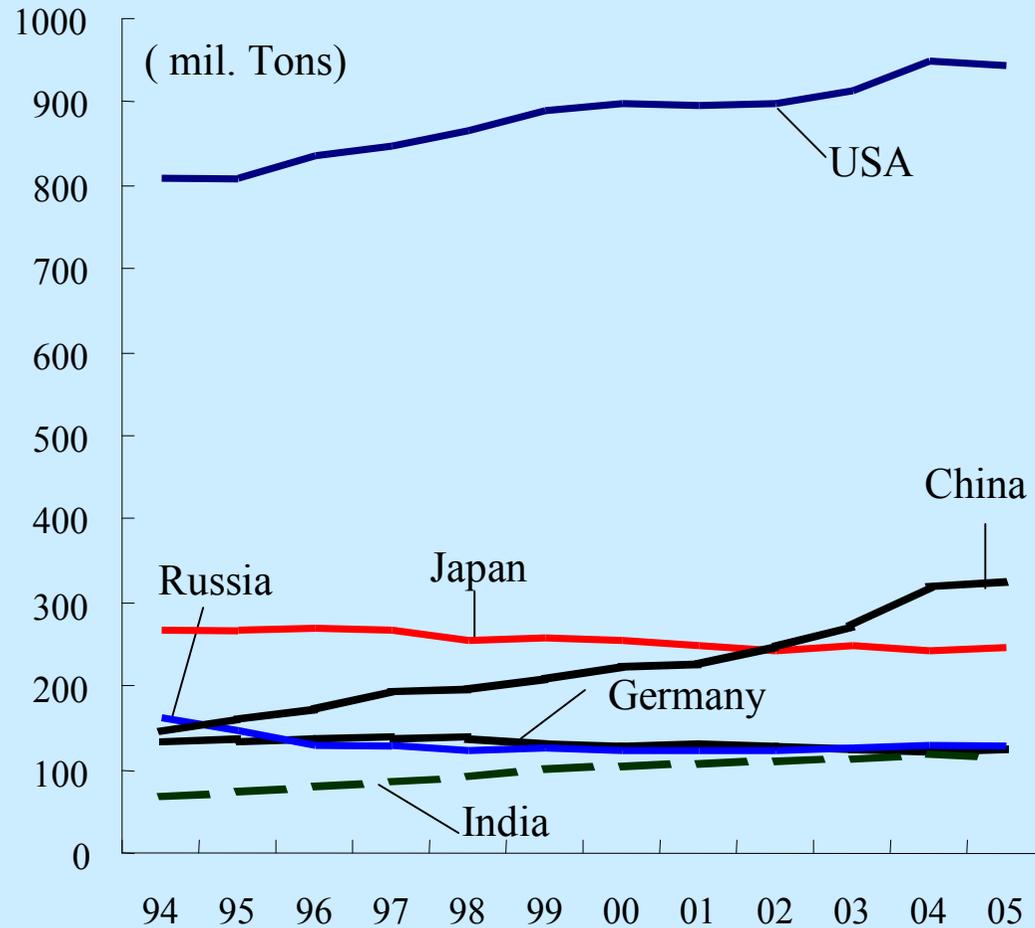
(2) Crude-oil imports in India and China

China: Although China only saw a 3.4% year-on-year increase in 2005, they are still importing around 2.54 million BD.

India: Imported approx. 1.65 million BD in FY2004.

⇒ Therefore, one could say that increases in crude-oil imports by both China and India would have a large-scale effect, impacting heavily on crude-oil supply and demand and crude-oil prices not only in Asia, but worldwide.

Fig. 7 Changes in Oil Consumption by the World's Top 6 Oil Consumers



(Source: BP Statistical Review of World Energy 2006)

(3) India

1) Crude oil and natural gas reserves and production

Proved reserves of crude oil: 739.08 million tons (approx. 5.42 billion barrels)
(As of April 1, 2004)

Proved reserves of natural gas: 922.8 billion m³ (As of April 1, 2004)

Crude oil production: 33.37 million tons (approx. 667,000 BD)
(Actual figures for FY2003)
33.98 million tons (approx. 680,000 BD)
(Forecast for FY2004)

Natural gas production: 32 billion m³ (Actual figures for FY2003)
31.8 billion m³ (Forecast for FY2004)

⇒ Crude oil reserves are approaching their ceiling. Most of the current deposits are concentrated around Mumbai in the west. The majority of natural gas reserves too are also located in the Arabian Sea off Mumbai. However, recently a number of large-scale gas fields have been discovered along the east coast (Bay of Bengal). (Such as the Dhirubhai gas field discovered by Reliance.)

Fig. 8

Crude Oil and Natural Gas Reserves and Production in India

Year	Crude Oil (MMT)		Natural Gas (BCM)	
	<u>Reserves</u>	<u>Production</u>	<u>Reserves</u>	<u>Production</u>
1970-71	127.84	6.872	62.48	1.445
1980-81	366.13	10.507	351.31	2.358
1990-91	738.60	32.160	686.45	17.998
2000-01	702.51	32.426	760.01	29.477
2001-02	732.22	32.032	762.95	29.714
2002-03	740.55	33.044	750.71	31.389
2003-04	761.10	33.373	853.48	31.962
2004-05(p)	739.08	33.981	922.80	31.777
(p) Provisional				
Reserves position as on 1st April of commencing year				
Source: Ministry of Petroleum & Natural Gas				

2) Crude oil supply and demand

Crude oil consumption:

116.01 million tons (approx 2.32 million BD) FY2004

Some 10 years ago, crude oil consumption stood at 1.31 million BD
– around half what it is today.

Domestic crude oil production:

33.37 million tons (approx. 670,000 BD) FY2004

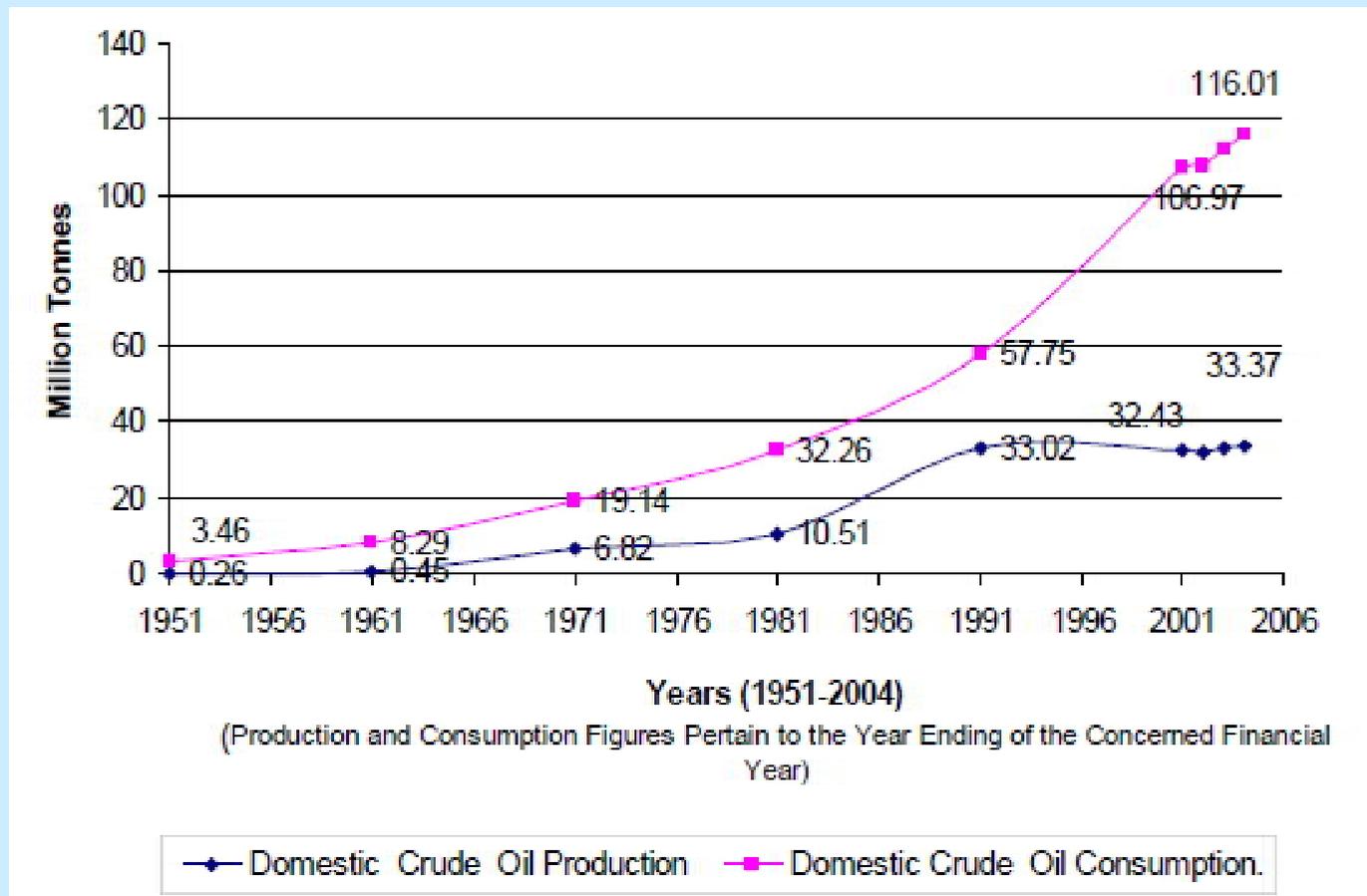
Crude oil imports:

Approx. 1.65 million BD FY2004

With regards to domestic crude-oil production, Mumbai High (API 39 degrees; high-sulfur crude oil), which was discovered in 1973 and commenced production in 1976, today produces around 320,000 BD. This equates to approximately 48% of total domestically produced crude oil. However, production at Mumbai High has started to drop from its peak of 420,000 BD. Predictions by the International Energy Agency (IEA) suggest that if India's demand for oil continues to grow by 2.8% a year, then in 25 years time, demand will be double 2004 levels, putting India's demand roughly on a par with Japan's at 5.2 million barrels a day. However, India's Ministry of Petroleum & Natural Gas predicts that demand will grow around 10% a year up to 2010. What is certain is that the import ratio for oil, which is over 75% at present, will increase more.

Fig. 9

Crude Oil Production and Consumption in India



Source: The Government of India's Planning Commission

3) Energy required to achieve 8% growth

They have predicted the amount of energy that will be required in 25 years time in FY2031 (April 2031 – March 2032). These predictions assume continued GDP growth at an annual rate of 8% over the 25-year period. Based on these predictions, the amount of energy that will be required in FY2031 and the volume of domestic production and imports are envisaged to be as outlined below.

◆ **Oil:**

Amount required - 406 million tons (approx. 8.12 million BD) – 493 million tons (approx. 9.86 million BD)
Domestic production - 35 million tons (approx. 700,000 BD)
Imports - 371 million tons (approx 7.42 million BD) – 458 million tons (approx. 9.16 million BD)
Import ratio - 91%-93%

◆ **Natural gas:**

Amount required - 114 million toe - 224 million toe
Domestic production - 200 million toe
Imports - 0 – 24 million toe (approx. 480,000 BD)
Import ratio - 0 – 11%

◆ **Coal:**

Amount required - 573 million toe – 1,082 million toe
Domestic production - 560 million toe
Imports - 13 million toe (approx. 260,000 BD)- 522 million toe (approx. 10.44 million BD)
Import ratio - 2%-48%

Fig. 10

Commercial Energy, Domestic Production and Imports Required to Sustain 8% Growth Per Year until FY2031

Fuel	Range of Requirement in Scenarios	Assumed Range of Domestic Production	Range of Imports	Import (Percent)
	(R)	(P)	(I)	(I/R)
Oil (mt)	406–493	35	371–458	91–93
Natural Gas (mtoe) including CBM	114–224	200	0–24	0–11
Coal (mtoe)	573–1082	560	13–522	2–48
TCPES	1378–1692	—	384–1004	28–59

Source: The Government of India's Planning Commission

Fig. 11

Some Energy Supply Scenarios for 8% GDP Growth

Scenario	Details
1 Develop coal base	Majority of power to be generated through coal-fired thermal power generation, which is the most economical option.
2 Maximize nuclear power generation	The development of nuclear fuel is envisaged as the most optimistic scenario.
3 Maximize hydroelectric power generation	Potential for all-domestic hydroelectric power generation by 2031 (150,000 MW)
4 Maximize hydroelectric and nuclear power use	Scenarios 2 and 3 for nuclear and hydroelectric power generation.
5 4+ Maximize natural gas	Natural gas covers 20% of power generation and 14% of primary energy.
6 5+ High efficiency coal-fired thermal power generation plants	Increase efficiency of supercritical boilers from the current 36% to 42%.
7 5+ Demand-side control	Cut power demand by 15% through demand-side control.
8 7+ Increase efficiency of coal-fired thermal power generation plants	Increase both demand-side control and the efficiency of coal-fired thermal power generation.
9 8+ Increase share by railway use	Increase share by railway use from 32% to 50%.
10 9+ Improve fuel efficiency	Improve fuel efficiency by 50% for all motorized vehicles.
11 10+ Renewable energy	By 2031, use 30,000 MW wind-powered energy, 10,000 MW of solar powered energy, 50,000 MW of biomass fuels, 10 million tons of bio diesel, and 5 million tons of ethanol.

Source: The Government of India's Planning Commission

4) Energy policies

According to the long-term energy policy for up to 2025 entitled “Hydrocarbon Vision 2025” submitted by the Ministry of Petroleum & Natural Gas and the Ministry of Finance, etc. in March 2003, India’s energy policies are as outlined below.
India will:

- ◆ Bolster domestic production and overseas investment to guarantee energy security.
- ◆ Improve product quality and enhance quality of life for a clean, green India.
- ◆ Improve technology and bolster capabilities to increase international competitiveness and develop a well-recognized hydrocarbon sector.
- ◆ Establish a free market and promote healthy competition between market players and customers.
- ◆ Continue to look at strategic and defensive considerations to secure the nation’s supply of crude oil.

(4) China

1) Crude oil and natural gas reserves and production

Proved crude oil reserves: China has 2.3 billion tons (16.9 billion barrels) of reserves, which constitutes 1.4% of the world's reserves (12th largest reserves in the world). Reserve-production ratio (R/P) of 13.4 years.

Proved natural gas reserves: China has 2.23 trillion m³ of reserves, which accounts for 1.2% of the world's reserves (17th largest reserves in the world). (BP Statistical Review; as of the end of 2004).

Crude oil production: 174.73 million tons (approx: 3.49 million BD). 6th largest producer in the world.

Natural gas production: 40.8 billion m³. 16th largest producer in the world (BP Statistical Review; 2004 figures)

According to the China National Taxation Bureau, crude oil production in 2005 increased 3.7% over 2004 to 181 million tons (approx 3.62 million BD).

2) Crude oil supply and demand

- ◆ In 1993, China became a net importer of all types of petroleum.
- ◆ Imports of crude oil and petroleum products have increased year by year, with the highest ever level of crude oil being imported in 2004, when 122.82 million tons (approx 2.46 million BD; 35% year-on-year increase) were imported.
- ◆ Crude oil imports in 2005 were 127 million tons (approx. 2.54 million BD), having only grown 3.4%. (China OGP) This is seen to be the result of the increase in the market price for crude oil, as well as the curbing of investment under tight economic conditions and the increase in domestic production. Crude oil imports in the first half of 2006 came to 73.33 million tons (≐ 2.93 million BD; +15.6%), while petroleum product imports amounted to 18.23 million tons (+16.1%). (National Bureau of Statistics of China)

Fig. 12**Changes in Crude Oil Supply and Demand**

[Units: 1,000 tons; %]

	Production			Imports			Exports			Demand			Processed		
	Quantity	Change	Growth rate	Quantity	Change	Growth rate	Quantity	Change	Growth rate	Quantity	Change	Growth rate	Quantity	Change	Growth rate
2001	164,834	2,526	101.6	60,255	▲10,010	85.8	7,551	▲2,887	72.3	217,538	▲4,597	97.9	186,353	▲1,611	99.1
2002	170,284	5,450	103.3	69,408	9,153	115.2	7,208	▲343	95.5	232,484	14,946	106.9	198,936	12,583	106.8
2003	170,444	160	100.1	91,126	21,718	131.3	8,133	925	112.8	253,437	20,953	109.0	221,541	22,605	111.4
2004	174,726	4,282	102.5	122,816	31,690	134.8	5,492	▲2,641	67.5	292,050	38,613	115.2	252,182	30,641	113.8

- (Notes) 1. Source: "China OGP" Monthly Report
 2. Demand is calculated by "Production + Imports - Exports".

4. Energy Strategies of India and China

<Recognition of the current state of affairs>

- ◆ Increase in resource nationalism on the back of higher crude oil prices.
 - ◆ Around 70% of oil resources are under the control of the governments of oil-producing nations (Around 7% are held by IOCs)
 - ◆ The players handling the resources are getting bigger and bigger and are creating oligopolies.
- ⇒ More instances of manipulation by the big-name oil majors (IOCs) and the state-run oil enterprises of oil-producing nations (NOCs).
- ⇒ The time has now come for heavy resource consumers like Japan, China, and India to question the strategic nature of how they secure resource supplies.

(1) India's Energy Strategies

<Deployment of omni-directional resource diplomacy>

After the collapse of the Cold War structure where the world was polarized by the two powers of the USA and the USSR, the USA streaked ahead and has continued over time to hold great power. However, in the face of nuclear development by Iran, the situation in North Korea, and the War on Terror, the US has found that it cannot unilaterally resolve these issues, and has even come up against opposition from some of its Cold War allies. Today, the world is made up of a number of complex alliances with Asia playing a central role.

Given this state of affairs, India has launched a multilateral resource diplomacy offensive.

- ◆ Relationship with the US: India will strengthen its cooperative relationship with the US in areas such as atomic energy, etc.

Efforts to secure cooperation from the US? ⇒ Replacement of the Minister for Petroleum & Natural Gas (Jan. 2006)

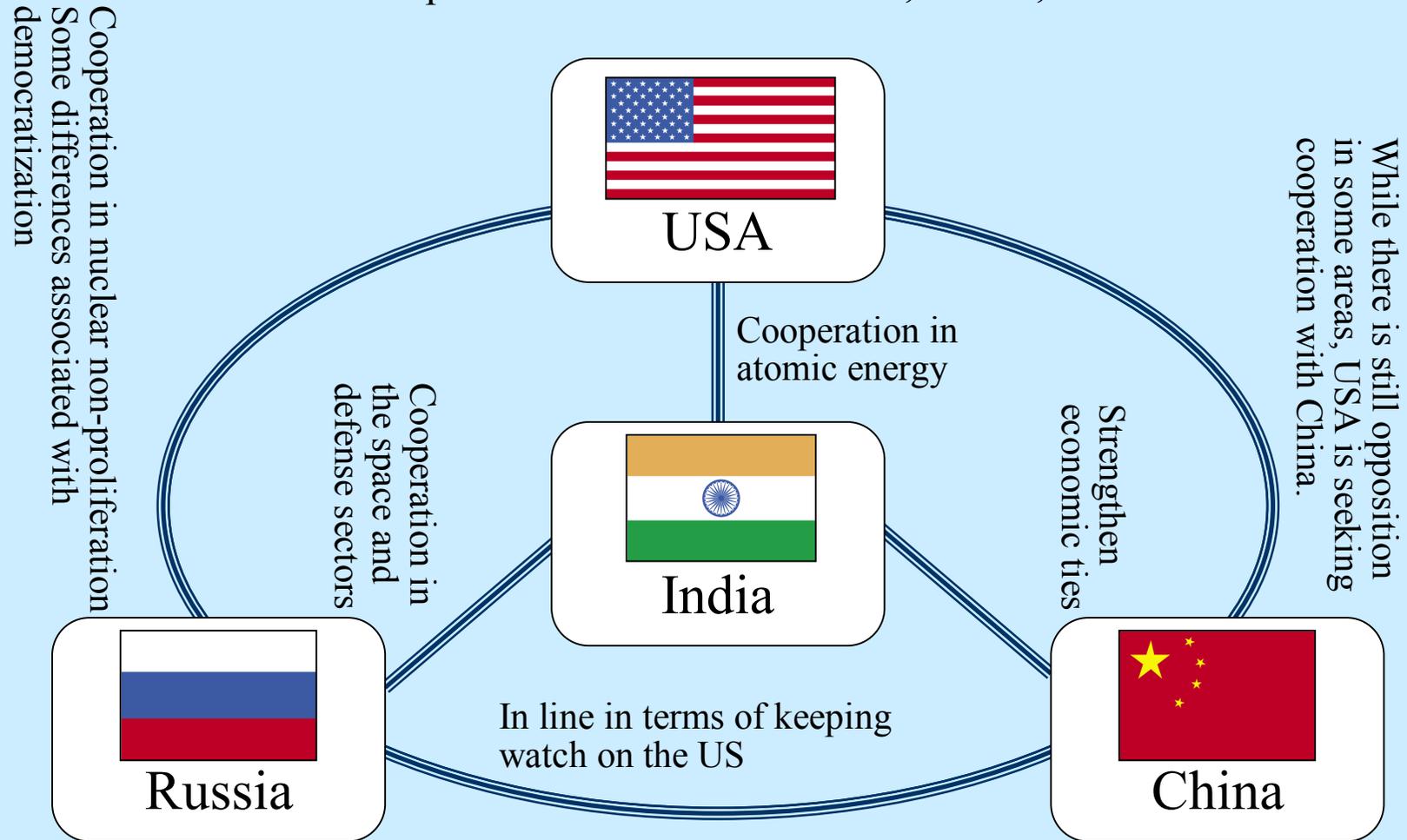
Main Shankar Aiyar (Foreign diplomat, IPI advocate) ⇒ Deora Murli (Pro-American)



- ◆ Relationship with China:
India will strengthen economic partnerships in pursuit of practical gains. India will pursue an expansion in military cooperation but setting goals and planning large-scale joint exercises. (On the other hand, however, China and India remain rivals in terms of their moves into Southeast Asian markets and in relation to Middle Eastern energy resources.)
- ◆ Relationship with Russia:
India will strengthen its cooperative relationship with Russia in the energy, space, and defense sectors, and will continue to rebuild the traditionally friendly military and energy relations between the two countries.
- ◆ Relationship with France:
India looks set to further its cooperative relationship with France in relation to atomic energy.
- ◆ Relationship with developing nations:
India maintains an historical relationship with Iran and developing nations as the leader of those countries not aligned with either of the Cold War superpowers. India is also promoting free trade agreement (FTA) talks with Southeast Asian countries and the Arab Gulf states. SAARC (South Asian Association for Regional Cooperation)

Fig. 13

Relationships between India and the US, Russia, and China



Source: *Nihon Keizai Shimbun* March 3, 2006 Morning Edition

(2) China's Energy Strategies

<China has high hopes of developing offshore oil fields in domestic waters and aims to strengthen its independent acquisition of energy interests without increasing its reliance on the Middle East, which is strongly controlled by the US.>

- ◆ China will foster partnerships between the Chinese government and NOCs (state-run oil enterprises of oil-producing nations)
Summit diplomacy on resources, economic aid, political power in the UN P5, arms exports, etc.
- ◆ China will focus on protecting and nurturing China's three major oil players and pouring their profits to acquire overseas upstream interests.
- ◆ In diversifying procurement channels (tanker, overland P/L-SCO (Shanghai Cooperation Organization), overland freight cars), in case of M&A, China will avoid the US and instead shift its focus to Canada (where it will focus on the oil sand) and Australia, etc.
(Learnt from CNOOC's mistake in buying out Unocal.)
- ◆ China will increase oil imports from Africa and Middle and South America.
(Top three crude oil import suppliers from Jan – July 06 were Angola, Saudi Arabia and Russia.)
- ◆ China will proactively develop offshore oil fields in its domestic waters.

5. India and China's Presence and Energy Strategies in Middle Eastern Oil-Producing Nations

(1) India and China's presence in Middle Eastern oil-producing nations.

The fact that the new King Abdullah of Saudi Arabia chose China and India to visit in his first official overseas trip after assuming the throne is symbolic. (He started his trip on Jan. 22, 2006, spending three days in China and four days in India.) There are three reasons why he chose to visit China and India.

- ◆ He is aware of the fact that these two rapidly growing nations are becoming major players in the world economy.
- ◆ He is aware that Saudi Arabia will be increasingly important to these countries in the future as a stable supplier of crude oil.
- ◆ He is aware that China and India have a crucial and important role to play as a “buffer” in mitigating the overwhelming power and influence of the US in trying to achieve political balance in the Persian (Arabian) Gulf.

This awareness is shared not only by Saudi Arabia but also by the vast majority of oil-producing nations in the Middle East.



1) India

- ◆ India and the Middle East have a long historical and humanitarian relationship.
 - ⇒ Many of the Middle Eastern gulf states used the Indian currency the Rupee as their own currency before WW2.

 - ⇒ There is an overwhelmingly large number of NRIs and PIOs residing in this region. (there are some 1.6 million NRIs and PIOs in Saudi Arabia, making Indians the largest group of foreigners residing in Saudi Arabia, accounting for around 25% of all foreigners.)
To date, these people have been welcomed by their guest countries as a migrant labor force, but in the future, there are hopes that these people will be able to be active in intellectual sectors as well, so as to contribute to the development of the IT industry in Dubai, for example.
Muslims in India: 13.4% of the population ⇒ approx. 150 million people.

- ◆ In FY2004, India imported a total of 95.86 million tons (approx. 1.92 million BD) of oil, 67% or 64.64 million tons (approx. 1.29 million BD) of which came from the Middle East. (Total oil imports for FY2005 were 111 million tons (approx. 2.22 million BD).

Fig. 14

India's Crude Oil Import Suppliers (by Country) (FY2004)

Country		Oil Imports (mmt)	% of Total Imports
Middle East Region	Iran	9.61	10.03
	Iraq	8.33	8.69
	Kuwait	11.36	11.85
	Neutral Zone	0.15	0.15
	Oman	0.14	0.14
	Qatar	1.19	1.24
	Saudi Arabia	23.93	24.96
	UAE	6.43	6.71
	Yemen	3.51	3.66
	Sub Total	64.64	67.43
Other Regions	Angola	2.44	2.55
	Brazil	0.29	0.30
	Brunei	0.81	0.84
	Cameroon	0.35	0.36
	Congo	0.14	0.14
	Egypt	2.12	2.21
	Equador	0.15	0.16
	Equitorial Guiena	1.66	1.73
	Gabon	0.28	0.29
	Libya	1.47	1.53
	Malaysia	3.43	3.58
	Mexico	2.28	2.38
	Nigeria	15.08	15.73
	Russia	0.16	0.16
	Sudan	0.33	0.34
	Thailand	0.27	0.28
Sub Total	31.23	32.57	
Total	95.86	100.00	

Source: The Government of India's Planning Commission

② China

- ◆ Since WW2, China has consistently maintained a non-alignment policy in its foreign diplomacy whereby it has maintained good relations with countries that are not on friendly terms with the USA . Examples of such countries in the Middle East are Sudan, Iran, Iraq, Yemen, Syria, Algeria, Libya, and Pakistan (not a Middle Eastern country, but still an Islamic nation).
- ◆ As a member of the UN P5, China has set itself apart from the US and the UK by taking a neutral position on issues such as the war on Iraq and Iran's nuclear development.
- ◆ Crude oil import suppliers: China imports from many different countries, but is less reliant on the Middle East than Japan, South Korea, or India are. (Nonetheless 49% of China's oil still came from the Middle East in the first half of 2005.)
- ◆ China continues to place importance on the Middle East, and is actively engaging in summit diplomacy on resources in view of future possible increases in imports from the region.

Fig. 15

Crude Oil Imports by 4 Asian Nations – Totals by Region

(Unit: 1 million b/d)

	2004	1 st Half 2005	Middle East	Africa
Japan	4.19	4.16	88 %	4 %
China	2.46	2.57	49 %	29%
South Korea	2.23	2.26	78%	5%
India	2.03	1.91	61%	24%

Source: PIW August15, 2005

(2) India and China's Energy Strategies in Middle Eastern Oil-Producing Nations

1) India

<A flexible strategy through which India continues to capitalize on its historical and people ties with the Middle East and its close proximity, as it weighs up the Middle East against sources in other regions.>

- ◆ Emphasis is placed on the geographical proximity of India to Middle Eastern oil-producing nations.
By Air (Mumbai ⇒ Tehran): 3 hours 15 min.
By Tanker (Ras Tanura ⇒ Mumbai): 3 – 4 days
(E.g.) Reliance is the largest supplier of gasoline to Iran.
- ◆ India capitalizes on the presence of NRIs and PIOs (especially in GCC nations)
- ◆ India has taken the initiative to facilitate dialog between Asian oil-consuming nations and oil-producing nations in the Middle East. (Former Minister for Petroleum & Natural Gas Mani Shankar Aiyar)

- ◆ India leverages resource summit diplomacy to the maximum.

(E.g.) The successful outcomes of King Abdullah's visit to India in Jan. 2006.

- Reliance to invest 8 billion dollars in Saudi Arabian refinery and petrochemical projects?
- Encouragement of Saudi Aramco's investment in five Indian refineries (Bhatinda, Bina, Paradip, Kakinda and Barmer).

- ◆ India employs adept negotiation skills to balance other sources and projects.

Flexible negotiation skills: "India – Pakistan – Lebanon – Syria" (+ Persian=Iran)

(E.g.)

P/L Gas Project

- IPI(C)P/L Gas Project

(Approx. 7.4 billion dollars, South Pars Gas Field, Iran — Pakistan — India (China))

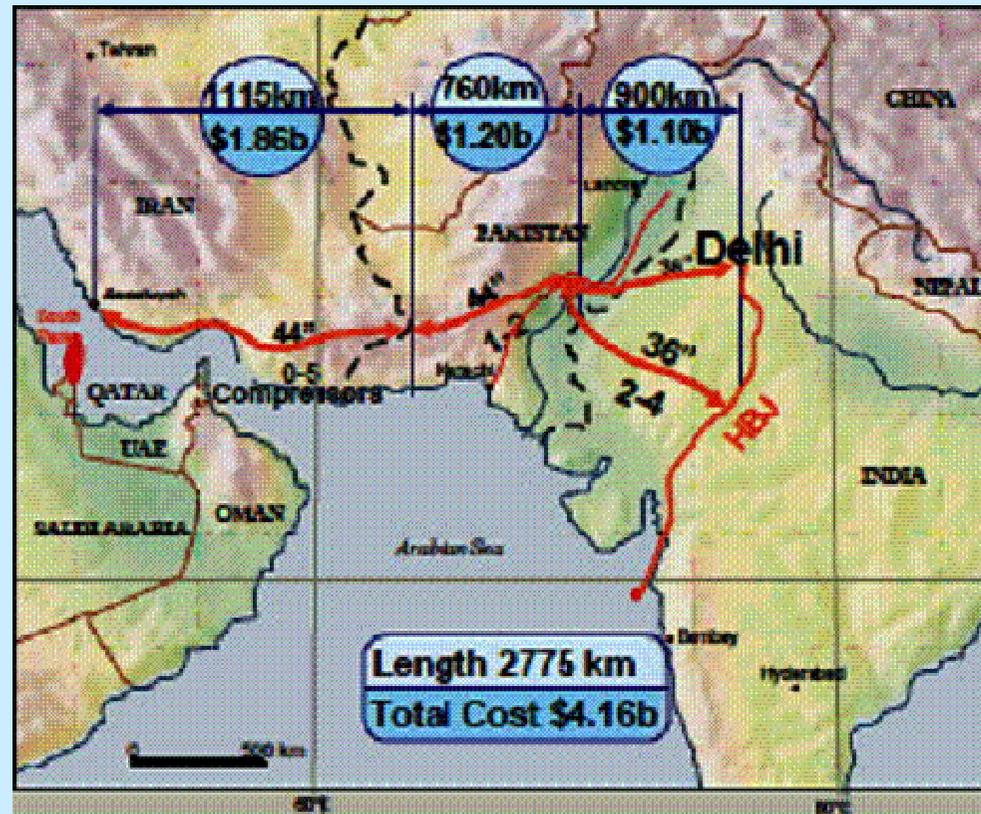
- TAP(TAPI)P/L Gas Project
(Daulatebad gas field, Turkmenistan — Afghanistan — Pakistan — (India))
- Myanmar P/L Gas Project
(Shwe gas field, Myanmar — Bangladesh — India, OVL20%, GAIL10%)

LNG Project

- Qatar LNG: Petronet buys 5 million tons annually from Ras Gas.
(Started from 2004 => Dahej terminal)
- Iran: Indian companies (IOC, Bharat Petroleum, Gail) entered into a sales agreement with NIGEC for 5 million tons a year over 25 years starting from 2009. (June 13, 2005)
- India is also considering importing from Malaysia, Australia (Gorgon project => Petronet/Kochi, 2.5 million tons a year from April 2011?), and Indonesia to try and lower the price.

Fig. 16

Iran-Pakistan-India(IPI) Pipeline Route



(Note: The total cost estimate currently stands at around 7.4 billion dollars)

Source: BHP Billiton website

2) China

<China's strategy involves continuing to be aware of the US's presence and leveraging as much as possible their position in the UN P5.>

◆ China will strengthen relations with Saudi Arabia

- King Abdullah's visit to China (Jan. 2006) and State President Hu Jintao's visit to Saudi Arabia in April 2006.

China's Sinopec and Saudi Aramco to cooperate in crude oil import and refining sectors and have agreed to jointly construct an oil storage base in China's Hainan Island.

- Gas Initiative

Rub Al Khali gas exploration and development agreement (3,800km², signed March 2004), 5-year agreement.

Sinopec: Saudi Aramco = 80: 20

- A "China Desk" has been established within SAGIA (the Saudi Arabian General Investment Authority)

(Daughter of the Sudairi family) ("Japan Desk: " Mr. Yasuharu Tanaka)

◆ China will foster closer ties with countries not on friendly terms with the United States.

- Iran

(Tehran subway, LNG Project –Sinopec 10 million tons/year, oil exploration and development project -Yadavaran oil field development, Arak refinery Expansion project-Sinopec)

- Sudan (Oil development and production)

- Syria (Acquisition of oil interests)

3) Competition and collaboration between China and India

Fierce competition to acquire interests in Russia, Angola, Nigeria, Kazakhstan etc. .

⇒ Spike in the price of oil and gas field interests.

In light of this situation, in Beijing in Jan. 2005, both countries signed a memorandum of understanding for “**Strengthening Oil and Gas Cooperation**” signed by Chairman of the National Development and Reform Commission Ma Kai and the (then) Minister for Petroleum & Natural Gas Mani Shankar Aiyar.

⇒ Through this agreement both parties jointly acknowledged that their never-ending competition would only serve to benefit other countries.

(Examples of collaboration)

- ◆ In Sudan: Joint development and production through CNPC, OVL, Petronas, and Sudapet
- ◆ In Syria: At the end of 2005, CNPC and OVL jointly purchased a 38% interest in the Al Furat Petroleum Company (AFPC) from Canada’s Petro Canada for some 1 billion dollars.
- ◆ In Columbia: In August 2006, OVL and Sinopec announced plans to jointly purchase a 50% interest (25% each) in Ominex de Colombia (Parent company is US concern Ominex Resources) for approximately 820 million dollars.

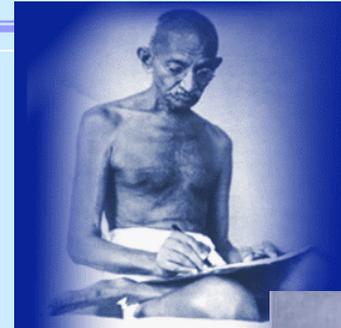
6. Conclusion and Recommendations

- China and India have become major international players in the political, economic and energy sectors => And so, will have a growing impact on world energy supply and demand in the future.
- A close eye needs to be kept on the energy strategies of China and India to make sure they do not affect the energy security of the world, Asia, and Japan.
- Middle Eastern oil-producing nations are hoping to provide a stable supply of oil and gas to China and India, where they will increase production themselves and where demand for oil and gas will grow exponentially in the future.
- India and China are taking different approaches in dealing with Middle Eastern oil-producing nations.
 - India: Is strengthening relationships in all areas, building on its geographical proximity to the Middle East and the turn around in relations with the US.
 - China: Continues to be aware of the US presence and while seeking to use its position in the UN P5 to strengthen relations, will keep its reliance on the Middle East to less than 50%.
- Japan is hoping to work on restoring friendly relations with China, whilst also deepening ties with India, a nation with which it has common values, and expanding dialog with Middle Eastern oil-producing nations, in an effort to fully secure a stable supply of energy.

<In the words of two notable Indians>

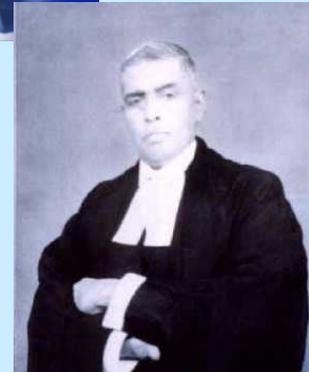
◆ **Mohandas K. Gandhi—<Planet Alert>**

“The world has enough for man’s need, but not for man’s greed”



◆ **Radha binod Pal—Statement at the Tokyo Tribunal of War Criminals**

“When time shall have softened passion and prejudice,
when reason shall have stripped the mask from misrepresentation, then justice,
holding evenly her scales, will require much of past censure and praise to
change places.”



Ref: Map of India



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(Honorary titles omitted)

Contact: report@tky.iej.or.jp