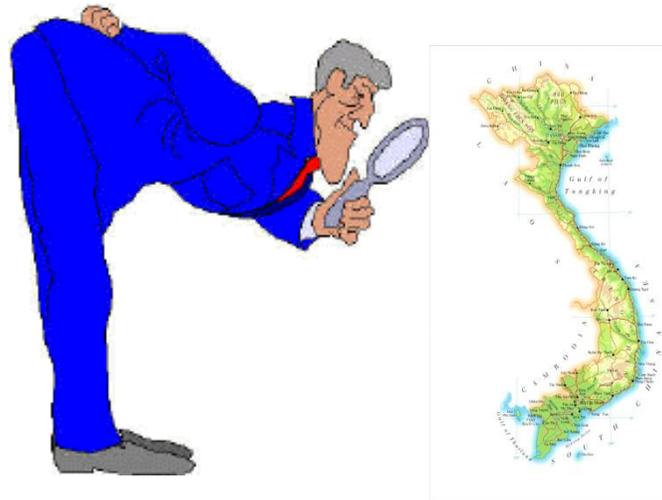


# Development Policy

## Industrialization Strategy

### The case of Vietnam



# Motivation

Twenty five years ago it seemed likely that Vietnam would follow the Trail of the Tigers.

Conditions in Vietnam in the early 1990s were comparable to the initial conditions in Taiwan in the 1960s, Thailand in the 1970s and China in the 1980s.

In the early 1990s Vietnam adopted many of the policies associated with the Export-Oriented Industrialization Strategy (EOI strategy) and experienced relatively rapid growth.

Since 2006, however, the momentum of EOI has declined, with lower average annual growth rates and higher levels of macroeconomic instability .

Recently many observers proclaim that Vietnam is stuck in a “Middle-Income Trap” —where prosperity is limited to the productivity of unskilled labor in labor-intensive manufacturing— and call for a new growth and industrialization strategy.

Why did the EOI strategy not live up to expectations in Vietnam?

- Because of weaknesses inherent to the strategy?
- Because of failures in implementing the strategy?

## Initial conditions: per capita income

My first paper on VN's economy (published in 1993) asked the following question: Were the initial conditions in Vietnam in 1990 similar to those of other countries when they launched and succeeded with the Export-Oriented-Industrialization (EOI) Strategy?

**Answer: Yes**, the starting point in terms of per capita income was similar—all started from a low per capita income level.



Riedel, "Vietnam on the Trail of the Tigers," *World Economy*, 1993.

## Initial conditions: human resources

Was Vietnam's human resource endowment comparable to the other countries when they launched EOI?

**Answer: Yes**, VN's human resource endowment was as strong or stronger than the other countries

	<i>Taiwan</i> 25–30 <i>Years Ago</i>	<i>Thailand</i> 15–20 <i>Years Ago</i>	<i>China</i> 15–20 <i>Years Ago</i>	<i>Vietnam</i> <i>Most</i> <i>Recent</i>
Population mn.	11	41	916	66
Pop. Density pop./sq. km.	300	108	96	195
Population Growth Rate %	3.1	2.7	1.8	2.4
Age Dependency Ratio	0.92	0.92	0.78	0.79
Urban Pop. Growth Rate %	5.7	5.2	2.3	3.9
Rural Pop. Growth Rate %	1.5	2.2	-6.0	2.0

Source: IBRD, *Social and Economic Indicators*; *Taiwan Statistical Data Book* (1989).

## Initial conditions: human development

Were Vietnam's human development indicators comparable to other countries when they launched EOI?

**Answer: Yes**, *VN's human development indicators were as strong or stronger than the other countries*

	<i>Taiwan</i> <i>25–30</i> <i>Years Ago</i>	<i>Thailand</i> <i>15–20</i> <i>Years Ago</i>	<i>China</i> <i>15–20</i> <i>Years Ago</i>	<i>Vietnam</i> <i>Most</i> <i>Recent</i>
Infant Mortality Rate	—	55	46	42
Life Expectancy	63	60	65	67
Calories per capita	2390	2285	2070	2233
Enrollment Rate <sup>a</sup>				
Primary	97	83	135	102
Secondary	30	26	47	42
Tertiary	3	12	—	—
Illiteracy Rate <sup>b</sup>	30	7	27	16

Riedel, 1993, "Vietnam on the Trail of the Tigers," *World Economy*

## Initial conditions: Natural resources

Was Vietnam's natural resource endowment comparable to other countries when they launched EOI?

**Answer: Yes**, like the other countries, VN's natural resource endowment was modest relative the size of its population

Indicators of Natural Resource Endowment

	<i>Taiwan</i> 25–30 Years Ago	<i>Thailand</i> 15–20 Years Ago	<i>China</i> 15–20 Years Ago	<i>Vietnam</i> Most Recent
Area thous. sq. km.	36	513	9561	332
Ag. Land/Total Area %	24	45	44	21
Ag. Pop. Density pop./sq. km.	629	240	219	934
Rice paddy yield kg./ha.	2495	3029	1910	3002
Forests thous. sq. km.	21	142	1389	98

Growth of Rice Production, Yields and Area of Cultivation in Taiwan, Thailand and Vietnam

	<i>Production</i>	<i>Area under Cultivation</i>	<i>Yield</i>
Taiwan (1952–70)	2.5	–0.1	2.6
Thailand (1970–90)	1.7	1.7	0.0
Vietnam (1970–90)	3.1	0.9	2.2

Source: *FAO Yearbook; Taiwan Statistical Data Book (1989)*.

Riedel, 1993, "Vietnam on the Trail of the Tigers," *World Economy*

## Initial conditions: Agriculture

Was the structure of the economy in terms of dependence on agriculture similar to that of the other countries when they launched EOI?

**Answer: Yes**, similar, but VN's dependence on agriculture was somewhat greater than the other countries.

The Share of Agriculture in Employment, GDP and Exports

	<i>Taiwan</i>		<i>Thailand</i>		<i>China</i>		<i>Vietnam</i>	
	<i>1960</i>	<i>1970</i>	<i>1970</i>	<i>1980</i>	<i>1980</i>	<i>1990</i>	<i>1985</i>	<i>1990</i>
Employment	50.2	36.1	77.8	71.1	74.0	—	72.3	71.5
Value Added	32.9	18.0	28.3	25.4	37.1	27.2	37.4	32.5
Exports	12.0	8.6	67.0	41.0	25.4	7.2	—	75.0
Processed Ag.	(55.7)	(12.8)						

Sources: *Taiwan Statistical Data Book* (1989); *Vietnam GSO* (1991); IBRD, World Tables (computer files).

## Initial conditions: Industry

Was the level of industrialization in VN comparable to the other countries that succeeded with EOI?

**Answer: No**, measured in terms of per capita production, Vietnam's manufacturing sector was much less developed. But this may have been an advantage since industrial development under ISI was generally inefficient. It certainly was no disadvantage since EOI is very footloose.

Per Capita Production of Selected Manufactured Goods

	<i>Vietnam</i> 1990	<i>Taiwan</i> 1960	<i>China</i> 1980
Steel (kg)	1.5	28.3	37.8
Machine tools ( $10^{-4}$ units)	11.1	210.8	136.6
Chemical fertilizer (kg)	4.9	34.4	125.6
Elect. motors ( $10^{-3}$ units)	0.1	1.5	na
Elect. Fans ( $10^{-3}$ units)	2.8	18.5	7.4
Paper (kg)	1.2	7.5	na
Cotton Fabrics (metres)	4.7	16.0	7.6

Sources: *Vietnam GSO* (p.20); *Taiwan Statistical Data Book* (1989); IBRD, China: *Country Economic Memorandum* (1989).

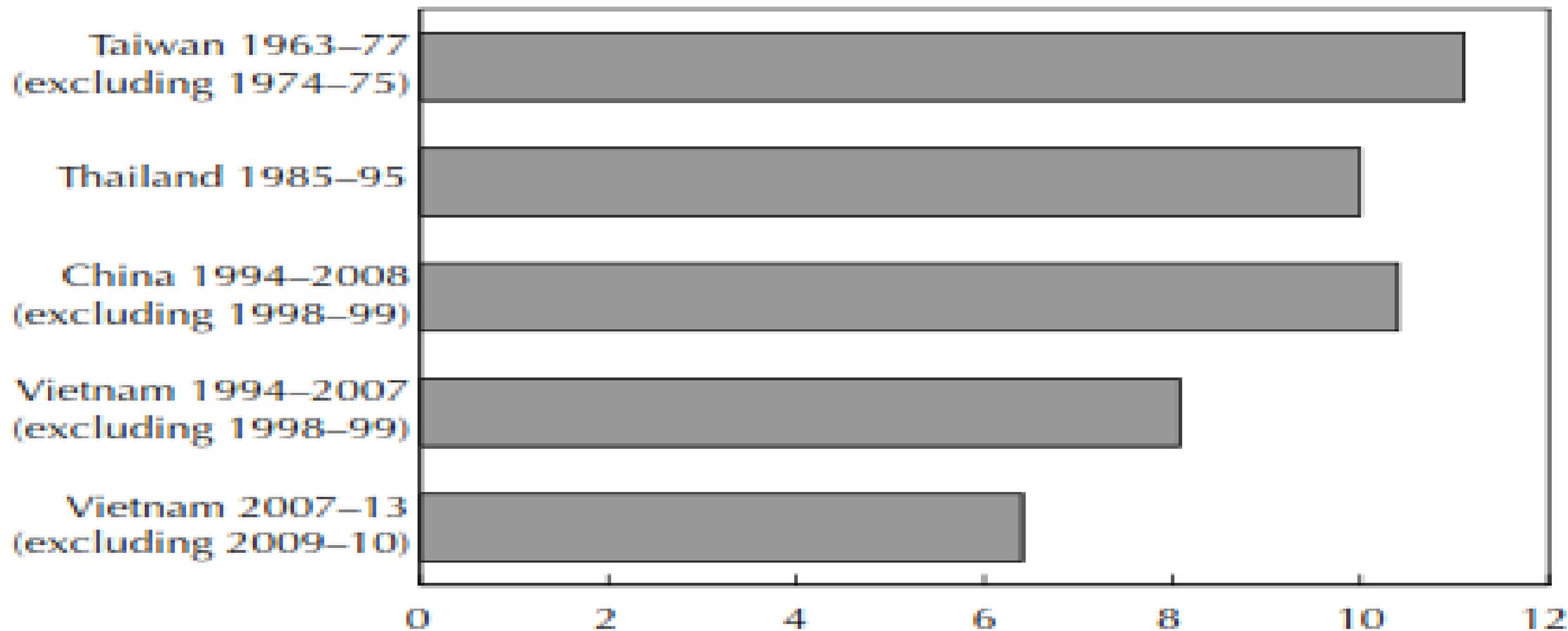
Riedel, 1993, "Vietnam on the Trail of the Tigers," *World Economy*

# Should Vietnam follow the Trail of the Tigers? Answer in 1993

1. Did Vietnam have initial conditions comparable to other countries that succeeded with EOI? **Yes**, at least as favorable or more favorable
2. Should Vietnam, in 1990, have taken the trail of the tigers? **Yes**, It leads to prosperity and there is no other known way that works better.
3. Did Vietnam subsequently follow the trail of the Tigers? **Yes**
4. Did Vietnam enjoy comparable success? **No**
5. **Why not?**

# Vietnam's Comparative Performance: Growth

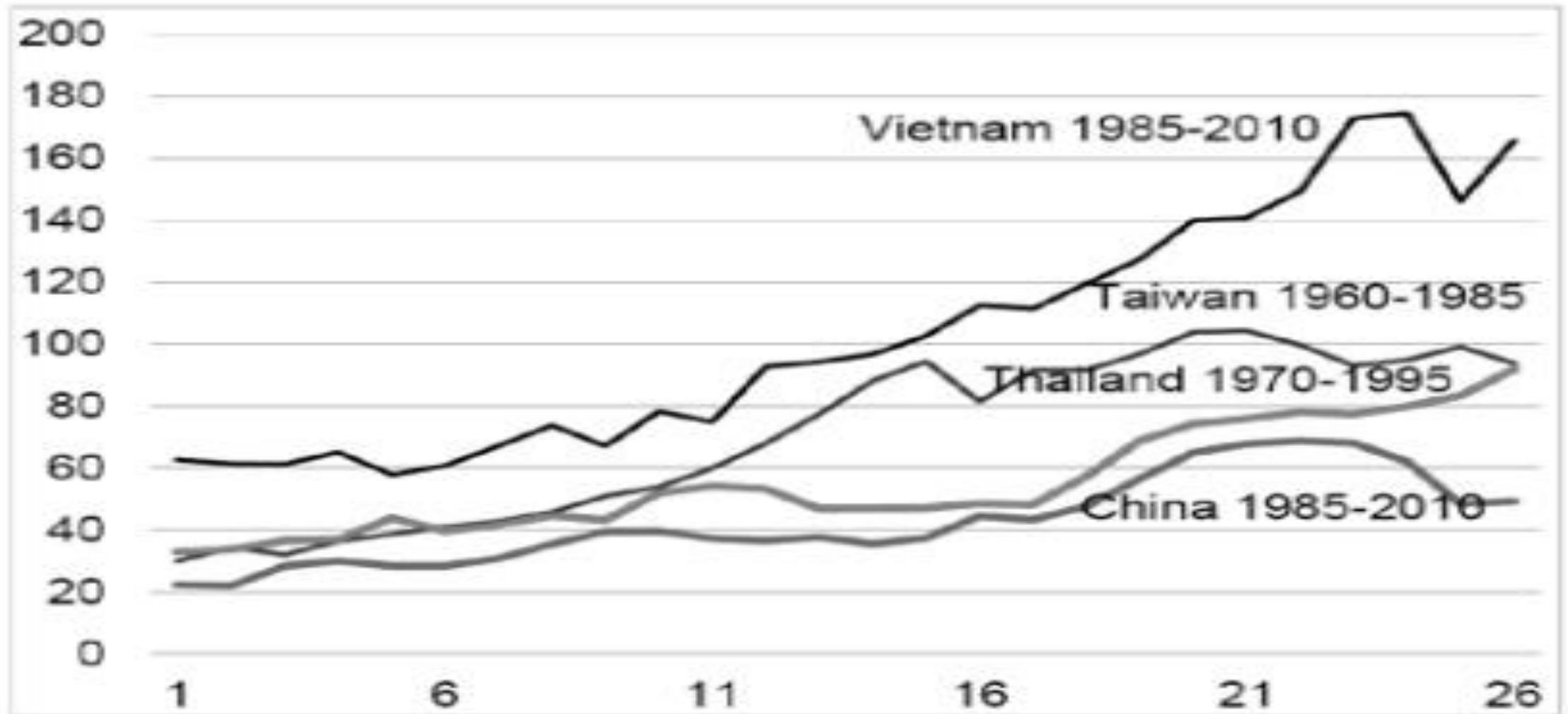
Average Annual Real GDP Growth Rates During the Take-off Phase of EOI



Source: IMF, *International Financial Statistics*, [www.imf.org/external/data.htm](http://www.imf.org/external/data.htm); Council for Economic Planning and Development, *Taiwan Statistical Data Book*, 1981.

# Vietnam's Comparative Performance: Export orientation

Trade (exports + imports) as percent of GDP during Take-off in Selected Countries



Source: Penn World Tables, version 7.1.

## Domestic versus Foreign Value-Added in Exports

Direct and total (directed plus indirect) foreign and domestic value added shares as percent of total and manufactured exports in Vietnam in 2007. The calculations indicate that about 50% of manufactured export value is contributed by imports.

	Foreign value-added share		Domestic value-added share	
	Direct	Total	Direct	Total
Total exports	25.8	39.5	74.2	60.5
Manufactured exports	31.3	48.2	68.7	51.8

Source: Own calculations using input-output tables, 2007, provided by the GSO.

Percentage shares of domestic value-added in China's exports, differentiating exports produced in export processing zones (processing exports) from those produce outside EPZs.

	Direct	Total
Total exports: undifferentiated	85.0	74.6
Total exports: differentiated	57.6	53.9
'Normal' exports	95.5	89.2
Processing exports	27.5	25.7
Manufactured exports: differentiated	55.0	51.3
'Normal' exports	95.1	88.4
'Processing' exports	27.0	25.1

Source: Koopman, Wang and Wei (2012); Dean, Fang and Wang (2011).

# Domestic versus Foreign Value-Added in Exports

Share of direct value-added, domestic inputs and foreign inputs in total sales of Vietnamese firms, differentiating firm by (1) degree of export orientation and (2) type of ownership.

Ratios of imported to domestic inputs are higher in (1) more export-oriented firms and (2) foreign owned firms.

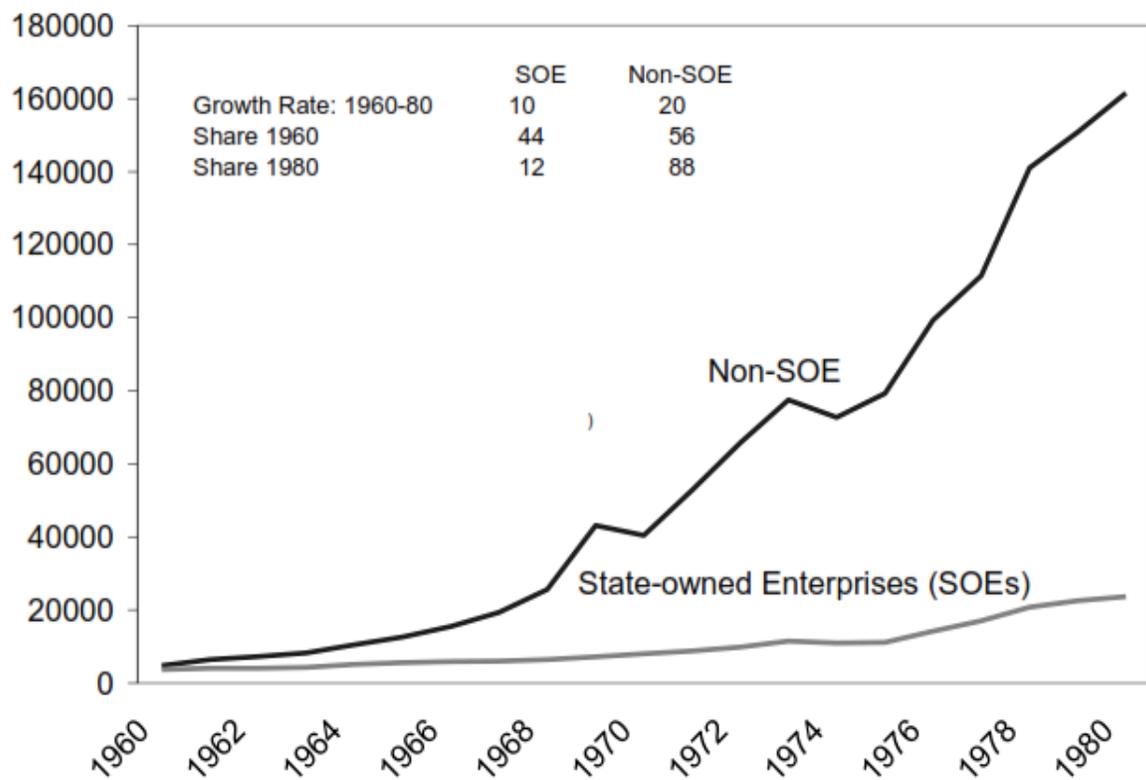
	No. of firms sampled	As % of total sales		Ratio of imported to domestic inputs	
		Value-added	Domestic intermediate inputs		Imported intermediate inputs
<b>Exports as % of sales greater than 75%</b>					
Textile	13	49.0	14.3	36.7	2.57
Garment	69	58.0	13.7	28.6	2.08
Plastic	9	39.3	19.3	41.3	2.14
Food processing	19	26.0	72.2	1.8	0.02
<b>Exports as % of sales less than 25%</b>					
Textile	4	49.6	46.2	4.2	0.09
Garment	11	65.7	18.6	15.7	0.84
Plastic	52	32.5	33.3	34.2	1.03
Food processing	5	32.5	67.5	0.0	0.00
<b>100% foreign-owned firms</b>					
Textile	14	44.9	22.9	32.2	1.4
Garment	23	55.7	11.2	34.9	3.13
Plastic	7	39.4	11.8	48.8	4.14
Food processing	3	24.7	64	11.3	0.18
<b>Domestically owned firms</b>					
Textile	15	53.5	26.2	18.1	0.69
Garment	71	61.7	15.7	22.4	1.43
Plastic	56	31.0	35.8	32.8	0.92
Food processing	28	28.0	71.6	0.4	0.01

Source: Vietnam Institute of Labor Science and Social Affairs.

# The Logic of Export-Oriented Industrialization in East Asia

- EOI allowed countries to exploit Comparative Advantage => higher growth and more “inclusivity”
- Starting out with surplus labor, EOI allowed EA countries to “have it both ways”=> (a) continue to protect capital-intensive SOEs and (b) grow labor-intensive, EO private firms => marginalization

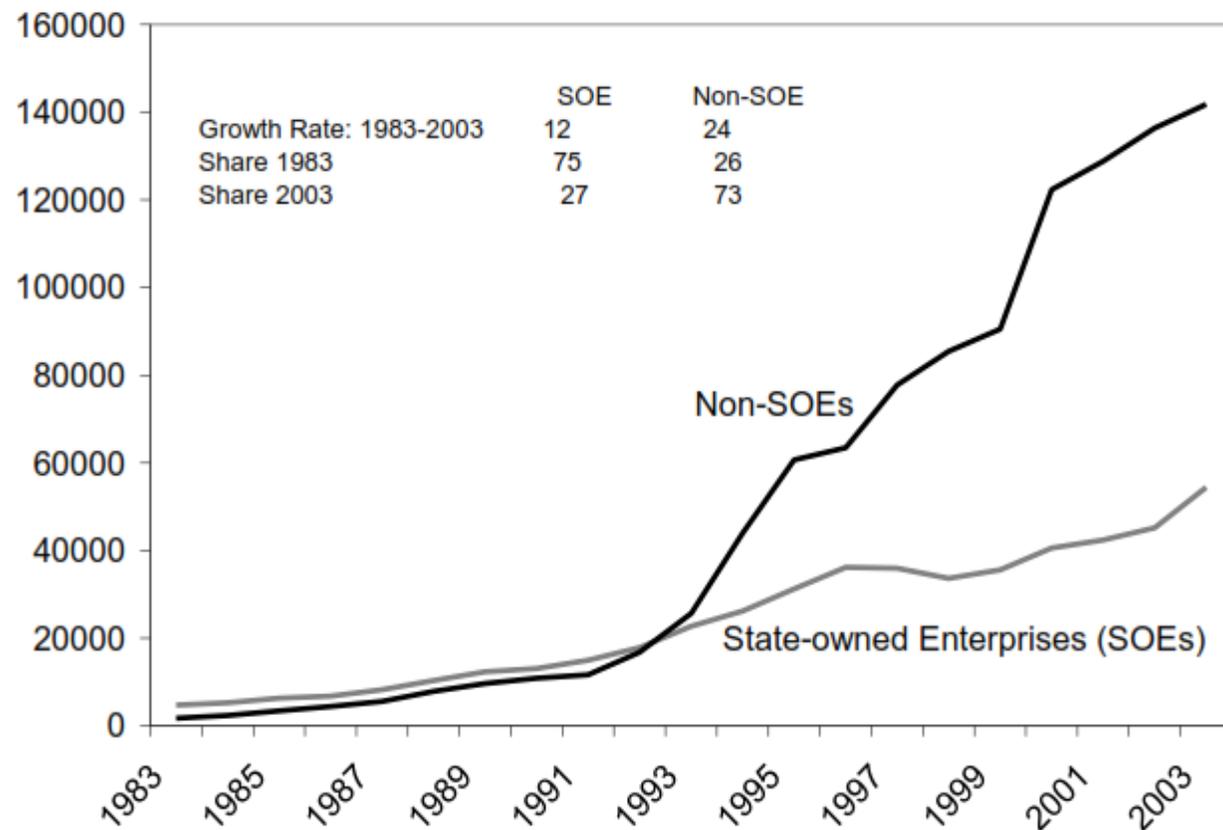
Taiwan: Industrial Output (NTD billions)



NTD = New Taiwan dollars

Source: Taiwan Statistical Data Book, 2008.

China: Industrial Output (RMB billions)

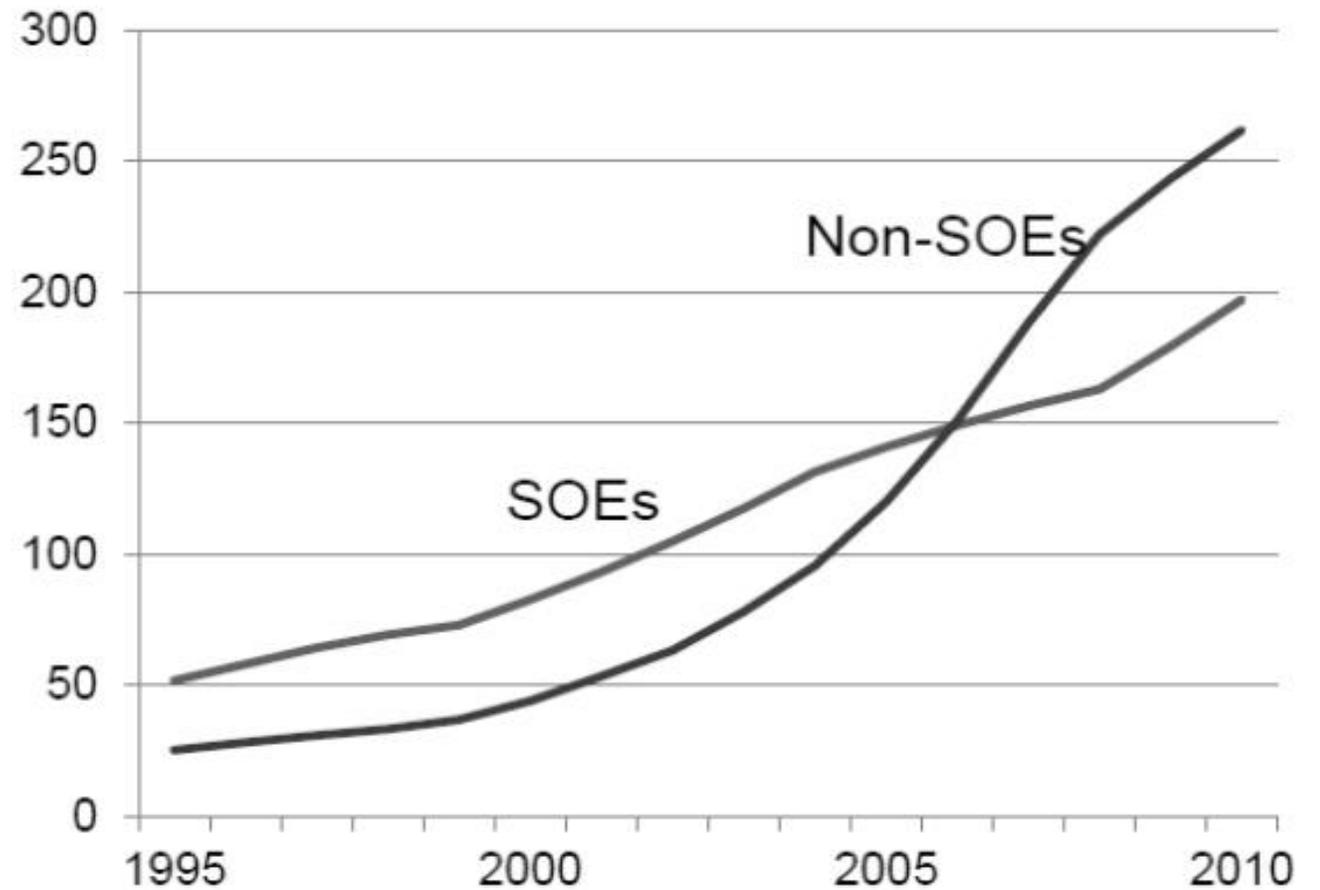


Source: China Statistical Yearbook, selected issues.

# The Logic of Export-Oriented Industrialization in East Asia

The process of marginalizing the SOE sector is underway in Vietnam, but at a slower pace than in either Taiwan or China during the take-off of EOI. In Vietnam, after almost 20 years of EOI, the state-owned sector still accounts for almost 50 percent of domestic industrial production (excluding foreign-owned firms)

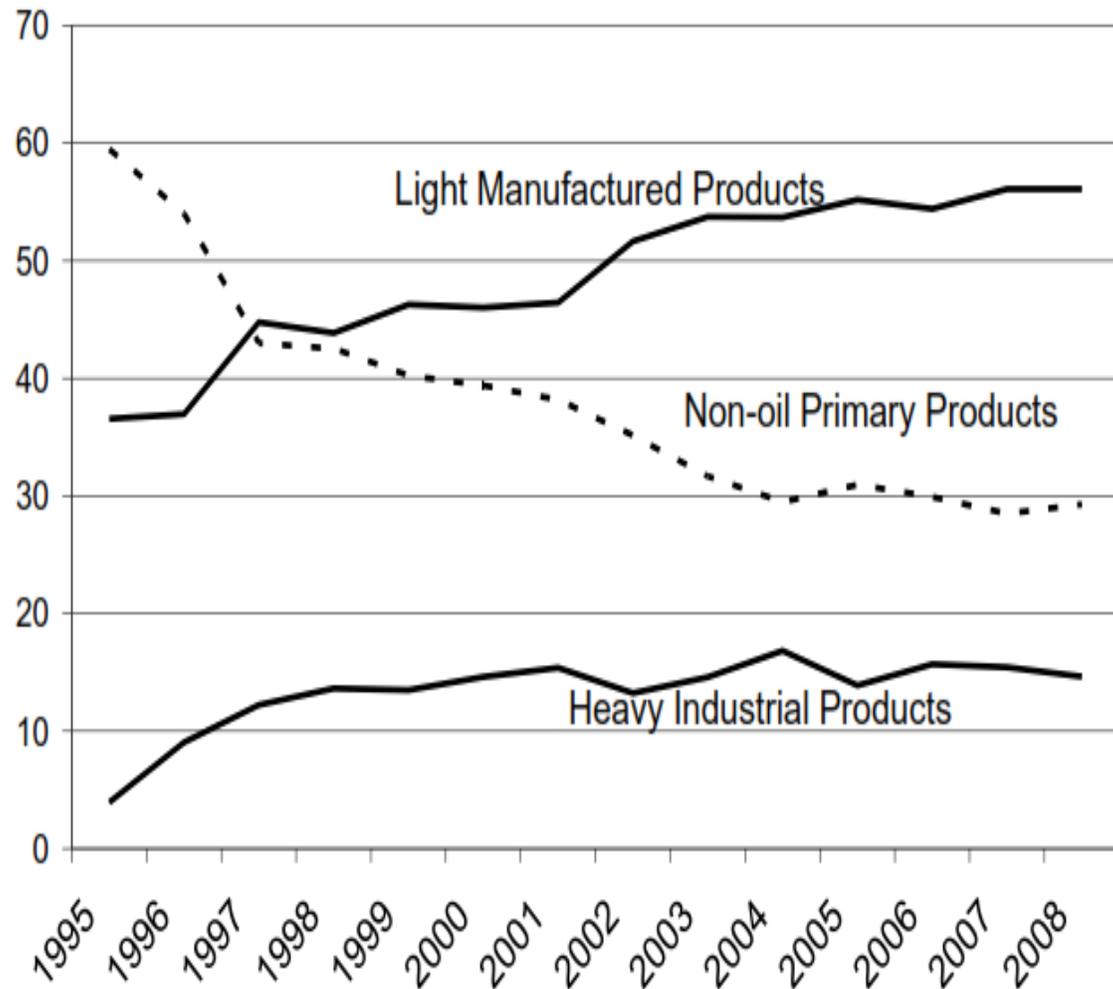
Vietnam: Industrial Output (VND trillions)



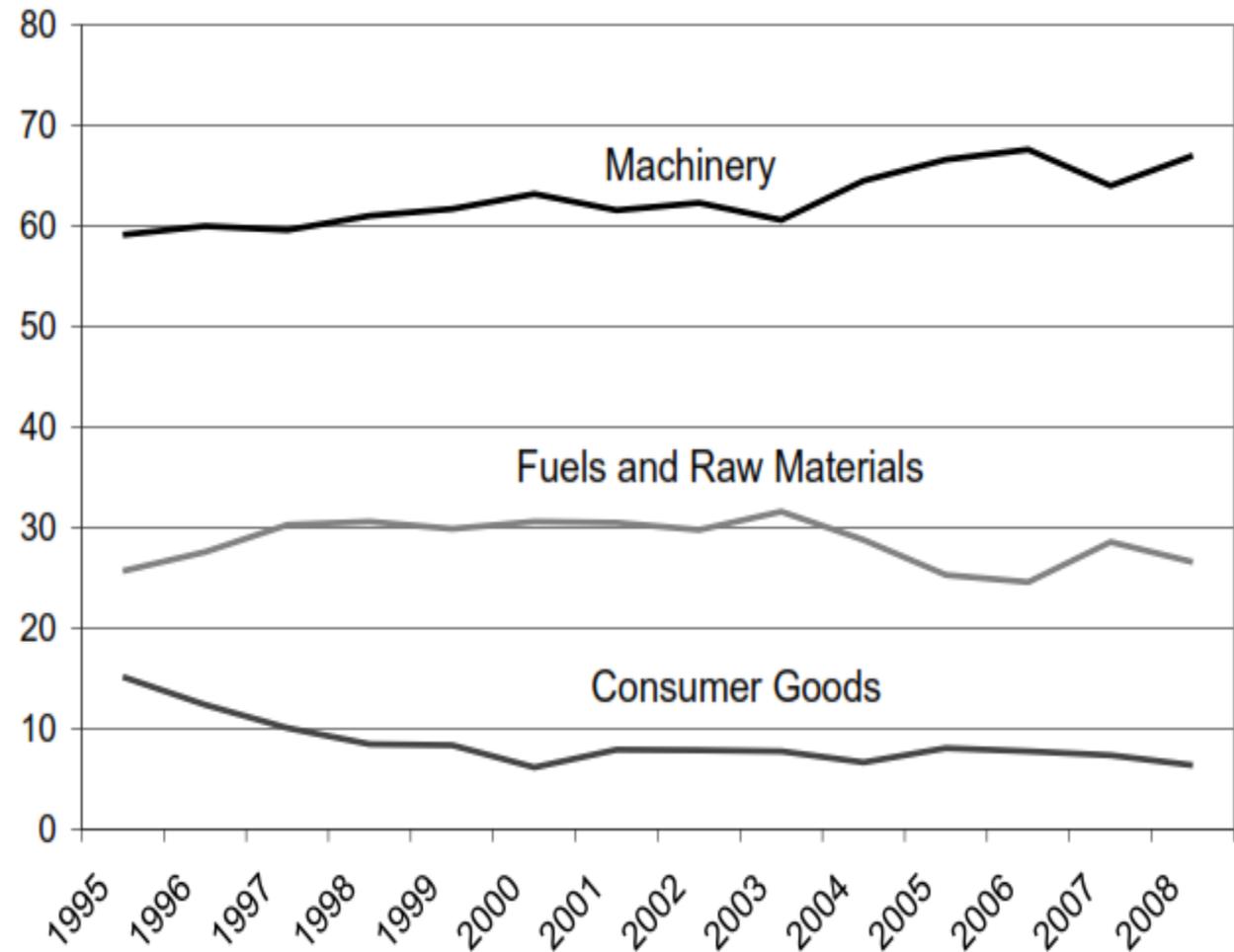
Source: GSO online databank ([www.gso.gov.vn](http://www.gso.gov.vn)).

# EOI and Structural Change in Vietnam: Trade

EOI in Vietnam has led to a significant change in the composition of export, not imports



Source: GSO online databank ([www.gso.gov.vn](http://www.gso.gov.vn)).



Source: GSO online databank ([www.gso.gov.vn](http://www.gso.gov.vn)).

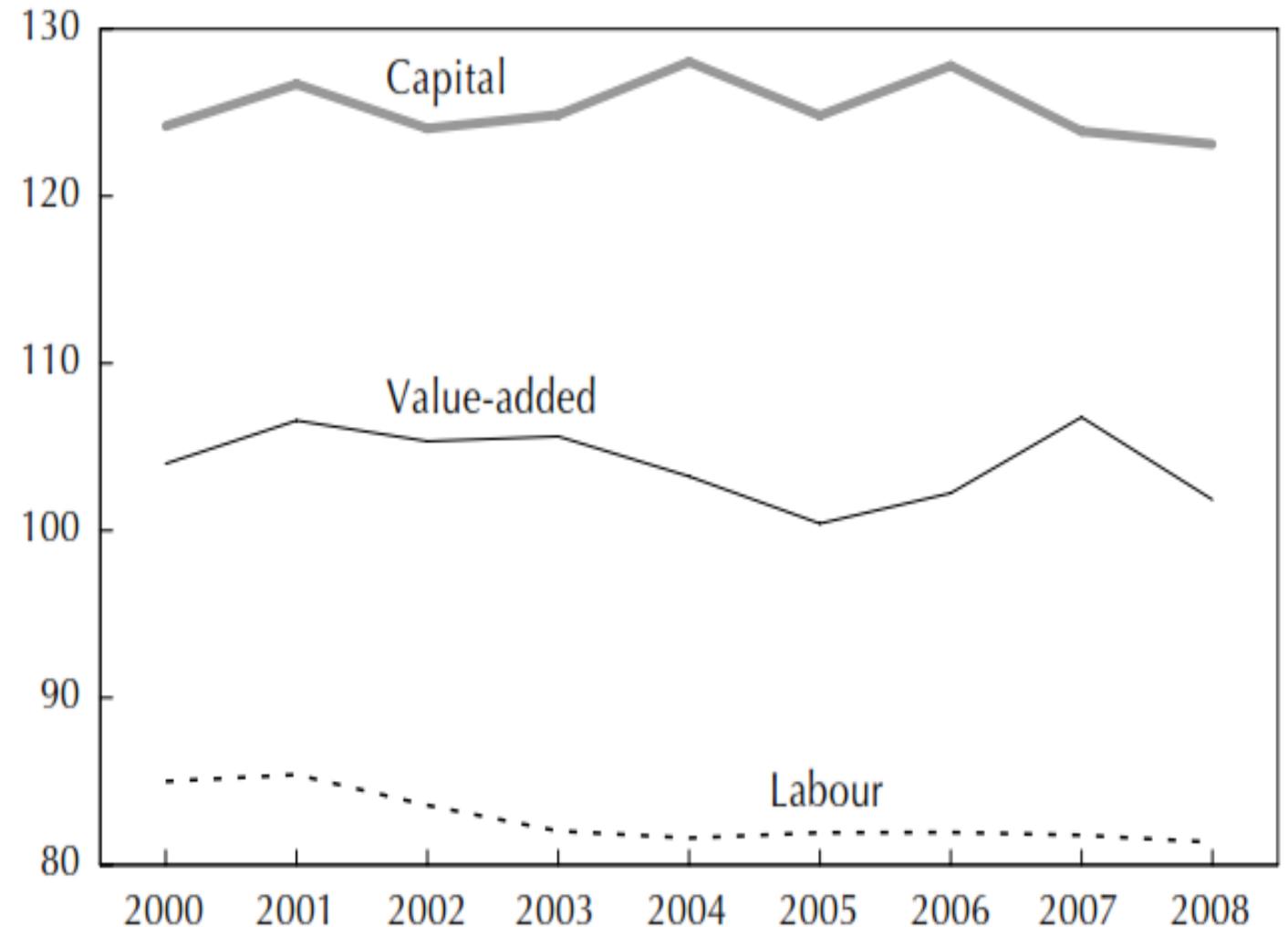
# EOI and Structural Change in Vietnam: Resource allocation

However, the distribution of the capital stock and value added have not changed in favor of relatively labor intensive sectors, as one would have expected.

The lines in the figure indicate the weighted average capital-labor ratio across sectors, where the weight are the share of each sector in the distribution of capital, value-added and labor respectively.

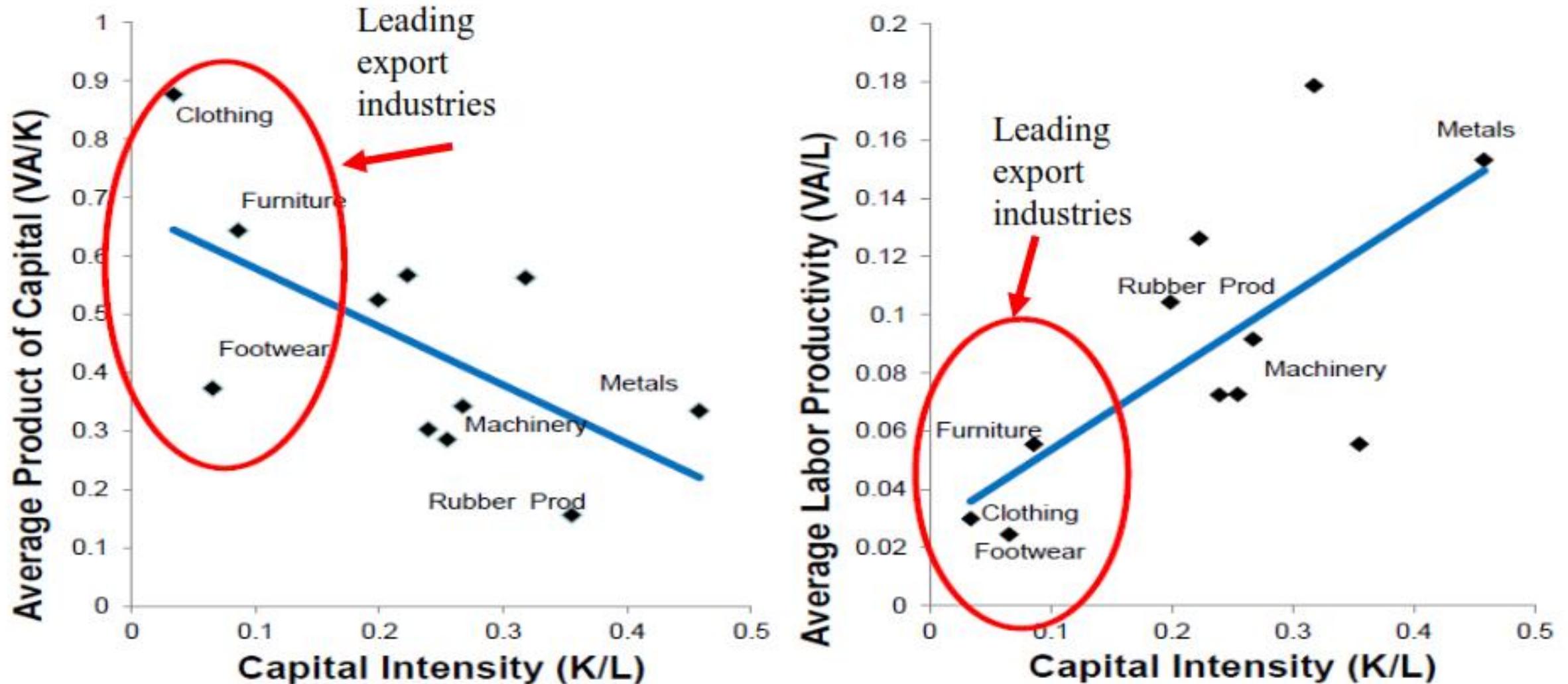
The figure indicates that most capital is allocated to capital-intensive sectors and that has not changed.

Labor is heavily allocated to labor-intensive sector and that has increased.



# EOI and Structural Change in Vietnam: Resource allocation

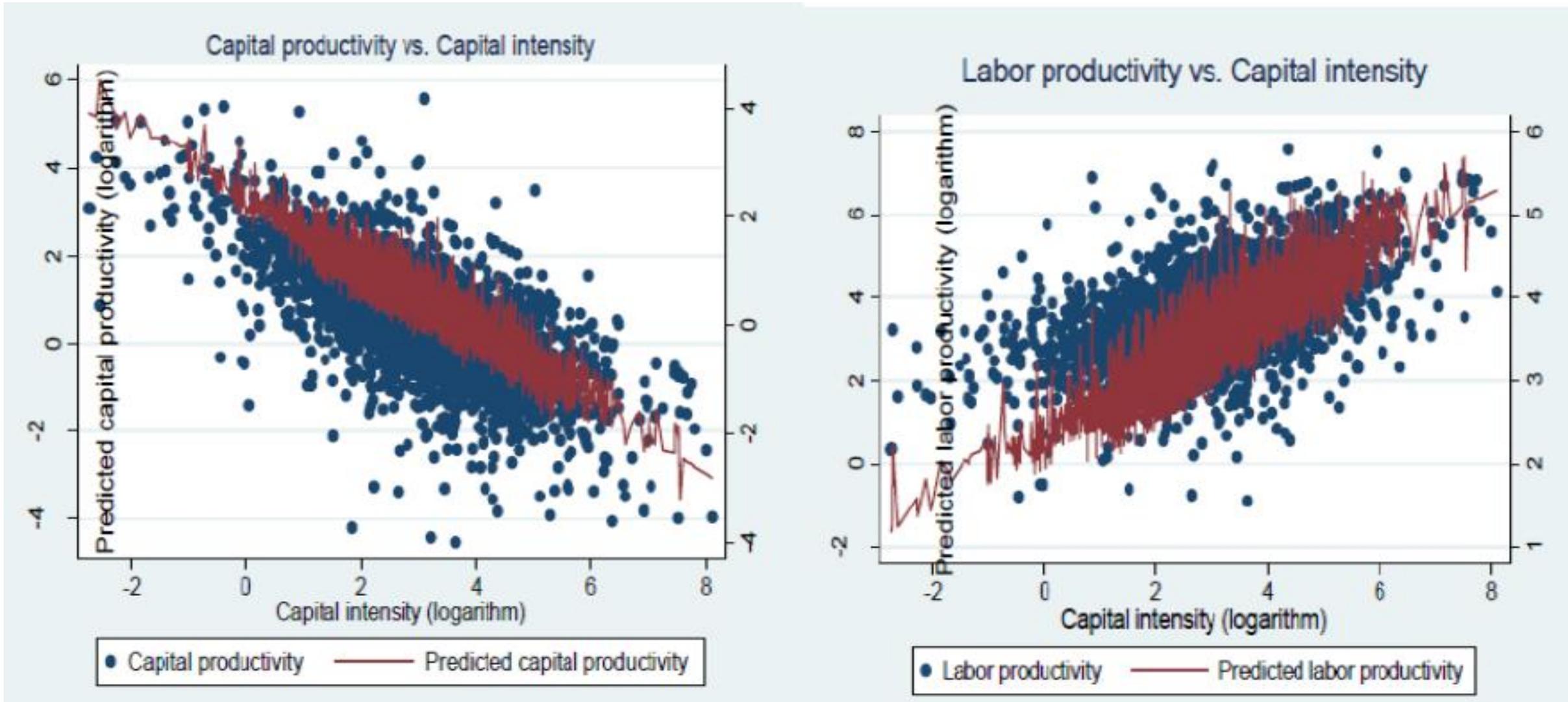
How should capital and labor be allocated to maximize real income and employment?



# EOI and Structural Change in Vietnam

How should capital and labor be allocated to maximize real income and employment?

The same relationship across 1200 products



# The Limits of EOI

EOI, as I interpret it, is largely a matter of government getting out of the way and allowing firms to exploit the country's comparative advantage that derives from an abundance of unskilled labor.

If the strategy succeeds, surplus labor will be absorbed in productive employment and real wages will begin to rise rapidly. As wages rise, the country's comparative advantage in labor-intensive manufactures will diminish.

In order to maintain growth, the country must be prepared to transition to more capital and technology intensive sectors, which will require important policy reforms, including:

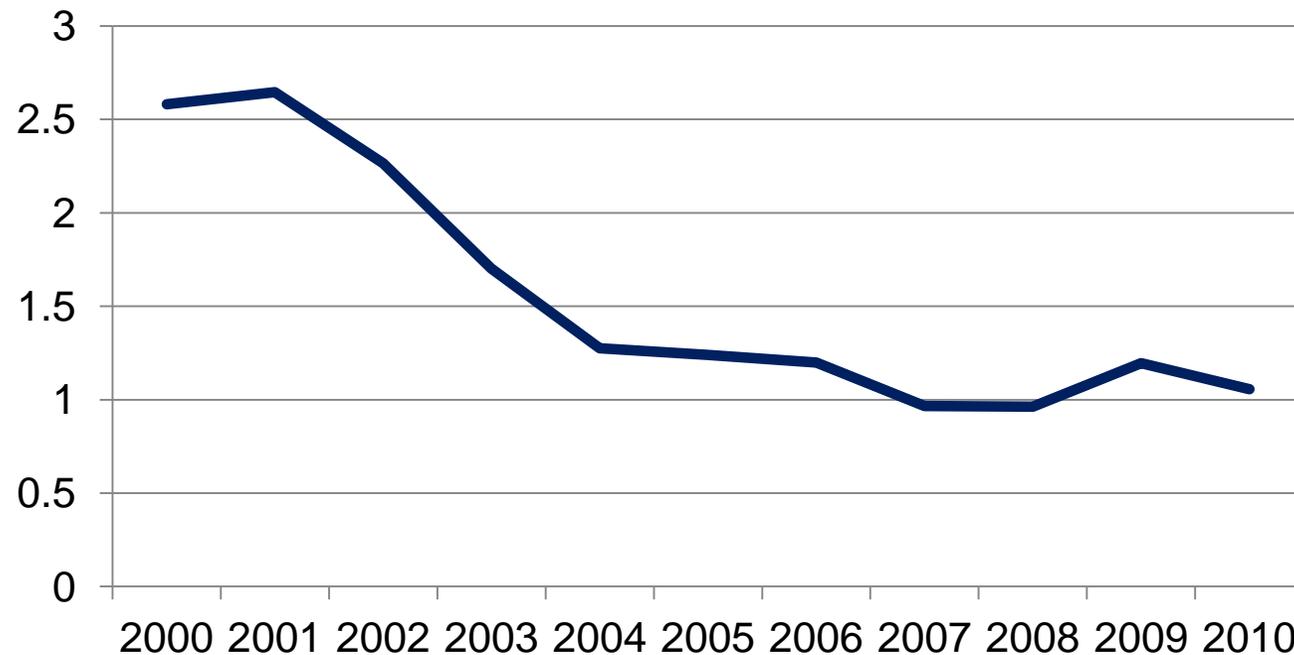
- Financial sector reforms that allow the nations scarce capital to flow to sectors where the returns to investment are highest
- Increasing investment in education to insure there is an increasing endowment of people with the skills required for the country to move up the ladder of comparative advantage
- Infrastructure investments need to insure the country is able to compete with other countries moving up the ladder of comparative advantage.

# How Vietnam Lost the Momentum of EOI: Priority of the state sector

Vietnam has lost the momentum of EOI before it has fully exploited its comparative advantage in labor-intensive manufacturing. How did Vietnam lose the momentum of EOI?

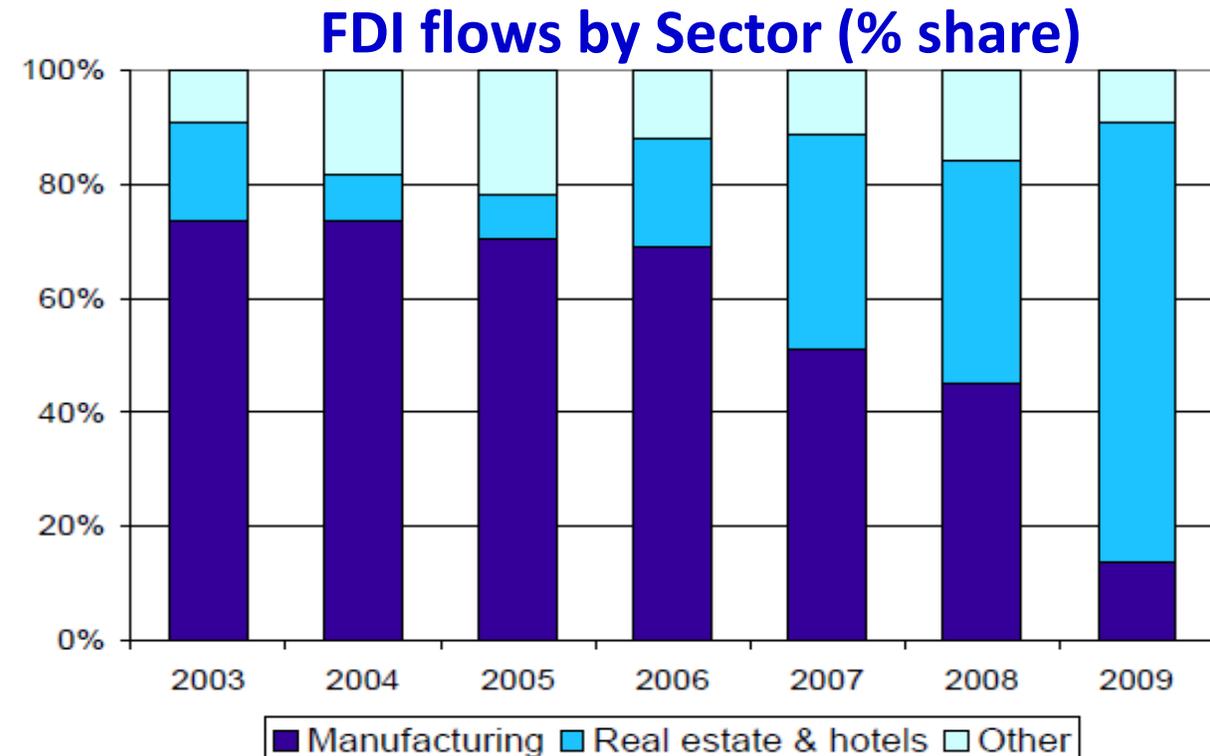
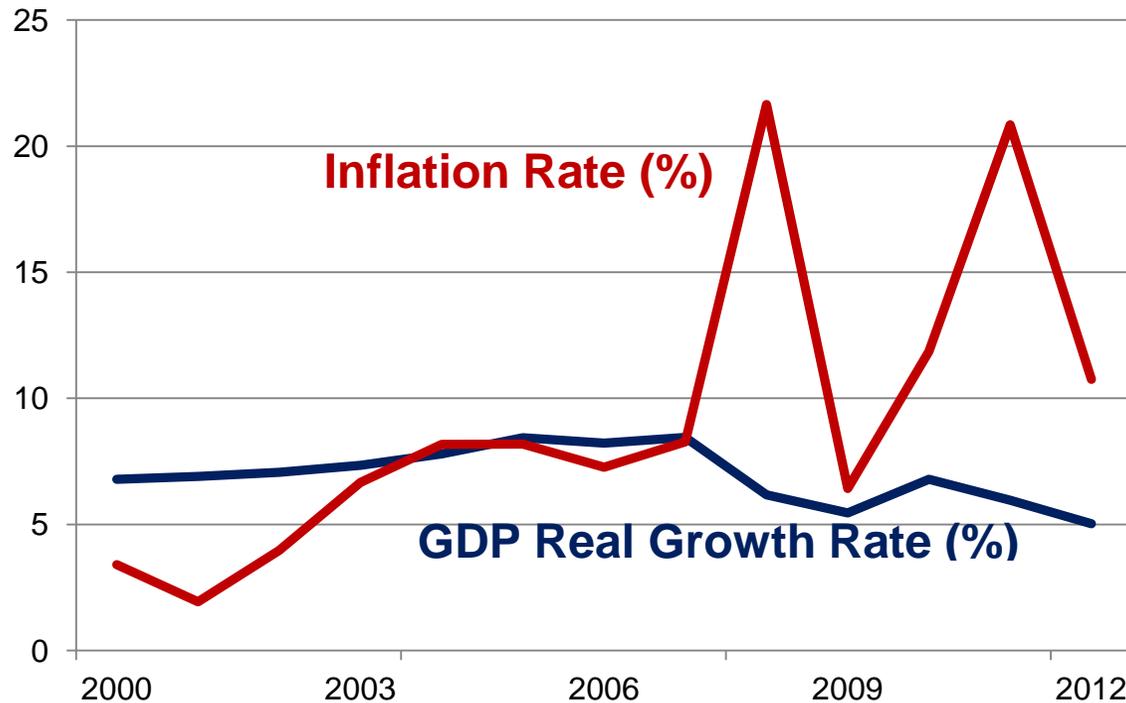
- The global recession 2009-10 dealt a blow to EOI, but the momentum of EOI began to decline before the global crisis in 2007 and 2008.
- The priority the government gave to SOEs and SOE conglomerates diverted investible funds away from private export-oriented manufacturing.

The Ratio of State to  
Non-State Industrial  
Investment



# How Vietnam Lost the Momentum of EOI: Macro Instability

- Macroeconomic developments in 2007 and 2008, which generated asset price bubbles (especially in real estate sector) also undermined export-oriented manufacturing.
  - Capital inflows => real appreciation and rising inflation
  - Price bubble in real estate => diverted investment from manufacturing to the property sector
  - Especially significant was the sector shift in FDI (see next slide)



# Is Vietnam Trapped on the Trail of the Tigers?

- Vietnam has lost the momentum of EOI, but is it trapped?
- If the momentum of EOI has been lost because of a failures in the implementation of the strategy, then perhaps the metaphor of a “TRAP” is not appropriate.
- If EOI has not lived up to expectations because the government has been unwilling to loosen its protective embrace of the state-owned enterprise sector, then Vietnam is in a trap of its own making.
- Under these circumstances would any other strategy work better?
- Perhaps the way forward is to go back to the strategy that has worked in all other East Asian countries.

# Which way forward for Vietnam?

## 1. Abandon EOI in favor of a new strategy

- Adopt a strategy that will create industrial clusters and raise national competitiveness (CIEM, *Vietnam Competitiveness Report, 2010*)
- Adopt a strategy to strengthen the “domestic value chain” and increase domestic value-added, especially in exports
- Adopt a strategy favoring production of “high tech” products instead of low-tech labor intensive manufactures
- Adopt a strategy that favors production of “high value goods”
- Adopt a strategy that will transform Vietnam from a “factory economy” to a “knowledge economy”

## 2. Adopt reforms that will make EOI a more effective strategy

# Which way for Vietnam?

*New School*

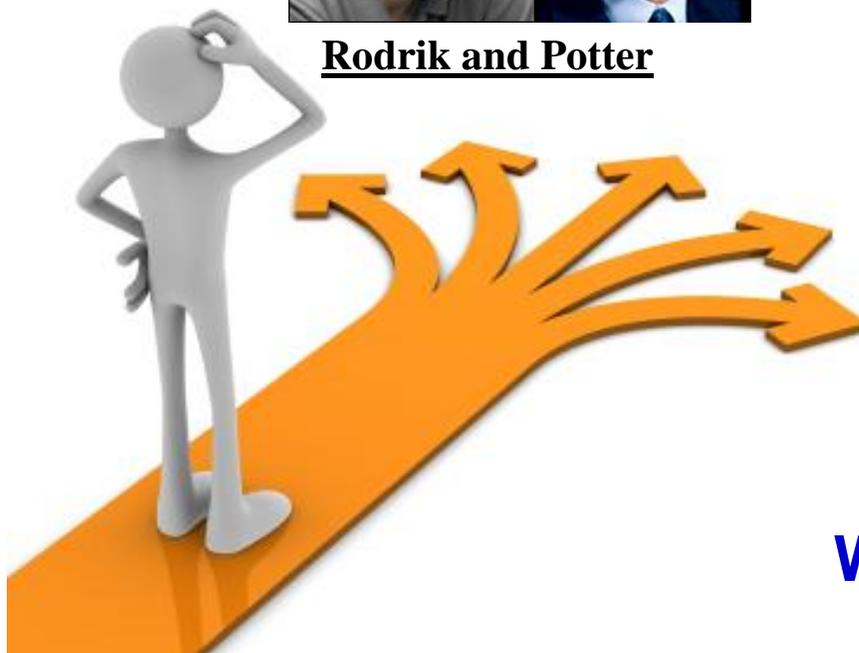


Rodrik and Potter

**OLD SCHOOL**



Lewis and Ricardo



**What do you think?**