

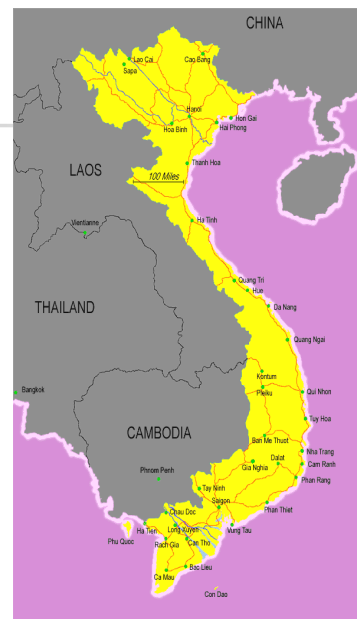
# The Impact of FDI on the Labor Productivity in Host Countries: The Case of Vietnam

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## Overview

1. Idea of the research
2. Existing research
3. Vietnam-the case study
4. Methodology
5. Estimation results
6. Conclusion, policy implication
7. Future research





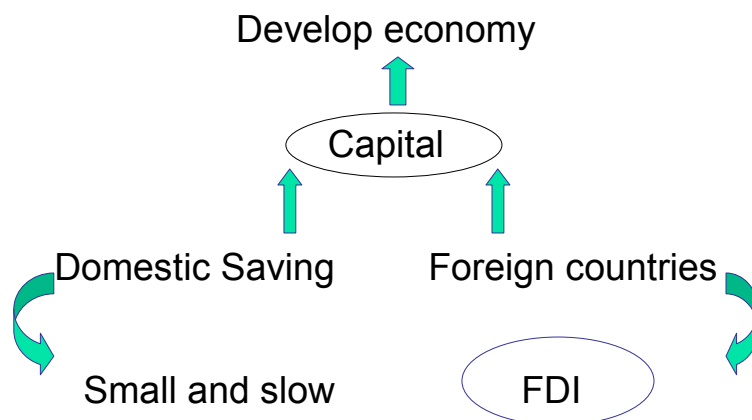
## Idea of the research

To achieve sustainable economic growth, one of the major issues for developing countries is to obtain adequate foreign capital to escape from the vicious circle of low saving and low economic growth

(Hayami and Godo, 2005)



## Idea of the research (cont)





## Existing research

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1. Theoretical studies (e.g. Hymper, 1960; Blomstrom and Kokko, 1998)
  - The effect is positive
  - Determinants: skilled labor, technology abilities, industry's capital intensity and domestic firm size.
2. Empirical studies – debate → mixed results
  - Similar determinants, but:
    - + One group: positive and clear
    - + Another: ambiguous and even negative



## Existing research (cont)

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### First group - 4 empirical studies

*Including:* Cave (1974); Globerman (1979); Liu *et al.* (2000a); Liu *et al* (2000b)

- The impact is positive and unambiguous
- Determinants: technology abilities; capital intensity; labor quality; domestic firm size, and degree of foreign presence
- All of them have positive correlations with the impact



## Existing research (cont)

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### Second group – 6 empirical studies

*Including:* Aiken & Harrison (1999); Knonings (2000);  
Haskel *et al* (2002); Javorcik (2004); Vahter (2004); Thiam (2006)

- The impact is ambiguous and even negative
- Determinants: technology abilities; capital intensity; labor quality; domestic firm size, and degree of foreign presence.
- Most of them have negative correlations with the impact



## Vietnam - the case study

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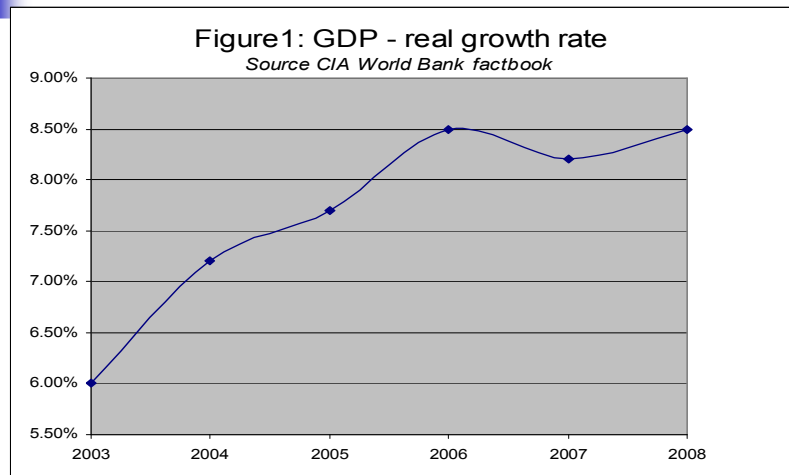
1. Overview of Vietnamese Economy
2. FDI flows in Vietnam
3. Previous studies
4. Hypotheses

## Overview of Vietnamese Economy

- Before 1986: Centralized economy
- After 1986: Market-oriented economy
- Law on Foreign Investment (LFI): 1987
- FDI flows into VN have been significant
- GDP growth: since 1990: 7.5%; 2001-2007: 8.5%
- Poverty reduction: 10-year earlier than MDGs

## Overview of Vietnamese Economy

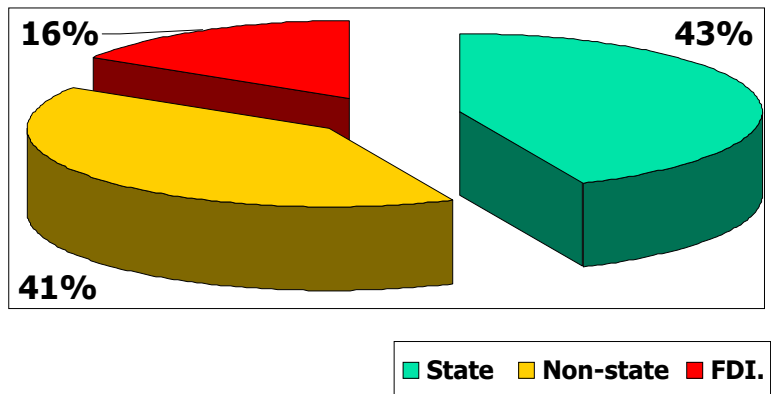
(cont.)



## Overview of Vietnamese Economy

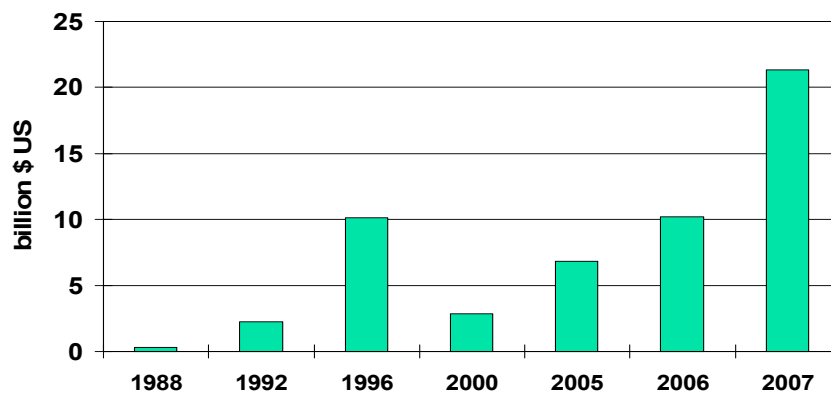
(cont.)

Structure of investment by ownership in 2007, GSO



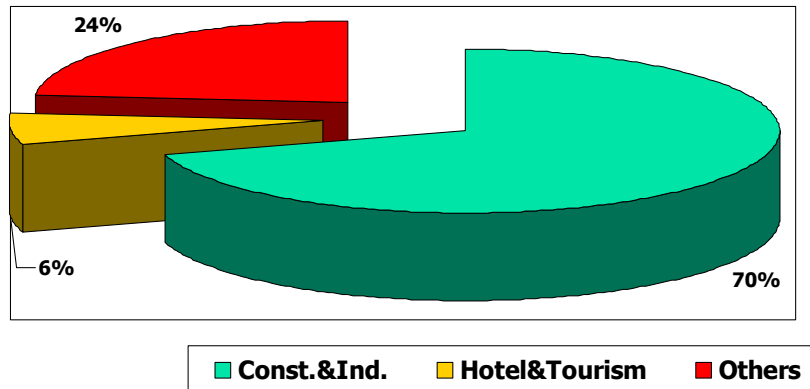
## FDI flows in Vietnam

FDI registered capital in 2007, GSO



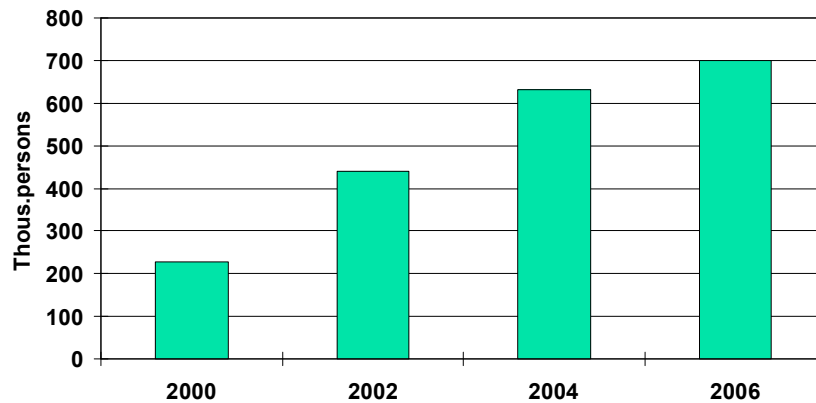
## FDI flows in Vietnam (cont.)

Structure of FDI project by sectors in 2006, GSO



## FDI flows in Vietnam (cont.)

Employment generalized by FDI, GSO





## Previous studies

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- Vitto and Douglas (2004), Le (2005)
  - + Technological spillovers: positive but limited
  - + Reasons: underdevelopment of domestic sectors, especially, private firms
- What is about the effect on the labor productivity?
  - + Positive?
  - + What are the determinants?



## Hypotheses

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Not going to test the impact on the productivity in general but on the labor productivity as a whole

- ***H1: The impact of FDI on the labor productivity in Vietnam is positive and depends on the gap between FDI & domestic firms in terms of industry's capital intensity, labor quality and firm scale.***





## Hypotheses (cont.)

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FDI tends to focus on the cities: developed infrastructure systems or near international harbors e.g HoChiMinh, Hanoi, Danang and the surrounding cities e.g DongNai, BacNinh, BinhDuong

- ***H2: The impact of FDI on the labor productivity in Vietnam differs across provinces***



## Hypotheses (cont.)

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- Is there any different effect due to the different forms of FDI ?→ has not been consensus
- Local workers could not occupy high positions in 100% foreign owned capital than in joint ventures or other contacts

- ***H3: The impact of FDI on the labor productivity in Vietnam varies based on the forms of FDI.***



## Methodology

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- Data: the data of Enterprise Survey 2005 by GSO

- Basic model:

$$\mathbf{labprod}_i = f(\mathbf{capint}_i, \mathbf{scale}_i, \mathbf{skill}_i, \mathbf{Fshare}_i, \mathbf{Dloca2}, \mathbf{Dloca3}, \mathbf{Dloca4}, \mathbf{Fshare1}_i, \mathbf{Fshare2}_i, \mathbf{Fshare3}_i) \quad (1)$$

- Test 1<sup>st</sup> hypothesis:

$$\mathbf{Ln}(\mathbf{labprod}_i) = \mathbf{a0} + \mathbf{a1*Ln}(\mathbf{capint}_i) + \mathbf{a2*Ln}(\mathbf{scale}_i) + \mathbf{a3*Ln}(\mathbf{skill}_i) + \mathbf{a4*Fshare}_i + \mathbf{ei} \quad (2)$$

$$\mathbf{Ln}(\mathbf{labprod}_i) = \mathbf{c0} + \mathbf{c1*Ln}(\mathbf{capint}_i) + \mathbf{c2*Ln}(\mathbf{scale}_i) + \mathbf{c3*Ln}(\mathbf{skill}_i) + \mathbf{c4*Fcapint}_i + \mathbf{c5*Fscale}_i + \mathbf{c6*Fskill}_i + \mathbf{vi} \quad (3)$$



## Methodology (cont.)

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- Test 2<sup>nd</sup> hypothesis:

$$\mathbf{Ln}(\mathbf{labprod}_i) = \mathbf{d0} + \mathbf{d1*Ln}(\mathbf{capint}_i) + \mathbf{d2*Ln}(\mathbf{scale}_i) + \mathbf{d3*Ln}(\mathbf{skill}_i) + \mathbf{d4*Floca2}_i + \mathbf{d5*Floca3}_i + \mathbf{d6*Floca4}_i + \mathbf{wi} \quad (4)$$

- Test 3<sup>rd</sup> hypothesis:

$$\mathbf{Ln}(\mathbf{labprod}_i) = \mathbf{e0} + \mathbf{e1*Ln}(\mathbf{capint}_i) + \mathbf{e2*Ln}(\mathbf{scale}_i) + \mathbf{e3*Ln}(\mathbf{skill}_i) + \mathbf{e4*Fshare1}_i + \mathbf{e5*Fshare2}_i + \mathbf{e6*Fshare3}_i + \mathbf{zi} \quad (5)$$



## Estimation results

**Table 1** For the 1<sup>st</sup> hypothesis

<b>Dep.Var</b>	In(labprod)				
<b>Obs</b>	441.00				
<b>R-squared</b>	0.5026				
<b>Inde.Var</b>	Incapint	Inscale	Inskill	Fshare	_cons
<b>Coff</b>	0.08***	0.18***	0.88***	16706.49***	0.16
	(0.03)	(0.04)	(0.08)	(6262.09)	(0.24)



## Estimation results (cont.)

**Table 2** For the 1<sup>st</sup> hypothesis

<b>Dep.Var</b>	In(labprod)						
<b>Obs</b>	441.00						
<b>R-squared</b>	0.5025						
<b>Inde.Var</b>	Incapint	Inscale	Inskill	Fskill	Fscale	Fcapint	_cons
<b>Coff</b>	0.09***	0.15***	0.94***	-1.6e+04*	13642.84***	-5689.81*	0.08
	(0.03)	(0.04)	(0.09)	(8329.72)	(4626.33)	(2938.78)	(0.25)



## Estimation results (cont.)

**Table 3** For the 2<sup>nd</sup> hypothesis

<b>Dep.Var</b>	ln(labprod)						
<b>Obs</b>	441.00						
<b>R-squared</b>	0.4979						
<b>Inde.Var</b>	Incapint	Inscale	Inskill	Floca2	Floca3	Floca4	_cons
<b>Coff</b>	0.08***	0.18***	0.88***	16599.66*	58054.03	6263.55***	0.17
	(0.03)	(0.04)	(0.08)	(9139.96)	(60713.57)	(2396.51)	(0.24)



## Estimation results (cont.)

**Table 4** For the 3<sup>rd</sup> hypothesis

<b>Dep.Var</b>	ln(labprod)						
<b>Obs</b>	441.00						
<b>R-squared</b>	0.5012						
<b>Inde.Var</b>	Incapint	Inscale	Inskill	Fshare1	Fshare2	Fshare3	_cons
<b>Coff</b>	0.08***	0.17***	0.86***	8955.91	60206.82**	26511.76***	0.26
	(0.03)	(0.04)	(0.08)	(7524.10)	(29495.43)	(8570.27)	(0.24)



## Conclusion

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1. The spillovers of FDI to the labor productivity in Vietnam is unambiguous and strongly positive
2. The spillovers depend on the skills (-), capital intensity (-) and scale gaps (+)
3. The spillovers vary across locations
4. The spillovers vary based on different types of FDI



## Policy suggestions

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- Make great efforts to attract more FDI: reform administration; strengthen laws & judicial system; promote business environment
- Take account of the tech. gap:
  - + encourage labor-intensive tech.
  - + develop domestic firms: renew tech., management & marketing skills, etc → catch up & compete
  - + improve skills of local labor: vocation colleges; training programs



## Policy suggestions (cont.)

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- To ensure equitable development among regions → to achieve sustainable development:
  - + Encourage investment in relative less dev. regions through policies such as tax & invst. incentives
  - + Spend budget on infrastructure sys.: roads, markets; schools → improve comparative adv. of these regions



## Policy suggestions (cont.)

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### *Regarding forms of FDI & appropriate policies*

- + The government should have a wider vision of socio-economic effects in long-run
- + Carefully analyses & evaluates costs & benefits of the society
- + Unequally competitive abilities between domestic & FDI firms should be taken into account
- + Attract & encourage FDI in appropriate sectors, fields

## Future research

1. This paper uses cross-sectional data → using panel data before concluding is required for further research
2. Concentrates on firm level → further research on the various spillovers across sectors is required
3. Research on the diff. spillovers of FDI to diff. types of domestic firms such as private & SOEs is required

## Thank for your attention

- ✓ Please give comments
- ✓ To VN
  - + Travel?
  - + Investment?



Trong-Mai Islet, Halong bay