DISCUSSION PAPERS IN ECONOMICS

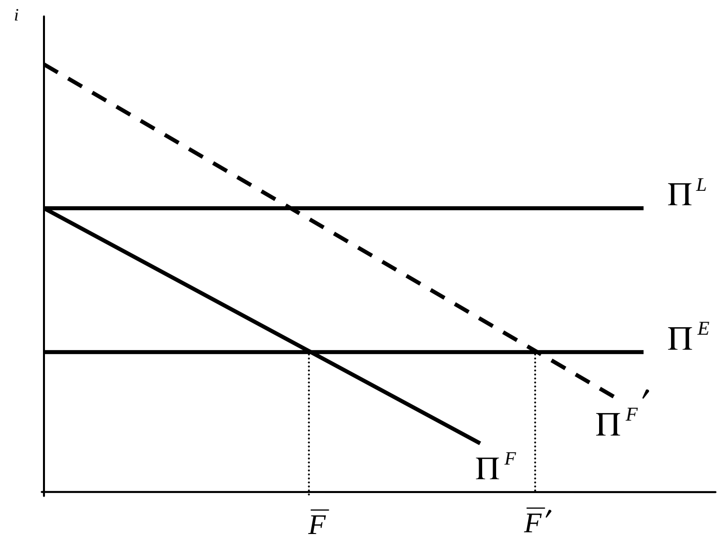
Intellectual Property Rights and Multinational Firms' Modes of Entry

Abstract

E *c* *t* *(*

Proposition 1 β^i $\overline{F}$ Π^E Π^F $\overline{F}$

Π^E Π^F $\overline{F}$ Π^E Π^F $\overline{F}$



$\frac{\partial \Pi^E}{\partial t}$

$\frac{\partial \Pi^F}{\partial F}$

$\frac{\partial \Pi^E}{\partial w^{US}}$ $\frac{\partial \Pi^F}{\partial w^n}$ $\frac{\partial \Pi^L}{\partial w^n}$

n

$\frac{\partial \Pi^i}{\partial \alpha}$ β^i $\beta^{i\prime}$ α

β^L β^F

$\left|\beta^{L\prime}\ \alpha\right| \leq \left|\beta^{F\prime}\ \alpha\right|$ $\frac{\partial \Pi^L}{\partial \alpha}$ $\frac{\partial \Pi^F}{\partial \alpha}$

Π^i

Π^F

$\Pi^{F'}$

Π^L

Π^E

β^L β^F

$\alpha_n \quad n \quad n$

$\alpha_n \quad n \quad n \quad n$

$\alpha_n \quad n \quad n$

α_n

x_n z_n δ γ

ε_{mi}

i

m

$$P_{mi} = \quad \Pi_{mi} > \quad \Pi_{mj} \quad \forall i \neq j$$

ε_{mi}

x_n

$$P_{mi} = \frac{\delta_i' x_n + \gamma_i' z_n}{+\sum_{i=} \delta_i' x_n + \gamma_i' z_n} \qquad i$$

$$P_{mo} = \frac{}{+\sum_{i=} \delta_i' x_n + \gamma_i' z_n}$$

x_n z_n

$$\left[\frac{P_{mi}}{P_m}\right] = \delta_i' x_n + \gamma_i' z_n$$

δ_i γ_i

i i

$T = \infty$

x_n

$$\frac{}{} = \left[\quad - \quad \right]$$

n

n

n

Table 1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Export					
FDI					
License					
IPR					
Econ Freedom					
GDP					

Table 2: Mean and Standard Deviation in each mode

Variable	Export	FDI	License
IPR			
Econ Freedom			
GDP			
Effective Wage			
Distance			
Investment Cost			
Observations			

4. Empirical Analysis

Table 3
Negative Binomial Regression Mode

Variable	Export (FE)	FDI (FE)	se
Constant			
IPR			
EF			
DIST			
GDP			
W			
N			

δ_i γ_i

Table 4
Multinomial Logit Model

	Model estimates[1]		Marginal effect on probabilities[2]		
Variable	**FDI**	**License**	**Export**	**FDI**	**License**
			Predicted Probabilities		
Constant					
			Marginal Effect		
IPR					
Economic Freedom					
Distance					
GDP					

β^i $\beta^{i'}\ \alpha$

β^L β^F $\left|\beta^{L'}\ \alpha\right| \leq \left|\beta^{F'}\ \alpha\right|$

$$\frac{\partial \Pi^L}{\partial \alpha} \quad \frac{\partial \Pi^F}{\partial \alpha}$$

$\geq$

Table 5

Predicted Probabilities of Entry Modes by IPR Index Level

	Probabilities		
IPR	**Export**	**FDI**	**License**
0			
1			
2			
3			
4			
5			

Table 6
Low R&D Group

	Model estimates[1]	Marginal e

Table 7
High R&D Group

	Model estimates[1]		Marginal effect on probabilities[2]		
Variable	**FDI**	**License**	**Export**	**FDI**	**License**
			Predicted Probabilities		
Constant					
			Marginal Effect		
IPR					
Economic Freedom					
Distance					
GDP					
Effective Wage					

Appendix A

Proof for Lemma 1

74Tj /MCID 10 >>BDC BT3 TT4 1 Tf8.975 0 0 807335 103.707335.9 T1 Tm06.4813.51

π^F p q^F q^F c^F w q^F

Appendix B

Comparative Static Analysis

$(\quad)$

Discount rate (r)

Appendix C

Comparative Static Analysis (cont'd)

Cases on $\frac{\partial \Pi^i}{\partial \alpha}$

$$\beta^E \quad \beta^F \qquad \beta^{E'} \; \alpha \qquad \beta^{F'} \; \alpha \qquad \frac{\partial \Pi^E}{\partial \alpha} \quad \frac{\partial \Pi^F}{\partial \alpha}$$

$$\beta^F \quad \beta^E \qquad \beta^{E'} \; \alpha \qquad \beta^{F'} \; \alpha$$

$$\beta^L \quad \beta^E$$

$$\beta^L \quad \beta^F \qquad \left| \beta^{L'} \; \alpha \right| > \left| \beta^{F'} \; \alpha \right|$$

Appendix D

BEA 3-digit Industry Code

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