

Foreign Direct Investment in Transition Economies: Strengthening the Gains from Integration

By Saul Estrin
LSE

and

Klaus Meyer
University of Bath

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Objective

- To review the literature in order to understand factors leading MNEs to invest in transition economies
- To analyze the impact of their investment, in terms of the impact on local firms and via horizontal and vertical spillovers
- To provide policy recommendations for host economies about how to influence FDI to increase diversification and integration of the transition economies of South Eastern Europe and the CIS

Outline of Presentation

- Introduction
- The pattern of FDI into transition economies
- The determinants of FDI to transition economies
- The potential impact of FDI
 - Macro-economic
 - Horizontal spillovers
 - Vertical spillovers
 - Diversification
- The impact of FDI on Transition Economies
 - On acquired firms
 - Spillovers
- Policy implications

Introduction

- FDI undertaken by MNEs in pursuit of their own strategies, not consideration of political or development agendas
- Ghemawat (2007) identifies three MNE strategies in global economy
 - **Adaptation:** adjusting to differences around the world and activity locally in each country
 - **Aggregation:** centralizing parts of their operations regionally or globally for scale economies and to integrate innovation
 - **Arbitration:** moving goods/services from high to low cost areas i.e. offshoring, global sourcing

Nature and pattern of FDI in transition economies

- Level of FDI to transition economies relatively low in early years (Table 1)
- FDI highly concentrated to Czech republic, Hungary and Poland initially
- Increase in FDI to CIS and Balkans since 2000, but still highly concentrated to resource rich economies (Russia, Azerbaijan, Kazakhstan)
- Sectoral distribution in Bulgaria and Russia. Most FDI to tertiary sector. In Russia, oil and gas predominated initially (tables 2 and 3)

Table 1: FDI Flows to Transition Economies (\$bn)

	1990-2	1993-6	1997-00	2001	2002	2003	2004	2005
Eastern Europe	6	24.9	62.5	17.5	21.5	8.3	16.3	29.5
Of which Czech Rep	1.7	5.5	9.1	5.4	8.3	1.9	3.9	11.6
- Hungary	3	10.2	8.1	3.6	2.6	0.9	3.7	3.1
- Poland	1	5.0	14.6	5.8	3.9	3.9	5.4	10.0
- Bulgaria	0.1	0.3	1.8	0.8	0.9	2.1	2.7	2.6
- Romania	0.1	1.1	4.3	1.1	1.1	1.8	6.4	6.6
- Serbia			1.0	0.2	0.1	1.3	1.0	1.5
CIS	-	12.8	30.4	4.8	5.0	5.3	13.7	12.4
Of which Russia	1.6	6.3	15.7	2.7	3.5	8.0	15.4	0.2
- Ukraine	0.2	1.2	2.5	0.8	0.7	1.4	1.7	5.4
-Kazakhstan	0.1	3.0	5.2	2.8	2.6	2.1	4.2	6.6
- Azerbaijan	-	1.0	2.3	0.2	1.3	3.2	3.6	1.0

Source: UN (2002), EBRD Transition Report, various years

Table 2: FDI Flows in Selected Transition Economies by Sector (% share), 2000

	Bulgaria	Poland	Russia
Primary Sector	1.8	0.4	10.7
- mining	0.7	0.3	10.0
Secondary Sector	20.5	22.3	31.6
- food	4.0	4.4	18.5
Tertiary Sector	74.7	77.3	67.7
- finance	45.0	21.1	0.6
- trade	7.0	8.0	19.5
- transport	6.6	36.6	29.9
FDI flow (\$bn)		9.3	4.4

Source: UN (2002)

Table 3: Sectoral Distribution of FDI Stocks, 2000 (% shares)

	Bulgaria	Poland	Russia
Primary Sector	1.4	6.8	15.6
- mining/petrol	1.2	6.5	15.1
Secondary	51.9	39.3	
Tertiary	45.7	59.9	46.2
- finance	7.3	20.3	1.3
- trade	19.2	16.9	10.7
- transport/communication	12.3	9.9	27.5

Source: UN (2002)

Determinants of FDI in transition economies

- Develop and test formal econometric model of factors driving FDI
- Literature indicates key determinants include
 - Host economy locational factors i.e.
 - Institutional development
 - Market size
 - Input costs
 - Investment risk
 - Source economy factors i.e.
 - Size (scale economies)
 - Level of development
 - Costs
 - Differences between source and host economy e.g.
 - Distance (transaction cost)

Determinants of FDI in transition economies

- Bevan and Estrin (B&E) (2004) and Bevan, Estrin and Meyer (BEM (2004) test these ideas
- Use FDI flow from source to host economy in a year as observation point
- Source economies = EU15
- Host economies = transition economies in Central and Eastern Europe, Balkans plus Russia and Ukraine
- Gravity-type model based around GDP of host and source economy, distance, unit labor costs and “risk” (B&E) or institutional development (BEM)
- Risk measured by risk ratings
- Other controls include trade and capital costs
- Institutional development measured by EBRD transition indicators

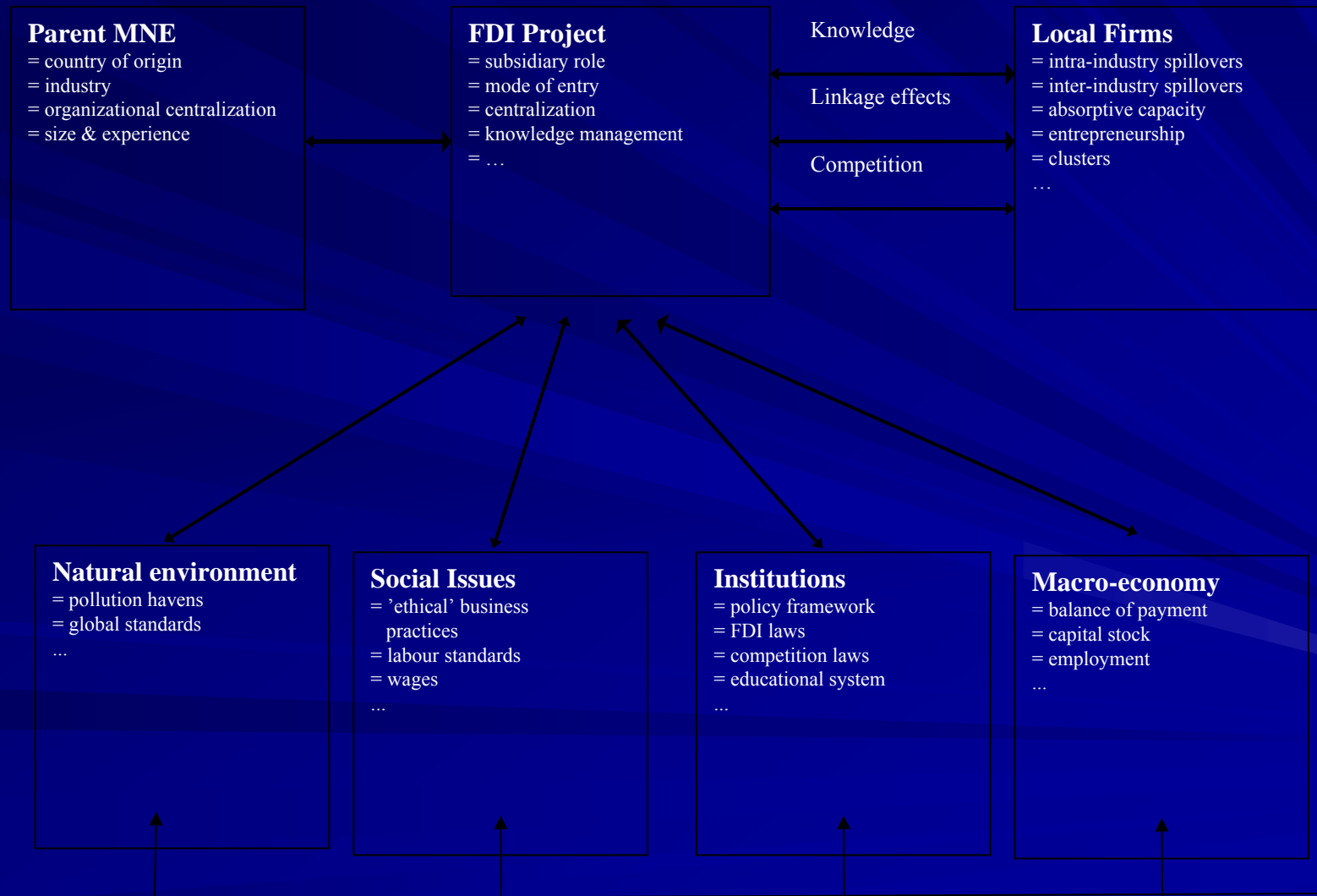
Findings

- Positive significant effects from source and host GDP and distance – gravity effects (table 4)
- Unit labor costs effect negative and significant
- FDI and trade found to be complementary
- No effect of host economy risk on FDI
- However, institutional development matters, notably privatization, banking sector development, trade liberalization and legal institutions
- Competition policy not significant

Table 4: Determinants of FDI inflows to transition economies

Independent variable	<i>FDI_{ij}</i> (levels)	<i>FDI_{ij}</i> (lagged form)
<i>GDP_i</i>	0.02***	0.02***
	(3.66)	(3.72)
<i>GDP_i</i>	0.003***	0.003***
	(10.65)	(10.45)
<i>r_{ij}</i>	0.32	0.33
	(0.55)	(0.52)
<i>trade_i</i>	221.70	293.37*
	(1.46)	(1.71)
<i>risk_i</i>	0.69	0.51
	(0.53)	(0.33)
<i>Distance_{ij}</i>	-0.06***	-0.06***
	(-4.28)	(-4.52)
<i>ULC_{ij}</i>	-272.29**	-255.15*
	(-2.19)	(-1.86)
Constant	160.40	134.72
	(1.20)	(0.88)
No. of obs.	981	829
No. of groups	198	198
<i>R</i> ² : within	0.1339	0.1357
between	0.2712	0.2672
overall	0.2163	0.2318
Wald χ^2	197.52	187.88

How might FDI affect performance and integration



Potential effects of FDI on host economy

1. Macro-economy

- Endogenous growth models indicate that FDI might increase growth, provided sufficient “absorptive capacity” (human capital) – see Borenstein *et al.*, 1998
- FDI impacts positively several macro-policy variables: balance of payments, employment, investment, exports

Potential positive spillovers

Horizontal

- Knowledge diffusion by demonstration effects
 - Local firm observe technology and managerial practices and thus adopt it...
- Knowledge diffusion by movement of employees
 - Employees are trained in MNE, and take up jobs in local firms, or set up their own business ...
- Access to export markets
 - Utilizing channels and reputation build by MNE
- Local Supplier industries and markets for specialized inputs supporting an industry
 - Indirect benefits for firms in the same industry

Vertical

- Vertical linkages (as supplier or customer)
 - Direct knowledge transfer
 - Economies of scale

Potential negative spillovers

Horizontal

- Attraction of the most productive resources
 - Highly qualified workers may leave local firms because MNE pay better
- Loss of market share and excess capacity
 - Mainly a short-term effect as capacities cannot be adjusted immediately

Vertical

- Reliance on imported components (existing suppliers of the MNE) and displacement of local suppliers
- Dependency relationships

Horizontal spillovers: Study design

- “knowledge flows ... leave no paper trail by which they may be measured and tracked” (*Krugman 1991: 53*).
→ *knowledge spillovers are difficult to quantify.*
- Indirect measurement:
 - Relate performance changes of potential recipient firms empirically to the presence of FDI in the same industry.
 - Knowledge spillovers are measured by changes in local firms productivity and the influence of FDI to the share of foreign-owned firms in the industry
 - The predominant approach in the literature of FDI spillovers: 38 studies worldwide

Horizontal spillovers: 38 studies

- 16 on developing/emerging economies,
 - *Positive* effects: e.g. **Blomstrom** (several studies) and **Kokko** (1996) on Mexico, **Kokko et al.** (1996) on Uruguay, **Sjoholm** (1999) on Indonesia, and **Chuang & Lin** (1999) on Taiwan.
 - *Negative* effects, e.g. **Aitken & Harrison** (1999) on Venezuela 1976-89 , **Kathuria** (2000) India 1975-89.
 - *Insignificant* effects, e.g. **Haddad & Harrison** (1993), Morocco 1985-89 or **Kugler** (2001) on Columbia 1974-98.
- 12 on transition economies,
 - *Positive* effects: e.g. **Liu** (2002) in China, **Yudayeva et al.** (2000) in Russia, **Sinani & Meyer** (2002) in Estonia
 - *Negative* effects, e.g. **Koning** (2001) for Bulgaria, Romania and **Djankov & Hoekman** (2001) on the Czech Republic
- 10 on developed countries.
 - *Positive* effects: e.g. **Caves** (1974) for Australia, **Globerman** (1979) on Canada, **Liu et al.** (2002), **Haskel et al.** (2002) both on the UK,
 - *Negative* effects, e.g. **Barrios et al.** (2001) and **Flores et al.** (2000) for Southern European countries

Horizontal spillovers: 38 studies

- Cross-sectional data (19) versus panel data analysis (19, mainly recent studies).
- Firm level data (24) versus industry level data (14) as unit of analysis
- Spillovers received by domestic firms only (23) versus spillovers received by domestic and foreign firms (15).
- Foreign presence (spillover proxy) is measured the share of foreign firms
 - in industry employment (13),
 - in industry sales/output/value added (11),
 - industry equity and other definitions (14).
- Local firm performance – the dependend variable – is measured by
 - output, value added or sales per employee (15),
 - the *growth* of output, value added or sales (13),
 - or other measures (10).

The effect of spillovers on firm productivity: Composite t-statistic without (T) & with (Tw) weights

Groups of Studies (1)	Nr of observations		All Studies		Excluding outliers	
	All (2)	Excludin g outliers (3)	T (4)	T _w (5)	T (6)	T _w (7)
Developing Economies	26	23	19.5***	12.6***	7.2***	4.2***
Transition Economies	21	19	15.0***	16.4***	5.2***	4.8***
Developed Economies	22	22	2.2**	1.4	2.2**	1.4
Cross-Section data	26	23	22.6***	18.6***	10.5***	8.3***
Panel data	43	41	9.7***	11.6***	2.7***	3.1*** ²⁰

Why would results vary?

Different contexts

■ Level of Economic Development

- Developing and Transition Economies may need more of what MNE are willing to give

■ Time Trend

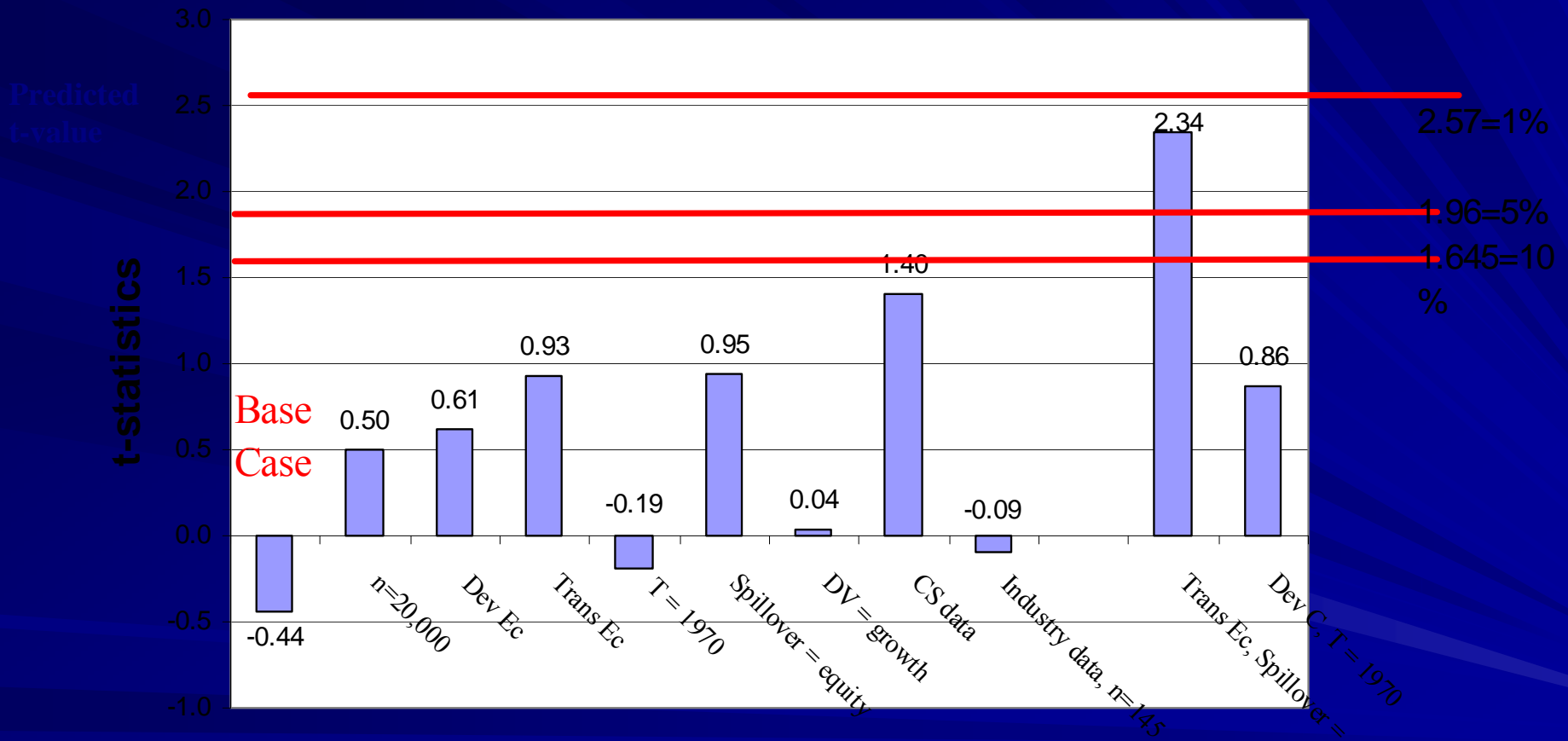
- Technological change may imply diminishing effect in recent years (e.g. due to tighter IPR)

Horizontal spillovers: Meta-analysis

Log(N)	0.45* (1.74)	0.44 (1.57)	0.47 (1.60)	0.51** (2.05)
Average time period of study	-0.026 (-0.59)	-0.024 (-0.52)	-0.046 (-0.90)	-0.024 (-0.53)
Dummy Developing Countries	1.06* (1.68)	1.05 (1.64)	0.75 (1.13)	1.02 (1.55)
Dummy Transition Countries	1.49 (1.38)	1.45 (1.20)	1.41 (1.37)	1.47 (1.420)
Dummy Cross-Section v. Panel Data	1.77*** (2.87)	1.78*** (2.89)	2.06*** (3.53)	2.03*** (3.09)
Dummy Industry level data	1.59* (1.76)	1.59* (1.77)	1.35 (1.43)	1.86* (1.89)
Dummy Domestic firms only	-	-0.09 (-0.14)	-	-
Dummy Spillover is share in employment	-	-	-0.056 (-0.08)	-
Dummy Spillover is share in equity	-	-	0.85 (0.96)	-
Dummy if Level of Dep. Variable	-	-	-	-0.19 (-0.25)
Dummy if Growth of Dep. Variable	-	-	-	0.55 (0.74)
Constant	-3.60** (-2.04)	-3.50* (-1.68)	-3.49* (-1.97)	-4.33** (-2.65) ²²
No. Observations	64	64	64	64

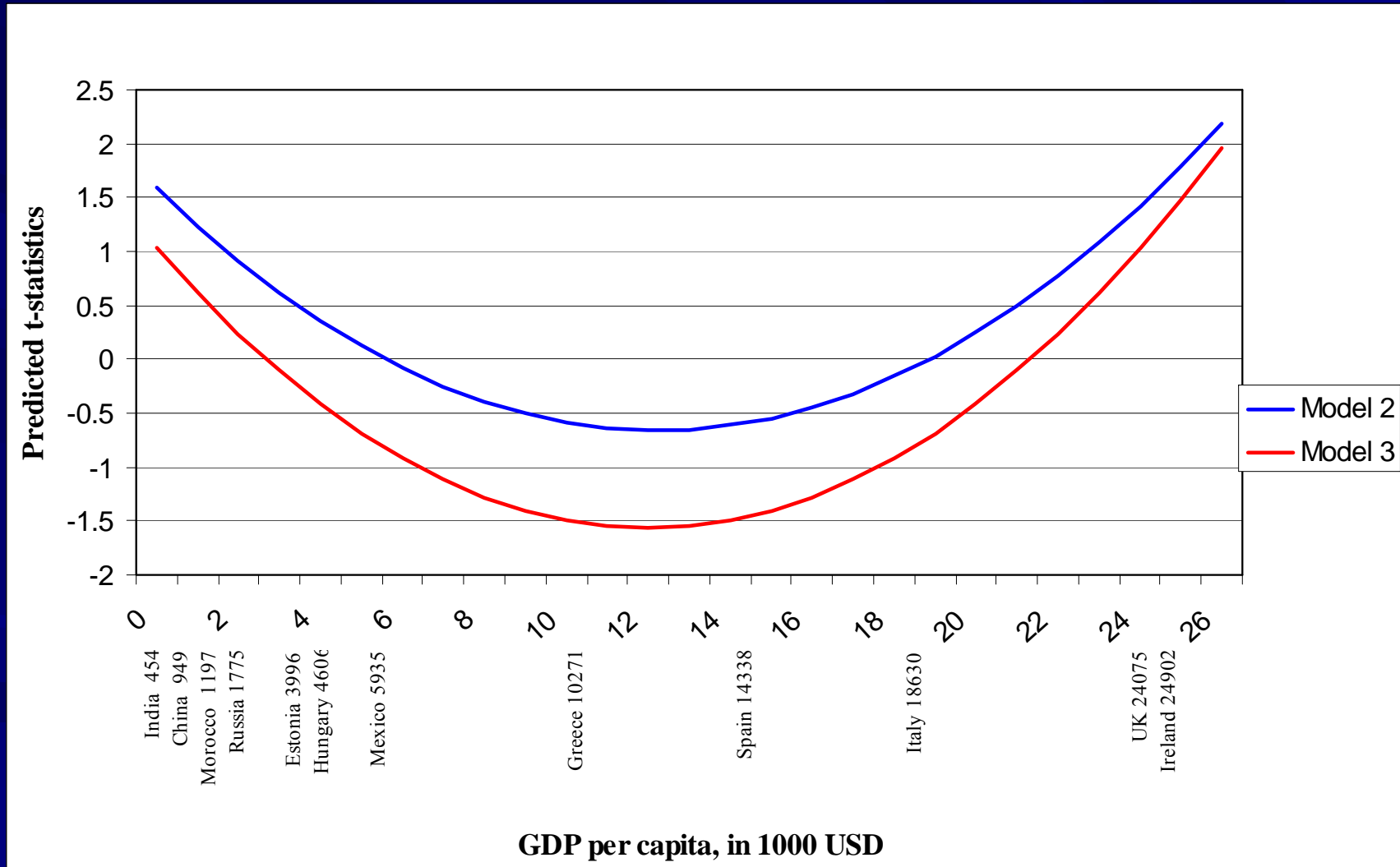
Spillovers: Meta-analysis

Predicted t-statistic by study characteristics



Base Case = Developed Country, 1995 data, n = 3425, panel data, firm level data

*Figure 2: Meta-analysis of horizontal spillovers:
Predicted t-statistics by characteristics of the study*



Sources of variation in FDI impact

- Industry specific factors
- Entry mode:
 - JV – sharing resources of two partners can increase spillover
 - Greenfield projects – create new businesses and direct impact on employment
 - Acquisitions – change performance and spillovers for existing firms

Evidence on the impact of FDI on Enterprise Performance

- Based on Estrin *et. al*, 2007 survey on TFP
- Three categories of paper (C1-3) – focus on C1 (large samples, control for selection and panel data methods)
- Focus on TFP measures of firm performance
- 9 C1 studies of TFP: all show privatization to foreign owners increases TFP
- Holds in countries with stronger and weaker institutions (e.g. Hungary versus Russia)
- Domestic private ownership raises TFP but effect is quantitatively smaller than for foreign ownership

Evidence on the impact of FDI on transition economies

Horizontal Spillovers

- We have seen, evidence is contradictory
 - Meyer and Sinani, 2007, find no significant effect for transition economies, which are on the declining part of the U-shaped curve

Vertical Spillovers

- Empirically difficult to identify because requires detailed input-output data; Jovorcik 2004 does find evidence of background linkages in Lithuania. Intra-industry effects small

Policy conclusions

- Direct effect of FDI on host firms positive – higher TFP, productivity, profitability
- Spillovers – perhaps greater potential from vertical than horizontal – depends on *absorptive capacity, entrepreneurship* and bargaining power to accrue benefits to local firm
- Policy implication at three levels – institutional environment, to facilitate maximum spillovers and to increase trade integration and diversification

Policy conclusions 1: Institutional environment

- Since FDI clearly benefits performance of recipient firms, need to understand factors encouraging greater FDI
- Improved institutional environment – notably legal arrangements, reduced corruption, strong property rights enforcement
- Reduced business risk – sound macro-economic policies, e.g. fiscal and monetary policy
- Privatization, allowing foreign firms to participate
- Perhaps not competition policy!

Policy conclusions 2: Spillovers

- Literature stresses role of absorptive capacity which links to quality of human capital, and of management, highlights role of education and management training policies
- Spillovers rely on transfer of labor, skills and know how to new firms, which requires low barriers to entry in labor and product markets, e.g. support for entrepreneurship, flexible labor markets

Policy conclusions 3: Global integration and diversification

- Considerable evidence that trade openness and FDI work together. Trade liberalization enhances FDI, and openness increases the spillover benefits from FDI
- Key is to create an environment to which value enhancing MNEs wish to come and in which local firms and workers are able to maximise the spillover benefits from their investment

Integration, Diversification and MNE Strategy

- MNEs invest abroad to achieve their own strategic goals, not those of the host economy
- Ghemawat's three strategies of MNEs point to policies for governments seeking to increase integration and diversification
- Adaptation and Aggregation: requires governments to liberalize local markets and open up to trade
- Arbitration: requires governments to encourage export centered production on the basis of local resources e.g. low cost labor, to provide a global base for MNCs