

The Impact of Oil Industry Liberalization on the Efficiency of Petroleum Fuels Supply for the Domestic Market in Indonesia

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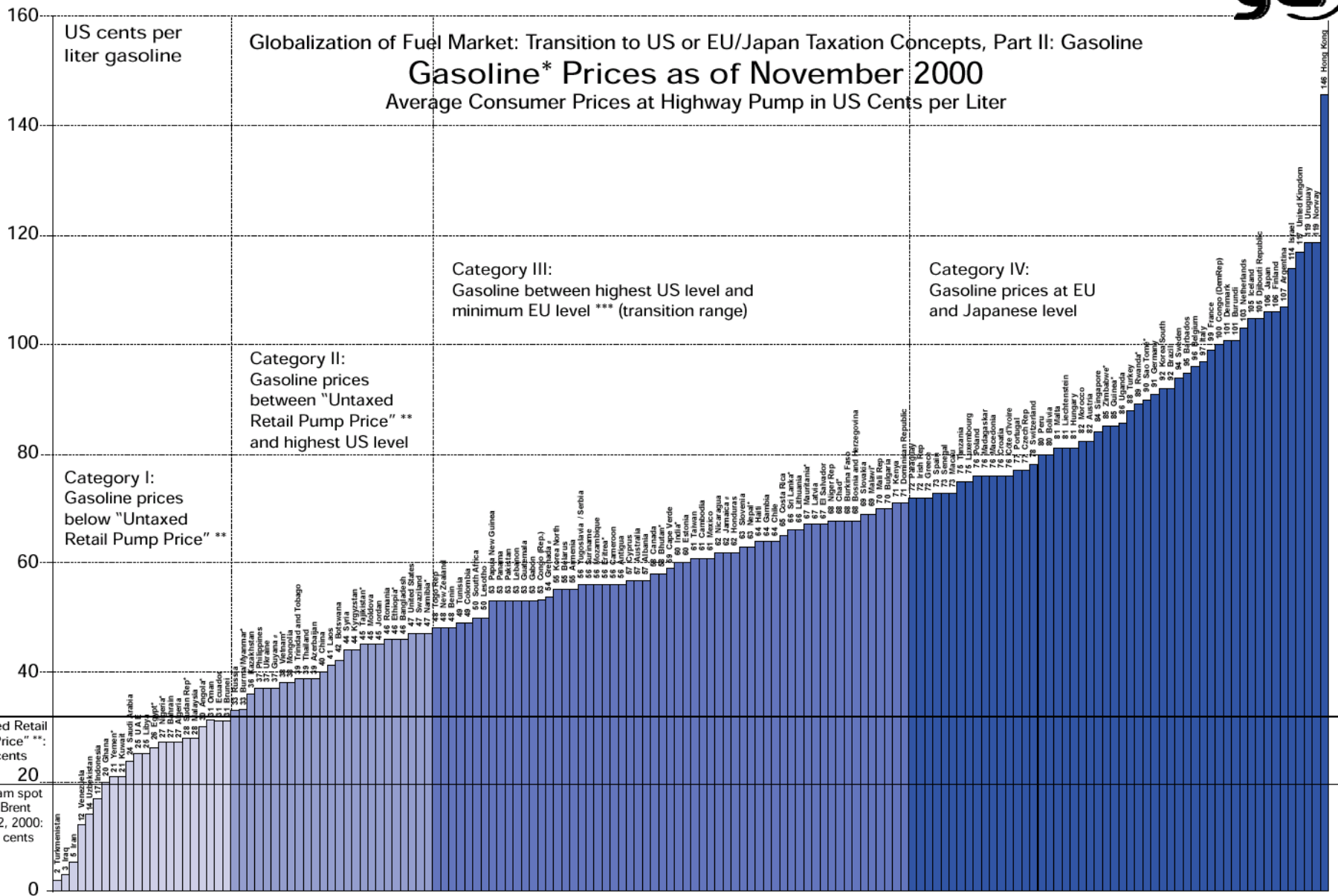
Presented to
The 26th Annual Conference of
International Association for Energy Economics (IAEE)
Prague, Czech Republic
June 2003

Liberalization of Oil Industry in Indonesia

- I. The Entry Point: Replacing Pertamina Law No.8/1971 with New Oil and Gas Law No.22/2001: Mining Rights (Mining Authority) removed from Pertamina (State Oil Company), Natural Monopoly and vertically integrated dismantled, free market and full competition applied.
- II. Besides some positive impacts, there will be some negative impacts on:
 1. the efficiency of petroleum fuels: the cost or price of petroleum fuels at end users will be more expensive than that of natural monopolist. Benchmark: market price at the pump using: Untaxed retail Pump Price (URPP), and
 2. the competitive advantage and the efficiency of Indonesian LNG industry will be harmful, i.e, security of supply for the buyers, cost of money for developing LNG plants and facilities will be more expensive, and finally will hit the competitiveness of Indonesian LNG .

**I. BENCHMARK OF EFFICIENCY:
WHAT IS THE MARKET PRICE
OF GASOLINE AT THE PUMP
STATION?:**

**SURVEY REPORT OF
WORLD GASOLINE RETAIL PRICES**



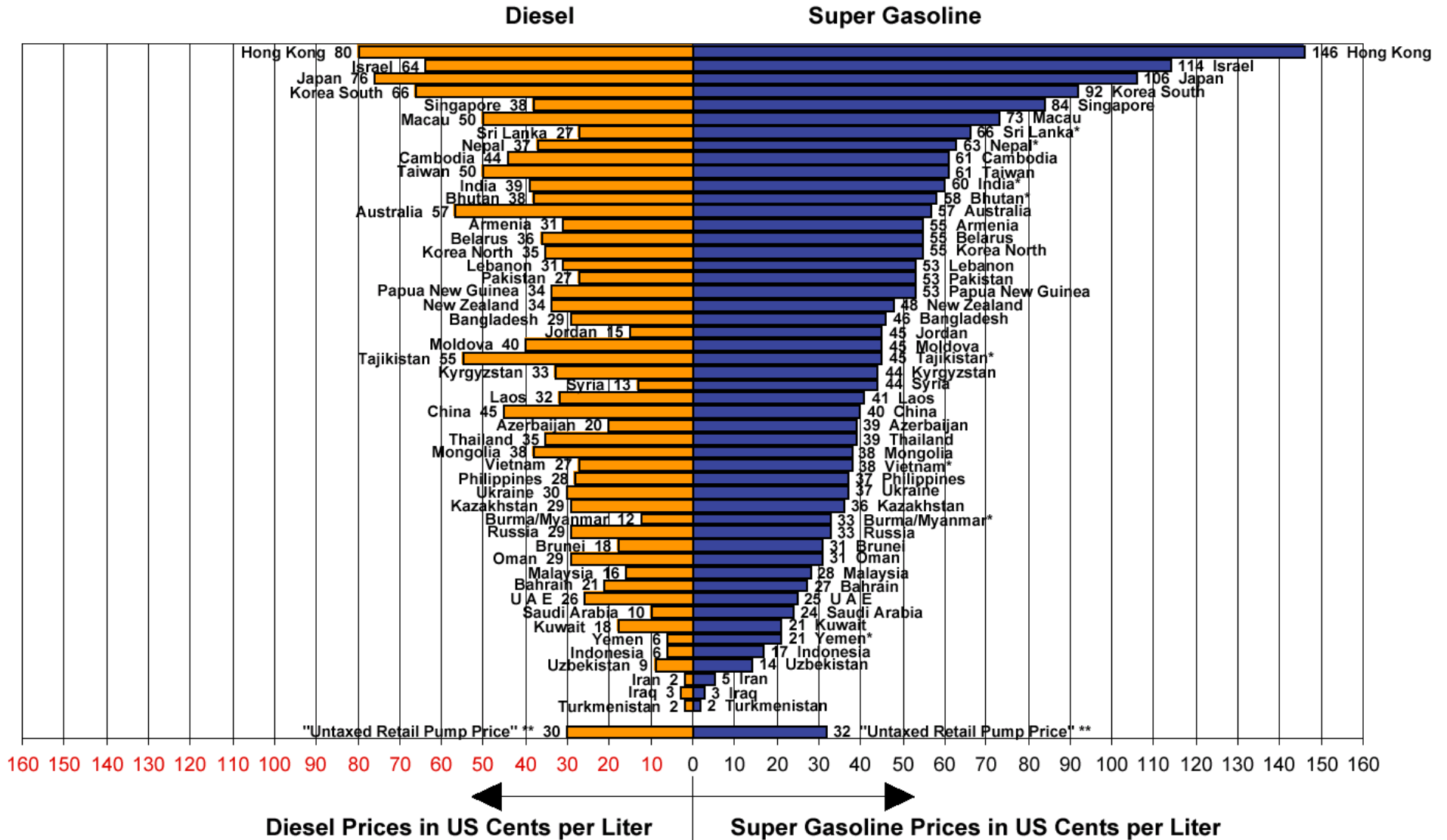
Source: GTZ Fuel Price Survey 2000 (Dr. Metschies); 1 US\$ = 2.26 DM = 1.16 EURO

* In most cases the prices given refer to super gasoline. Only in those countries marked with * the quality is "regular".

** The "Untaxed Retail Pump Price" is a hypothetical reference retail pump price for super gasoline including distribution but excluding fuel tax, VAT, etc.

*** According to the agreed upon EU minimum taxation ("Acquis Communautaire").

Fuel Prices as of November 2000 - Asia and Australia - Average Consumer Prices at Highway Pump in US Cents per Liter



Source: GTZ Fuel Price Survey 2000 (Dr. Metschies); 1 US\$ = 2,26 DM = 1,16 Euro

* The gasoline quality is in general "Super". In those countries marked with "*" the quality is "Regular".

** The "Untaxed Retail Pump Price" is a hypothetical reference retail price including distribution but excluding fuel tax, VAT, etc.

**Unleaded Gasoline Retail Price, Tax Component and Untaxed Retail Pump Price In
OECD Countries, as of November 2000**

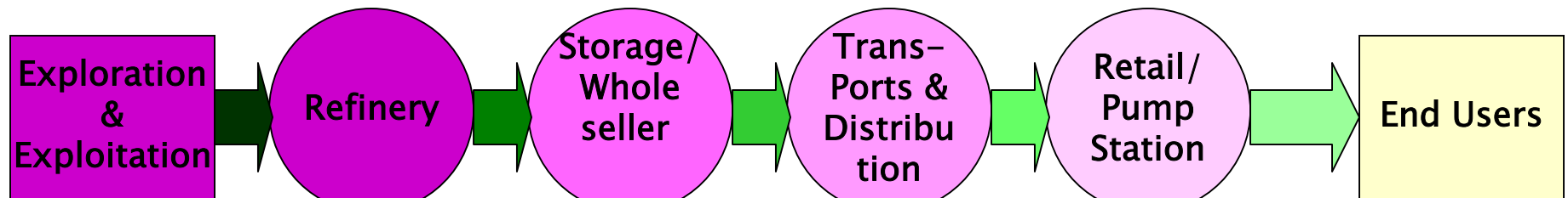
Country	Taxed Retail Pump Price (US\$/Liter)	Gasoline Tax Component (%)	Untaxed Retail Pump Price in % and (US\$)
1. Norway	1.19	74.2%	25.8% (US\$0.30)
2. UK	1.17	74.3%	25.7% (US\$0.30)
3. Finland	1.06	76.5%	23.5% (US\$0.25)
4. Netherlands	1.03	79.2%	20.8% (US\$0.22)
5. Denmark	1.01	75.1%	24.9% (US\$0.25)
6. France	1.01	79.7%	20.3% (US\$0.21)
7. Italy	1.00	73.9%	26.1% (US\$0.26)
8. Belgium	0.96	74.6%	25.4% (US\$0.24)
9. Sweden	0.95	71.7%	28.3% (US\$0.27)
10. Austria	0.91	66.3%	34.7% (US\$0.31)
11. Germany	0.90	74.2%	25.8% (US\$0.23)
12. Portugal	0.90	71.1%	28.9% (US\$0.26)
13. Japan	1.06	58.7%	41.3% (US\$0.41)
14. Luxembourg	0.75	64.4%	35.6% (US\$0.26)
15. USA	0.36	30.0%	70.0% (US\$0.25)
Untaxed Retail Pump Price (Average)	-	-	US\$0.32
Indonesia	0.18	Negative (Subsidy)	US\$0.24

Source: Fuel Prices and Vehicle Taxation by Gerhard P. Metschies, October 2002, Pertamina and OECD Publications.

II. COST OF PETROLEUM FUELS IN INDONESIA :

1. UNDER VERTICALLY INTEGRATED SYSTEM (NATURAL MONOPOLY WITH BIG SIZE/economy of scale):
18 cents (Zero subsidy)
2. UNDER UNBUNDLING SYSTEM (LIBERALIZED SYSTEM with smaller size): 24 cents

COMPARISON BETWEEN LIBERALIZED SYSTEM AND VERTICALLY INTEGRATED SYSTEM OF DOWNSTREAM OIL INDUSTRY IN INDONESIA



Crude Oil:
International Price

New system
Law No.22/2001:
Unbundling
With transaction
Costs + Taxes

Old System
Law No.8/1971:
Vertically
Integrated System

	Refinery	Storage/ Whole seller	Trans- Ports & Distribu tion	Retail/ Pump Station	End Users
	↓	↓	↓	↓	
	LLC	LLC	LLC	LLC : separate limited liability company	
	Cost + "Profit"	Cost + "Profit"	Cost + "Profit"	Cost + "Profit"	Market Price = URPP
	Cost	Cost	Cost	Pump Margin	Average Total Cost

URPP of Petroleum Fuels >> ATC of Petroleum Fuels

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24 Cents >> 18 Cents

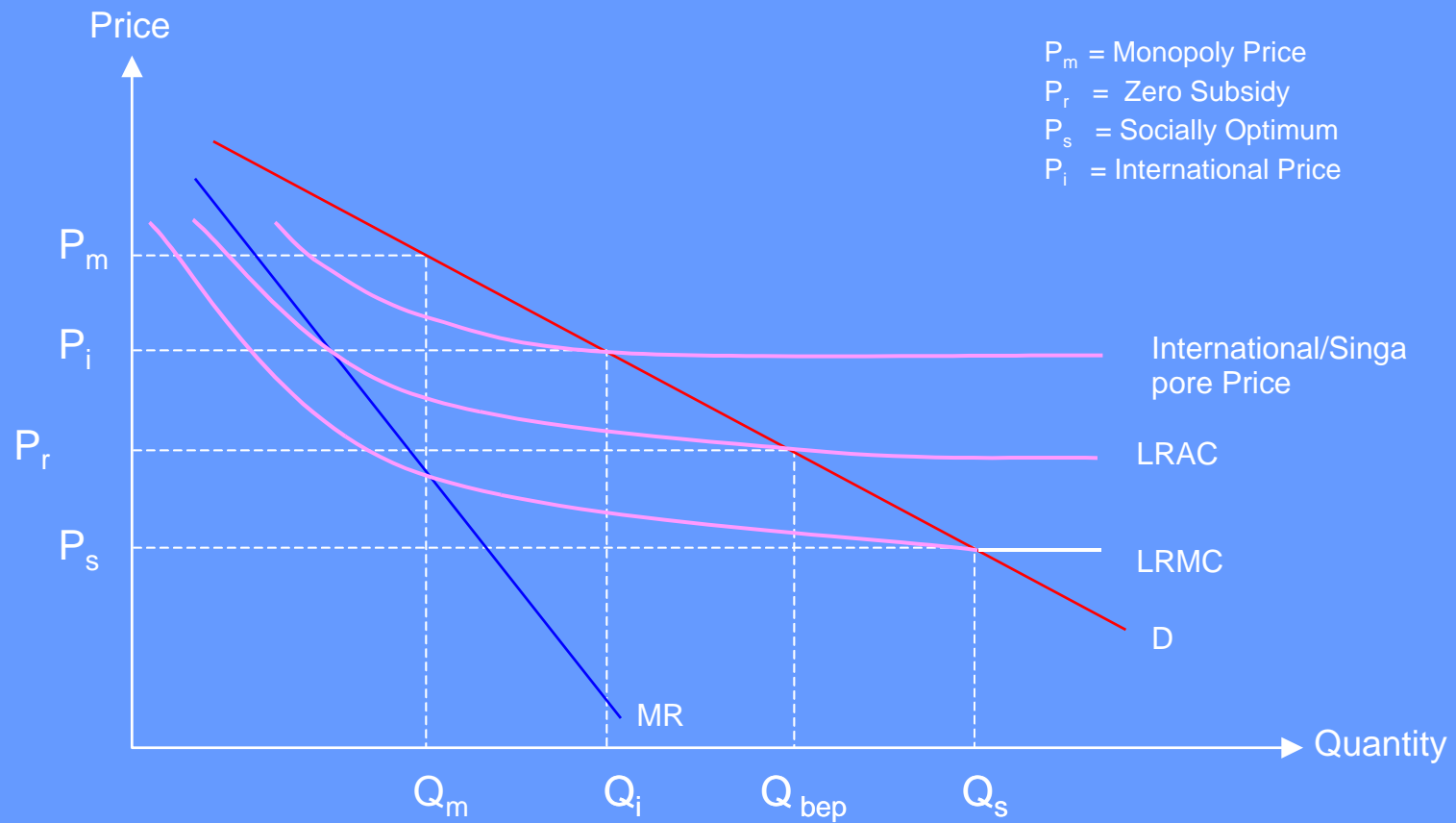
Average Cost of Petroleum Fuels at End Users Throughout Indonesia
(US Cent Dollar per Liter)

Fiscal Year	Operating Cost (Controlled by PERTAMINA)	Crude Run Costs + Imported Petroleum Fuels (Uncontrollable)	Total Cost of Petroleum fuels at end user
1994/1995	4.21	11.62	15.83
1995/1996	3.81	12.47	16.28
1996/1997	3.68	14.62	18.30
1997/1998	3.23	13.38	16.61
1998/1999	2.21	7.96	10.17
2000	1.88	16.50	18.38
2001	1.73	16.32	18.05

Declining: The nature of
Natural Monopolist

Mostly influenced
by World Crude Oil price

MONOPOLY WITH DECREASING MARGINAL COST: *NATURAL MONOPOLY*



Empirical Studies on Vertical Integration

Conducted by: Tasneem Chipty (Charles River Associates, Boston)

*“Vertical Integration, Market Foreclosure, and
Consumer Welfare in the Cable Television Industry”*

Conclusion:

*“Vertical integration does not harm, and may actually benefit,
consumers because of the associated efficiency gains”*

(The American Economic Review, June 2001, Vo. 91, No.3)

III.

The Impact Liberalization on Indonesian LNG industry

1. LNG Plant could be treated as a profit center, so every body could enter this market. This will reduce State revenues from LNG. Under vertically integrated system (old system), LNG plant was not a profit center in order to maximize revenues for both the State and PSCs who hold risk in their upstream business. In fact, LNG plant does not create any value added, because LNG will be re-gasified in consuming country
2. LNG Marketing is not under one roof because Pertamina will not be a Mineral Rights holder. No Single Seller anymore: there will be competition among Indonesian LNG. The possible consequence dealing to the security of supply for the buyers, the credibility of Pertamina in the World LNG industry and Financiers.

Indonesian LNG Industry System based on Law No.8/1971

LNG Revenues = $A - (X + Y + Z)$

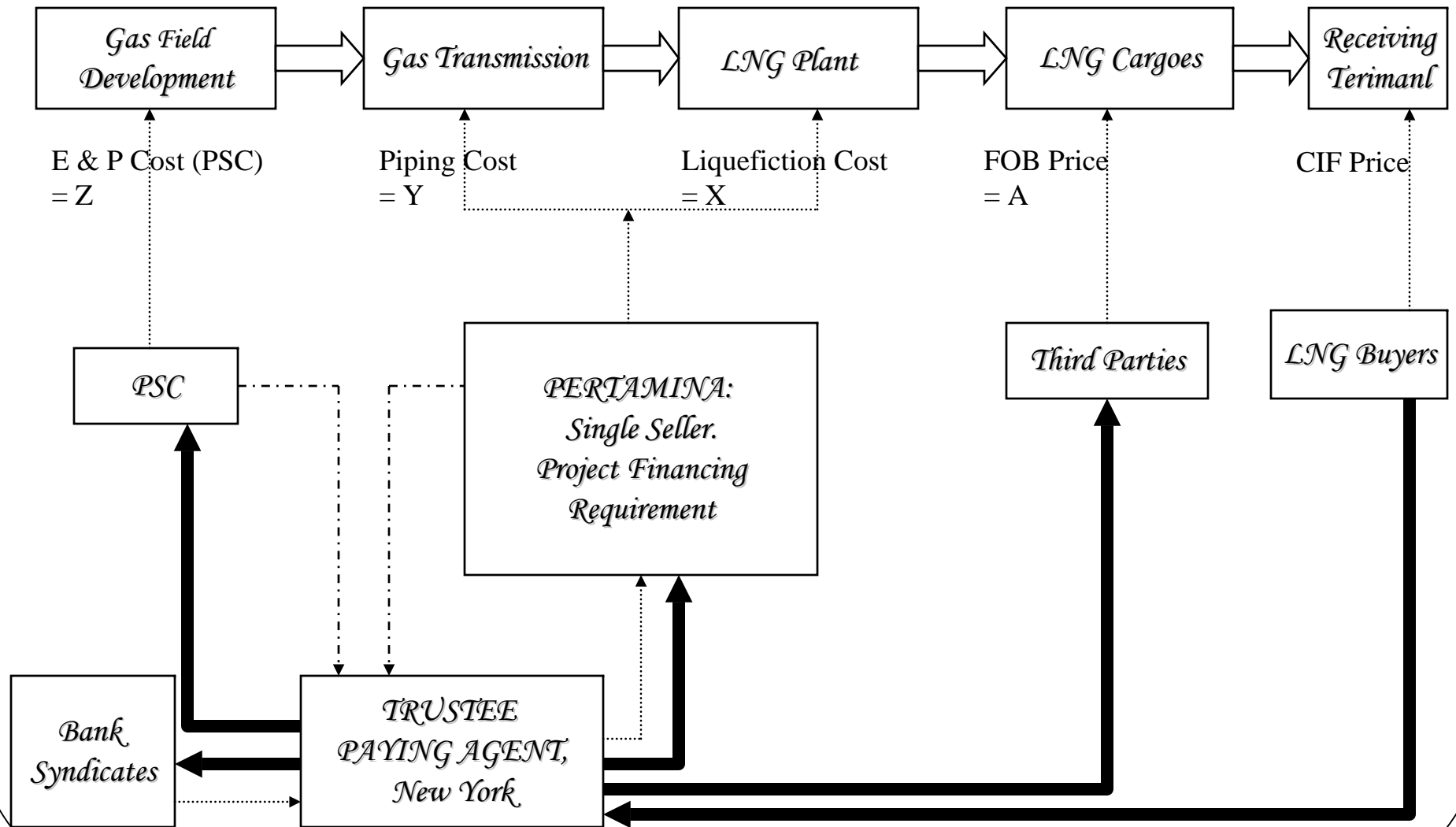
GOI: 65% - 70%

PSC: 30% - 36%

Arus Pembayaran LNG:

Arus Investasi:

Pembentukan Trustee:



LNG Export (US\$ Million)

<i>Year</i>	<i>Japan</i>	<i>Korea</i>	<i>Taiwan</i>	<i>Total</i>
<i>1977</i>	<i>80</i>	<i>-</i>	<i>-</i>	<i>80</i>
<i>1980</i>	<i>2.327</i>	<i>-</i>	<i>-</i>	<i>2.327</i>
<i>1985</i>	<i>3.801</i>	<i>-</i>	<i>-</i>	<i>3.801</i>
<i>1990</i>	<i>3.397</i>	<i>491</i>	<i>159</i>	<i>4.048</i>
<i>1995</i>	<i>2.677</i>	<i>850</i>	<i>329</i>	<i>3.856</i>
<i>2000</i>	<i>4.512</i>	<i>1.475</i>	<i>837</i>	<i>6.825</i>
<i>2002</i>	<i>3.738</i>	<i>1.058</i>	<i>839</i>	<i>5.637</i>

Note: Export to Korea and Taiwan started in 1986 and 1990 with the value of US\$14 million and US\$159 million respectively

IV.

The Future of Indonesian Oil Industry: Still Optimistic

1. High Potential of Hydrocarbon Resources
2. Long experience with International Oil Companies
3. Initiator of Production Sharing Contracts: have given big benefit to the State.

HYDROCARBON RESOURCES IN INDONESIA

<i>I. BASINS:</i>	60	{ <i>EXPLORED</i> : 38 <i>NOT YET EXPLORED</i> : 22	{ 14 <i>PRODUCTION</i> 9 <i>DISCOVERED</i> 15 <i>NO DISCOVERY</i>
<i>II. RESOURCES (1.1.2000) :</i>	{	<i>OIL</i> : 77 <i>BILLION BARELS</i> <i>GAS</i> : 332 <i>TRILLIUN CUBIC FEET (TCF)</i>	
<i>III. PROVEN AND POTENTIAL RESERVES (1.1.2000) :</i>	{	<i>OIL</i> : $5,11 + (1,82 + 2,74) = 9,67$ <i>BILLION BARELS</i> <i>GAS</i> : $80,83 + (36,39 + 29,70) = 146,92$ <i>TCF</i>	
<i>IV. PRODUCTION (2000) :</i>	{	<i>OIL</i> : 0,48 <i>BILLION BARELS</i> <i>GAS</i> : 2,26 <i>TCF</i>	

PRODUCTION SHARING CONTRACTORS

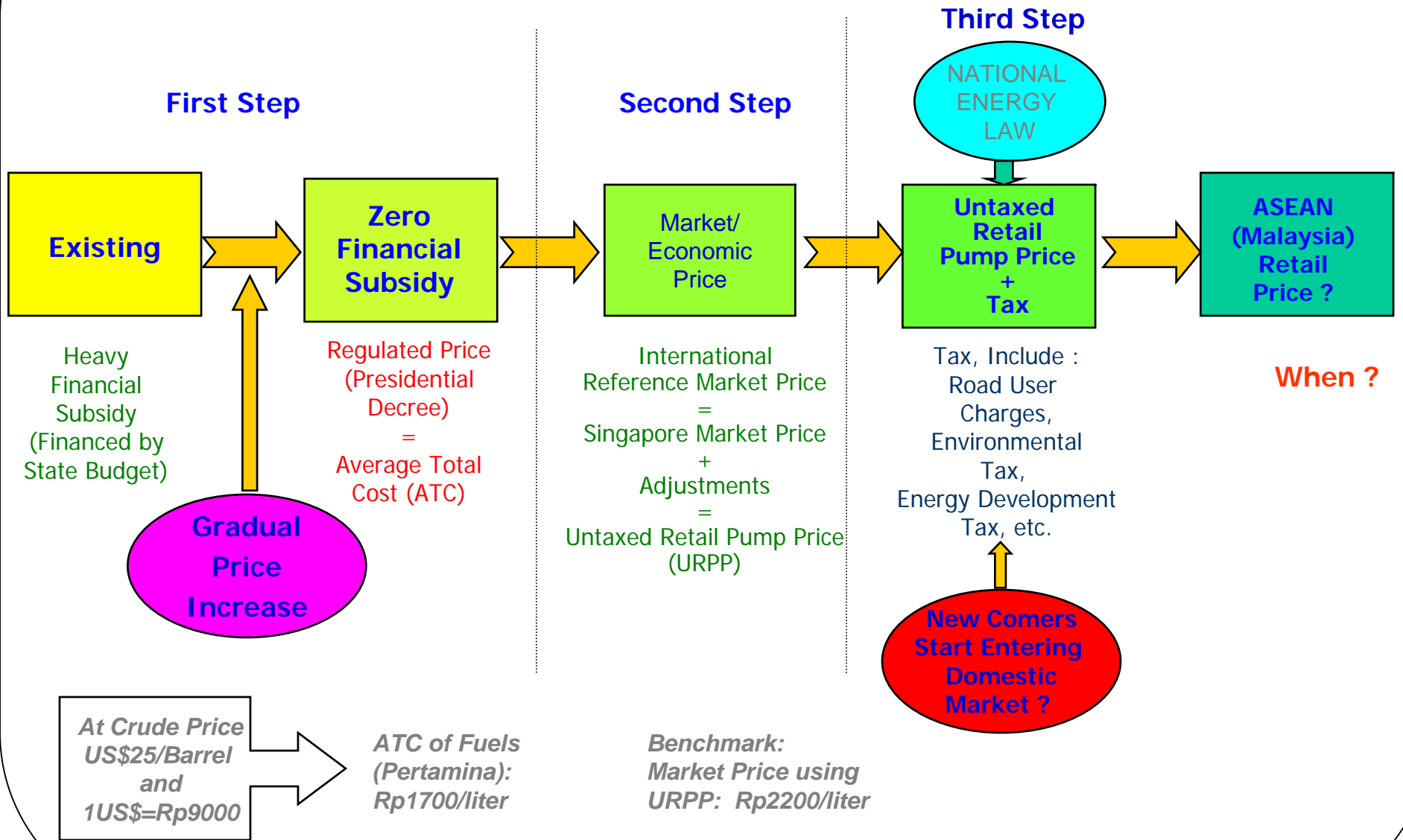
- A. PARTICIPANTS** : 60 OPERATORS INCLUDING 5 SUPERMAJORS (EXXON MOBIL, CHEVRON TEXACO, BP AMOCO ARCO, TOTAL FINA ELF, SHELL). MAJORS (CONOCO, REPSOL, UNOCAL, SANTA FE, GULF, PREMIER, LASMO, INPEX, JAPEX, DLL.) AND INDEPENDENTS.
- B. WORKING AREAS - 160** PRODUCERS : 57 (12 SUPERMAJORS, 15 MAJORS DAN 30 INDEPENDENTS)
EXPLORATION : 103 (19 SUPERMAJORS, 32 MAJORS DAN 52 INDEPENDENTS)
- C. RESERVES (1.1.01) - OIL :** SUPERMAJORS (70 %), MAJORS(18 %), INDEPENDENTS (12%)
- GAS : SUPERMAYORS (80 %), MAYORS(15 %), INDEPENDENTS (5%)
- D. PRODUKSI (2000) - OIL :** SUPERMAJORS (68 %), MAJORS (28 %), INDEPENDENTS (4%)
- GAS : SUPERMAYORS (82 %), MAYORS (15 %), INDEPENDENTS (3%)
- E. PENDAPATAN (REVENUE)**
(1966 s/d 2000)..... : GROSS REVENUE : US \$ 348,- BILLION (100 %)
= COST RECOVERY..... : US \$ 69,- BILLION (20 %)
= NET CONTRACTOR SHARE... : US \$ 48,- BILLION (14 %)
= INDONESIA SHARE..... : US \$ 231,- BILLION (66 %)

V.

LONG TERM FUEL PRICING POLICY:

1. Eliminating subsidy by applying average cost pricing of natural monopolist: to make consistent with the market structure
2. International market price by using Untaxed Retail Pump Price approach.
3. Applying fuel (gasoline) tax based on National Energy Law

LONG TERM PETROLEUM BASED FUELS (BBM) PRICING POLICY



Conclusions:

1. Applying liberalization and privatization in the oil industry sector in Indonesia will bring some consequences on the efficiency of the industry. It is important to look for the strategy to implement the program without sacrifice the efficiency.
2. In the long run, petroleum fuel pricing policy in Indonesia, should be integrated with both primary and final energy pricing policies.
3. Before applying gasoline tax, it needs to increase price gradually by considering purchasing power of the people and market structure.
4. In order to avoid any disadvantages, such as in the domestic petroleum fuels and LNG industries in Indonesia, the New Law on Oil and Gas should be opened to be amended.