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Deputy editor: Kálmán Kalotay

Associate editor: Grazia Ietto-Gillies

Production manager: Tess Sabico

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Political activities by transnational corporations: bright lines versus grey boundaries

John M. Kline *

Well-intentioned calls for greater social responsibility by transnational corporations paradoxically may imperil the long-standing admonition against corporate interference in domestic political activities. Contemporary international society lacks a specific standard, or even a general consensus, regarding the permissible nature and extent of the political involvement of transnational corporations. Although intergovernmental documents generally proscribe the interference of transnational corporations in political matters, civil society groups increasingly urge corporate actions that often constitute political activity, sometimes in direct conflict with national government policies. Governmental failure to forge international legal mechanisms for emergent norms on human rights shifts onto firms expanded corporate social responsibilities. Absent agreed “bright line” rules, transnational corporations test the “grey boundaries” of permissible political involvements, often relying on process-oriented guidelines involving voluntary codes, reporting and dialogue with civil society groups. New principles and processes are needed to guide the actions of corporations on human rights issues that would override traditional admonitions against corporate involvement in internal political affairs.

Key words: corporate social responsibility; human rights; civil society; national sovereignty; TNC political activities; codes of conduct; supply chain responsibilities.

Introduction

This article traces the evolution of international standards and guidelines utilized by the international community to address the involvement of transnational corporations (TNCs) in political

* Professor, Landegger Program in International Business Diplomacy, Walsh School of Foreign Service, Georgetown University, Washington, D.C., United States; contact: klinej@georgetown.edu.

activities. What historically appeared to be a narrow “bright line” across which TNCs should not step into a nation’s political activities has faded into a broader “grey boundary” where the justifications and limits on corporate actions become blurred. The traditionally dominant dictates of national sovereignty are challenged by an array of competing but unconsolidated international standards promoted by the activities of an internationally organized civil society. Marketplace pressures orchestrated by issue advocacy groups spur changing social expectations regarding TNC actions that race ahead of national or international legal directives. These shifts alter both the normative basis for TNC standards and the scope of potentially affected enterprises.

Concern over TNCs causing harm is being supplemented, if not supplanted, by a focus on a firm’s capability to influence outcomes, whether or not an enterprise is proximate or causally linked to a problem. This new focus on capability over causality enlarges the scope of enterprises addressed and broadens the range of potential actions expected. The relatively new concept of supply chain responsibilities reflects the extended scope of social responsibility, encompassing many corporations that lack traditional TNC investment or other direct connections to overseas circumstances. Notions about “spheres of corporate involvement” provide uncertain guidance regarding which corporations should act to influence geographically and politically distant events. The range of expected business actions is similarly problematic. A heightened emphasis on outcomes rather than process obscures historical warnings against political involvements without providing clear new guidelines for business decisions.

The following analysis first sketches the broad outlines of historical background and evolutionary change in international standards regarding TNC political involvements. The next section examines shifts in expectations regarding TNC actions and the expanding range of corporations involved. Finally, core issues are identified that shape a pending agenda for international discussion regarding the nature and scope of socially responsible TNC involvement in political activities.

Historical context

United Nations and OECD standards

The principal historical fear of TNC political activity arose from concerns that foreign firms investing in developing countries could engage in activities against the national interests of the host country, to promote the TNCs' goals and/or the home country's interests. Events in Chile during the early 1970s presented the prototypical example of this fear. Charges arose that ITT Corporation engaged in activities, perhaps in collusion with the United States Central Intelligence Agency, to promote the overthrow of the democratically elected but socialist government of Salvador Allende in Chile. Prior to his death in a military coup, President Allende castigated ITT from the podium of the United Nations General Assembly, energizing a North-South debate that fuelled a backlash against TNCs, sparking a wave of expropriation actions against foreign direct investment (FDI) during the 1970s.

International documents reflect this concern with potential TNC interference in the domestic political affairs of sovereign nations. A section of the United Nations General Assembly's Resolution of 1 May 1974, declaring a New International Economic Order (NIEO), addressed the "Regulation and Control over the Activities of Transnational Corporations" by calling for an international code of conduct for TNCs that would "prevent interference in the internal affairs of the countries where they operate" (UNCTAD, 1996a, p. 54). Seven months later, the United Nations General Assembly adopted a resolution for a Charter of Economic Rights and Duties of States, which similarly declared that "Transnational corporations shall not intervene in the internal affairs of a host State." (*ibid.*, p. 61).

Efforts to draft a United Nations Code of Conduct for Transnational Corporations confronted this issue but ended in the early 1990s after more than a decade of deadlock, failing to reach agreement on a full text. The draft TNC code section on "Non-interference in internal political affairs" reflects the emphasis on prohibiting TNC political actions, but bracketed language denotes

points of disagreement, reflecting important nuances regarding how narrowly the bright line against political involvements should be drawn. The two key provisions read as follows:

“Transnational corporations should/shall not interfere [illegally] in the internal [political] affairs of the countries in which they operate [by resorting to] [They should refrain from any] [subversive and other [illicit]] activities [aimed at] undermining the political and social systems in these countries...

Transnational corporations should/shall not engage in activities of a political nature which are not permitted by the laws and established policies and administrative practices of the countries in which they operate” (*ibid.*, p. 165).

The “should/shall” choice represents the draft Code’s basic disagreement over whether the Code should be binding or voluntary. However, the bracketed wording suggests differing opinions among nations regarding how narrowly or specifically to construe admonitions against TNC political activities.

The main differences in the draft’s first paragraph posit a choice between a general prohibition against TNC political involvements versus more narrowly proscribed actions that might be defined by their particular purpose or legality. By inference, the narrower formulation could mean that other, unspecified types of TNC political activities are not proscribed. The second paragraph, largely agreed to by the negotiators, sets a positive standard of national law and practice to evaluate TNC political actions. Only those activities permitted by established national laws, policies and administrative practices are appropriate; the principle of national political sovereignty is maintained.

In the 1976 Guidelines for Multinational Enterprises of the Organisation for Economic Co-operation and Development (OECD), developed countries reached agreement on a concise but undefined standard for TNC political activities that largely reflected positions they took in the draft United Nations Code negotiations. The OECD Guidelines simply state that enterprises should “Abstain

from any improper involvement in local political activities” (OECD, 1986, p. 13). This formulation again seems to imply that “proper” political activities exist, but the Guidelines provide no referent standard regarding how to distinguish between proper and improper actions. The Preface to the OECD Guidelines does provide a general context for political activity standards by advising that national laws govern local TNC operations, subject to international law. The international law qualification represents a traditional position taken by developed nations, although disputes arise over what qualifies as international law.

In 2000, two changes to the OECD Guidelines’ text provided an updated context for the provision on political activities. A new introductory sentence to the “General Policies” section (where the political activities’ provision is located) states: “Enterprises should take fully into account established policies in the countries in which they operate, and consider the views of other stakeholders.” (OECD, 2000, p. 19). The reference to established policies appears to reinforce the role of national standards, encompassing norms beyond legal mandates. However, the unusual reference to the “views” of undefined “other stakeholders” broadens the scope of referent standards in a more dramatic fashion, blurring considerations heretofore focused narrowly on government actors and national sovereignty.

The second notable change in text, in the same “General Policies” section, added a provision calling on enterprises to “Respect the human rights of those affected by their activities consistent with the host government’s international obligations and commitments” (*ibid.*). This specific reference to human rights reflects the international community’s increased concern with such issues. Rather than mirroring the negative admonition to abstain from improper political activities, the provision calls on TNCs to “respect” human rights. While this standard certainly includes the negative notion that TNCs should not violate human rights, “respect” might also encompass positive actions to support or promote such rights. Nevertheless, the provision still couches the human rights standard in the context of the host nation’s international commitments, raising potential questions about whether and when international standards constitute national obligations.

Standards provided in the United Nations and OECD documents established the basic principles reflected in most intergovernmental agreements that address political involvements by TNCs. Several key issues arise from these formulations. A central question is whether TNC political activities in host countries constitute improper interference in a nation's internal affairs, or whether only "improper" political involvements should be proscribed. If "proper" TNC political activities exist, then distinguishing standards are needed, and a positive list of such activities should be identifiable. Standards might be defined by national law, policies and government practices, or international standards (law or otherwise) could be used, raising the question of whether or when TNCs should follow international norms if they conflict with national standards. A related issue is whether TNCs have political rights if they are assigned duties or responsibilities regarding political activities in host nations.

Apartheid and civil society pressures

As Governments laid down markers during the 1970s that emphasized strictures on TNC political activities, a contemporaneous problem stirred passions that pushed in an opposite direction. The struggle against apartheid in South Africa confronted the international community with a dilemma. TNC conformance with national law and policy standards meant participating in an apartheid system based explicitly on racial discrimination. TNC activities opposing apartheid could mean violating local law and, arguably, constituted action to overthrow the South African Government, because white minority rule depended upon the apartheid structure.

The United Nations NIEO Resolution, cited above, perceived no dilemma. The Resolution's full dictum on TNCs sought a code of conduct to "prevent interference in the internal affairs of the countries where they operate *and their collaboration with racist regimes and colonial administrations*" (UNCTAD, 1996A, p.54; emphasis added). The draft United Nations Code expounded on the subject in a section dealing with "Non-collaboration by transnational corporations with racist minority regimes in southern Africa". Although negotiating disagreements again resulted in bracketed language, the draft provisions would have sought TNC withdrawal

from South Africa or “appropriate activities” to help eliminate apartheid, in line with United Nations decisions (*ibid.*, pp. 164-165).

These limited provisions linking efforts against South Africa’s apartheid system to TNC conduct could be viewed as standards that would involve TNCs in political activities. However, at the time the case appeared to constitute a clear exception rather than a fundamental challenge to governmental admonitions against TNC involvement in a country’s internal affairs. Intergovernmental documents stopped well short of calls from emerging civil society groups for more aggressive TNC actions. For many Governments, the justification for TNC activities against national laws and policies in South Africa rested on the illegitimacy of the South African Government. However, not all Governments were willing to declare the apartheid-based Government illegitimate, so intergovernmental disputes remained over when international standards might override national sovereignty in guiding TNC conduct.

The civil society movement pressuring TNCs for actions against South Africa’s apartheid regime favoured two alternative paths. One approach urged disinvestment to damage South Africa’s economy, thereby weakening the apartheid regime. Under these circumstances, TNC withdrawal could have a political impact, whether the motivation was to bring political change or simply respond to a deteriorating economic and business climate. The second approach, based initially on the Sullivan Principles (Kline, 1991), made continued TNC operations contingent on operational standards designed to avoid racial discrimination while improving conditions among the firms’ black workers and communities. This approach encouraged TNC activities within South Africa that would challenge, breach and seek to dismantle the apartheid system, undermining the Government’s base of power.

Implementing the initial Sullivan Principles could lead TNCs to violate petty apartheid laws and certainly contravened broader national apartheid policies. Later amplifications of the Sullivan Principles explicitly called on TNCs to participate more directly in the political process. Among other politically-related goals, TNCs were pledged to “oppose adherence to all apartheid laws and regulations; support the ending of all apartheid laws, practices and

customs; (and) support full and equal participation of blacks, coloreds and Asians in the political process” (*ibid.*, p. 29.) A clear contrast appeared between civil society and governmental guidelines for TNC activities in South Africa, particularly where TNC conduct would involve direct political actions. For example, when the United States State Department essentially adopted the Sullivan Principles as standards of conduct required for firms to qualify for trade assistance programs, the government standard notably omitted the Sullivan Principle amplification calling for TNC political activities (*ibid.*, p. 16).

The debate over TNC conduct in the struggle against apartheid proved pivotal in shaping subsequent developments on TNC social responsibility, especially on politically relevant issues. Learning from the South African experience, when international issue advocacy groups failed to secure satisfactory actions through governmental channels, attention shifted increasingly to TNC capabilities to influence circumstances abroad, including local political processes. These campaigns sought to direct TNC involvement on issues as diverse as political repression in Myanmar, regional conflict in Nigeria, religious rights in the Russian Federation and Northern Ireland, and labour regulations in many developing countries (Avery, 2000; Kline, 1999). The connection of particular TNCs to these issues range from direct to distant, but their potential capabilities could affect outcomes and business often responded more promptly than Governments to civil society pressures. Most often, calls for TNC action invoked human rights standards as the basis for asserted TNC responsibilities.

Expanding political actions to more business actors

Over the quarter century since the first efforts to formulate TNC guidelines, expectations have shifted toward a more expansive view of corporate social responsibility, encompassing a broader range of business actors.¹ Governments and corporations continue to stress

¹ Discussion of expanded corporate social responsibility, along with references to publications with relevant theoretical debates on ethical norms, can be found in UNCTAD, 1994, pp. 312-340; UNCTAD, 1999; and UNCTAD, 2001.

setting boundaries that limit TNC political actions, sometimes acknowledging general responsibilities on the human rights issues that energize civil society demands for more activist TNC involvements. Although many standards call upon TNCs to “respect” human rights, most governmental and corporate guidelines focus on negative injunctions not to violate such standards, while civil society groups are more likely to add positive responsibilities to “support” or “promote” human rights. Governments also focus their attention primarily on firms engaged in traditional FDI operations, even where guidelines are cited as good standards for all applicable corporations. By contrast, civil society campaigns actively target many more firms by incorporating supply chain responsibilities, focusing on the trade-related capabilities of domestic enterprises to influence overseas behaviour indirectly through contractual requirements and follow-up monitoring. Malleable notions such as “spheres of business involvement” connect a broad range of business functions to potential policy targets in other nations.

Civil society moves the line

The proliferation of non-hierarchical civil society groups has generated an array of documents with diverse formulations of calls for greater TNC social responsibility. An example of activist expectations can be found in the “Principles for Global Corporate Responsibility: Bench Marks for Measuring Business Performance” issued in 1998 by the Interfaith Center on Corporate Responsibility (ICCR, 1998). Principles in this document call for companies to be “fully committed to respecting internationally recognized human rights standards”. Among several benchmark criteria to evaluate such a commitment is the expectation that: “In instances where legislation or the actual practices of any public institution violate fundamental human rights, the company does everything in its power to maintain respect for those fundamental rights in its own operations. The company also seeks to exercise its corporate influence to contribute to the establishment of such fundamental rights” (*op. cit.*, p. 4). Compliance with this standard could involve TNCs in political activities, perhaps even leading to violations of local laws or policies.

The Core Standards of the World Development Movement urges a similarly activist approach while identifying some of the

specific human rights relevant to TNC activities. “Multinational companies should respect the right of everyone to life and liberty; no-one should be subject to torture, cruel treatment or arbitrary arrest. Companies should promote basic human rights, ensuring they are universally and effectively observed” (UNCTAD, 2000, p. 455). Clearly, TNCs are expected to become engaged in the promotion of human rights standards that could involve human rights violations by local political authorities. Such calls for increased TNC engagement on human rights issues clearly moves the line for corporate social responsibility and presents corporations with certain dilemmas of how to respond.

Business dilemmas in drawing distinctions

Conduct standards endorsed by TNCs traditionally mirror the focus of governments on national political sovereignty. For example, the 1972 International Chamber of Commerce (ICC) Guidelines for International Investment emphasizes investor compliance with the local legal framework, urging respect for “national laws, policies and economic and social objectives of the host country in the same way as would a good citizen of that country” (UNCTAD, 1996b, p. 286). The Pacific Basin Charter on International Investments, adopted in 1995, promotes similar norms, stating that: “International investors should fully recognize the sovereign rights and responsibilities of economies and must accept reasonable obligations that are placed upon business enterprises in the domestic interest, and should act in all ways as a good corporate citizen of the host country” (*ibid.*, p. 376).

Despite this general deference to national law, TNCs can encounter conflicts between international social responsibility standards and national law and policies. Many TNCs struggled with such a situation during South Africa’s apartheid era, but few firms explicitly and publicly discuss how they resolved the dilemma, nor what lessons the experience holds for guiding future actions. A recent exception is contained in a case study description of policies followed by British Petroleum (BP).

“The Ethical Conduct Policy commits the company to respecting the rule of law in the countries of operation. But what about standards where national laws contravene

basic human rights or where to uphold the letter of the law could result in human rights infringements? One such example is the apartheid laws of the old South Africa, which required racial segregation of the workforce. There, BP Amoco applied the principle that international law took precedence over national or local laws and chose to desegregate their employees. . .BP Amoco respects the rule of law, recognising the hierarchy of international, regional, national and local laws...By respecting the rule of law, BP Amoco is acknowledging that local or national laws may conflict with the promotion of human rights” (PWBLF, 2002).

Although acknowledging a responsibility toward human rights that can supersede national law, BP also draws a line regarding appropriate actions to carry out its responsibilities. The BP case study cites “a clear distinction between acting in an advocacy role for human rights and exerting a positive influence” (*ibid.*).

David Rice, Director of BP’s Policy Unit, elaborates on this distinction in a separate article (Rice, 2002). Although the firm promotes respect for human rights, “We do not engage in advocacy, nor are we campaigners. This is not our role” (*op. cit.*, p. 134). He ascribes the advocacy role, described as “complementary”, to other actors, including non-governmental organizations (NGOs). However, the basic dilemma remains, as Mr. Rice recognizes:

“So we have options. We have political influence...We need to act in the interests of the country in which we operate, in the interests of our shareholders and the international community. We will continue to have discussion on roles and boundaries, and it is society at national and international levels that will decide. But in the meantime many of the human rights issues we’re facing aren’t theoretical. They’re real, they’re here and now. . .It’s hard to discern any rules or pattern in this. Everything is handled on a case-by-case basis” (*ibid.*, p. 136).

The Confederation of Norwegian Business and Industry (NHO) offers one of the most explicit formulations of standards relating to TNC political activities in its 1998 publication on “Human

rights from the perspective of business and industry: a checklist” (NHO, 1998). In the document’s preface, the NHO specifies several key areas falling under corporate social responsibility but differentiates between Government and business role obligations, specifically excluding business lobbying activities on human rights issues:

“Business and industry must acknowledge that companies bear an ethical responsibility for protecting universal human rights, workers’ rights and the environment. At the same time, it is essential that the authorities and business and industry keep their roles separate. Direct lobbying activities to promote democracy and human rights in respect of regimes in countries in which Norwegian enterprises have business dealings should be left to the authorities” (*op. cit.*, p. 1).

Having denied the appropriateness of direct political activity, the statement goes on to endorse actions that might indirectly affect political outcomes, asserting that, by following their home country practices in their foreign operations, TNCs can positively influence local developments: “And although there should be a division of responsibility between the authorities and business and industry, there will never be any absolute boundaries. There will inevitably be grey zones where the players’ spheres of responsibility overlap” (*ibid.*).

The NHO checklist further differentiates between necessary and discretionary corporate actions. “Companies’ primary direct ethical responsibility is to protect the rights of their own employees, and to see to it that corporate activities are conducted in a manner that does not violate human rights” (*ibid.*, p. 4). Hence, the negative “do not harm” mandate applies to all company operations and a more active duty exists to help protect the rights of employees. But broader responsibilities for human rights activities are deemed discretionary.

“Business and industry also bear a social responsibility to promote respect for human rights so that they will be generally and effectively recognized and observed in the countries with

which Norwegian companies deal. This is a discretionary responsibility. Individual companies alike must decide for themselves when and how to get involved in the efforts to promote human rights” (*ibid.*).

Despite the cautionary notes, the NHO text suggests that managers of companies with “considerable influence” in countries with systematic human rights violations “bear an independent responsibility to try to improve the human rights situations, either alone or in collaboration with others” (*ibid.*). Among possible actions are open support for the human rights standards of United Nations and of the International Labour Organization (ILO); support for related educational projects; and contact with other companies, NGOs, individuals, and local and national authorities. This discretionary responsibility even contemplates action on individual cases. “Both companies and individual businesspersons can get involved in defending people whose human rights have been violated, regardless of whether they are victims of torture, random arrests, illegal imprisonment or miscarriages of justice” (*ibid.*). It is difficult to read this list without concluding that involvement by a foreign company in such cases would be viewed by most host country governments as involvement in their internal political affairs.

Expanding the number of responsible business actors

The number and range of business enterprises drawn into political activities expanded with recent changes in the spatial and functional concept of corporate social responsibility. When the historical focus rested on preventing TNCs from engaging directly in harmful political activities in host countries, the potential universe of capable TNC actors was relatively small. Subsequently, not only has the number of TNCs grown enormously, but many enterprises with low or non-equity foreign involvement are drawn into the net of potentially relevant actors through concepts such as supply chain responsibilities and, even more broadly, spheres of business involvement.

Compared with traditional TNCs, these newly relevant enterprises typically reside at a greater geographic and operational distance from the foreign locales of perceived harm, such as human

rights violations. The causal link between the corporation and the harm is also more tenuous, sometimes resting on vague notions such as complicity.² Alternatively, the argument for corporate responsibility may rest on the firm's potential capability to do good rather than claims that the enterprise is causally connected to the harm. The concept of business spheres of involvement also enlarges the number of potential corporate actors, where the image of expanding concentric circles encompasses a broader range of corporate actors even as their connection to the central problem recedes.

These evolving expectations on corporate social responsibility appear explicitly in "Human rights principles for companies: a checklist", a joint publication from The Prince of Wales Business Leaders Forum (PWBLF) and Amnesty International (AI) (Frankental and House, 2000). The report asserts that "Civil society in developed and developing countries alike is demanding more and more that TNCs actively seek to protect human rights within their legitimate sphere of influence. This sphere is perceived as extending to all business partners. Society is increasingly seeing TNCs as responsible for the human rights context of both the sourcing of their products and their end use" (*op. cit.*, p. 24). The report sketches a TNC's sphere of influence in concentric circles that begin with core operations and then expand to cover relations with business partners, host communities and finally "advocacy/policy dialogue" with Government (*ibid.*, p. 28).

In applying this standard to labour conditions, the report acknowledges that "A company's influence over working conditions obviously lessens as it moves away from its direct operations into joint venture partners and subcontractors down the supply chain. Nevertheless, society at large will hold a company responsible for violations occurring in plants from which it sources products or services, and therefore over which it has a degree of influence" (*ibid.*, p. 17). This view is endorsed by the Social Accountability 8000 standard that specifically elaborates how companies should extend social and labour accountability requirements to suppliers/

² If a firm outsources work to unaffiliated foreign manufacturers to avoid responsibilities, the argument for a causal connection would be strengthened by the nature of the firm's intention.

subcontractors and sub-suppliers by evaluating, selecting and contractually requiring conformance with accepted standards, even to the level of supplies obtained from homeworkers (SAI, 2001, p. 7).

As spatial and functional distance lengthens between an enterprise and the location of perceived harms, the argument for corporate social responsibility also tends to shift from allegations of direct causation to notions of more indirect potential capabilities. Again, the PWBLF/AI document (Frankental and House, 2000) traces this broadening boundary, concluding that simply doing business with Governments that violate human rights can incur a corporate responsibility to act. “Even when a company’s operations do not directly impact upon human rights issues, the company may nonetheless be called upon to speak out or act when an oppressive government violates its citizens’ rights” (*op. cit.*, p. 33).

Large TNCs, with substantial FDI in developing countries, may still typify the type of enterprise usually associated with issues of political involvements in host countries. Nonetheless, civil society groups and some business organizations now draw the boundaries for corporate social responsibility broadly enough to encompass more business actors. Newly encompassed enterprises include manufacturers, retailers or other services providers with little or no direct overseas presence, but who possess some capability to influence foreign economic and (thereby) political activities.

From defined bright lines to procedural grey boundaries

As traditional bright line definitions are challenged by expanding social expectations of more business actors, some groups are turning toward alternative approaches that outline procedural grey boundaries for good TNC conduct. The United Nations Global Compact, initiated by Secretary-General Kofi Annan in January, 1999 and formalized the following year, offers a new process-oriented approach that has drawn significant interest among governments, TNCs and NGOs. This effort relies heavily on voluntary TNC adherence to broad value principles involving human rights, labour standards and the environment. The Global Compact is an initiative of the Secretary-General rather than an action by the nation-State members of the United Nations. Seeking a careful balance between

calls for greater corporate involvement and potential sensitivities regarding government policies and prerogatives, the document omits any “bright line” standards for political activities that may infringe on national sovereignty. Instead, the Global Compact adopts several concepts that suggest broad, grey boundaries for corporate responsibilities.

The Global Compact asks companies to “support and respect the protection of internationally proclaimed human rights within their sphere of influence” and to “make sure that they are not complicit in human rights abuses” (UN, 2000). Many human rights issues (as well as labour standards and the environment) will relate to areas relevant to TNC operations and, at the same time, constitute matters central to the internal political affairs of host countries.

The effectiveness of the Global Compact will depend largely on how adhering TNCs define, apply and report on their implementation of these broad value principles, as evaluated by civil society and others interested groups, including governments. Related components of the Global Compact, including policy dialogues among interested stakeholders and a sharing of “good practice” examples, can help. On labour standards and the environment, some complementary guidelines and implementation measures are available in the form of ILO conventions and monitoring, and the environment-centred Sustainability Reporting Guidelines promoted by the Global Reporting Initiative (GRI). Monitoring and evaluation procedures are not as developed for follow-up on human rights value principles, although a new effort encourages companies to use GRI reporting guidelines to describe their implementation actions on all the Global Compact’s principles (UN, 2003a).

Other recent interactions between business and civil society groups also suggest a shift from efforts seeking clearly defined standards to establishing acceptable procedural boundaries within which TNCs can act responsibly on human rights issues. For example, Amnesty International links general standards with procedural approaches in a document titled “Human rights principles for companies: a checklist” (AI, 1998). This checklist sets forth the following statement regarding a “Company Policy on Human Rights”:

“All companies should adopt an explicit company policy on human rights, which includes public support for the Universal Declaration of Human Rights. Companies should establish procedures to ensure that all operations are examined for their potential impact on human rights, and safeguards to ensure that company staff is never complicit in human rights abuses. The company policy should enable discussion with the authorities at local, provincial and national levels of specific cases of human rights violations and the need for safeguards to protect human rights. It should enable the establishment of programs for the effective human rights education and training of all employees within the company and encourage collective action in business associations to promote respect for international human rights standards” (*op. cit.*, p. 2).

This AI standard couples general public support for the United Nations Declaration with a vague injunction against corporate complicity in human rights abuses. The document calls for policies to “enable” corporate actions without attempting to specify more precisely when, where or exactly how activities should be undertaken. Companies are left to decide on the appropriateness of case-specific actions, but under a later section in the AI document, those decisions would be subject to retrospective evaluation by monitoring reports, verified independently with the involvement of local communities and voluntary organizations (*ibid.*).

Shell appears to have largely followed Amnesty International’s suggested approach with an effort that began in 1996 with an altering of the firm’s General Business Principles and led to a new corporate position and process for addressing human rights issues. The company originally relied on non-interference and neutrality as key principles in dealing with host governments (Shell, 1999, p. 15). Now, Shell has explicitly endorsed the United Nations Declaration on Human Rights and committed itself to express support for such rights “within the legitimate role of business” (*ibid.*, p. 22). Confronting the task of translating this position into actions, Shell developed “Business and human rights: a management primer” as part of a training program to educate Shell managers on how human rights principles relate to corporate operations. The primer provides limited specific guidelines

but does recognize that TNCs working in countries with serious human rights problems can expect scrutiny from NGOs to assess whether, at least, the firm provides measurable support for human rights and does not seek to benefit from rights violations (*ibid.*, p. 21). In addition, Shell uses case scenarios in training sessions to stimulate discussion and promote forethought on ways the company could respond to various situations involving human rights issues.

Process-oriented approaches shift onto the corporations the burden of applying general principles within the broad grey boundaries of good business conduct. Such a stance may appeal to normal business preferences to avoid regulatory straitjackets that confine operational options. However, it is unclear whether most TNCs are really prepared, functionally or substantively, to formulate and follow human rights guidelines that may overlap with political involvements in a host Government's policies and practices. Nor is it clear that Governments, or civil society groups, are ready to endorse an expressly political role for TNCs, despite recent pressures for increased TNC action and accountability.

Delimiting the political involvement of TNCs

Global society currently lacks sufficient political consensus to adopt internationally binding agreements with enforcement mechanisms that would effectively override nation-State sovereignty on most human rights issues. Nevertheless, non-state actors are effectively redrawing traditional bright line rules based on deference to national political sovereignty, turning them into broader grey boundaries for TNC social responsibility, particularly in critical human rights situations where political authorities cannot or will not take effective action. This development is occurring with little explicit debate and limited official endorsement by public bodies. Reintroducing TNC political activities as a core topic for international discussion should stimulate debate and encourage the development of clearer guidelines on at least three related points.

First, the responsiveness of public authorities at the intergovernmental level to human rights abuses has not kept pace with the global community's growing concern with such issues. Expanded TNC social responsibility that leads to political

involvements generally constitutes a second- or third-best alternative to action by political authorities. The lagging development of effective intergovernmental responses should be acknowledged and coupled with a renewed commitment to improving relevant political mechanisms. When national sovereignty claims clash with international human rights principles, political authorities clearly bear the principal responsibility to address issues of relative priority and appropriate actions. It is the current political failure of Governments to forge a consensus on international legal standards that shifts greater responsibilities onto TNCs through an expansion of corporate social responsibility.

Second, the myth that significant TNC investments can be politically “neutral” is no more sustainable than a host Government’s expectation that legally incorporated foreign investors have significant social responsibilities but no political rights. The boundaries between permissible TNC political involvements and “improper” political activities should be reviewed and refined. Past assumptions associated all TNC political involvements with negative effects, ranging from bribery or collusion with opposition forces to questionable political contributions and lobbying. A more differentiated approach could recognize selective characteristics or criteria to distinguish “improper” TNC actions from permissible political activities.

“Bright line” restrictions should still preclude TNC involvement in bribery and corruption, or collusion with illegal opposition forces (although possible case-specific exceptions might be debated on the latter, as in the anti-apartheid campaign). National sovereignty could determine the appropriateness of political contributions, relying primarily on each country’s national standards and regulatory procedures. Lobbying, however, requires more extensive discussion and delineation of the grey boundaries for TNC actions. Although TNCs typically promote their financial self-interest in public policy processes, Governments are often reluctant to explicitly acknowledge the legitimacy or clearly regulate the conduct of such political activity. Civil society groups that often question the legitimacy of TNC self-interest lobbying nevertheless urge enterprises to exert political influence in support of human rights, labour or environmental goals.

The challenge thus becomes determining the conditions under which TNC lobbying constitutes appropriate political activity, including possible limitations on the method or effects of such actions.

For example, social responsibility expectations commonly seek TNC conformance with high international labour and environmental standards in both home and host country operations. However, should TNCs extend their influence beyond their own facilities and actively lobby for the passage of improved local labour and environmental laws? Good TNC conduct practices serve as passive models for improving local standards, but TNCs could also actively advocate within local political processes for the adoption of new public policies. Such TNC lobbying may illustrate a permissible type of involvement in a country's internal affairs, taking foreign-based corporations beyond passive conformance with established laws, policies and practices. A "Guide to the Global Compact" (UN, 2003b) seems to endorse lobbying activity, stating that companies should contribute to public debate on human rights and "therefore have the right and the responsibility to express their views on matters that affect their operations, employees, customers and the communities of which they are a part" (*op. cit.*, p. 20).

If such lobbying by local affiliates of TNCs is proper, "grey boundary" issues may still arise when foreign enterprises outside a country effectively influence that country's policies and practices through supplier contract provisions that can include local monitoring requirements on labour or environmental practices. Although not part of a political process, such external supply chain actions can influence a country's internal policies and practices just as surely, and perhaps more effectively, than formal political lobbying activities. A question deserving broader discussion is whether a TNC should purposefully exert supply-chain influence to shape public policies in nations where the TNC is not even incorporated, lacking status as a legal corporate citizen.

Resource allocation issues within host countries offer another illustration where clearer guidelines are needed for TNC political involvements. Large TNC natural resource investments generate enormous revenues for both TNCs and host countries. TNCs engage in negotiations and lobbying activities to influence contractual conditions and public regulations that determine the company's share

of profits. However, ruling Governments in host countries may be corrupt or unrepresentative of their peoples' best interests. In such circumstances, particularly where indigenous peoples or other minority groups appear to be treated unjustly, TNCs may be called upon to use their influence to reallocate governmental revenue flows more fairly (Ottaway, 2001). Certainly such TNC actions, affecting fundamental governance decisions in a host country, constitute political activities and involvement in the country's internal affairs. Is the exercise of such TNC influence "proper" or "improper?" One answer might be to view TNC social responsibility as requiring transparency but not direct involvement in public resource (re)allocation (for example, open publication of revenues paid to the government but not direct involvement in decision-making on public expenditures). Another approach is being tested in Chad, where TNC, NGO and World Bank coordination is shaping the distribution of oil resource revenue within that country (Useem, 2002).

The *third point* meriting greater international discussion relates to process-oriented decision guidelines that can supplement defined standards for TNC political involvements. Improved procedural guidelines should be developed to clarify questions of *who* should decide on corporate action, *when* and *how*. If broad international consensus is not attainable on such procedural guidelines, then TNCs should be granted substantial discretionary latitude to carry out expanded social responsibilities without facing unfair, retrospective condemnation for decisions taken.

"Bright line" rules provide specific standards for conduct when sufficient societal consensus exists to support prospective mandates.³

³ A Working Group of the Sub-Commission on the Promotion and Protection of Human Rights at the United Nations Commission on Human Rights has been developing "Draft norms on the responsibilities of transnational corporations and other business enterprises with regard to human rights" (United Nations document E/CN.4/Sub.2/2003/12, available at: <http://www.unhchr.ch/Huridocda/Huridoca.nsf/TestFrame/64155e7e8141b38cc1256d63002c55e8>). This set of draft principles represents an important effort to refine some "bright line" standards for TNC responsibilities on human rights issues. The Sub-Commission's Fifty-fifth Session (28 July to 15 August 2003) is scheduled to discuss the current draft, but significant obstacles appear to remain at political levels before these norms might garner enough support for a broad consensus adoption.

Such rules are preferable because they offer clarity and stability for all parties regarding societal expectations and the standards used for judging appropriate actions. However, where agreement on societal value priorities is less clear or specific, process-oriented approaches offer a credible alternative, setting out grey boundaries within which permissible action can occur. A key issue in developing process-oriented approaches is determining how much latitude for TNC political involvement should accompany the assignment of politically related social responsibilities. Such sanctioning of political activities by non-governmental actors should be carefully assessed for its broader implications before process-oriented approaches are endorsed by NGOs, TNCs or governments.

In determining *where* to set the boundaries for responsible TNC political activities, international discussions should consider *why* TNCs are being assigned responsibilities in the political arena. Answers to this *why* question would help determine the type and extent of political latitude that should be granted relevant TNCs. For example, a TNC's causal relationship to human rights violations should affect the degree of latitude granted the firm for discretionary action. TNCs with a capability to influence outcomes, but little or no causal connection to violations, should be allowed a broader choice of possible responses than enterprises more causally linked to the harm and therefore directly responsible for restitution or reparations.

Several concepts can help gauge a TNC's relationship to social responsibility issues, but most applications are still too unrefined to serve as process-oriented decision guidelines. For example, complicity may signify anything from actively causing harm, to passively benefiting from harmful actions, to an awareness of the harm coupled with some capacity to influence outcomes.⁴ Similarly, tracing TNC spheres of influence may identify corporate capabilities,

⁴ The United Nations Guide to the Global Compact describes "direct complicity", "beneficial complicity" and "silent complicity" in discussing how to understand the social responsibility principle that corporations should avoid complicity in human rights abuses. Although this preliminary differentiation suggests some distinguishing categories, the practical prescriptive or evaluative implications of the differences remain unclear (UN, 2003b, p. 24).

but this approach can lead to short-term, case-specific pressures for action rather than clear rationales for TNC political involvements that also weigh the longer-term implications of such actions. The concept of corporate citizenship, carrying with it both civic responsibilities and rights, can also be useful. However, TNCs face special challenges in sorting out priority responsibilities among their simultaneous roles as global as well as multiple national and local corporate citizens. Renewed international discussion of TNC political activities could help refine these concepts to serve as better decision guides within the broad grey boundaries of potential TNC involvements.

Conclusion

Globalization trends are weaving new patterns of economic, social and political interaction into the fabric of international relations. Formal political authority remains largely confined within nation-State borders, while globally integrated TNC operations and proliferating civil society groups forge new international capabilities that make traditional roles and rules appear inadequate, especially on important human rights issues. With Governments unable to set definitive rules for corporate conduct, the path ahead contains few “bright line” markers within the expanding “grey boundaries” of TNC and civil society interaction. With renewed attention and commitment, the international community could debate and delimit the appropriate nature, function and guiding principles for TNC political activities in this evolving global order. In particular, governments should directly reengage on this issue where political authorities hold the greatest capability and responsibility for deciding appropriate actions.

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Managing the environment across borders: a survey of environmental management in transnational corporations in Asia

Michael W. Hansen *

“The multinational firms provide a significant bridge in the environmental sphere between one country and another and between one region and another. They do so with perhaps as great or greater influence than do other international players in environmental protection and control (such as the UN), other international governmental organizations and commissions, and the larger NGOs” (Hadlock, 1994, p.155).

More than ten years ago, at the United Nations Conference on Environment and Development in Rio de Janeiro, transnational corporations pledged to play a constructive role in sustainable development. They were expected to engage in self-regulation, for example, by devising internal codes of conduct and management procedures that would apply to their global operations and, in particular, to their operations in developing countries. This article assesses progress made in this respect since Rio, based on the findings of a survey of environmental management practices of transnational corporations in Asia. It examines the scope, content and determinants of such environmental management, emphasizing the influence of parent companies on the environmental practice of foreign affiliates. Parent-affiliate environmental links can be characterized as a continuum, spanning close cross-border integration and high levels of local autonomy. Approximately one third of the corporations opt for a very close integration of their foreign affiliates, while 40% report no formalized environmental links between headquarters and affiliates. Affiliates in industries with high environmental risks and joint ventures, as well as large and old affiliates, appear to be subject

* Assistant Professor, Department of Intercultural Communication and Management, Copenhagen Business School, Copenhagen, Denmark. Correspondence to: mwh.ikl@cbs.dk.

to close environmental scrutiny by headquarters. Furthermore, efforts towards environmental management vary: some transnational corporations are seriously engaged, other are not. Thus, there is still a long way to go before transnational corporations have fully honoured their commitments made in Rio.

Key words: Transnational corporations and sustainable development; environmental self-regulation and developing countries; environmental management of foreign subsidiaries.

Introduction

Governments have traditionally been seen as responsible for correcting market failures and harnessing the market for social objectives. In the case of environmental externalities related to foreign direct investment (FDI), the effectiveness of government intervention has been hampered by collective-action problems at the national and international levels.

Against this background, it is not surprising that alternatives to government-led approaches have gained ground in recent years. One such approach is corporate self-regulation. Thus, since the early 1990s, the business community (or at least parts of it) has argued that it is capable of, and willing to, internalize social preferences for environmental protection through voluntary initiatives.¹ On this issue, a huge literature has emerged.²

The potential advantages of corporate self-regulation in developing countries are obvious. Through the control of a growing number of production facilities in developing countries and collaboration with an ever growing number of local firms through various non-equity arrangements, transnational corporations (TNCs) have ample opportunity to influence

¹ See e.g. BCSD, 1992; ICC, 1992.

² For overviews of that literature, see e.g. Chudnovsky *et al.*, 1999a; Perry and Singh, 2001; NGLS and UNRISD, 2002; and Iannuzzi, 2002.

environmental conditions in those countries. TNCs' decisions regarding company-wide environmental standards, the transfer of cleaner technology, environmental training programmes for employees, environmental supply chain management, collaboration with local environmental authorities, or marketing of environmentally friendly products may have profound implications for the state of the environment in developing countries. In fact, it has been argued that TNCs may provide one of the most important environmental links between the North and the South (Hadlock, 1994).

TNC self-regulation in developing countries was clearly emphasized at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. More than 30 provisions of Agenda 21 and the action plan for sustainable development adopted by the international community referred to the role and responsibilities of TNCs (UNCTAD, 1996). Among those, it was stated that TNCs should:

- recognize environmental management as among the highest corporate priorities and as a key determinant to sustainable development (30.3);
- be encouraged to establish worldwide corporate policies on sustainable development (30.22);
- introduce policies and commitments to adopt equivalent or not less stringent standards of operation as in the country of origin (19.53 and 20.30);
- establish environmental management systems, including environmental auditing of production or distribution sites (20.13); and
- share their environmental management experiences with the local authorities, national Governments and international organizations (30.22).

More than a decade later it is timely to examine whether and how TNCs have engaged in the self-regulation of their activities in developing countries, and what the modalities of that self-regulation may be. Between 1998 and 2000, a survey

of environmental practices of 163 foreign affiliates in China, India and Malaysia was conducted to provide a wide range of information on TNC environmental practices in developing countries.³ As relatively few studies have examined this aspect of TNC activity, the survey fills a lacuna in the existing literature on TNCs and development.⁴ Relating directly to the prescriptions made by the international community in Rio, the results of the survey may inform policy makers and other interested parties in their deliberations on issues related to international business and sustainable development.

- Based on the survey, this article examines three dimensions of TNC environmental practices in developing countries.
- What is the status of environmental management at foreign affiliates in Asian developing countries?
- How and to what extent do parent companies engage in the (self-)regulation of their foreign affiliates in Asia?
- What are the conditions under which parent companies engage in the environmental (self-)regulation of their foreign affiliates in Asia?

Methodology and sample profile

A survey of approximately 50 questions was developed and sent to 250 foreign affiliates in each of the three host countries (China, India and Malaysia). With 163 foreign affiliates

³ The survey was conducted as part of a joint project between UNCTAD and the Copenhagen Business School, funded by the Danish development assistance agency, DANIDA. The project combined the survey with case studies of individual firms and studies of the political economy of FDI and the environment in host and home countries. The findings of the project are presented in a consolidated report (Hansen, 2002a). This article presents not just a summary of the findings of the project, drawing on the consolidated report, but also further substantiates the survey results and their possible policy implications.

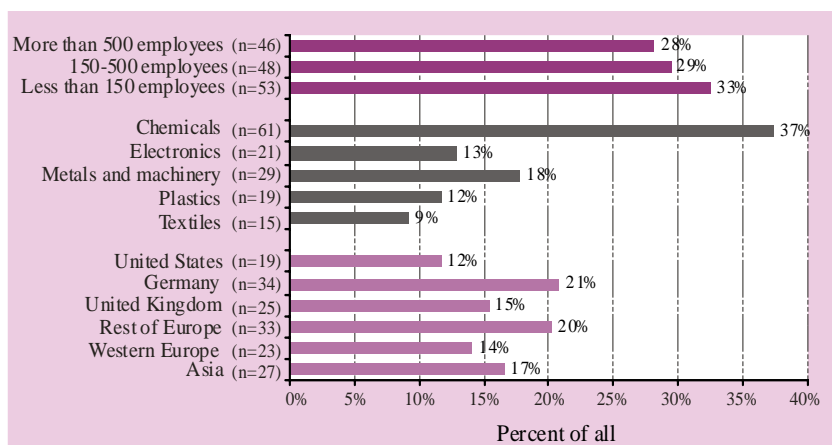
⁴ Some studies have examined the global environmental management practices of TNCs from a headquarter perspective (e.g. Rappaport *et al.*, 1991; UNCTAD, 1993; Hansen, 1998). However, the environmental management practices of affiliates in developing countries are rarely examined. Exceptions are Brown, 1993; and Perry and Singh, 2001.

in the sample, the response rate was 22%. The main strength of the sample is that it includes a significant number of affiliates of the world's largest TNCs. Thereby it allows for a statistical analysis of different categories of TNCs. However, it is also expected that best performers are overrepresented in the sample because environmental laggards may have disproportionately declined to participate and because responses – being provided by managers – may exaggerate positive stories and understate negative cases.

The survey targeted foreign affiliates in manufacturing industries with significant environmental problems, in particular the chemical industry, the electronics industry, the textiles industry, and the metals and machinery industry. With 37%, the chemical industry⁵ is by far the largest group in the sample (figure 1).

China, India and Malaysia were chosen because they all are important hosts to TNCs and because they represent fundamentally different approaches to FDI. Malaysia promotes export-oriented FDI on a large scale through open-door policies since the mid 1980s (Rasiah, 1999); India pursues a restrictive FDI policy aimed at promoting market-seeking FDI in selected

Figure 1. Profile of sample



⁵ Including pharmaceuticals, fine chemicals (household products and paints) and other chemicals (oil products, bulk chemicals or pesticides).

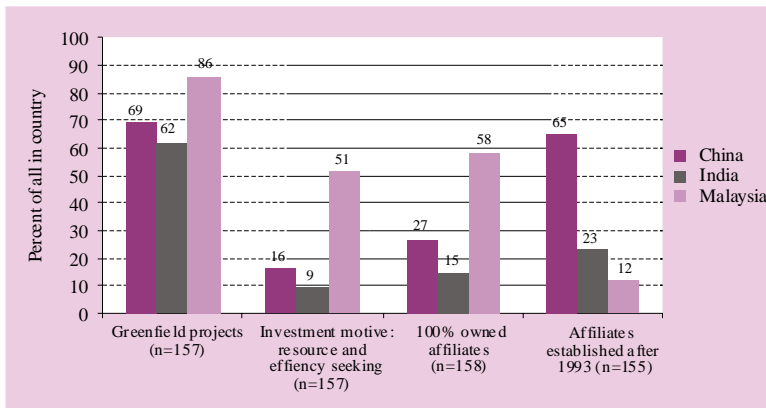
industries until 1991, liberalizing its FDI regimes only after 1991 (Jha, 1999); and China opened up to FDI in the late 1980s and become the world's second largest recipient of inward FDI at the end of the century (Xian *et al.*, 1999). The differences in the three host countries' market structures and industrialization strategies are clearly reflected in the sample (figure 2). Foreign affiliates in India are typically market seeking, relatively old, relatively large and joint ventures; foreign affiliates in Malaysia are typically export-oriented, fully controlled greenfield projects. Compared to Malaysian and Indian affiliates, foreign affiliates in China are as in India market seeking, but they are also comparatively new and relatively small.

The state of environmental management at affiliates

Environmental management systems

There are a number of management tools and systems that firms can adopt to address environmental challenges, among those formally assigning environmental responsibilities to an environmental manager, formulating an environmental policy, adopting environmental programmes in specific areas of concern, establishing monitoring and data collection procedures

Figure 2. Major characteristics of investment projects in the three host countries
(Per cent)

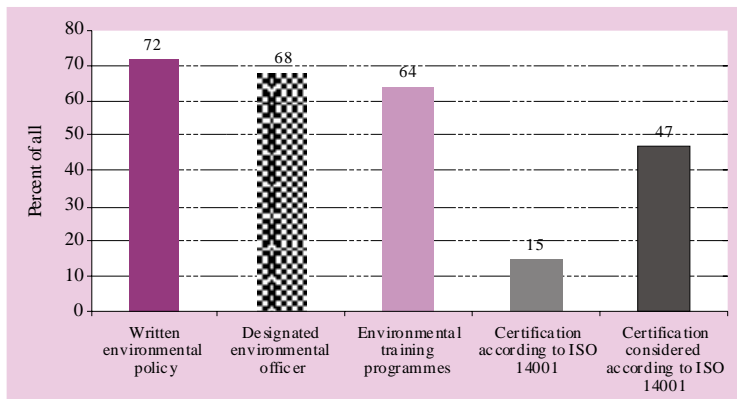


(including environmental accounting), reporting to the public and other stakeholders on environmental issues, etc. Together such activities form an environmental management system.

The vast majority of the 163 foreign affiliates had adopted such management measures (figure 3). However, at the time of the survey, only 15% had obtained certification of their environmental management system according to an environmental management standard (all according to ISO 14001), a fairly low number when taking into account that the sample probably is biased toward the best performing TNCs. One explanation could be that many TNCs – in particular those in the pharmaceutical industry – perceive the ISO 14001 standard as inferior to existing industry and company specific standards. Another explanation could be that international environmental management standards are relatively new and that foreign affiliates in developing countries have not yet had the time to implement them. Supportive of this latter explanation is the finding that close to 50% of the foreign affiliates were considering certification. It thus appears that a surge in certification is underway at foreign affiliates in Asia.

One of the frontiers in environmental management concerns outreach to local suppliers (Dobilas and MacPherson, 1997) as well as to local communities (Utting, 2000). These

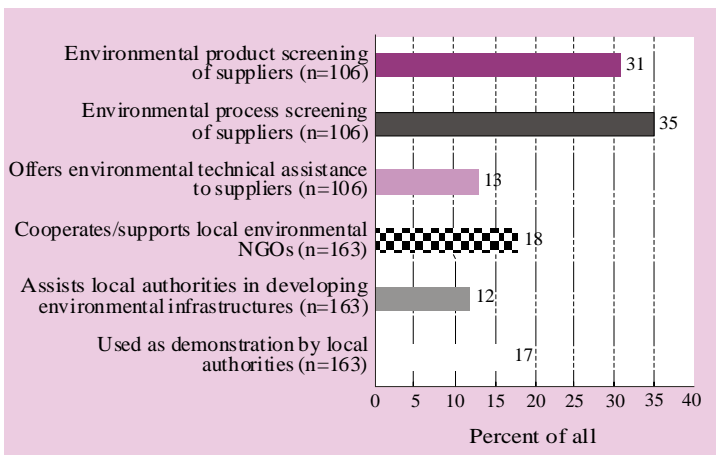
Figure 3. Environmental management activities at affiliates
(n=163)



issues are important because they may determine whether foreign affiliates contribute to the building of environmental capabilities in host countries or remain isolated islands of environmental excellence (Ruud, 1999). Based on the survey it appears that environmental outreach to local firms in Asian developing countries is rather embryonic: While around one third of the foreign affiliates in Malaysia and China were engaged in environmental supply chain management (e.g. by screening processes and products) and while some foreign affiliates offered environmental technical assistance to local suppliers (figure 4), generally speaking, supply chain environmental management seemed to be *ad hoc* and informal (see Pedersen, 1999; Ruud, 1999; Xian and Zhang, 1999).

Similarly, outreach to local communities seemed to be limited at best. Less than 20% of the respondents reported that they supported local authorities' environmental standard setting and infrastructure development efforts or contribute to local environmental non-governmental organizations (NGOs). This apparent relative underdevelopment of outreach made one observer note that TNCs prefer a "muted, withdrawn appearance, concentrating on keeping their in-house and back-yard clean beyond the scrutiny of external stakeholders" (Ruud, 1999, p. 22).

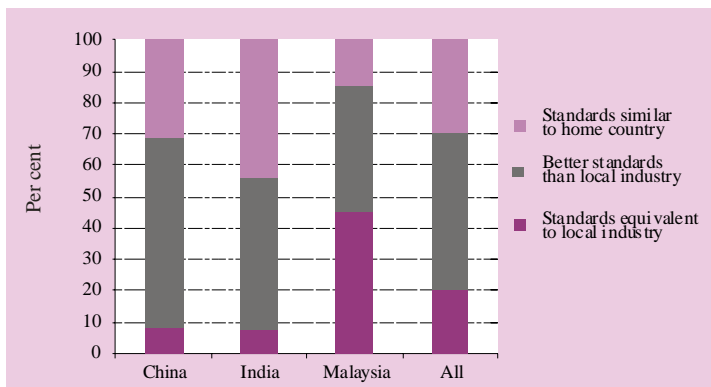
Figure 4. Environmental outreach activities



Environmental performance

There is extensive discussion in the literature whether foreign affiliates, due to their privileged access to technology, resources and know-how, and their wider exposure to scrutiny by local regulators and global NGOs, tend to have better environmental performance than comparable local companies.⁶ While this survey did not conduct a formal comparison between the performance of the 163 foreign affiliates and local firms, respondents were requested to characterize the environmental performance of their foreign affiliates *vis-à-vis* local as well as home-country standards. Overall, 30% reported that their foreign affiliates performed according to standards equivalent to home countries, and only 21% reported performance according to standards of local industry (figure 5). The remaining respondents reported performance in between. Only in Malaysia did a significant proportion (45%) report that their foreign affiliates performed at local industry levels. One explanation for this finding could be that Malaysian environmental regulation, compared to that of India and China, is relatively advanced and that local industry standards therefore are approaching those of the home countries of TNCs.

Figure 5. Managers' characterization of affiliate environmental performance (n=156)



⁶ For overviews of the literature on that issue, see e.g. Zarsky, 1999; and Chudnovsky *et al.* (1999b).

Moreover, reported performance similar to local industry might be explained by problems of implementation related to the poor standard or non-availability of central storage, treatment and recycling infrastructure for waste and hazardous materials or it might be results of attempts to adapt know-how and technology to local conditions and fit the technology to the knowledge level of subsidiary workers and the cost of labor.

Motives behind improved environmental performance

Surveys typically find that a central motivating factor behind environmental improvements in firms is current and anticipated regulatory pressures (Pratt and Fintel, 2002; UNCTAD, 1993; Rappaport *et al.*, 1991). In recent years it has been argued that market factors, including pressures from green consumers (Rheinhardt, 1999), from industrial customers (Dobilas and MacPherson, 1997) or financial markets (Iannuzzi, 2002), too, may drive firms beyond compliance. In the particular case of foreign affiliates, some have pointed to the central importance of the corporate headquarters' (HQ) environmental policies and practices as drivers of environmental improvements (Hadlock, 1994). In order to obtain managers' subjective evaluation of what had driven environmental improvements at foreign affiliates, respondents were requested to prioritize a list of seven factors potentially motivating environmental improvements.

"HQ polices, procedures and standards" turned out to be the most frequently cited: 42% mentioned them as a primary motivating factor, before current and anticipated regulatory pressures (34%), consumers, NGOs and media and local management leadership (figure 6)⁷. The respondents were also requested to assess a list of factors motivating existing or future certification according to an environmental management standard. Here 58% reported that the main motivating factor

⁷ Consistent with this finding, a recent study of 180 foreign affiliates from Malaysia and Singapore found that environmental criteria set by the corporate head office was most frequently given as the most important driver of affiliate management (Perry and Singh, 2001, p. 18).

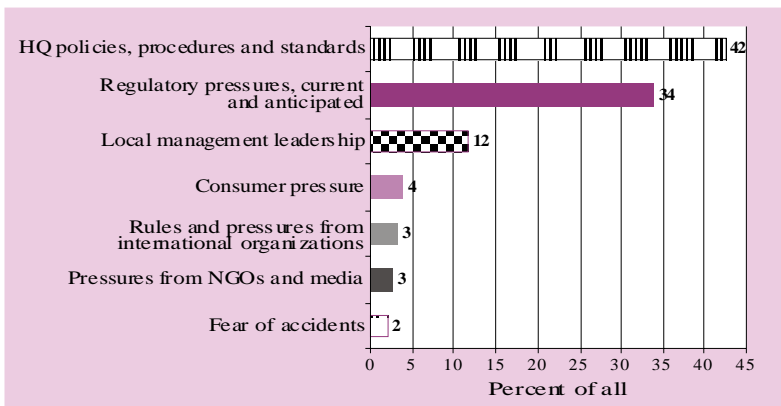
was “HQ policies, procedures and standards”, before regulatory factors and market factors. It is thus clear that managers of foreign affiliates assign great importance to the influence of the parent company as a promoter of environmental improvements.

Managing the environment across borders

Headquarters can adopt various measures to motivate and control environmental activities at foreign affiliates, e.g. company-wide policies and standards, on-site inspections, or mandatory reporting (Hadlock, 1994). These measures are the core of self-regulation within TNCs. The environmental link between parents and affiliates has been coined “cross border environmental management” (Hansen and Ruud, 1996).

The literature debates whether parent-affiliate environmental links should be characterized as globally standardized or locally adapted, integrated or fragmented, and based on “double standards” or uniform standards (Royston, 1985; Castleman, 1985; Gladwin, 1987; Brown, 1993; UNCTAD, 1993; Hadlock, 1994). Rather than describing the parent-affiliate environmental linkage in terms of dichotomies, it is suggested that it can be characterized as a continuum spanning from highly adapted systems with no central

Figure 6. Main driver of improved environmental performance (n=153)



coordination or governance (“environmental stand-alone”) to highly integrated systems with little leeway for local affiliates to defect from corporate standards.⁸

The literature furthermore debates what makes TNCs opt for either global integration or local adaptation of their environmental management systems: Among the cited advantages of integration strategies are that they reduce risks of reputation-damaging accidents and incidents at foreign affiliates (Gladwin, 1987); produce scale advantages related to common procedures and standards (Royston, 1985); avoid costly retrofitting as host-country regulation is strengthened (Hansen, 1998); allow TNCs to recoup sunk costs in development of environmental management systems and clean technology in home countries (Lundan, 1996); reduce environmental risks and liabilities associated with operating in a pollution haven (Klavens and Zamparutti, 1995); provide advantages in developing country markets where buyers (e.g. Governments and international financial institutions) require documented high environmental performance (Clark, 1993); and reduce the transactions costs of multiple standards and management systems (Hansen, 2002b). Conversely, local adaptation strategies may increase responsiveness to specific local environmental conditions and preferences (Gladwin, 1987); ensure that each foreign affiliate operates at its optimal production function (Reinhardt, 1999); and avoid growing transaction costs of cross-border reporting and control activities (Hansen, 2002b).

This article will examine whether TNCs are pursuing in practice adaptive or integrated strategies and why some parent companies promote close integration of environmental activities at foreign affiliates while others do not.

The nature of parent-affiliate environmental links

In order to characterize the nature of parent-affiliate environmental links, a distinction between cross-border

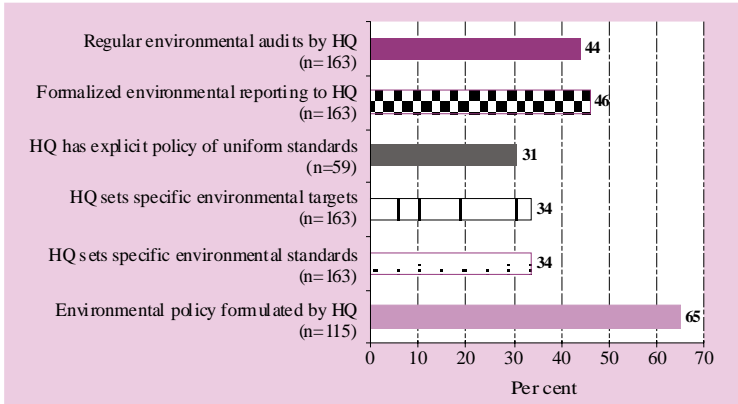
⁸ This continuum is similar to the typology of transnational management strategies introduced by Bartlett and Ghoshal (1989). See also Hansen, 2002a.

environmental policies and standards and cross-border environmental control procedures is useful.

Cross-border policies and standards

At its core, a cross-border environmental management system has a general “environmental policy” or “philosophy”. Seventy two percent of the respondents had a written environmental policy in place, 65% of which were formulated by their HQ (figure 7). Headquarters can also formulate more specific internal standards applicable to all foreign affiliates, for example, standards for air emissions, workers exposure to hazards, or standards for wastewater. Thirty four percent reported that HQ sets “specific environmental standards for performance of the affiliate”⁹ (figure 7). Some TNCs will state that they strive to have their foreign affiliates operate in accordance with home country standards. Thirty one percent of reported that the parent

Figure 7. Managing the environment across borders



⁹ Areas where some of the 163 foreign affiliates report their HQ to set environmental standards are: accidents; noise; air emissions; occupational health and safety; compliance with local regulation; recycling and production; benzene requirement; resource conservation; dust safety; effluent discharge; solid waste disposal; emissions spills; energy conservation; waste recovery; energy consumption; waste reduction; environmental management; waste water; fire preparedness; industrial ecology; green field around the plant.

has such a policy.¹⁰ Finally, 34% of the respondents reported that HQ sets specific targets for improvements in the environmental performance of foreign affiliates.¹¹

Cross-border control procedures

Headquarters often have various procedures for monitoring and controlling whether the environmental conduct of foreign affiliates is in accordance with the principles, standards and targets devised by their HQ as well as with local regulatory requirements. Almost half of the foreign affiliates had formalized environmental reporting procedures in place (figure 7). Typically, foreign affiliates are requested to report to their HQ on environmental matters annually; however, some of the companies reported more frequently, either on a quarterly or monthly basis. The reporting took place through various channels. In some cases reporting was made in a separate report, while in others, environmental reporting was made in separate section of the general financial report. A few of the respondents had implemented computerized and company-wide environmental accounting and reporting databases which enabled HQ to get an overview of the corporation's total impact on various environmental dimensions, to benchmark different units against each other, and keep track of – on a daily, weekly, monthly or yearly basis – developments on environmental dimensions. Over 40% of the respondents reported that their HQ conducts regular environmental audits of the foreign affiliates. In regard to frequency, such audits were typically conducted every two or three years; however, some TNCs conducted environmental audits on an annual basis.

¹⁰ This question was asked in Malaysia only.

¹¹ Areas cited by some of the 163 foreign affiliates where their HQ set environmental targets are: reduction in effluent volume; noise; solid waste reduction; phase out of trillorin; consumption of energy; objective of zero discharge; life cycle analysis for a range defined for each product/process; objective of zero lost time due to accidents; the reduction and phasing out of ozone depleting substances; plan to meet the standard of domestic government; cost-saving; reduction of energy consumption; dust pollution; replacement of chemicals; environmental improvement target; resource conservation; energy conservation; safety improvements.

The depth of cross-border integration

In order to characterize the level of environmental integration of the foreign affiliates, an index of four cross-border environmental management activities was created.¹² Based on this index it was found that 60% of all respondents had one or more cross-border environmental management practices and that 30% had three or more such practices. Conversely, approximately 40% of the responding foreign affiliates had no cross-border environmental practices.

The determinants of parent-affiliate environmental links

As demonstrated above, foreign affiliates are found to be placed on a continuum spanning from close cross-border integration to local adaptation. The question to be examined in the following is: what are the factors influencing where a given TNC foreign affiliate is placed on this continuum are? Or to phrase it differently: under what circumstances can one expect TNCs to engage in (self-)regulation of their affiliates?

The survey allowed for an analysis of eight potential determinants of cross-border environmental management that have been mentioned in the literature on TNC environmental practices in developing countries. These determinants are: “industry” (see e.g. Gladwin, 1987; Rappaport *et al.*, 1991); “entry mode” (see e.g. Chudnovsky and López, 1999b); “size of TNC” (see e.g. UNCTAD, 1993); “home-country factors” (see e.g. Eriksen and Hansen, 1999; Temme and Koch, 1999); “host-country factors” (see e.g. Jha, 1999; Rasiah, 1999; Xian et al; 1999); “market orientation” (see e.g. Jenkins, 1999); “age of facility” (see e.g. Chudnovsky and López, 1999b); and “parent’s share of ownership” (see e.g. Hadlock, 1994). Other potentially relevant determinants could not be analyzed due to limitations of the survey, e.g. the nature of the production technology

¹² These activities were “regular environmental audits by HQ”, “formalized environmental reporting procedures between HQ and affiliate”, “HQ setting environmental standards”, and “HQ setting environmental targets”.

(Brown, 1993) or the level of internationalization of the parent company (Lundan, 1995; and Hansen, 1998).

In the following it will be discussed how the eight determinants may relate to TNC cross-border management practices and how they may be interrelated. As there is little theoretical or empirical basis for predicting the relative importance of the eight determinants *a priori*, a regression analysis was conducted to get a basic judgment of the influence of the eight determinants on cross-border environmental management.¹³ A simple regression analysis demonstrated that six of the eight determinants produced variation in the cross-border environmental management index within the 5% confidence level. These were in order of importance “parent’s share of ownership”, “industry”, “host country”, “age of facility”, “home country”, and “size of TNC”.¹⁴ A multiple regression analysis demonstrated that of those six determinants, only “parent’s share of ownership”, “industry”, “age of facility” and

¹³ The dependent variable, “cross-border environmental management index” was available at interval level (number of cross-border practices). The eight determinants were available either as single variables at interval level (“size of TNC” (number of employees) and “age of facility” (years since establishment)); as dichotomous variables (“entry mode” (greenfield or acquisition) and “market orientation” (export or local market oriented)); or as dummy variables computed from categorical variables (“parent’s share of ownership” computed into “minority share”, “majority share”, “100% foreign ownership”; “industry” computed into “chemical”, “metals and machinery”, “plastics”, “textiles”, “electronics”, and “miscellaneous”; “home country” computed into “Europe”, “United States” and “Asia”; and “host country” computed into “India”, “Malaysia” and “China”).

¹⁴ A model for each of the eight determinants was created to test the determinant (either single variables or groups of dummy variables representing a categorical variable) against the dependent variable “cross-border environmental management index”. The eight models produced the following adjusted R²: “parent’s share of ownership”, adj. R²=0.150 (F=13,243 Sig.=0.000); “industry”, adj. R²=0.144. (F=6,827 Sig. =0.000); “host country”, adj. R²=0.136 (F=11,911 Sig.=0.000); “age of operation”, adj. R²=0.109 (F=17,989 Sig.=0.000); “home country” adj. R²=0.069 (F=6,167 Sig.=0.003); size of TNC”, adj. R²=0.045 (F=7,524 Sig.=0.007); “market orientation” adj. R²=0.018 (F=3,610 Sig.=0.060); and “entry mode”, adj. R²=0.002 (F=1,280 Sig.=0.266).

“size of TNC” remained significant when controlling for the other seven determinants.¹⁵ In the following, it will be discussed why the six determinants may be important and how they may be related.

Parent firm's share of ownership

Majority owned foreign affiliates were significantly more inclined to have close management ties to their HQ than were those with minority foreign ownership (table 1). This is hardly surprising as the options for influencing the environmental practices in a foreign affiliate where the parent holds minority shares obviously are constrained by a lack of formal powers. However, it should be noted that the relationship between share of ownership and cross-border controls is not completely linear: three quarters of the respondents with a majority share reported that their HQ have cross-border controls, while only 41% of those having a minority share and 45% of those having 100% ownership did so. One explanation is likely to be that cross-border environmental management is particularly important in joint ventures where the parent on the one hand is liable but on the other hand shares management responsibilities with a local partner.¹⁶

¹⁵ A model consisting of all eight determinants produced a modest $R^2=0.376$ ($F=6,864$ Sig.=0.000). This suggests that there are other important determinants of cross-border environmental management that are not captured by the present model. Introducing each of the determinants last into the model produced the following changes in R^2 : “parent's share of ownership” R^2 change=0.093 (Sig.=0.000); “industry” R^2 change =0.070 (Sig. =0.006); “age of facility” R^2 change =0.036 (Sig.=0.006); “size of TNC” R^2 change=0.020 (Sig.=0.040); “home country” R^2 change=0.015 (Sig.=0.206); “market orientation” R^2 change=0.012 (Sig.=0.106); “entry mode” R^2 change=0.009 (Sig.=0.150); “host country” R^2 change=0.007 (Sig.=0.484).

¹⁶ Previous studies (e.g. Jenkins, 1999; Dasgupta *et al.*, 1998) suggested that, when controlling for other determinants, foreign ownership is no longer significant. These studies are however not directly comparable to the present study that focuses on determinants of *cross-border* environmental practices in TNCs, not on environmental performance or management of firms, TNCs as well as non-TNCs.

Industry

There were large industry variations in the scope and content of cross-border environmental management: almost three quarters of the foreign affiliates involved in chemical manufacturing had cross-border management procedures, but only one fifth of the foreign affiliates involved in manufacturing of plastic products. Within the chemical industry, especially pharmaceutical companies had cross-border practices: all 16 pharmaceutical firms had one of the four cross-border

Table 1. Determinants of cross border environmental management practices

Determinant	Category	Number of cross border activities			n
		0 activity	1-2 activities	3-4 activities	
Foreign ownership	<i>Less than 50%</i>	59%	36%	5%	158
	<i>50-100%</i>	26%	28%	46%	
	<i>100%</i>	55%	29%	16%	
Industry	<i>Electronics</i>	48%	29%	24%	162
	<i>Plastics</i>	79%	16%	5%	
	<i>Metals and machinery</i>	48%	31%	21%	
	<i>Textiles</i>	47%	33%	20%	
	<i>Chemicals</i>	20%	31%	49%	
	<i>Misc</i>	44%	33%	22%	
Number of employees	<i>Less than 150</i>	60%	26%	13%	147
	<i>150-500</i>	38%	33%	29%	
	<i>More than 500</i>	30%	20%	50%	
Investment motive	<i>Market seeking</i>	32%	35%	33%	153
	<i>Resource and efficiency seeking</i>	59%	18%	23%	
Age of facility	<i>Before 1986</i>	22%	28%	50%	155
	<i>1987-1993</i>	55%	21%	25%	
	<i>After 1993</i>	44%	39%	17%	
Home country	<i>Asia</i>	67%	15%	19%	163
	<i>Europe</i>	39%	33%	28%	
	<i>USA</i>	11%	32%	58%	
Host country	<i>China</i>	43%	41%	16%	163
	<i>India</i>	17%	30%	53%	
	<i>Malaysia</i>	59%	19%	22%	
Nature of facility	<i>Greenfield</i>	42%	32%	26%	158
	<i>Acquisition</i>	36%	23%	41%	
All		41%	29%	30%	163

environmental management procedures in place; all had formalized environmental reporting procedures, and 14 reported that HQ conducted regular environmental audits. It is not surprising that HQ in the chemical industry often have a hands-on approach to environmental management at foreign affiliates in Asia. The chemical industry has since the 1984 Bhopal catastrophe worked intensely to prevent similar disasters to take place, as demonstrated with this industry's elaborate "Responsible Care Programme". Due to the huge stakes, TNCs involved in chemical manufacturing are poised to keep a close eye on the environmental performance of their foreign affiliates in developing countries.

Host-country factors

Based on the simple regression, it appears that TNCs discriminate between different locations in terms of cross-border environmental management. Thus, foreign affiliates in India were particularly inclined to report close management ties to their HQ. One explanation could be that the mixture of a relatively critical environment towards TNCs and widespread regulatory failure in India (Jha, 1999) induce TNCs into close scrutiny of their foreign affiliates' environmental performance in this country. But it is also possible that the influence of the host country is spurious. Thus, when controlling for the seven other determinants, "host country" is no longer significant.¹⁷

Age of facility

There was a clear correlation between the age of the facility and the scope of cross-border controls: the older the activity, the more inclined HQ is to impose cross-border environmental controls. One likely explanation for this correlation could be that older facilities – *ceteris paribus* – are characterized by higher

¹⁷ The determinants "age of facility" and "industry" are both highly correlated with "host country". Thus a relatively large proportion of Indian affiliates was old and was in the chemical industry and this may largely explain the more elaborate cross-border environmental procedures reported by Indian affiliates.

risks for the parents and thus the incentive to engage in controlling the foreign affiliates is greater.

Home-country factors

United States firms appeared to have deeper cross-border integration of their foreign affiliates than did their European and Asian (mainly Japanese) counterparts. One explanation could be that the more legalistic regulatory environment in the United States and the possibility that United States firms can be held liable for accidents abroad at United States courts encourage United States companies to strengthen cross-border environmental management. Another explanation could be that TNCs based in large FDI home countries, such as the United States, may be under greater scrutiny than TNCs based in smaller home countries. But like was in the case with “host country”, it is also possible that the influence of home country is spurious. Thus, when controlling for the other seven determinants, “home country” no longer remains significant.¹⁸

Size of the TNC

Lacking information on sales and employees of the entire TNCs, “number of employees at the foreign affiliate” was used as a proxy for size. It was found that the larger the operation, the larger the involvement of HQ in the environmental management of foreign affiliates is. The explanation could be that large TNCs can offset costs of cross-border coordination better. Moreover, as large TNCs typically have many foreign operations, the scale advantages and reduced transaction costs from harmonizing management systems and standards internationally can be expected to be greater.

¹⁸ In particular there was a high correlation between the determinants “host country” and “home country”. Thus, the majority of affiliates with HQ located in the United States were from India.

Conclusions

At the 1992 UNCED conference in Rio de Janeiro, the international community had high expectations to corporate self-regulation. In particular in developing countries, the potential of corporate self-regulation to compensate for regulatory failure and ensure transfer of advanced practices was seen as great. A survey of 163 foreign affiliates has provided new insights into the scope, content and determinants of TNC self-regulatory activities undertaken in the wake of the 1992 Rio conference. The main findings are:

- The vast majority of foreign affiliates report to have formalized environmental management systems in place and most report to perform better than local firms; in fact 30% of them assess that they operate according to home-country standards. However, only few foreign affiliates have had their environmental management system certified, although it appears that a surge in certification is underway in Asia in that 50% are considering certification.
- The most influential factor behind environmental improvements at foreign affiliates is, according to managers, HQ environmental policies and practices. This article examined the nature of this influence in detail and found that while up to one third of the foreign affiliates were closely governed and monitored by the HQ, 40% had no formalized environmental management ties with HQ. The huge variation in the level of cross-border integration was explained with several factors. In general, foreign affiliates involved in potentially highly polluting and hazardous activities, large operations, old operations, and joint ventures were subject to relatively close scrutiny by their HQ. These findings suggest that cross-border environmental management mainly is a way for HQ to monitor and control activities that are deemed particularly risky.

Can it based on the findings of the survey be concluded that the business community has responded to the expectations of the international community expressed in Rio de Janeiro? On the one hand the answer is “yes”. A significant proportion of

TNCs does in fact appear to “regulate” environmental aspects of their activities in Asian developing countries. Moreover, this self-regulation appears to have a strong influence on the environmental performance of the foreign affiliates, at least as reported by managers. On the other hand, it would be highly premature to conclude that TNCs have engaged wholesale in self-regulation of their developing country activities as expected in Rio in 1992. Thus, the survey demonstrated that many TNCs have yet to establish global policies and practices, an observation that becomes even more significant when taking into account that the sample most likely is biased toward better performing foreign affiliates. Moreover, it can be debated whether environmental management systems necessarily are correlated with reduced environmental impacts.¹⁹ It has even been argued that much of the so-called corporate self-regulation in reality is a form of “green-washing”, where TNCs are saying one thing but in practice doing something else (Bruno and Greer, 1996; Utting, 2000).

However, there is little doubt that the survey has captured a link between parents and foreign affiliates that significantly shapes the environmental practices of foreign affiliates in the developing world. This cross-border environmental management appears to be central to understanding environmental practices of foreign affiliates, however, does not imply that factors, such as market pressures, government regulation or NGO pressures, are unimportant. Rather, these forces and factors must be seen as complements to and facilitators of corporate self-regulation, for instance by pushing parent companies into close scrutiny of their foreign affiliates around the world. In fact, one of the main policy implications of this survey could be that NGOs, consumers, investors and regulators should strengthen their efforts to lobby and influence TNC HQ; if they succeed, this survey suggests that it is likely that a “trickle down” effect to developing countries can be witnessed. ■

¹⁹ An often cited critique of ISO 14001 is that a company can be certified and still be a major polluter (Krut and Gleckman, 1998). See also David L. Levy (1995) for an account questioning whether or not there is a clearcut correlation between environmental management and environmental impact.

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Foreign direct investment and its effect on employment in Central Europe

Slavo Radosevic, Urmaz Varblane and Tomasz Mickiewicz *

This article investigates the effects of foreign direct investment on employment generation in Central Europe. Foreign affiliates operate as a buffer to reductions in overall employment and show significant cross-country differences. A model analyzing the contribution of foreign direct investment to restructuring is developed. This model helps interpret the empirical evidence on the link between foreign direct investment and employment in Central Europe. Increasing differentiation in employment between manufacturing industries dominated by foreign affiliates suggests the importance of diversified sources of foreign direct investment for employment generation and preservation. A disaggregate analysis indeed reveals a much more complex and differentiated role of foreign direct investment in employment preservation, employment generation and structural change than the aggregate picture would suggest. This diversity has important policy implications for attracting and upgrading foreign direct investment.

Key words: foreign direct investment, employment, Central and Eastern Europe

* The authors are, respectively, Reader in Industrial and Corporate Change, University College London, School of Slavonic and East European Studies, London, United Kingdom; Head of the Institute of Management and Marketing and Professor of International Business, Faculty of Economics and Business Administration University of Tartu, Tartu, Estonia; and Senior Lecturer in Economic Restructuring in Central and Eastern Europe, University College London, School of Slavonic and East European Studies, London, United Kingdom. Corresponding author: Slavo Radosevic, e-mail: s.radosevic@ssees.ac.uk. The authors are grateful to three anonymous referees for very useful and constructive comments on a previous version of this paper. All remaining errors are entirely their responsibility. The study was prepared in the framework of the PHARE-ACE project R97-8112R, "Impact of Foreign Direct Investment on International Competitiveness of CEEC Manufacturing and EU Enlargement" and the UK Economic and Social Science Research Council funded project L213 25 2037, "The emerging industrial architecture of the wider Europe".

Introduction

After ten years of post-communist transition, the differences among Central and Eastern European (CEE) economies in terms of growth and restructuring have become significant (EBRD, 1999).¹ Much of these differences are related to the scale and nature of the foreign direct investment (FDI) that these economies receive. FDI has been predominantly concentrated in a few Central European countries, in particular in Poland, Hungary and the Czech Republic.²

There has been an expectation that foreign investors would bring not only new technology and capital, which would accelerate structural changes, but would also maintain employment. Indeed, since the mid-1990s, FDI has played an important role in employment in the Central European economies (Enderwick, 1996; Hunya, 1998b).

From the outset of economic transition, it was obvious that it would be impossible to maintain the levels of employment of the socialist period. Hence, the slowdowns in new employment and protection of existing employment have become one of the main objectives of economic policy. Active labour market policies have had positive local results, although they have not substituted new job creation in the private sector. According to Marie Lavigne (1999), employment-enhancing measures, such as privatization contracts with foreign investors, have had some effect although other observers disagree with this view (Kalotay and Hunya, 2000). The choice of privatization method has also had an effect. In particular, voucher and insider privatizations have operated as employment securing devices –

¹ “CEE” refers to all European post-socialist economies including the Russian Federation, Ukraine and Belarus. The term “Central Europe” is used in an institutional and economic rather than a geographic sense. Hence, the Baltic States are included in “Central Europe”, although geographically they belong to Northern Europe.

² According to UNCTAD (2002), in 2001, 69% of all inward FDI stock in CEE was invested in Central Europe, of which the Czech Republic, Hungary and Poland accounted for 84%.

although they turned out to be double edged as they have also slowed down restructuring.

Employment enhancing measures include contracts with foreign investors, incorporating guarantees to maintain a specified level of employment for a certain period, in exchange for either lower prices or additional incentives. This policy has been important in East German privatization in particular, but has proved to be largely ineffective (Brucker, 1997, chapter 5). Guaranteed maintenance of specific employment levels was included in the sales contracts of such countries as Poland and Estonia. However, these direct policies were not sufficient. Indeed, employment generation in the private domestic sector has had a greater impact.

This article analyzes whether the expectations regarding FDI and employment have been materialized. In particular, the role of FDI in job creation and job preservation, as well as its role in changing the structure of employment is examined. This analysis is framed within a broader literature. A stage model of FDI and growth is developed, which then highlights two major stylized facts in CEE. First, there is an increasing differentiation in terms of manufacturing employment in foreign affiliates. Second, interaction between domestic and foreign controlled employment shows country specific patterns. These two facts are interpreted within a stage model, which helps develop a taxonomy of interaction between domestic and foreign controlled employment. The analysis shows a much more complex and differentiated role of FDI in terms of its contribution to employment preservation and generation than the aggregate picture would suggest. These findings point to much more country and firm specific effects – with important policy implications.

In the next section, literature relevant to the subject is reviewed. The subsequent section presents a descriptive stage model of FDI penetration in an economy in transition. Then follows an explanation about data sources. In the subsequent section, two issues are analyzed: the increasing differences in

the industry distribution of employment in foreign affiliates, as reflected in the descriptive stage model, and the taxonomic features of interaction between domestic and foreign controlled employment. The last section of the article discusses the results and presents conclusions.

What the literature tells

Despite the potentially positive effects of FDI on the magnitude and skills profile of employment in host countries, the relationship between FDI and employment is far from being well understood. It is influenced by a plethora of different macro and micro factors, which make its comprehensive assessment difficult.

A review of the employment effects of FDI by the Organisation for Economic Co-operation and Development (OECD, 1995) demonstrates that there is “no general conclusion [...] regarding either the sign of employment effects or their magnitude. The broad range of results is a reflection of both the complexities of the analysis and methodological shortcomings, combined with the generally poor data availability in most countries” (p. 140).

Similarly, the authors of the 1999 *World Investment Report* (UNCTAD, 1999) conclude that “[t]he balance of these various effects is difficult to assess [...] A short term loss of employment may be more than offset by long term gains if FDI raises the competitiveness, efficiency and export-orientation of domestic firms” (p. 261).

It is useful to classify the literature on FDI and employment along two dimensions: first, whether the relationship between FDI and employment is seen as a primarily quantitative or qualitative phenomenon; and, second, whether the main focus is on direct or indirect effects (table 1).

Most of the literature is focused on the direct effects of FDI in terms of human capital (UNCTAD, 1994). Recent reviews by Matthew Slaughter (2002) and Ethan Kapstein (2002) clearly

Table 1. Literature on FDI and employment

Focus	Direct effects (intra-firm)	Indirect effects (intra and inter-industry)
Qualitative (skills)	Changes in demand for skills through technology imported via FDI	Skill transfer from FDI to local affiliates. Focus on types of skills, mechanisms and determinants of their transfer (spillovers).
Quantitative (employment)	Direct employment effects (employment generation, reduction or substitution)	Indirect employment generation or reduction. Labour market effects (wages and labour mobility).

Source: Authors' collection.

point to positive direct (intra-firm) effects of FDI on human capital through technology and capital investment in host economies. Transfer of technology from the parent company induces demand from the local affiliate for skilled labour. However, indirect or spillover effects are rare and are not automatic (Görg and Greenaway, 2001). Evidence on their occurrence is much more mixed. Indirect effects occur through the movement of trained labour from foreign affiliates to other sectors, as well as through increased links with domestic subcontractors. However, qualitative or human capital effects in terms of skills and their upgrading are inherently difficult to analyze without firm-level data. The movement of labour and links with domestic subcontractors enable transfer of business routines, which includes corporate values, organizational structures and management practices (Mirza, 1998). These qualitative aspects are difficult to disentangle when trying to understand the indirect effects of FDI.

The literature dealing with the quantitative effects of FDI on employment focuses mainly on the impact of FDI on home-country employment and wages, due to delocalization (Baldwin, 1995; Feinberg *et al.*, 1998). Effects on employment in host economies have been analyzed as part of the spillovers. As a result, employment effects have been bundled together with a plethora of other effects. There are a surprisingly few articles that explicitly address the effects of FDI on employment in host economies.

Empirical research on the effects of FDI in CEE is of recent origin. Reviews of this literature (Holland *et al.*, 2000; Hunya, 2000a and b; Resmini, 2000; Konings, 2001; Meyer, 1998) show that:

- FDI is concentrated in a few countries but is dispersed across industries and geographical sources;
- FDI is deepening trade linkages as evidenced by a disproportionately high share of foreign affiliates in host-country export and imports;
- FDI leads to a significantly higher productivity of the acquired companies and greenfield projects than that of domestic firms (Hunya, 2000a). Foreign affiliates are the main profit generators in CEE countries with higher relative shares in investment and in research and development than domestic firms;
- in terms of industrial and market structures, FDI plays a dual role as a restructuring agent through building new industries (electronics, automobiles) and as a market seeker (food and beverages); and
- the effects of FDI are still confined mostly to the acquired or newly built plants; the extent of spillovers from FDI is still very limited, non-existent or even negative (Kinoshita, 2000; Konings, 2001; UNECE, 2001).

A fair conclusion is reached by Dawn Holland *et al.* (2000) who point out that “FDI inflows have improved the overall growth potential of the recipient economies, but primarily through productivity improvements within the foreign affiliates themselves, rather than through increased capital investment, or technology spillovers to domestic firms” (p. 210).

In terms of direct employment, foreign affiliates have quite extensively integrated Central Europe into the global economy, even compared to East Asian economies (UNCTAD, 2002). The indirect employment effects of FDI in CEE countries have not been analyzed explicitly, which is understandable given the paucity of detailed firm and industry level data.

The literature shows that the effects of FDI are that high growth rates and large inflows of FDI tend to go together (UNCTAD, 2000). However, causation mechanisms at the macro (aggregate) level are not clear as they are very much context specific (Görg and Greenaway, 2001; Blomström and Kokko, 1997; de Mello, 1997; Radosevic, 1999). With the benefit of hindsight, it would be argued that this is the major weakness of the conceptual models that try to describe in stylized manner the effects of FDI on growth and restructuring.

The contribution of FDI to growth as represented by stage-type models has been one of the major lines of study for researchers of transnational corporations (TNCs). An antecedent of this approach was Raymond Vernon's (1966) product cycle theory. Vernon was the first to conceptualize United States investment that led to import substituting FDI, first into Europe and then, later, into developing countries. The emergence of Japan as an economic superpower led Kiyoshi Kojima (1978) and Terutomo Ozawa (1979) to theorize about the Japanese case. The novelty of the Japanese situation was that FDI was driven by supply, rather than demand: firms of a leading country relocates less sophisticated industries to developing countries in order to improve its competitiveness. Rajneesh Narula (1996) developed a stage-model of the contribution of FDI, based on their character and composition, which vary according to the stages of national development. Thus, the investment development path (cycle) of FDI varies with income per capita – though beyond a certain income level this is no longer a reliable guide to a country's competitiveness.

The aggregate nature of these models is a strength but also a weakness. The differentiated nature of FDI makes broad generalizations susceptible to counter-evidence from case studies. It is being increasingly appreciated that new models need to take into account the firm- and industry-specific nature of FDI.

The effects of FDI on employment and other aspects cannot be well analyzed based on aggregate FDI values only (Sprengrer, 1999). Henry Crookel (1975) argued that developing countries

should distinguish between different types of FDI, based on whether it is oriented towards the domestic or the foreign market. Susan Feinberg *et al.* (1998) made the point, based on evidence from Canada, that the firm-specific characteristics of TNCs are more important in determining incremental FDI and employment decisions than industry characteristics such as factor endowments or structural imperfections of the market. Theodore Moran (1998) also concluded that the magnitude of spillovers depends on the strategic orientation of foreign firms, i.e. “if plants are thoroughly incorporated into the global/regional sourcing network of the parent instead of oriented primarily toward the domestic market” (p. 82). The international business literature points to the different effects on host countries, depending on the organizational types of TNCs (Sölvell and Zander, 1995). In the context of CEE, Laura Resmini (2000) demonstrated the existence and importance of industry-specific effects of FDI. Yuko Kinoshita (2000) showed that the rate of technology spillovers from FDI in the Czech Republic varies greatly across industries. A business opinion survey on the absorptive capacities of different industries in CEE countries, undertaken by UNCTAD, showed that there are significant industry differences in terms of absorptive potential for FDI (Kalotay, 2000).

In this article, a conceptual model of the employment effects of FDI is developed and tested, with the aim of overcoming the limitations of aggregate models by explicitly taking into account the differentiated (firm- and industry-specific) nature of FDI.

The model

The model developed in this article builds on the empirical insights of Hans Peter Lankes and Anthony Venables (1996), capturing the endogenous nature of FDI by relating changes in the types of FDI to progress in transition. Lankes and Venables proved that there is no smooth functional relationship between *levels* of FDI and progress in transition. However, there is a strong relationship between the *type* of FDI and the level of

transition. Exporters and wholly owned affiliates are more frequently present in economies of an advanced stage of transition, while distributors, local market seekers and joint ventures are more characteristic of economies lagging in institutional transformation and recovery. This article builds on this important insight by exploring its implications for employment in foreign affiliates.

The changing type of FDI suggests that it is not only aggregate levels of foreign affiliate employment but also differences in the micro features of FDI and industry specific features of such employment that matter in the restructuring of Central Europe. Some types of FDI can change the structure of employment toward a direction that is favourable to long-term growth. From this starting point, this article examines the effects of FDI on the structure and levels of employment in Central European economies. A stage model of the changing relationship between employment and FDI during the transition process is outlined underpinning some of the empirical conclusions of Lankes and Venables (1996). The model is based on a few stylized facts about FDI in Central Europe that are relevant to the employment effects of FDI:

- First, market seeking is the dominating motivation of FDI in Central Europe; factor-cost considerations are secondary (Lankes and Venables, 1996; Meyer, 1998). Only when they are in conjunction with attractive markets, do lower factor costs attract inward FDI (Meyer, 1998).
- Second, the sequence of different types of FDI suggests that horizontally integrated FDI enters Central European economies relatively early. First-mover advantages (i.e. in sales strategy) are more essential for distributors than for producers (exporters) or firms acquiring existing assets (Lankes and Venables, 1996).
- Third, progress in transformation will make more and more Central European economies host vertically integrated FDI through export-oriented facilities; this will integrate them more deeply into the European Union (EU) and world production networks. In advanced economies in transition, FDI is more

export oriented, more integrated into TNCs, and more likely to be wholly owned than in laggard economies (Lankes and Venables, 1996).

- Fourth, FDI enters into industries that have either relatively stable or promising and growing domestic markets (Hunya, 1998a). They do not enter collapsing industries with shrinking domestic markets.

Based on these stylized facts, there are three stages within this model. In the first stage, FDI enters primarily to capture domestic market shares or to use CEE as a cheap offshore location. This mainly involves activities in which a first-mover position is key to competitive advantage, and where equity investment is combined with subcontracting or outward processing arrangements in production. In this stage, the initial wave of FDI is focused mainly on domestic markets and confined to the distribution segments of the value chain or on assembly-type activities or on offshore facilities for hiring cheap labour. This stage is dominated by FDI in trading, business support services and consumer goods operations targeting local markets or low value-added processing activities.

High institutional instability and market uncertainty in the first stage of transition are significant but not insurmountable obstacles to these types of FDI, which explains their presence in those economies (for example, Ukraine) where high business risks would generally inhibit large-scale FDI inflows (Stern, 1997). Investors have the opportunity to capture local markets by being first, or to invest in local capacities with minimum equity investment. However, these advantages have to be balanced against economic risk and uncertainty. As a result of these opposing concerns, capitalization of FDI and their technology content are low, although it often includes a significant inflow of human capital in the form of transfer of managerial know-how, new organizational structures, management and marketing skills, and access to international distribution networks. In the case of subcontracting, they involve radical improvements in quality management.

In this stage, the overall impact of FDI on aggregate levels of employment is not significant. Nevertheless, FDI bring entirely new types of skills, which are critical for the marketization process. With the penetration of market-seeking FDI, foreign affiliates gradually substitute for decline in domestically controlled employment.

In the second stage, as the institutional framework of CEE improves, the basic conditions for FDI operations improve. Factor-cost advantages and skill endowments, combined with the opportunity to serve the local market directly, rather than through exports, become important factors affecting the locational decisions of foreign investors. In this stage, foreign affiliates begin looking for local suppliers to serve the domestic market and to increase the local content of their processing facilities. The latter type of FDI is in the form of so-called “source” factories or advanced “offshore” plants, which provide access to low-cost inputs but also carry much more responsibility for the production of specific components.

Compared to the previous stage, the employment effects of FDI are much more positive in several respects. First, capitalization of investment projects increases and their time horizon expands, which typically augments the number of employees in foreign affiliates. Second, this type of FDI embodies more technology than is the case of distribution, low value-added assembly or cheap-labour-based activities. This new stage requires diversified skill structures. The effects on employment are more substantial than in the previous stage, both in terms of scale and structure. A strong substitution of employment for the overall decline in employment by foreign affiliates is driven by the emergence of export-oriented FDI, in addition to market-seeking FDI.

In the third stage, CEE economies are used as export platforms for labour-intensive activities, which have been delocalized from home countries. Foreign affiliates transform their local suppliers into regionally or globally rationalized

exporters, i.e. into “focused” factories.³ This is a qualitatively different stage of FDI penetration. By delocalizing facilities from their home economies, investors are committing themselves to long-term investment. In this stage, the effects on employment in CEE are different from those in the previous stage. Foreign affiliates start to shape employment according to the locational advantages of their host economies, unexploited in the first two stages. Cheap engineering skills and development of just-in-time systems in serving world markets, as well as integration of affiliates into company networks, require new investment in skill formation, sometimes based on cooperation with local education institutions. Inflows of Western technology, deepening cooperation with parent firms and better access to the distribution networks in world markets increase productivity in those industries. The deepening of domestic linkages leads to more employment at the domestic subcontractors of foreign affiliates.

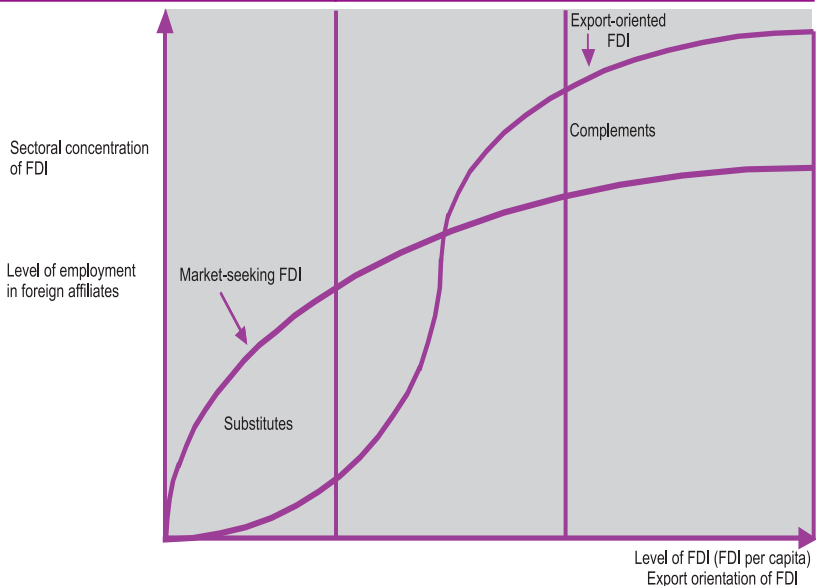
In addition, in the third stage, the portfolio of FDI expands through the emergence of strategic investment in utilities (telecommunications, energy). As the share of FDI in employment increases, domestic firms that are linked to foreign affiliates as contractors also start to offer higher wages for skilled labour; so wage differentials decline. This equilibrating effect of competition for labour enables a movement of labour from foreign affiliates to domestic firms, which in turn leads to diversified spillover effects. FDI and domestic investment start to operate as complements; export-oriented FDI concentrates in few industries (table 2 and figure 1 summarize this process).

The relationship between FDI and employment keeps changing during the transition process. FDI operates as a vehicle of change in the structure of employment. This change comes not only through aggregate levels of FDI but, even more importantly, through types of FDI with a diversified skill structure, which may lead to larger spillover effects (Meyer and Pind, 1999). Progressively, as more diversified, functional types

³ “Focused” factories produce few product lines for both local and foreign markets and are globally rationalized.

Table 2 and Figure 1. Stages of FDI penetration in Central Europe and employment effects

Item	Stage I Market seeking	Stage II Market/efficiency seeking	Stage III Efficiency (export) seeking
Host-country advantages/ motives for FDI	Cheap labour, domestic market, first-mover advantages	Diverse factor cost advantages; skill endowments; local market	Dominantly export-oriented FDI; "deep" integration of CEE affiliates in TNC networks; delocalization of facilities from the EU
Dominant FDI types	Distributors/local low value-added assemblers/offshore factories	Stage I types + local suppliers; source factories	Stage II types + regionally (globally) rationalized affiliates (focused factories)+ strategic investments in utilities
Employment effects of FDI			
- Aggregate effects	Small aggregate effects	Increasing aggregate employment in foreign affiliates, preserved and generated	Increasing employment in foreign affiliates induces domestic employment through subcontracting linkages; spillover effects
- Structural effects	FDI brings new market-related skills	Diversification of skill structure	Increased industry-by-industry differentiation in employment levels and skills; upgrading of skills
Relationship between domestic and foreign controlled employment	Substitutes	Substitutes/complements	Complements



Source: the authors.

of FDI enter the economy, the skill structure of the labour force employed by foreign affiliates changes. This leads to competitive reactions from domestic firms and a change in the relative wage levels between domestic firms and foreign affiliates. As shown by Lankes and Venables (1996), the scale and timing of this interactive process depends largely on progress in transition. Given that the countries analyzed in this article are advanced economies in transition, the structure of FDI would be expected to be already diversified. Moreover, since the data refer to the 1993(1995)-1999(2000) period, the distributor and offshore and local supply-type FDI have already entered these economies. However, with the exception of Hungary, this may not yet be happening extensively with export-oriented FDI.

An increase in FDI is likely to be based on diversification among the types of FDI. For example, a high share of FDI in Hungary is not related to a relatively higher presence of only distributors or local suppliers when compared, for example, to the Czech Republic or Slovenia. The difference in the levels of FDI is due more to a higher share of exporters through “focused” factories and in some cases “world product mandate” factories.⁴ Thus, with higher levels of FDI inflows, the structure of FDI would be expected to become more diversified. Data for Hungary show that a high level of FDI is accompanied by a very high share (80%) of foreign affiliates in exports (UNCTAD, 2002, p.288). Also, an increasing differentiation of types of FDI among countries in transition would be expected, as differences in FDI presence becoming greater across the region. Data on the industry structure of FDI may show some aspects of this diversification process.

Next it will be explored whether the employment patterns observed in Central Europe are compatible with the stage model of FDI and a restructuring that implicitly underpins the empirical observations of Lankes and Venables (1996). However, it should be borne in mind that this model also includes services (*cf.*

⁴ World product mandate factories also manufacture for global sales; however, they are mostly responsible for product redesign for their own input, which is not the case with “focused” factories.

distributors) while the data used in this article refer only to manufacturing. Also, the stage model reflects a pattern of all CEE countries as a group while the data here refer only to the most advanced economies in transition.

The data

The data that form the basis of this article come from the Database on Foreign Investment Enterprises in Central European Manufacturing 1993-1999, prepared by The Vienna Institute for International Economic Studies (WIIW), with the exception of the data for Slovenia and Estonia in 2000, which were obtained from national sources. The WIIW database contains selected indicators derived from company balance sheets and income statements. Data are organized into 23 manufacturing industries, at slightly different levels of aggregation for different countries, and are presented separately according to firm ownership – i.e. whether domestic or foreign owned. For 1993-1999, the database contains information on the Czech Republic, Hungary, and Poland. For Slovakia data are available for 1993-1996, for Slovenia from 1995-2000, and for Estonia for 1995-2000.

With the exception of firms in Estonia, where only majority-owned foreign affiliates are included, all firms with foreign equity participation are counted as foreign affiliates. However, the bias in Estonia is not significant, as over 95% of all foreign affiliates there are majority owned (Varblane, 2001). In the rest of the countries, minority owned foreign affiliates are kept in the sample firms because it can be argued that minority shares usually provide foreign investors with a real control over management.

The WIIW database is a rich source of information on FDI; it nevertheless has some shortcomings. These primarily relate to the exclusion of small firms from the database, with threshold levels differing from country to country. Data for the Czech Republic are for companies with 100 or more employees, for Slovakia above 25 employees, for Poland above 50 employees, for Estonia above 20 employees in 1996-2000 and above 50

employees in 1995. This probably inflates the share of foreign affiliates in Poland and Czech Republic as compared to Hungary and Slovenia whose data cover all firms.⁵

Empirical results

With the opening of the Central European economies, FDI became an important mechanism for their integration into the world economy, especially the EU. Starting from a level of only \$2.4 billion in 1990 (1.5% of GDP), FDI increased by 25 times to \$61.2 billion (table 3). The relative importance of FDI in Central Europe is highest in Hungary. A high relative penetration of FDI is due to early inflows, dating back to 1990, as well as to the type of privatization. Another early target for FDI was the Czech Republic. However, since 1997, Poland became the main recipient of FDI in Central Europe, and continues to be so.

Cumulative FDI inflows per capita show increasing differences among the Central European countries. The Czech Republic, Estonia and Hungary have the highest cumulative inflows per capita. Given its large size, Polish FDI per capita is still low (similar to Slovakia). After 1997, Slovenia was falling behind; it still occupies an intermediate position between these two countries (figure 2).

Table 3. Inward FDI inward stock of Central European countries, 1990-2000
(Millions of dollars)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Central Europe	1 316	4 629	7 188	9 478	15 166	19 163	20 980	25 372	27 299	29 892	36 076
Poland	109	1 370	2 621	3 789	7 843	11 463	14 587	22 479	26 075	33 603	42 433
Czech Republic	1 363	2 889	3 423	4 547	7 350	8 572	9 234	14 375	17 552	21 644	26 764
Hungary	569	3 424	5 576	7 087	11 919	14 961	16 086	18 517	19 299	19 804	23 562
Slovakia	81	268	400	592	810	1 379	1 539	2 267	2 868	4 634	6 109
Estonia	-	96	258	473	674	825	1 148	1 822	2 475	2 645	3 155
Slovenia	666	841	954	1 326	1 763	1 998	2 207	2 766	2 657	2 809	3 250

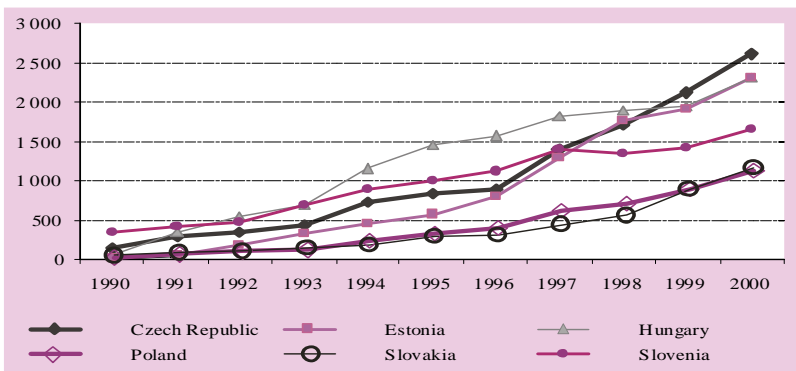
Source: UNCTAD, FDI/TNC database, accessed in January 2003.

⁵ For extensive methodological explanations, see WIIW, 1998.

Differences among Central European economies in terms of the share of foreign affiliates in manufacturing employment are also significant (tables 4a-c). Already by 1993, more than 31% of employment in Hungary was by foreign affiliates, a level that other Central European economies still have not reached. The share of employment in foreign affiliates in other Central European economies ranged between 15% and 29% in 1999, and has continued to rise.

The share of employment of foreign affiliates for new OECD members from Central Europe⁶ is already high: 46.5% for Hungary and 26.9% for the Czech Republic (OECD, 1999;⁷ Hunya, 2002). This compares well with other OECD economies with a high share of foreign affiliates in employment such as Ireland (47%), France (25.8%) and Sweden (19.9%). (In turn, it is low in Japan (0.8%), Turkey (5.6%) and Germany (6.9%)). This suggests that the economies of Central Europe are already well integrated into international production networks (systems).

Figure 2. Cumulative FDI inflows per capita, 1990-2000
(Dollars)



Source: UNCTAD, FDI/TNC database, accessed in January 2003; World Bank, World Development Indicators (for population), accessed in January 2003.

⁶ The Czech Republic joined OECD in 1995, Hungary and Poland in 1996 and Slovakia in 2000.

⁷ WIIW database figures differ from OECD statistics, due to differences in the threshold used to measure controlling stakes and the inclusion of small firms in the latter.

The structure of FDI shows that the technology-intensive electrical machinery and car industries are the main targets. The textiles, clothing and leather goods industries are less internationalized through FDI. However, FDI has also penetrated into industries with relatively stable domestic markets, such as food, beverages and tobacco.⁸ Some industries, which typically have low foreign penetration worldwide, have high foreign involvement in Central Europe, such as the production of construction materials (“other non-metallic minerals” in table 4a).⁹ On the other hand, with the exception of Hungary, foreign

Table 4a. Shares of foreign affiliates in total manufacturing employment of Visegrad-3 countries, 1993 and 1999
(Per cent)

ISIC code	Industry	Czech Republic		Hungary		Poland	
		1993	1999	1993	1999	1993	1999
15+16	Food products, beverages, tobacco	13.3	17.6	36.6	41.7	10.0	30.8
17	Textiles	0.4	20.1	28.8	39.9	3.7	13.7
18	Wearing apparel, dressing	1.7	19.1	29.4	35.2	16.3	30.0
19	Tanning and dressing of leather	2.6	10.6	24.1	52.2	3.7	19.4
20	Wood	2.9	29.3	17.6	21.3	9.9	27.3
21	Paper and paper products	5.6	48.7	52.8	47.2	63.4	49.3
22	Publishing, printing	3.6	26.2	23.8	20.9	13.7	41.0
23	Coke and petroleum	-	-	5.5	99.6	0.1	42.4
24	Chemicals	5.9	20.3	43.6	73.7	5.0	28.0
25	Rubber and plastic	12.6	46.3	33.0	48.1	9.2	42.1
26	Other non-metal Minerals	11.8	32.6	40.4	49.1	7.8	37.6
27	Basic metals	0.9	7.0	11.4	39.2	4.8	8.2
28	Fabricated metals	4.8	24.0	24.4	25.9	6.8	17.1
29	Machinery and equipment n.e.c.	2.1	15.9	24.4	43.1	3.8	15.4
30	Office machinery	-	75.0	54.7	44.3	10.8	28.4
31	Electrical machinery and app.	4.6	53.2	66.0	72.8	12.6	47.8
32	Radio, TV set	0.8	50.9	28.1	74.2	21.0	48.6
33	Medical, precision, opt. Instruments	9.5	37.2	31.6	39.0	4.1	15.7
34	Motor vehicles, trailers	27.9	68.3	36.3	74.1	20.9	65.6
35	Other transport equipment	2.0	2.7	48.2	26.7	2.0	8.2
36	Furniture, manufacturing n.e.c.	0.9	22.4	20.9	24.2	21.7	43.8
37	Recycling	-	23.4	26.9	39.6	13.8	22.5
D	Total manufacturing	5.9	26.9	31.7	46.5	9.7	29.4
	Standard Deviation	6.6	20.1	14.4	20.5	13.1	15.3

Source: WIIW Database on Foreign Investment Enterprises, Vienna, 2001.
n.e.c.: not elsewhere classified.

⁸ For detailed analyses on these issues, see Hunya, 1998a and 2000a.

⁹ Expanding construction activities in the region encourage the acquisition of cement and similar factories.

presence is still relatively small in industries with major structural difficulties and overcapacity, for instance in iron and steel.

Beside these common features, the pattern of foreign penetration across industries is also country specific. For example, in Hungary, the industries in which foreign presence

Table 4b. Share of foreign affiliates in total manufacturing employment in Slovenia and Estonia, 1995 and 2000
(Per cent)

Slovenia				Estonia			
ISIC code	Industry	1995	2000	ISIC code	Industry	1995	2000
15	Food products, beverages	5.7	6.8	15,16	Food products, beverages	11.1	12.2
16	Tobacco manufactures	^a	100	17	Textiles	26.3	54.0
17	Textiles	5.6	12.5	18	Wearing apparel, dress.	8.5	29.3
18	Wearing apparel, dressing	1.2	0.3	19	Tanning and dressing of leather	-	31.3
19	Tanning and dressing of leather	^a	30.1	20	Wood	5.7	18.9
20	Wood	1.7	3.9	21	Paper and paper prod.	-	71.7
21	Paper and paper products	18.4	31.7	22	Publishing, printing	-	12.4
22	Publishing, printing	6.4	6.6	23,24	Chemicals and coke	15.3	30.3
23	Coke and petroleum	^a	-	25	Rubber and plastic	-	24.3
24	Chemicals	10.1	14.5	26	Other non-metallic minerals	32.3	40.0
25	Rubber and plastic	13.5	19.0	27,28	Metals and products	-	14.6
26	Other non-metallic minerals	4.6	13.1	29	Machinery and equipment n.e.c.	4.5	15.1
27	Basic metals	4.1	19.4	30-33	Office, electrical, radio and medical	-	63.6
28	Fabricated metals	1.4	11.8	34,35	Motor vehicles and transport equipment	-	24.9
29	Machinery and equipment n.e.c.	13.5	23.6	36,37	Furniture, others, recycling	-	27.5
30	Office machinery	8.8	6.2	D	Total Manufacturing	9.5	27.3
31	Electrical machinery and app.	11.8	18.3		Standard deviation	10.4	18.5
32	Radio, TV sets	22.5	37.8				
33	Medical, precision, optical instr.	14.8	17.7				
34	Motor vehicles, trailers	36.6	46.0				
35	Other transport equipment	^a	3.0				
36	Furniture, manufacturing n.e.c.	2.1	2.0				
37	Recycling	^a	-				
^a	Industries with less than 3 foreign affiliates	6.1					
D	Total Manufacturing	8.5	15.1				
	Standard deviation	9.0	21.8				

Source: WIIW Database on Foreign Investment Enterprises, Vienna, 2001; Database on Foreign Investment Enterprises in Estonia 1995-2000, University of Tartu, 2002; Database on Foreign Investment Enterprises in Slovenia, Ljubljana, 2002.

n.e.c.: not elsewhere classified.

Table 4c. Share of foreign affiliates in total manufacturing employment in Slovakia, 1993-1996

(Per cent)

ISIC Code	Industries	Slovakia	
		1993	1996
15-16	Food products, beverages	11.5	11.3
17	Textiles	13.4	21.8
18	Wearing apparel, dressing	5.0	9.3
19	Tanning and dressing of leather	0.6	6.5
20	Wood	3.0	6.2
21-22	Paper products and publishing	15.1	17.1
23-24	Petroleum and chemicals	17.4	20.8
25	Rubber and plastic	-	5.4
26	Other non-metallic minerals	5.2	10.0
27-28	Basic metals	8.1	12.4
29-33	Machinery & equip	4.8	10.8
34-35	Transport equipment	16.4	25.8
36	Furniture	2.9	12.7
37	Recycling	-	-
Total manufacturing		8.0	13.0
Standard deviation		6.01	6.84

Source: WIIW, 2001.

is very high are motor vehicles (74.1%), electrical machinery (72.8%), and chemicals (73.7%). In the Czech Republic, these are office machinery (75%), motor vehicles (68.3%) and electrical machinery (54.7%). In Poland, the strongest foreign presence is in motor vehicles (65.6%), production of radio and television sets (48.6%) and in electrical machinery (47.8%). In Estonia the industries in which foreign affiliates have a relatively high share in total employment are paper and paper products (71.7%), office and electrical machinery (63.6%) and textiles (54.0%). In Slovakia and Slovenia, foreign presence is lower compared to other Central European countries: there are no industries with over 50% of employees working in foreign affiliates. The exception is tobacco industry in Slovenia where 100% are employed in foreign affiliates.

Foreign and domestic controlled employment: taxonomic features and interpretation

In this section the interaction between foreign and domestic controlled employment is analyzed. More specifically,

the issue of whether and how FDI contributes to employment creation and preservation is explored. This way, the conceptual model is tested for relevance. The findings suggest that, with increasing FDI, the relationship between domestic and foreign controlled employment is expected to change from a substitutive to a complementary relationship. More specifically, the aim is to establish whether FDI is a driving force in employment or a “job destroyer”. An additional question relates to differences between countries in this respect and the possible explanations of such differences. In order to analyze these issues, changes in employment in different manufacturing industries for 1993-1999 and the contribution of FDI to net balances were calculated (tables 5a and b).

Tables 5a and b compare changes in total employment with those in foreign affiliates. Changes in employment in domestic firms versus foreign affiliates are not analyzed, as their interpretation would present serious problems. If this article were to focus on the distinction between domestic and foreign controlled employment, it would be measuring the aggregate effect of both changes in ownership of enterprises and those in their employment. This is extremely risky, given the very short-time period for which data are available. Also, the data do not allow differentiation between created and preserved jobs. These lumped data are interpreted as the “employment capability” of the foreign affiliate sector, which is defined as the ability to maintain existing or generate new employment.¹⁰

Figure 3 displays several interesting features. First, medium-term employment generation in manufacturing is now on the agenda in Hungary, in contrast to the initial period of transition: Hungary experienced the most dramatic reductions in manufacturing employment at that time (Mickiewicz and Bell, 2000). With 53,008 jobs created in 1993-1999, this economy stands apart from those where the dominant mode of adjustment, until very recently, has been passive adjustment through layoffs.

¹⁰ Slovakia is excluded from this part of the analysis because the period of available data is too short. However, in analyzing the taxonomy of employment changes, data for Slovakia are used.

Second, despite wide relative differences, foreign affiliates have more employment capability than the domestically controlled sector in all Central Europe manufacturing. In all countries, the foreign affiliate sector operates as a buffer to a further erosion in employment. In Hungary the contribution of the foreign affiliate sector has had a dramatic effect on the overall figures, which hides a strong shift in the composition of employment from the domestic to the foreign affiliate sector. The development of the foreign affiliate sector has been very marked in Poland, too. However, it has not been sufficient to counterbalance the equally radical reduction in domestically controlled employment. The Czech Republic has been the most affected by the shrinking of the domestic sector. A net reduction

Table 5a. Change in manufacturing employment in the Visegrad-3, 1993-1999

ISIC code	Industry	Czech Republic		Hungary		Poland	
		Total	Foreign affiliates	Total	Foreign affiliates	Total	Foreign affiliates
15+16	Food products, beverages, tobacco	23 676	10 510	-22 257	-1 512	-68 026	52 558
17	Textiles	-24 527	12 227	-4 192	2 823	-75 140	5 082
18	Wearing apparel, dressing	8 491	6 485	16 546	9 182	-45 483	7 514
19	Tanning and dressing of leather	-18 422	1 045	-2 108	6 332	-31 130	2 819
20	Wood	6 150	8 226	2 183	1 257	-485	9 853
21	Paper and paper products	-3 229	7 266	-150	-678	-4 192	-6 618
22	Publishing, printing	4 383	4 137	103	-849	-293	11 975
23	Coke and petroleum	-9 883	0	-6 321	13 495	2 391	10 855
24	Chemicals	-2 398	5 382	-6 108	8 897	-20 242	23 697
25	Rubber and plastic	10 017	13 388	11 580	9 061	6 962	22 189
26	Other non-metal minerals	-2 003	14 147	1 213	3 394	-20 798	29 382
27	Basic metals	-26 169	4 733	-314	5 841	-26 212	2 249
28	Fabricated metals	32 123	21 693	6 209	2 474	9 173	12 188
29	Machinery and equipment n.e.c.	-55 787	17 553	-2 066	11 373	-89 110	19 591
30	Office machinery	-1 640	732	8 513	3 415	-73	657
31	Electrical machinery and app.	13 339	30 380	31 164	24 836	663	27 395
32	Radio, TV set	4 503	10 051	10 371	18 141	-16 890	4 883
33	Medical, precision, opt. Instruments	-2 976	4 142	-1 843	557	-4 644	3 110
34	Motor vehicles, trailers	3 050	27 178	5 779	14 579	-3 516	37 875
35	Other transport equipment	-15 844	-147	2 765	-490	-33 364	4 099
36	Furniture, manufacturing n.e.c.	-1 868	11 000	694	1 029	5 447	22 614
37	Recycling	-1 420	641	1 247	539	321	457
	Total manufacturing	-60 433	210 769	53 008	133 696	-414 641	304 424

Source: Authors' calculations, based on the WIIW Database on Foreign Investment Enterprises, Vienna, 2001.

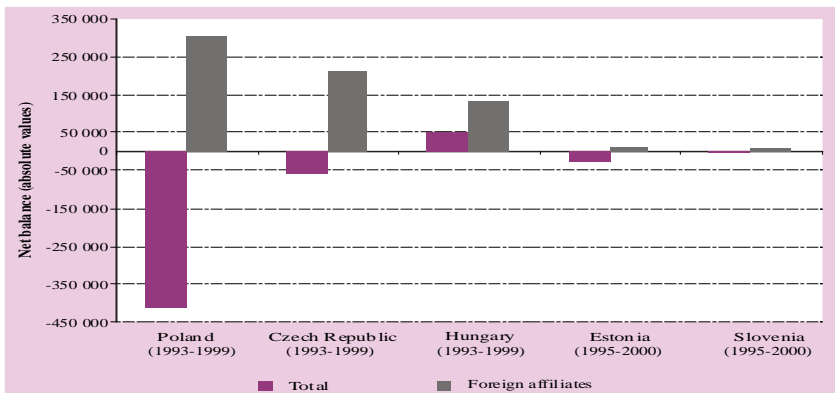
Table 5b. Change in manufacturing employment in Slovenia and Estonia 1995-2000

ISIC code	Industry	Slovenia 1995-2000		Estonia 1996-2000 ^a	
		Total	Foreign affiliates	Total	Foreign affiliates
15-16	Food products, beverages	537	229	-4 174	- 255
17	Textiles	-4 434	656	-242	- 570
18	Wearing apparel, dressing	-5 015	-174	259	2 178
19	Tanning and dressing of leather	n.a.	n.a.	-135	246
20	Wood	-1 000	207	2 416	1 531
21	Paper and paper products	-1 540	498	117	331
22	Publishing, printing	-929	-39	60	368
23-24	Petroleum, chemicals	-321	536	-3 811	- 3
25	Rubber and plastic	-216	530	1 075	408
26	Other non-metallic minerals	-2 966	638	-1 284	- 17
27-28	Metals and products	-1 752	1 249	1 090	329
29	Machinery and equipment n.e.c.	1 957	2 247	-897	327
30-31	Office, electrical machinery	-6 374	1 370	1 585	4 499
32	Radio, TV sets	225	-6	^b	^b
33	Medical, precision and opt. instrum.	-1 797	565	^b	^b
34-35	Motor vehicles, other transport equip	845	1 160	-1 416	142
36	Furniture, manufacturing n.e.c.	383	-7	396	2 102
	Industries with less than 3 foreign affiliates	-16 193	-990		
	Total	-28 634	11 438	-4 961	7 378

Source: WIIW Database on Foreign Investment Enterprises, Vienna, 2001; Database on Foreign Investment Enterprises in Estonia 1995-2000, University of Tartu, 2002, Database on Foreign Investment Enterprises in Slovenia, Ljubljana, 2002.

- ^a In the case of Estonia, the base period chosen is 1996, as from 1995, the data do not contain firms with less than 50 employees. Since 1996, all firms with at least 20 employees are included.
- ^b Included into previous industry.

Figure 3. Changes in manufacturing employment, net balances, 1993-2000



Source: Authors' calculation.

of 60,433 jobs was accompanied by 210,769 jobs being created or taken over (preserved) by foreign affiliates. In other words, employment in the foreign affiliate sector in no way compensated for the job destruction in the domestic sector. The continuous process of downsizing in Czech manufacturing strongly suggests that, between 1993 and 1999, the country was still in the early phase of restructuring and the inflow of FDI had no effect on that situation. Also, in Estonia and Slovenia the foreign affiliate sector increased, but this did not change the negative balance of total employment.

As a next step in the analysis, the focus is on changes in manufacturing employment and, in particular, employment in foreign affiliates. Manufacturing industries were classified into four groups, depending on their relative contribution to employment creation/preservation:

- The first group consists of industries where *employment, both total and in foreign affiliates, is decreasing (Type I)*. This decrease may signal that rationalization in the industry is taking place largely through layoffs in both domestic firms and foreign affiliates.
- The second group includes those industries in which *total employment is declining, but employment in foreign affiliates is increasing* (i.e. the foreign affiliate sector is not strong enough to balance the decline in domestic enterprises) (*Type II*). These are industries undergoing a heavy restructuring process after privatization, where growth in employment in foreign affiliates is the result of new job creation but also may stem from the acquisition of existing domestic firms.
- The third group includes those industries where *overall employment is increasing but where foreign affiliates are recording a decline in employment (Type III)*. In this group, domestic firms have a strong employment capability, while foreign affiliates are reducing their employment. These are industries in which the competitive advantages of foreign affiliates are either small or important structural differences exist between domestic firms and foreign affiliates. In such cases, “the logic of growth” in foreign affiliates is different from that of domestic firms. In other industries, vertical inter-industry subcontracting linkages may explain this pattern.

- The fourth group consists of industries where *net employment, both overall and in foreign affiliates, is increasing (Type IV)*. These industries have undergone initial restructuring and have good prospects for development.

The results are presented in tables 6a-b, where all manufacturing industries in the Czech Republic, Hungary, Poland, Slovakia and Estonia are classified according to these four types of employment change. The results from tables 6a-b are summarized in table 7. (The latter shows the frequency of changes).

Several interesting common and country specific patterns can be observed in table 7. There are very few Type III industries in the five Central Europe countries analyzed. Employment in foreign affiliates reduced in the publishing and other transport

Table 6a. Classification of manufacturing industries in Visegrad-3, by the type of employment change, 1993-1999

ISIC code	Industry	Czech Republic	Hungary	Poland
15+16	Food products, beverages, tobacco	IV	I	II
17	Textiles	II	II	II
18	Wearing apparel, dressing	IV	IV	II
19	Tanning and dressing of leather	II	II	II
20	Wood	IV	IV	II
21	Paper and paper products	II	I	I
22	Publishing, printing	IV	III	IV
23	Coke and petroleum		II	IV
24	Chemicals	II	II	II
25	Rubber and plastic	IV	IV	IV
26	Other non-metallic minerals	II	IV	II
27	Basic metals	II	II	II
28	Fabricated metals	IV	IV	IV
29	Machinery and equipment n.e.c.	II	II	II
30	Office machinery	II	IV	II
31	Electrical machinery and app.	IV	IV	IV
32	Radio, TV set	IV	IV	II
33	Medical, precision, opt. instruments	II	II	II
34	Motor vehicles, trailers	IV	IV	IV
35	Other transport equipment	I	III	II
36	Furniture, manufacturing n.e.c.	II	IV	IV
37	Recycling	II	IV	IV
	Total manufacturing	II	IV	II

Source: Authors' calculations, based on the WIIW Database on Foreign Investment Enterprises, Vienna, 2001.

Table 6b. Classification of manufacturing industries by the type of employment change: Slovenia, Estonia and Slovakia

ISIC code	Industry	Slovakia 1993-1996	Estonia 1996-2000	Slovenia 1995-2000
15-16	Food products, beverages, tobacco	I	I	IV
17	Textiles	II	I	II
18	Wearing apparel, dressing	II	IV	I
19	Tanning and dressing of leather	II	II	II
20	Wood	II	IV	II
21	Paper and paper products	II	IV	II
22	Publishing, printing	^a	IV	I
23-24	Coke and petroleum, chemicals	I	I	II
25	Rubber and plastic	II	IV	II
26	Other non-metallic minerals	II	I	II
27-28	Basic and fabricated metals	II	IV	IV
29	Machinery and equipment n.e.c.	II	II	II
30	Office machinery	^a	IV	III
31	Electrical machinery and app.	IV	^a	II
32	Radio, TV sets	II	^a	IV
33	Medical, precision, opt. Instruments	I	^a	IV
34	Motor vehicles, trailers	^a	II	I
35	Other transport equipment	II	^a	^a
36	Furniture, manufacturing n.e.c.	II	IV	III
37	Recycling	II	^a	n.a.
	All manufacturing	II	II	II

Source: Author's calculation, based on the WIIW Database on Foreign Investment Enterprises, Vienna, 2001.

^a Included into previous industry.

Table 7. Summary of changes in employment based on 4-type classification

	Czech					
	Hungary (1993-1999)	Republic (1993-1999)	Poland (1993-1999)	Slovakia (1993-1996)	Estonia (1996-2000)	Slovenia (1995-2000)
Number of industries	22	21 ^a	22	17	15	18
Type I	2	1	1	3	4	3
Type II	7	11	13	14	3	12
Type III	2	0	0	0	0	2
Type IV	11	9	8	1	8	3

Source: Authors' calculations.

^a There was no FDI presence in coke and petroleum; therefore, the industry was excluded from classification.

equipment industries in Hungary and in the office machinery and furniture industries in Slovenia, while overall employment increased. This further reinforces the earlier general conclusion that recovery in CEE was most often either FDI led or FDI assisted. In other words, in very rare cases domestic firms were able to expand employment in areas where foreign affiliates were either not able or not interested in doing so.

The types of changes are mainly country specific and reflect differences among countries in terms of FDI penetration and indigenous restructuring activities. However, if a change occurred in five out of six countries is defined as a common trend, a small number of industries can be discerned from the common patterns.¹¹ Only two types of changes are identical across all six countries. Type II change is present in machinery and equipment and leather in all countries; and in textiles in five countries. Type IV change is common in electrical machinery and apparatuses in five out of six countries. This further reinforces a conclusion on the differentiated role of FDI.

In Hungary and Estonia, the growth in employment by foreign affiliates was complemented by growth in overall employment in the majority of industries (Type IV). The pattern of complementarity in these two economies differs from the other three economies, in which foreign affiliates substituted for the overall decrease in employment in most manufacturing industries (Type II).

The prevalence of Type II changes in the majority of the countries confirms the general impression that intensive micro restructuring is still underway and that FDI cannot entirely compensate for domestic structural weaknesses. In the majority of the countries analyzed, employment generation/preservation continues to be a major structural problem. In the Czech Republic employment by foreign affiliates has continuously increased, but still has not been sufficient to compensate for the large decrease in overall employment. Poland gained the most

¹¹ Different levels of aggregation confine the comparison to comparable industries.

in terms of employment by foreign affiliates but also experienced the biggest loss in employment. Slovenia lost much more employment than FDI could have compensate for. This explains a shift in Slovenian FDI policy towards attracting more FDI since 1999.

Hungary and Estonia are in a more advanced stage of restructuring after the first phase of general reduction of excessive initial employment levels (Mickiewicz and Bell, 2000). This is particularly true for Hungary where, overall, both total employment and employment by foreign affiliates, increased (*cf.* complemented). In this respect, Hungary's indigenous "employment capability" seems to be distinctly different than in other Central European economies. Hungary is an example of the mature stage of FDI where much of the foreign-led restructuring seems to have been complemented by domestic-led restructuring.

FDI in Estonia have increased/preserved much more employment than the overall loss. In that respect, Estonia is the only economy where FDI has successfully substituted for the overall loss of employment. The number of Type IV industries is high, but the overall capability of the economy for employment generation/preservation is much weaker than in Hungary. In Estonia, foreign affiliates still function as a substitute for deficient domestic employment preservation/generation.

Differentiation of FDI and employment effects

Earlier it was pointed out that the employment effects of FDI could not be understood at the aggregate level. Different levels of FDI across countries are constituted of different types of FDI, which in turn have different effects on overall employment. All of which are captured in the conceptual model described above.

Tables 4a-c present the shares of foreign affiliates in total employment in 1993-2000. The last row shows substantial increases in standard deviation in almost all the Central European countries analyzed. This suggests that there is growing dispersion among manufacturing industries in terms of the

importance of employment by foreign affiliates.¹² Differences between industries in terms of foreign penetration tend to become more pronounced over time. Moreover, increasing dispersion follows differences among countries in terms of FDI per capita (figure 4), as well as differences in the share of foreign affiliates in exports (figure 5).¹³ The more FDI a country receives, the more it tends to be differentiated across industries.¹⁴

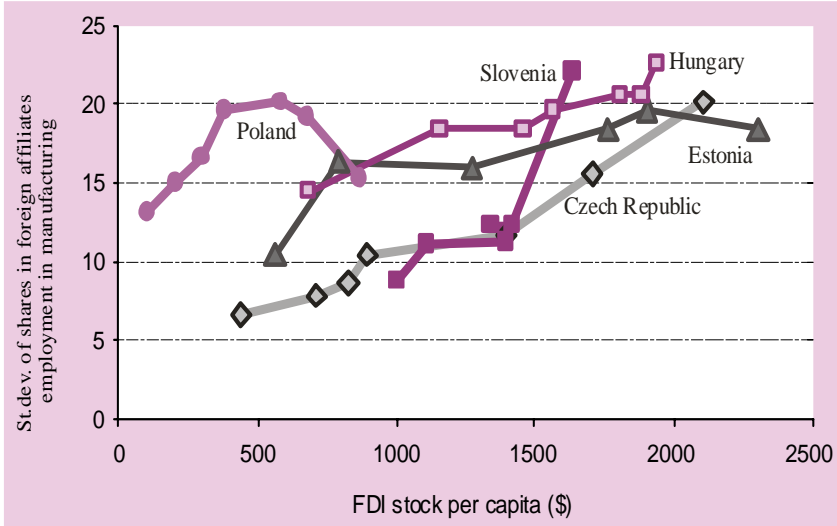
This differentiation is strongly related to the role of foreign affiliates as exporters. Domestic-market-oriented FDI is more evenly spread across industries, while export-oriented FDI is much more industry specific. Gábor Hunya (2000a) noted that, up to a certain level, increases in FDI are driven by the domestic market; beyond that level, however, it can grow only if it is export oriented. He pointed out that, paradoxically, the share of foreign affiliates in exports is the most limited in the two smallest and most export-oriented countries, Estonia and Slovenia. This is so, because they have low shares of export-oriented FDI. Indeed, in figure 5, a low rate of FDI differentiation is closely

¹² The industrial classification of foreign affiliates for Slovenia is not comparable between 1995 and 2000. Due to the low share of foreign affiliates in several industries (less than 3), these were merged, although in a different way for different years. This makes a comparison of standard deviations for Slovenia of limited value. Nevertheless, the underlying trend of increased variation in the share of foreign affiliates in employment is present clearly.

¹³ FDI per capita, rather than the absolute volume of FDI, better reflects the changing nature of FDI. (FDI per capita in industry would be an even better proxy than FDI per capita. However, there are no comparable.) Data on FDI in the WIIW database are the values of nominal capital, which cannot be used for international comparisons. For example, nominal values of foreign affiliate assets in Hungary did not change much in the 1993-1999 period, according to balance sheet data.

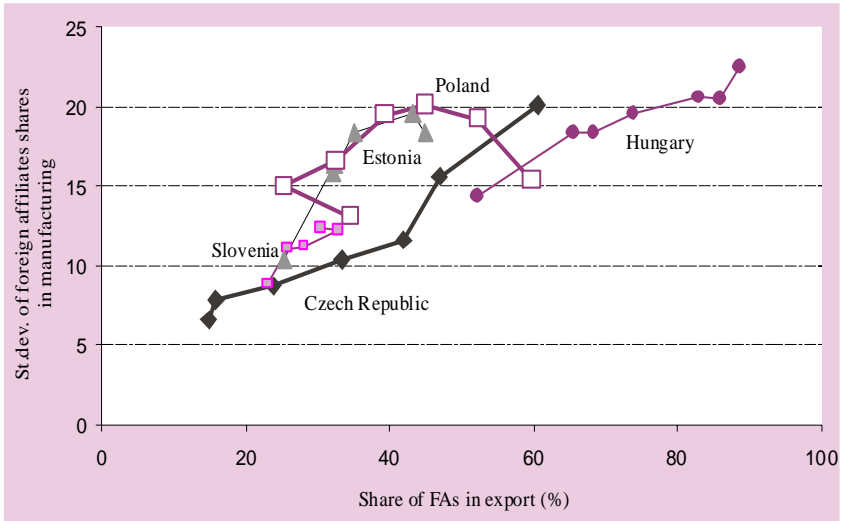
¹⁴ The only country that does not fully conform this pattern is Poland. Although Polish data do confirm increasing differentiation in the share of foreign affiliates in manufacturing employment, there is a clear trend of reduced differentiation from 1997 onwards. This corresponds to huge inflows of FDI into Poland, which increased its stock of FDI from \$14.5 billion in 1996 to \$22.5 billion in 1997 (table 3). This may be a delayed reaction of investors who seized opportunities arising from Polish privatization to expand further market-seeking FDI rather than immediately expand to export-oriented FDI.

Figure 4. FDI and diversity, 1993-2000



Source: Authors' calculation.

Figure 5. Share of foreign affiliates in exports and FDI diversity, 1993-2000



Source: Authors' calculation.

connected with a low share of foreign affiliates in exports. Hunya (2000a) explains this as being one of the inherent problems of small countries – to develop economies of scale for export-oriented industries.

However, the case of Ireland does not support this argument (Ruane and Görg, 2002; O’Connor, 2001). It may be considered that in Estonia and Slovenia this situation primarily reflects the lack of a strategic FDI policy which would attract export-oriented FDI, given other conditions being favourable.

Increasing differences in foreign presence among industries suggest that the types and orientations of foreign affiliates differ. In view of the results and the evidence in the study by Lankes and Venables (1996), it would be argued that an increasing unevenness in FDI penetration is accompanied by an increasing unevenness of the types of FDI. More FDI is accompanied by a more diversified structure, for example, a higher share of exporters as compared to distributors and local suppliers. In industries in which foreign affiliates have a lower share of employment, their investment is of a different type and orientation than in industries in which they dominate in employment. Although only indirectly, this is a both empirically and intuitively persuasive evidence. It points to an increasing differentiation of the role of FDI among industries and thus increased differentiation in its effect on the structure of employment. The more FDI becomes export oriented, the more it is becoming vertically rather than horizontally integrated. Its potential for producing various spillover effects, in particular employment generation through different subcontracting linkages, becomes greater.

Conclusions

In conclusion, this analysis highlights several interesting features of restructuring and the role of FDI in this process:

- *First*, in all six Central Europe economies, foreign affiliates have operated as an important buffer against further erosion of employment by either generating new, or preserving existing

employment (tables 5a and b; figure 3). However, the way in which FDI was used as a substitute for the almost inevitable reduction in overall employment was quite different in individual economies (tables 6a and b). Its use for employment generation/preservation was the most successful in Hungary and partly in Estonia. This article has discussed above the factors that might have contributed to these different country patterns.

- *Second*, despite its important role in buffering overall decreases in employment, it seems that FDI cannot operate as a complete substitute for domestic-led restructuring. The reason why FDI operated successfully in employment generation/preservation in Hungary was that overall employment in Hungary had improved since 1995. This would not have been possible without domestic-led restructuring. As a result, in 1995-1999 in many industries in Hungary, employment by foreign affiliates contributed only partially to an overall improvement. Moreover, in absolute terms the contribution of foreign affiliates to employment in the Czech Republic was bigger than that in Hungary (210,769 versus 133,696; table 5a). However, a poor “employment capability” of the Czech domestic industries made it possible for FDI to substitute only partly for the overall reduction in employment. This might suggest that at best FDI operate as a complement to, rather than a substitute for, domestic employment generation/preservation. Nevertheless, these results suggest that one should also take into account the spillover effects on domestic employment that emerge from diversified types of FDI and, in particular, from the presence of different types of exporters (table 2). This evidence gives more support to the view that FDI can contribute to domestic employment generation and recovery than to the view that FDI can lead growth or generate the bulk of manufacturing employment. This conclusion is restricted entirely to FDI as an employment generator and does not relate to its role in technology transfer or to other impacts.
- *Third*, it has been shown that the increasing differences in the industry distribution of foreign affiliate employment across countries are closely related to the relative order of FDI inflows per capita and the export bias of FDI (figures 4 and 5). The more FDI inflows countries receive and the more they are export

oriented, the more likely it is that a diversified structure of FDI will emerge. The evidence for this micro phenomenon here comes from an increasing dispersion across industries of employment by foreign affiliates in the 1993-1999 period. Quite probably, an increasing unevenness in FDI across Central Europe economies is accompanied by increasingly diverse types of FDI. Deeper penetration of FDI is accompanied by a more diversified structure of the types of FDI, i.e. a higher share of exporters than distributors and local suppliers. This points to the important effects of the structure of FDI on employment in host economies.

- *Fourth*, from a policy perspective it is important to recall that the structure of FDI diversifies with increased relative levels of FDI. However, in those CEE countries that cannot count on large-scale inflows of FDI, in particular the members of the Commonwealth of Independent States, policy makers should focus much more on attracting diverse types of FDI rather than just on FDI inflows. If policy is unable to maximize the scale of FDI inflows, then policy makers should focus much more on attracting “higher-powered” types of FDI. A country should try to attract not only FDI that is oriented towards the domestic market but even more so that is export oriented. Diversified types of FDI that function at different levels of international production networks (systems) are essential for any restructuring based on foreign demand to start.

Also, further increases in FDI to the Central European economies seem to be possible only if they are export oriented.¹⁵ A high share of foreign affiliate exporters brings easier access to foreign markets, and ensures more training and quality improvements. The policy lesson from both positions is that Central Europe should learn from the Irish experience and should try to develop a strategic FDI policy. This means an explicit targeting of FDI in order to maximize not only the direct effects of FDI, in terms of employment and trade balance, but also the indirect effects or spillovers.¹⁶ In that respect,

¹⁵ However, this does not mean that export performance requirements would be the optimum way to achieve this. For discussion of related policy issues, see Moran, 1998.

¹⁶ For a conceptual and empirical analysis of the concept of strategic policies in the post-socialist context, see Radosevic, 1994 and 1997.

strategic FDI policies should aim to combine support to high-powered FDI with an identification of a country's complementary assets and missing capabilities. The policy focus should be on aligning foreign affiliates with local supplier networks as well as tailoring vocational training systems to needs of foreign affiliates.¹⁷

- *Fifth*, the application of a stage model of FDI and restructuring for economies in transition which takes into account the firm- and industry-specific nature of FDI has confirmed that aggregate approaches to understanding the role of FDI in growth are *déjà vu*. Future models to understand the relationship between FDI and growth are likely to be less elegant and formal but will probably be closer to reality and more relevant to policies. ■

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¹⁸ For a summary of a policy approach along these lines, see Gristock, 2003.

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RESEARCH NOTE

Product characteristics and the growth of FDI

Frank Barry and Aoife Hannan *

Foreign direct investment and the activities of foreign affiliates have grown dramatically in recent decades, both in absolute terms and as a share of world gross domestic product. Most explanations of this phenomenon focus on the impact of technology and the macroeconomic environment on the choices facing individual firms over whether or not to engage in foreign direct investment. This research note focuses instead on the characteristics of demand for the products produced in industries known to be conducive to foreign direct investment. These characteristics are shown to help explain the recent growth in the foreign direct investment-to-gross domestic product ratio.

Key words: foreign direct investment

Introduction

The strong growth in foreign direct investment (FDI) flows and in the FDI-to-gross domestic product (GDP) ratio over recent decades is well documented. One obvious explanation for this – particularly relevant, presumably, for economies such as China and the countries of Central and Eastern Europe (CEE) – is the increasingly liberal investment climate of the period, as emphasised by Edward Safarian (1999).

Another perspective on the issue focuses on the microeconomics of firm behaviour. It is widely accepted that firm-level scale economies arising from intangible assets or “knowledge capital” provide a rationale for the existence of transnational

* The authors are, respectively, Senior Lecturer and Researcher at the Department of Economics, University College Dublin, Ireland. Correspondence to: frank.barry@ucd.ie.

corporations (TNCs) (Markusen, 1995, 1998). Given that plant-level economies of scale are generally found to be negatively associated with transnationality (because they favour single-plant as opposed to multi-plant production), an increase in FDI flows can also arise as a result of technologically-induced changes in the ratio of firm-level to plant-level scale economies (Brainard, 1997).

While increased FDI flows can arise for either of these reasons, these processes have no implications for the FDI-to-GDP ratio once adjustment to the new equilibrium has taken place. A further hypothesis concerning horizontal FDI offered by James Markusen (1998) has clearer implications for the latter. He analyzes the effects of GDP growth on the choice facing a firm as to whether or not to engage in FDI. The alternative to horizontal FDI is to export directly instead. An increase in market size tips the balance in favour of the high fixed-cost FDI option as against the high marginal-cost exporting option. Hence “the volume of affiliate production should rise faster than total (two-country) income as total income grows” (p. 752).

The present note proposes a further, possibly complementary, explanation for the recent growth in the FDI-to-GDP ratio. It is hypothesized that the kinds of products for which knowledge capital is important are characterized by high income elasticities of demand and, as such, price effects notwithstanding, these products attract an increasing share of total expenditure. As growth occurs, their share of total production rises, thus raising the average ratio of firm-level to plant-level scale economies across manufacturing (rather than within individual industries, as in the technological-change explanation). Thus both the pool of FDI and the FDI-to-GDP ratio increase as GDP itself increases.

This research note is structured as follows. The next section summarizes the data on historical and recent trends in FDI growth. Though the historical evidence is inconclusive, it appears that secular growth in the FDI-to-GDP ratio may be a post-war phenomenon, which is consistent with the view that it is associated with the demand characteristics of the particular goods that have tended to be produced by TNCs in this period. The subsequent section states the empirical hypothesis succinctly. This is followed by a review of the

determinants of the sectoral pattern of FDI activity in order to identify the FDI-intensive sectors within both manufacturing and services. The next section then employs European Union (EU) and United States data to illustrate the increasing share in expenditure accounted for by the output of these industries. The findings are summed up in a concluding section.

FDI growth

The activity of TNCs can be tracked through FDI stock or flow data or, more directly, by looking at the activities of foreign affiliates. Each method paints a broadly similar picture of recent developments. This note focuses first however on historical FDI stock data, to illustrate that the rapid expansion in FDI is primarily a phenomenon of recent decades (table 1).

Table 1. Stock of outward FDI by source countries, 1913-1995
(\$ billion, 1900 prices)

Home country	1913	1929	1938	1950	1960	1971	1980	1990	1995
World total	11.5	...	14.6	...	15.7	29.4	41.9	102.9	156.1
Australia	...	...	...	...	-	0.1	0.2	1.7	2.0
Belgium	...	...	...	...	0.3	0.4	0.5	2.3	3.4
Canada	0.1	0.2	0.4	0.3	0.6	1.1	2.1	4.7	5.7
France	1.4	...	1.4	...	1.0	1.2	2.1	6.1	18.4
Germany	1.2	...	0.2	...	0.2	1.2	2.7	7.0	11.2
Italy	...	...	...	...	0.3	0.5	0.6	3.2	5.3
Japan	0.2	0.5	0.9	...	0.1	0.8	1.8	11.2	11.6
Netherlands	0.7	...	1.5	...	1.6	2.4	3.7	6.3	9.1
Sweden	...	...	...	...	0.1	0.4	0.5	2.7	3.4
Switzerland	...	...	...	...	0.5	1.6	1.8	3.7	7.0
United Kingdom	5.2	...	5.8	1.0	2.5	4.0	7.0	12.9	15.3
United States	2.1	3.6	4.0	3.6	7.7	14.1	18.9	40.9	63.8

Source: Twomey, 2000, p. 33.

It is clear that the FDI of recent decades is of a different nature to that of earlier times. John H. Dunning (1983) points out for example that more than four-fifths of the foreign capital stake in 1914 was directed to less developed economies outside Europe and the United States, reflecting the importance of railway building, the extractive industries and the colonial control of international trade in that era.

The vast bulk of today's FDI is between developed countries, on the other hand, and is associated with a different basket of goods.¹ The hypothesis of this research note refers only to this more recent basket of goods. That the FDI-to-GDP ratio has grown in recent decades is clear from table 2.

Table 2. Percentage annual growth rates in FDI-related aggregates and GDP, 1960-2000

Item	1960-1970	1970-1980	1986-1990	1991-1995	1996-2000
FDI inflows	10.2	15.0	23.6	20.0	40.1
FDI inward stock	...	...	15.6	9.1	17.9
Cross-border M&As	...	...	26.4	23.3	49.8
Gross product of foreign affiliates	...	...	18.8	6.7	12.9
GDP	8.4	15.2	11.5	6.5	1.2

Source: Grimwade, 2000 (for the 1960s and 1970s); UNCTAD, 2002.

The hypothesis

The basic point of the present note can be stated as follows. Assume the economy consists of two industries i and j . Letting FDI and Y stand for the total levels of FDI and GDP, and FDI_x and Y_x for the levels of FDI and GDP arising in industry x , it is clear that:

$$FDI/Y = (FDI_i/Y_i) Y_i/Y + (FDI_j/Y_j) Y_j/Y.$$

Most analyses, including Markusen's, imply that the growth in the FDI-to-GDP ratio is driven by increasing FDI levels within industries – i.e. by growth in FDI_i/Y_i and FDI_j/Y_j . Let us assume to the contrary however that these levels are constant. If this is so, then differentiation yields:

$$d(FDI/Y) = (FDI_i/Y_i) d(Y_i/Y) + (FDI_j/Y_j) d(Y_j/Y) = [(FDI_i/Y_i) - (FDI_j/Y_j)] d(Y_i/Y).$$

¹ The same point is made by Alfred Chandler (1990, tables 14 and 15) who shows that the number of United States industrial enterprises establishing operations in the United Kingdom and in Germany grew modestly in the decades from 1900 to the 1950s and exploded thereafter.

The point is that even if FDI intensities within industries (FDI_i/Y_i and FDI_j/Y_j) are constant, the ratio of FDI to GDP will still grow as long as the industry with the expanding share in GDP is more FDI-intensive than the industry with the contracting share. It is this that will be demonstrated empirically.

The industry-by-industry location of FDI activity

Two methods are used here to pinpoint the FDI-intensive industries within manufacturing. Attention will then be turned to services.

Surveying a range of studies carried out between the early 1970s and the 1990s, Richard Caves (1996, p. 8) concludes that “research and development intensity is a thoroughly robust indicator” of transnationality and that “advertising intensity has proved nearly as robust”. Markusen (1998) concurs, noting that the FDI-intensive industries will be ones in which knowledge capital such as “patents, blueprints, formulae, managerial and work procedures, marketing knowledge, reputations and trademarks” (p. 753) are important. The first method employed focuses on identifying which industries are characterized by high R&D and advertising intensities.

Stephen Davies and Bruce Lyons (1996) provide a classification of manufacturing industries into such groupings following a three-digit breakup of activities according to the *Nomenclature générale des activités économiques dans les Communautés Européennes* (NACE). An industry is classified as “Type A” (for advertising-intensive) if advertising expenditures in the United Kingdom exceed 1 percent of national consumption.² R&D-intensive industries are denoted “Type R”. R&D data from both Italy and the United Kingdom are used in the determination of these industries, with relatively high R&D expenditures required in both countries if an industry is to be classified as such. Industries that are intensive in both R&D and advertising are classified as “Type AR”. Of the roughly 100 NACE 3-digit industries Davies and Lyons

² The United Kingdom is used as it is the only EU country with appropriately comprehensive advertising-intensity data by industry.

(1996) classify 13 as Type A, 22 as Type R and 9 as Type AR. These industries are listed in table 3.³

Table 3. Advertising- and R&D-intensive industries, mid-1990s

Type A	Type R	Type AR
Oils and fats	Basic chemicals	Paint and ink
Dairy products	Industrial and agric. chemicals	Pharmaceuticals
Fruit and vegetable products	Domestic and office chemicals	Soaps and detergents
Confectionery	Man-made fibres	Tractors and agricultural machines
Animal foods	Machine tools	Radio and television
Other foods	Textile machinery	Domestic electrical appliances
Distilling	Transmission equipment	Motor vehicles
Wine and cider	Paper/wood machinery	Optical instruments
Beer	Other machinery	Clocks and watches
Soft drinks	Computers and office mach.	
Tobacco	Insulated wires and cables	
Musical instruments	Electrical machinery	
Toys and sports	Electrical equipment	
	Telecom and measuring equip.	
	Electric lights	
	Motor vehicle parts	
	Railway stock	
	Cycles and motor cycles	
	Aerospace	
	Measuring instruments	
	Medical instruments	
	Rubber	

Source: Davies and Lyons, 1996, appendix 2.

The second method to pinpoint the FDI-intensive manufacturing industries uses a higher level of aggregation, based on United States data, and adopts the methodology of Karolina Ekholm and Karen Helene Midelfart-Knarvik (2003), as illustrated in table 4. The first column of table 4 shows the share of total sales

³ One simple verification that these are the FDI-intensive industries is to look at the extent of foreign ownership in these industries using data from the Irish Census of Industrial Production. Employment rather than output data are used to surmount transfer-pricing problems. (FDI flow data are insufficiently disaggregated for present purposes.) For 1990, the last year for which data were reported on the basis of the old NACE categories used by Davies and Lyons, these three groups of industries accounted for 62% of the jobs of all foreign affiliates, and for only 26% of jobs in domestically owned industry.

of United States TNCs that consists of foreign-affiliate sales, and the second column shows the share of United States industry GDP that is made up of the gross product of United States affiliates of foreign TNCs.⁴ Both measures are above average for only four industries, *viz.* (i) petroleum and coal products, (ii) chemicals, (iii) electronics and (iv) transportation equipment. These industries can therefore be taken to be the FDI-intensive ones.⁵

Table 4. Foreign affiliates' share of United States TNCs' total sales and share of United States industry GDP accounted for by affiliates of non-United States TNCs in the United States, 1998
(%)

Item	Foreign affiliates' share of United States TNCs' total sales	Share of United States industry GDP accounted for by affiliates of non-United States TNCs in the United States
All industries	33	5
Petroleum and coal	59	80
Food, beverages and tobacco	31	11
Textiles, apparel and leather	21	6
Chemicals	45	25
Non-metallic mineral products	26	31
Primary and fabricated metals	26	18
Plastics and rubber products	32	17
Machinery	36	1
Electronic products	48	17
Transportation equipment	36	22
Wood products	24	2
Paper	32	11
Printing	15	3
Wholesale trade	26	8
Retail trade	10	3
Finance and real estate	22	3
Professional services	36	2

Source: Authors' calculations, based on United States, Bureau of Economic Analysis data.

⁴ Dunning, Kim and Lin (2001) use an equivalent method – focusing on the data in the first column only – to identify the “created asset”-intensive industries upon which their analysis is based.

⁵ In what follows we confine ourselves to the last three manufacturing industries, as production data for petroleum and coal products are not readily available. The most recent Irish Census of Industrial Production reveals that 64% of foreign-industry employment is in these three industries compared to only 16% of indigenous-industry employment.

Both of the Ekholm and Midelfart-Knarvik (2003) measures yield fairly low values for the service industries. As they point out however, a large share of affiliate sales in manufacturing industries is likely to consist of sales of services rather than of goods.

To determine the FDI-intensive services industries, therefore, a different set of data sources that focus specifically on services was used. The available FDI and production data yield information on four services industries: (i) finance and business activities (which is the equivalent of the “FIRE” industry (financial institutions, insurance, real estate and business services in the output data), (ii) wholesale and retail trade, restaurants and hotels, (iii) transport, storage and communications, and (iv) other services.

FDI-intensive services industries will be those for which $FDI_j/Y_j > FDI_s/Y_s$, where the subscript s refers to aggregate values for services. Of these four industries, only finance and business activities emerges as FDI-intensive.⁶

Product characteristics of the output of FDI-intensive industries

The hypothesis is that the demand characteristics of the types of goods for which FDI is the appropriate vehicle for expansion cause them to account for a growing share of aggregate expenditure. What is suggested essentially is that these are high-income-elasticity-of-demand products.⁷ This research note is not concerned with estimating demand curves however. Rather, the concern is with

⁶ The value of $(FDI_j/Y_j)/(FDI_s/Y_s)$ for finance etc. rises from 1.5 to 3 between the late 1980s and the late 1990s, the value for trade etc. remains at 0.6, the value for transport etc. rises from 0.02 to 0.1 and the value for other services rises from 0.35 to 0.56. The data on services as a share of GDP come from UNCTAD (1991 and 2001b); data on the output shares of the services sub-industries come from OECD (2001) and data on industry-by-industry FDI shares come from UNCTAD (2001a).

⁷ Even if this were the case, relative price changes could nevertheless cause them to decline as a share of expenditure. This is not very likely however. For the goods in which technical progress is rapid (primarily the Type R industries), Bradford DeLong and Lawrence Summers (2000) argue that price elasticities of demand are likely to be high; as their relative price falls due to technical progress, this characteristic protects their expenditure shares. Given that advertising aims to reduce price elasticity we might expect generally low price elasticities for the advertising-intensive Type A industries; as their relative price rises, their share of consumption is protected.

outcomes, in terms of the share in total expenditure accounted for by these industries.

The hypothesis of this analysis will be confirmed if it is found that the output of the FDI-intensive manufacturing industries is growing as a share of total spending on manufactures, and that finance and business activities are growing as a share of spending on services.

To determine this, it would be necessary ideally to have data on world production, which would then yield world demand. These data are unavailable however. There are some consistent trade and production data for EU and United States manufacturing however, and these two regions account for the bulk of FDI in the world economy today.⁸ If the United States and EU supply is sufficiently close to apparent consumption (i.e. production plus imports minus exports), one can view them as closed economies as far as FDI-intensive goods are concerned, and thereby treat production value as a reasonably accurate measure of expenditure on these goods.

Table 5 confirms that this is the case. For the year to which the data refer (1995), the gap between EU and United States production of, and expenditure on, the output of the FDI-intensive manufacturing industries is less than 5 percent.⁹

Table 5. Trade surplus as a percentage of production for FDI-intensive industries, 1995

Methodology	Country	Value
Davies and Lyons (1996)	EU15	4.65
Ekholm and Midelfart-Knarvik (2003)	EU15	3.3
..	United States	-4.5

Source: Production data from the Statistical Office of the European Communities' (Eurostat's) DAISIE database, 1995, coded according to NACE Rev. 1. Trade data from Eurostat's COMEXT database, 1995, and United Nations Trade Statistics.

⁸ In 2001 for example, they accounted for 58% of the world's inward FDI stock and 74% of the outward stock.

⁹ Ideally one might wish to show that this is the case for each year of the analysis. This is a greater task than might appear at first sight however as the sectoral classifications and the membership of the EU both change over time. A cursory inspection of the data reveals that 1995 is not an atypical year however.

Unfortunately, as the services-sector data yield measures of value added rather than production, one cannot carry out an equivalent analysis for the services industries of interest. This might not be overly problematic however, given the presumption that services are less tradable internationally than manufactured goods.

Table 6 shows that the Davies-Lyons industries have indeed expanded as a share of EU and United States production (and, by implication, of consumption) over time. The first three rows in the table differ in terms of the number of EU member States included (because the appropriate data typically become available only upon a country's accession to the EU), and in terms of the time periods considered, because of the changes made to the NACE coding system in the early 1990s.¹⁰

Regardless of which group of countries is examined or which coding system is used, the share of advertising- and R&D-intensive industries is seen to rise over time.

Table 6. Shares of Davies-Lyons industries in total production, various years
(%)

Country	NACE 70			NACE Rev. 1	
	1975	1982	1990	1990	1997
EU9	37.6	..	51.8	42.9	44.6
EU12	..	48.1	51.1	42.4	44.3
EU15	..	..	..	41.2	43.8
United States	..	..	..	45.1	49.9

Source: Eurostat Structure and Activity of Industry (for NACE 1970) and Eurostat DAISIE (for NACE Rev. 1).

Note: EU9 refers to the six original member States plus the United Kingdom, Denmark and Ireland; EU12 = EU9 + Greece, Spain and Portugal; and EU15 = EU12 + Austria, Sweden and Finland.

¹⁰ Carlo Altomonte's (2000) recoding of the Davies and Lyons industries in line with NACE Rev. 1 is adopted here. Again one can verify on Irish data the extent to which these industries are associated with transnationality. For 1998, Altomonte's grouping of the Davies and Lyons industries accounts for 68% of jobs in foreign affiliates, compared to just 24% in indigenous industry.

Next, attention is turned to the higher aggregate of manufacturing industries classified as FDI-intensive according to the Ekholm and Midelfart-Knarvik (2003) methodology. Table 7 shows the equivalent data for this group of industries, comprising chemicals, electronics and transport equipment. Again it can be seen that the share of FDI-intensive industries, classified according to this alternative methodology, rises over time in both the EU and the United States.

Table 7. Share of production of FDI-intensive industries classified according to the Ekholm and Midelfart-Knarvik methodology, 1985-1997
(%)

Country	1985	1990	1996	1997
EU15	..	30.24	31.59	32.32
United States	37.89	..	39.33	41.67

Source: Eurostat DAISIE database.

Finance and business activities (FIRE) were identified earlier as the FDI-intensive segment within services. As with the advertising- and R&D-intensive manufacturing industries however, the precise make up of this category changed in the 1990s with the switch from the International Standard Industrial Classification of all Economic Activities (ISIC) Rev. 2 to ISIC Rev. 3. As table 8 shows, however, FIRE as a proportion of total services value added grew throughout the entire period under discussion, in both the EU and the United States.

Table 8. Share of FIRE in total Services, ISIC Revs 2 and 3, various years
(%)

Country	FIRE as % of total Services GVA (ISIC Rev. 2)				(ISIC Rev. 3)	
	1970	1982	1994	1997	1995	1998
EU8	19.76	27.72	31.38	..	40.41	41.49
EU11	..	27.16	30.11	..	39.43	40.43
EU14	..	27.10	31.20	..	39.11	40.08
United States	29.31	33.28	36.45	38.69	..	..

Sources: OECD, *Services Statistics on Value Added and Employment*, editions 1996 and 2000 (services gross value added (GVA) data); International Monetary Fund, *International Financial Statistics Yearbook 2000* (exchange rates).

Note: EU8 refers to the six original member States plus the United Kingdom and Denmark; EU11=EU8+Greece, Spain and Portugal; and EU14=Austria, Sweden and Finland.

A corollary of what has been shown is that the share of total FDI accounted for by the FDI-intensive industries is rising. This can be seen directly by comparison of the data shown for 1988 and 1999 in UNCTAD, 2001a (annex table A.II.4), in which the share in both developed-country and world FDI stocks of the FDI-intensive industries – defined here as finance and business activities plus chemicals, electronics and transportation equipment (as sufficiently disaggregated data allowing identification of the Davies and Lyons (1996) industries is unavailable) – rises substantially, whether measured as inward or outward FDI stocks.¹¹

Conclusions

This research note has offered an explanation for the growth in the FDI-to-GDP ratio seen over recent decades. It has been argued that it reflects, in part at least, the fact that post-war FDI within the developed world is concentrated in products that display high-income elasticities of demand. As income grows, these industries grow more rapidly, as does the scope for FDI. In microeconomic terms, the argument is that as the share in expenditure of products embodying “knowledge capital” rises, so too does the average ratio of firm-level to plant-level scale economies. This raises both the pool of FDI and the FDI-to-GDP ratio.

The use of trade and production data showed that products and services that are conducive to FDI activity do indeed account for a growing share of total EU and United States expenditure.

An important policy issue concerns the factors that allow firms and countries to break into these industries. Caves (1996) presents a review of the literature on how and why particular firms become TNCs, while corporate strategy textbooks focus on the determinants of success in these fields. Frank Barry (2003) discusses the range of factors that has allowed Ireland to become the most attractive location in the EU for foreign manufacturing affiliates.

¹¹ For developed countries, the share of these industries in the inward stock rises by 8.2 percentage points, and in the outward stock by 15.3 points. For the entire world economy, the share in the inward stock rises by 4.4 points and in the outward stock by 15 points.

The findings of the present note are of relevance to at least one current policy debate, concerning the likely implications for current EU incumbents of eastwards enlargement of the EU. Some incumbents are fearful of a diversion of FDI flows to the east. Henrik Braconier and Karolina Ekholm (2001) have shown for example that the opening-up of the CEE economies has already diverted Swedish TNC activity away from Southern Europe, while Barry (2003) suggests that Ireland's FDI inflows may also be threatened, given the low corporation tax rates and labour costs – and reasonably high educational standards – prevailing in some of the more advanced CEE countries. Such fears may receive further support from recent work by Peter Neary (2002) who points out that the development of a free trade area (FTA) can reduce aggregate FDI in two ways. Firstly, reductions in inter-FTA tariffs reduce the tariff-jumping incentive to set up more than one FDI plant in the area; and secondly, reduced internal tariffs also lead to increased competition from domestic FTA firms, which works against both FDI and exports.

If the products produced in FDI-intensive industries are income-elastic, on the other hand, as the present analysis suggests, this means that the growth effects of enlargement are likely to increase the total pool of FDI within the expanded EU. The historical evidence adduced by Dunning (1997a and b) and the recent findings of Stephen Pavelin and Frank Barry (2003) – that the coming into being of the Single Market increased the average number of EU countries in which leading firms located production plants – also support this more optimistic assessment. ■

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Attracting FDI to the Republic of Korea: foreign affiliates satisfaction with government policies

Sunghoon Hong and Sidney J. Gray*

Recently, the Government of the Republic of Korea has endeavoured to attract more foreign direct investment through the improvement of its regulatory framework. This research note seeks to investigate the extent to which foreign manufacturers are satisfied with those government policies in areas such as tax incentives, subsidies, financial policy, administrative assistance, and labour policy. There is, in general, below medium level satisfaction as well as significant differences across policy areas. It is also noteworthy that tax incentives and labour policy are important determinants of overall satisfaction. Furthermore, large export-oriented and technology-intensive foreign affiliates show higher levels of satisfaction while Japanese firms and firms located in metropolitan areas show lower levels of satisfaction.

Key words: Republic of Korea, foreign direct investment, investment incentives, government policies.

Introduction

Recently, the Republic of Korea has introduced incentives to attract more inward foreign direct investment (FDI), mainly for the purpose of improving the balance-of-payments position, employment levels and industrial efficiency. This research note aims to investigate the extent to which foreign manufacturers are satisfied with these and other government policies towards inward FDI. Based on the findings, suggestions are formulated as how to review and prioritize policies if the Government is to improve its regulatory framework for FDI.

*The authors are, respectively, Associate Professor of International Business, Honam University, Gwangju City, Republic of Korea and Professor of International Business, University of Sydney, Sydney, Australia. Corresponding address: s.gray@econ.usyd.edu.au

A close look at the historical background may help understand better why the Government of the Republic of Korea has recently begun to attract FDI in manufacturing actively. During the 1960s, the Republic of Korea had to rely heavily on external loans for economic development and did not wish to attract inward FDI, aiming at limiting foreign equity participation in major industries or in exports. In the 1970s and early 1980s, the Government began to eliminate various restrictions on inward FDI and to provide a considerable number of incentives to foreign affiliates. Transnational corporations (TNCs) were allowed to establish wholly owned affiliates in a wide range of industries, such as electronics, machinery, metals and industrial equipments. In 1984, the Government changed its notifying system from a positive to a negative listing approach and, for the first time, the open industries outnumbered the prohibited ones. During the second half of the 1980s, foreign exchange reserves soared in the Republic of Korea, thanks to successful exports and so the country did not need to apply extensive incentives to attract inward FDI. For instance, the period of tax concessions and tariff exemptions were shortened. But facing the economic slowdown in the early 1990s, the Government began to abolish local content regulations, alleviate restrictions on land purchase, and extend the scope and amount of corporate tax and tariff concessions. Moreover, when the Republic of Korea applied for emergency loans from the International Monetary Fund in 1997, it was experiencing a sudden shortage of foreign exchange reserves due to a swift withdrawal of foreign portfolio investors. That prompted the Government of the Republic of Korea to begin to attract more FDI in order to secure foreign exchange and recover from an unprecedented level of unemployment.

Having realized the importance of FDI, the Government of the Republic of Korea passed the Foreign Investment Promotion Act (FIPA) in 1998. This act provides tax reductions in high-technology manufacturing, a comprehensive one-stop investment service, the designation of Foreign Investment Zones (FIZ) and inexpensive long-term leases of land. The Government further opened up the economy to FDI by allowing full foreign

ownership in 1,029 industries out of 1,058 possibly subject to FDI. Foreign ownership is still prohibited in some sensitive areas such as fishing and broadcasting.

The FDI inflows of the Republic of Korea increased nearly twofold, from \$5.2 billion in 1998 to \$10.2 billion in 2000. Table 1 shows that the Republic of Korea began to attract considerable amounts of FDI in recent years, standing ahead of ASEAN countries, but behind Hong Kong (China) and China. Given the size of the Korean economy, this performance does not seem to be satisfactory. The Republic of Korea is still behind Malaysia, Thailand, China, Hong Kong (China), and Singapore in terms of FDI inflows as a percentage of gross fixed capital formation. Furthermore, the recent surge of FDI inflows in the Republic of Korea was more a result of the currency devaluation than an improvement in the business environment. Devaluation prompted foreign investors to acquire insolvent Korean companies at much lower prices than before. In addition, surveys of two prestigious international institutions such as *International Institute for Management Development* and *World Economic Forum* have ranked the Republic of Korea as very poor in providing investment incentives for foreign affiliates (IMD, 2001; WEF, 2000). In this respect, this note might contribute to a better understanding by the Government of the Republic of

Table 1. FDI inflows in selected Asian developing economies, 1996-2000
(\$ and %)

	1. Amount (\$ million)			2. Percentage of gross fixed capital formation	
	1996	1998	2000	1996	1999
ASEAN					
Indonesia	6 194	-356	-4 550	9.2	-11.0
Malaysia	7 296	2 700	5 542	15.1	20.1
Philippines	1 520	1 752	1 489	7.8	5.1
Thailand	2 271	5 143	2 448	3.0	13.7
China	40 180	43 751	40 772	14.3	11.3
Hong Kong	10 460	14 776	64 448	21.7	60.2
Taiwan	1 864	222	4 928	3.0	4.4
Singapore	8 984	5 493	6 390	29.7	26.1
Republic of Korea	2 308	5 215	10 186	1.2	9.3

Source: UNCTAD, *World Investment Reports*, various years.

Korea of the strengths and weaknesses of its FDI policies and the scope for improving its regulatory framework for the operations of foreign affiliates.

Research hypotheses

This research note intends to examine FDI policies of the Republic of Korea in five major areas: tax incentives, subsidies, financial policy, administrative assistance and labour policy. Although both tax incentives and subsidies are related to government budgets, they will be assessed separately in view of their individual importance. The importance of these policy areas has been identified already in some previous studies by Korean researchers (Choo and Kim, 1995; Kim, 1997; KITA, 1998; Park, 2000).

In this note, six hypotheses will be tested through empirical analysis. First, it is hypothesized that: *satisfaction of foreign affiliates with the FDI policies in the Republic of Korean is significantly different across policy areas*, such as tax incentives, subsidies, financial policy, administrative assistance and labour policy. The question is raised whether or not some policies are more attractive for manufacturing TNCs than others. Prior research has emphasized that different kinds of policies impact differently on the locational decisions of TNCs. Louis Wells (1986), for example, explained that FDI projects have different market orientations and thus react to different types of incentives: domestic-market-oriented projects react vastly to “commodity incentives” such as tariff protection; export-oriented projects in turn are responsive to factor incentives including tax holidays. The former may prefer to invest in a country protected from international competition while the latter may tend to exploit a low-cost production base in a host country. Douglas Woodward and R. Rolfe (1993) analyzed FDI in the Caribbean Basin and found that export-oriented foreign affiliates, being cost-conscious, are more responsive to tax incentives while domestic-market-oriented ones are more concerned with local market conditions. Harry Grubert and John Mutti (1991) found that TNCs choose to allocate higher levels of capital to countries

with lower tax rates, which demonstrates that low tax rates are highly effective in attracting FDI. Timothy Keochlin (1992) also demonstrated that the tax rates of host countries played a significant role when United States manufacturing TNCs searched for plant locations. Myles Shaver (1998) analyzed the location patterns of foreign affiliates in the United States and showed that some State characteristics, including corporate taxes and public budgets relating to promotional activities, had influenced the location of foreign affiliates.

Another group of researchers have indicated that subsidies, financial policy and/or administrative assistance can also be important factors in attracting foreign investors. C. Coughlin *et al.* (1991) found that the State selection patterns of TNCs in the United States are likely to be linked to the promotional expenditure of State governments. Stephen Hill and Max Munday (1991) also found that regional preferential assistance to foreign affiliates, including subsidies for fixed capital and employment, had a significant positive impact on the location selections of TNCs in the United Kingdom, which consequently explains the agglomeration of foreign manufacturing in Wales. Other researchers focused on the labour policy of a host country. Woodward (1992), for example, found that Japanese investors in the United States are more likely to start manufacturing operations in less-unionized States. Shaver (1998) also pointed out that foreign affiliates in the United States prefer operating in states with low unionization rates and less right to work legislation.

Second, it is hypothesized that: *the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly influenced by the size of local employment.* In other words, the more local workers foreign affiliates employ, the more likely they are to be subject to incentives and then be content with government policies. The Government of the Republic of Korea has been trying to offer its incentives more generously to large foreign affiliates, having regard to their impact on the host economy. Therefore, if foreign affiliates with higher levels of employment are highly content with the FDI policies of the Republic of Korea, this will mean that the Government has been

successful in achieving its objective of favouring large affiliates. T.E. McGreevy and A. W. J. Thomson (1983) found that, in Scotland, large manufacturing affiliates are more likely to consider regional financial assistance in their investment decision making than small ones. After surveying United States TNCs in the Caribbean region, R. Rolfe *et al.* (1993) found that large firms show higher preferences for the incentives, such as cash grants for fixed assets, job training subsidies and real estates tax concessions. Maura Sheehan (1993) showed that large foreign manufacturers in Northern Ireland were likely to have received more government incentives, such as Standard Capital Grants and Selective Financial Assistance, although these grants were considered to be more valuable for small firms. It was also found that large foreign affiliates use grants as important sources of finance for investment and are more likely to incorporate incentives in their investment appraisals. These studies imply that the size of the TNC is influencing its perceptions towards host government policies.

Third, it is hypothesized that: *satisfaction with the FDI policies in the Republic of Korea is significantly different, depending on the nationality of the investor.* United States and Japanese investors tend to show higher satisfaction than European investors because they are more likely to obtain the benefits of incentive schemes owing to their long-term business experience in the country. Furthermore, foreign affiliates of different nationalities might be different in evaluating policies in each area. J. Taylor (1993) showed that Japanese firms in the United Kingdom regarded stable labour relations as more important than a low tax burden or availability of financial assistance. Francis Ulgado (1996) demonstrated that Japanese firms in the United States tend to emphasize employee training incentives and site selection assistance while German firms give more weight to financial assistance.

Fourth, it is hypothesized that: *the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly different, depending on the location of plants.* It is generally believed that foreign affiliates in less developed areas

(usually Government-assisted areas) are more satisfied with FDI policies than those in more developed areas. Hill and Munday (1991) asserted that financial incentives exerted substantial influences on the regional distribution of foreign manufacturing affiliates in the United Kingdom. Taylor (1993) found that the Assisted Areas in the United Kingdom, such as Development Areas or Intermediate Areas, had been highly successful in attracting Japanese manufacturing activities. Leonard Cheng and Yum Kwan (2000) examined important factors affecting the location of inward FDI in China and found that Special Economic Zones designated by the Government were attracting significantly more foreign manufacturing affiliates. These studies have an implication that foreign affiliates in peripheral (usually Government-assisted) areas are likely to receive substantial regional incentives and have a more positive perception towards host Governments.

Fifth, it is hypothesized that: *the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly different in terms of their propensity to export.* As prior research suggests, export-oriented foreign affiliates face price competition in the international market directly and thus are highly sensitive to fiscal and financial incentives that lower their production costs (Woodward and Rolfe, 1993; Wells and Allen, 2001). They are also mobile in that they compare several potential sites and would likely choose the one with the lowest production costs. Rolfe *et al.* (1993) also provided empirical evidence export-oriented firms show higher preferences for cost-saving incentives, such as import duty concessions, tax holidays, cash grants and job training subsidies. S. Nicholas, W. Purcell and S. Gray (2001) surveyed Japanese companies investing in Singapore and found that incentives attracting export-oriented compared to domestic market-oriented investors differed from each other. It thus seems probable that export-oriented and domestic-oriented foreign affiliates in the Republic of Korea will respond in different ways to the same amount of fiscal and financial incentives; the former will likely show higher satisfaction than the latter.

Sixth, it is hypothesized that: *the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly different in terms of their technological intensity.* This hypothesis is suggested to confirm whether or not foreign affiliates in high technology show higher satisfaction than those in low technology. According to the current incentive scheme, foreign affiliates carrying advanced technology are subject to a complete exemption of corporate income tax for the first seven years and a 50% reduction for the next three years. These firms are also eligible to locate their facilities in industrial complexes reserved exclusively for foreign affiliates. If this policy is as effective as anticipated, the investment climate in the Republic of Korea will be more favourable for FDI with high technology. According to Michael Luger and Sudhir Shetty (1985), states in the United States of America that had expended relatively greater effort on industrial promotion show higher probabilities of attracting foreign affiliates in technology-intensive industries such as pharmaceuticals and industrial machinery.

Methodology

This research note employs a survey method in order to collect the direct opinion of foreign affiliates in the Republic of Korea. The foreign manufacturing affiliates surveyed were selected randomly from the *Directory of Foreign Investors in Korea*, published by the Ministry of Commerce, Industry and Energy (MCIE, 2001). About 350 questionnaires were sent by mail to foreign manufacturing affiliates operating in the country as of March 2001. The questions related to their locations, nationalities and number of employees were also asked. From the questionnaires sent, 64 (17%) were returned, 60 of which were suitable for statistical analysis. The respondents have, on average, about six years experience in the Republic of Korea, and about two-thirds of them were established after 1997.

As mentioned, five policy areas were surveyed. Each of the five policy areas was evaluated on the same scale, in order to compare effectively the statistical averages across areas. The elements within each policy area were initially determined based

on prior research and then revised after pilot interviews with three foreign affiliates. Respondents were requested to indicate their degree of satisfaction on each element on a 5-point Likert scale; i.e. very poor (1), poor (2), medium (3), good (4) and very good (5). Respondents were also requested to express their degree of overall satisfaction with respect to FDI-related policies in the Republic of Korea. Phone interviews were conducted with most of the respondents to supplement the mail responses and gain additional information on their operations in the country.

Empirical results

The average degree of satisfaction of the respondents concerning FDI policies in the Republic of Korea is shown in table 2. The results show that the average scores of satisfaction are mostly lower than the medium level (3) on a Likert scale, ranging from 2.02 to 3.02. The average for all policy areas is only 2.53. This is a clear evidence that foreign affiliates are somewhat negative towards the regulatory environment for inward FDI. For the first research hypothesis, an ANOVA test was carried out on the averages of the five policy areas. The F value reached 16.45, with a significance level of 0.0001, indicating that the levels of satisfaction shown by foreign affiliates are significantly different across policy areas. Respondents gave the highest score (2.62) to tax incentives and the lowest score (2.31) to subsidies. Regarding tax incentives, they were relatively positive on corporate tax rates and tax reduction for research and development (R&D), but appeared somewhat discontent with personal income tax and tariffs on imports of components. In the area of subsidies, they showed low satisfaction with almost all elements, being particularly critical on utilities, environmental protection and loan interest. Among the firms surveyed, the majority applied for tax holidays and received them in different amounts. But very few of them were found to receive subsidies for new employment or plant expansion. These findings imply that FDI policies in the Republic of Korea are being implemented only if they are seen not to affect much government budgets. Tax holidays for foreign

affiliates reduce the potential revenues of the Government while subsidies tend to increase its current expenditures. Therefore, from the viewpoint of policy makers, the former seems to be much less burdensome than the latter.

Table 2. Average scores of foreign affiliates' satisfaction with FDI-related Policies in the Republic of Korea

Policies	Average Score	Policies	Average Score
1. Tax incentives		4. Administrative assistance	
Corporate Tax	2.85	From Korea Investment Service Centre	2.51
Personal income tax	2.41	From local governments	2.40
Value added tax for imports	2.52	For investment consultation	2.51
Tax deduction for R&D	2.80	For incorporation	2.68
Tariffs on imports of components	2.48	For selection of plant site	2.58
Tariffs on imports of capital goods	2.50	Of support for plant operation	2.35
Accelerated depreciation	2.71	Promotional efforts	2.55
Tax deduction for new investment	2.69	For application of tax reduction	2.39
Property taxes	2.64	For imports of capital goods	2.52
Tax for royalty payment	2.58	Subtotal	2.50
Reduction period of taxes or tariffs	2.68		
Subtotal	2.62		
2. Subsidies		5. Labour policy	
Investment for production facilities	2.35	Official working hours	2.78
Employment	2.28	Minimum wages	2.69
R&D expenditure	2.43	Labour disputes	2.54
Training & education	2.55	Monetary compensation for unused leave	2.53
Exports	2.28	Plural labour unions	2.47
Utilities	2.02	Layoffs and dismissal of employees	2.50
Purchase of plant site	2.46	Retirement allowance	2.83
Rental of production facilities	2.35	Insurances for medical care	2.54
Environmental protection	2.19	Pension contributions	2.34
Loan interests	2.22	Employment of part-time workers	2.66
Subtotal	2.31	Subtotal	2.59
3. Financial policy			
Access to loans from Korean banks	2.69	Average of all policy areas	2.53
Favorable interest rates	2.33	Overall satisfaction with government policies	2.51
Extension of loan term	2.65		
Convertibility of foreign currencies	3.02		
Regulation on loans from overseas	2.82		
Profit repatriation	2.66		
Collateral exemption for loans	2.11		
Government-assisted loans for plant	2.48		
Government-assisted loans for plant site	2.48		
Funds transfer for transacting real estate	2.53		
Subtotal	2.58		

Source: Authors' survey.

Note: n = 60.

Scale: 1 = very poor, 2 = poor, 3 = medium, 4 = good, 5 = very good.

Foreign affiliates also expressed relatively low degrees of satisfaction with financial policy, administrative assistance and labour policy. When examined in more detail, they are somewhat positive about government policies in respect of access to loans from Korean banks, convertibility of foreign currencies, overseas loans, administrative assistance for incorporation, official working hours and minimum wages. But they are dissatisfied with the provision of collateral for loans, administrative support for plant operation (service for after-investment activities) and pension contributions.

Relating to the first hypothesis, a regression analysis has been undertaken in order to determine how much the overall satisfaction with government policies in the Republic of Korea would be influenced by a marginal improvement of the elements in each policy area. The response variable was measured by the score of each respondent in respect of overall satisfaction, and the explanatory variables were represented by the average scores of each respondent's satisfaction in five policy areas. As the response variable represents categorical data indicating five different levels of satisfaction, an ordered logit model (i.e. proportional odds model) is employed. According to Peter McCullagh (1980), the proportional odds model can be used when the response variable represents categorical data. Suppose that the k ordered categories have probabilities $P_1(x), P_2(x), \dots, P_k(x)$ in the response when the covariates take the value X . Let Y be the response that takes the values in the category $1, 2, \dots, k$, and $K_j(x)$ be the odds that Y is equivalent to or less than j given the covariate values of X . The proportional odds model is expressed as:

$$K_j(x) = k_j \exp(-B^T X) \quad (1 = j = k - 1), \quad (1)$$

where B is a vector of unknown parameters. As the odds for Y_j can be also expressed as $CP_j(x)/\{1 - CP_j(x)\}$, where $CP_j(x) = P_1(x) + P_2(x) + \dots + P_j(x)$, the proportional odds model is obtained as the following form and can be estimated by using a maximum likelihood method:

$$\ln Y_j = \ln[CP_j(x)/\{1 - CP_j(x)\}] = \ln K_j(x) = \ln k_j - B^T X \quad (2)$$

In this analysis, only two categories among five were used for the response variable because respondents have rarely chosen the other three categories. Accordingly, 58 out of 60 respondents indicated a poor-level (second category) or medium-level (third category) of satisfaction in their overall evaluation of government policies. The results of maximum likelihood estimation are presented in table 3 using SAS (Allison, 1999). A logit model was adopted as the link function rather than a probit model since the response variable has a binomial distribution with two categories. It has been confirmed that LAB and TAX are significant at the levels of 0.02 and 0.08 respectively, implying that the overall satisfaction of respondents is significantly influenced by the change in these two variables. In other words, labour policy and tax incentives can play important roles in improving foreign affiliates' satisfaction with the regulatory environment. In particular, the Wald statistic in labour policy shows the highest value (5.81), which means that foreign affiliates are highly sensitive to the labour climate in the Republic of Korea.

Second, as shown in table 4, the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly different in terms of local employment. Foreign affiliates with 100 or more employees are obviously more

Table 3. Maximum likelihood estimation

Variable	Parameter estimate	Standard Error	Wald Chi-Square	Pr. > Chi-Square	Odds Ratio
TAX	1.71	0.97	3.10	0.08	5.57
SUB	-0.87	0.92	0.90	0.34	0.42
FIN	0.66	0.92	0.52	0.47	1.94
ADMIN	1.06	0.74	2.09	0.15	2.90
LAB	2.34	0.97	5.81	0.02	10.36
-2LL (intercept only) = 79.78		-2LL (final) = 54.4		Chi-square = 25.381 (p=0.0001)	
Link function: Logit					

Source: Authors' calculation.

Note: (1) TAX, SUB, FIN, ADMIN and LAB stands for tax incentives, subsidies, financial policy, administrative service and labour policy, respectively.

(2) -2LL indicates -2 times log likelihood.

positive on government policies than those with less than 100 employees. More specifically, the degree of satisfaction of larger firms with tax incentives and financial policy are 2.79 and 2.80, respectively, while those of smaller firms are 2.55 and 2.48. This result may have been derived from a combination of two major rationales. One is that the Government of the Republic of Korea has been successful in favouring large foreign affiliates that create more jobs and industrial linkage effects, and the other is that small firms tend to be less content with government policies

Table 4. Average scores of foreign affiliates' satisfaction, by firm groups, 2001

Groups of Firms	Average Scores					Total
	Tax Incentives	Subsidies	Financial Policy	Admin. assistance	Labour Policy	
1. Employment						
Less than 100	2.55	2.23	2.48	2.43	2.53	2.45
100 or more	2.79	2.50	2.80	2.66	2.71	2.70
t value	-3.32	-4.26	-4.87	-3.48	-2.75	-8.21
(Pr.>|t|)	0.00	0.00	0.00	0.00	0.01	0.00
2. Source countries						
USA	2.76	2.27	2.53	2.53	2.68	2.56
Europe	2.58	2.35	2.64	2.43	2.65	2.53
Japan	2.53	2.30	2.57	2.57	2.40	2.47
F value	4.81	0.73	1.00	1.78	7.95	2.93
(Pr.>F)	0.01	0.48	0.37	0.17	0.00	0.05
3. Locations						
Metropolitan areas	2.47	2.27	2.42	2.39	2.61	2.43
Other areas	2.75	2.35	2.72	2.59	2.58	2.60
t value	-4.54	-1.36	-4.63	-3.24	0.47	-6.05
(Pr.>|t|)	0.00	0.18	0.00	0.00	0.64	0.00
4. Market orientation						
Export	2.76	2.29	2.79	2.56	2.56	2.59
Domestic	2.57	2.32	2.49	2.47	2.61	2.49
t value	2.73	-0.62	3.90	1.26	-0.75	3.15
(Pr.>|t|)	0.01	0.53	0.00	0.21	0.46	0.00
5. R&D activity						
High R&D	2.74	2.38	2.67	2.49	2.66	2.59
Low R&D	2.56	2.29	2.54	2.51	2.57	2.50
t value	2.22	1.41	1.80	-0.21	1.49	3.04
(Pr.>|t|)	0.03	0.16	0.07	0.83	0.14	0.00

Source: Authors' survey.

because they usually expect more assistance from the Government.

Third, the statistical results reveal that the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly different in terms of the nationality of TNCs. The F value for the comparisons of the three different nationality groups reaches 2.93, with a significance level of 0.05. Japanese and European firms are less content with tax incentives than United States firms, and Japanese firms are less content with labour policy than their United States and European counterparts. On the whole, Japanese firms show less satisfaction than United States and European firms. KITA (1998) also shows that Japanese firms are more likely to consider labour unions as hostile in the Republic of Korea.

Fourth, it has been confirmed that the satisfaction of foreign affiliates with the FDI policies in the Republic of Korea is significantly different in terms of the location of plants. When they were divided into those located in seven metropolitan areas (e.g. Seoul and the six largest cities) and those in other areas, the latter showed higher satisfaction than the former in three policy areas: tax incentives, financial policy and administrative assistance. In spite of this result, there is no evidence that the central Government actually provided more incentives to foreign affiliates in non-metropolitan areas (usually backward areas) in order to achieve a more balanced regional development. Unlike most Western countries, the Government of the Republic of Korea does not offer any systematic assistance in this area.

Fifth, the respondents in the sample were divided into export-oriented firms and domestic market-oriented firms; the former defined as the ones exporting a half or more of their sales. The empirical results in table 4 show that export-oriented firms show more satisfaction. As expected, they show higher satisfaction in relation to tax incentives (2.76) and financial policy (2.79), which offer pecuniary benefits to reduce their production costs. Subsidies are exceptional as they are hardly available for all types of investments in the country. Since the

Government of the Republic of Korea does not provide any preferential treatment for export-oriented firms, these findings imply that the FDI incentives of the Republic of Korea are indeed more helpful to export-oriented firms than domestic market-oriented ones.

Sixth, the respondents in the sample were divided into those with high technology and those with low technology. The division was based on the level of R&D activities that had been confirmed through telephone interviews. Firms with high technology expressed the view that they are technology intensive and usually spend more than 3% of their sales on R&D, being involved in industries such as machinery, chemicals, electronic components, automobile components and parts and electric devices. Those with low technology expressed the view that they are not technology intensive, being involved in apparel, furniture, textile, plastics, construction equipments, lighting devices and food. The analysis shows that firms with high technology generally show higher satisfaction than those with low technology, especially in respect of tax incentives (2.74) and financial policy (2.67). This finding is consistent with expectations, implying that the incentive scheme of the Republic of Korea has been to some extent effective in favouring foreign affiliates bringing high technology. The Government is expected to further attract technology-intensive firms as they contribute to the sophistication of the country's industrial structure. According to government statistics, technology-oriented industries, such as electronics and electrical goods, chemical engineering, machinery and automobiles, account for about 59% of the total stock of manufacturing FDI in the Republic of Korea (KISC, 2000).

Discussion and conclusions

Overall, this study has revealed that foreign affiliates express below-medium levels of satisfaction with the inward FDI policies in the Republic of Korea. Due to a lack of relevant literature, it is difficult to compare these results with similar surveys in neighbouring Asian countries competing for similar FDI projects. But it is possible to compare them to some extent

with a survey on the United States. Francis M. Ulgado (1996) analyzed the evaluation of Japanese and German TNCs in the United States on the eleven different types of incentives given by the State and local governments, including financial assistance, tax breaks, land grants, and so on. Japanese and German firms indicated satisfaction levels of 3.05 and 2.70, respectively, on a five-point Likert scale (originally 4.27 and 3.78, respectively, on a seven-point scale). The average satisfaction level of Japanese firms (2.47) in this survey is considerably lower than that in the Ulgado survey, and the evaluation of European firms (2.53) in this survey is slightly lower than the German opinion in the Ulgado survey.

The relatively low level of satisfaction of foreign affiliates in this survey could be attributed to their high expectations or the unappealing policies in the Republic of Korea. But low satisfaction stemming from high expectations would tend to show up only during an initial period and diminish when foreign affiliates become familiar with the country. If low satisfaction persists, it is presumably due more to government policies than high expectations. In order to examine this possibility, the respondents were divided into two different groups, namely those established until 1997 and those established after that year. The former showed an average satisfaction level of 2.60 in all policy areas while the latter showed 2.49, which means that there has been no improvement, rather a slight decline in the foreign affiliates' evaluation over time. This finding is also consistent with the surveys of the International Institute of Management Development (IMD, 2001), in which the investment incentives of the Republic of Korea were ranked 32nd in 1997, 35th in 1999, and 35th in 2001, always being far behind other Asian countries such as China, Singapore and Malaysia. This is an obvious evidence that, in spite of the Government's efforts in recent years, foreign affiliates' evaluation of the Republic of Korea's incentive scheme has not changed much. Recent measures adopted by the Government, including the FIPA, are not considered as sufficiently effective in improving the country's business environment. Some follow-up efforts need to be made in order to implement these measures more effectively and consistently.

The empirical findings of this research note indicate that foreign affiliates in the Republic of Korea are particularly dissatisfied with the level of subsidies, and the incentive packages consist mainly of tax incentives. This is not unique to the Republic of Korea. Most developing countries tend to offer less financial incentives than fiscal ones because of their scarce financial resources. UNCTAD (1996) shows that tax holidays and import duty exemptions are offered more in Asian countries while accelerated depreciation and investment allowances are typical to Western European countries. This difference seems to be influenced by different economic policies. Jobless people in industrial countries are usually subject to unemployment allowances. When a foreign affiliate employs them, the Government uses the same budget to offer subsidies to the firm and help it maintain its employment. Most of the European Union countries offer various types of subsidies for new employment, R&D and environmental protection in order to attract FDI. It is difficult for the Government of the Republic of Korea to follow this practice because it has neither an affluent budget for unemployment allowances nor a separate fund to subsidize foreign affiliates. Nonetheless, most developing countries tend to increase their levels of subsidies to attract more manufacturing FDI (UNCTAD, 1996). The Republic of Korea needs to consider this tendency in order not to fall behind other developing countries in the competition for inward FDI. Subsidies can be effective in helping foreign affiliates with financial difficulties, while tax concessions are advantageous for those with profits. Further, it is eligible under the rules of World Trade Organization to provide subsidies to foreign affiliates located in backward areas.

In addition, the overall evaluation of foreign affiliates has been found to be highly responsive to marginal changes in labour policies, which in turn implies that foreign affiliates are conscious about labour conditions in the Republic of Korea. This result is in line with Woo-Sung Park's (2000) conclusion that foreign affiliates from the United States, Japan and the EU are concerned about labor conditions including inflexible work time, high retirement allowances and prohibition of labour

substitution. Based on the findings of this research note, it would seem desirable for the Government to review its regulations on the layoff of employees, pension contributions and plural labour unions in order to create a more favourable labour climate for foreign affiliates.

The results also indicate that Japanese investors show relatively low satisfaction. It is not clear whether Japanese firms are less satisfied with FDI-related policies particularly in the Republic of Korea or this is so even in other countries. There could be two types of explanations for this phenomenon. One is that a high psychic distance formed historically between the Republic of Korea and Japan might have led to a lower satisfaction level of Japanese investors. The other explanation is that, since Japanese firms are highly controlled and supported by the headquarters in their home country (Bartlett and Ghoshal, 1991), they might consider it less necessary to obtain the incentives offered by host governments. None of these explanations would however support the view that the Government of the Republic of Korea would be inclined to favour Japanese firms less than those from other countries.

It has also been shown that affiliates located in non-metropolitan areas indicate relatively high evaluation levels. As the major explanation, firms in non-metropolitan areas are more subject to various types of incentives since they usually operate plants in industrial complexes designated by local governments. Among the firms surveyed, 33 are operating in non-metropolitan areas, and 85% of these located their plants in government-designated industrial complexes, with 21% of them operating in the Cheonan Industrial Complex prepared exclusively for foreign affiliates. Therefore, the Government needs to consider developing special industrial complexes to increase foreign affiliates' satisfaction with the Korean business environment. The empirical results also suggest that the FDI policies of the Republic of Korea are to some extent effective in satisfying foreign affiliates that have large local employment or a high propensity for exporting or high technological intensity. The Government is expected to support continually these types of

investors since they are helpful for improving employment, balance of payments and technology in the economy.

In spite of their partial success to date, the FDI policies in the Republic of Korea appear unsatisfactory in many areas from the standpoint of the foreign affiliates in the survey. This research suggests the need to consider improvements in several policy areas in order to create a more positive perception of the Korean business environment. When assessed overall, the Government of the Republic of Korea seems to concentrate its efforts mainly on providing a basically necessary environment for foreign affiliates but has neglected developing a more appealing environment that can actively attract the attention of potential FDI. In this regard, it is suggested that the Government needs to change its policy stance towards FDI from a reactive to a more proactive approach. This means that the Government should not just passively remove hindrances to the inflows of FDI but actively support the long-term operations of foreign affiliates.

In regard to the limitations of this research, this research note does not provide relevant data by which foreign affiliates' satisfaction with government policies can be compared with those of other Asian countries. Additionally, this research note is focused only on analyzing the perceptions of foreign affiliates on FDI policies. Further research should desirably assess the impact of such policies on the levels of FDI and explore the likely impact of any policy changes on future FDI. ■

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The impact of technological advances on transnational corporations: a review article

Lilach Nachum*

A review of:

Roche, Edward M. and Michael J. Blaine, editors (2000). *Information Technology in Multinational Enterprises* (Cheltenham and Northampton, MA: Edward Elgar), 360 pages.

da Costa, Eduardo (2001). *Global E-Commerce Strategies for Small Businesses* (Cambridge, MA: MIT Press), 220 pages.

McMahon, Peter (2002). *Global Control: Information Technology and Globalization Since 1845* (Cheltenham and Northampton, MA: Edward Elgar), 200 pages.

Santangelo, Grazia D. (2002). *Innovation in Multinational Corporations in the Information Age: The Experience of the European ICT Industry* (Cheltenham and Northampton, MA: Edward Elgar), 256 pages.

Introduction: the challenge of information and communication technologies

Advances in information and communication technologies (ICT) are affecting many aspects of business activity. Notable among these are the obscuring of the material aspects of the behaviour of firms and the subsequent changes in the meaning of distance and geography (Brynjolfsson and Kahin 2000; Porter 2001; Evans and Wurster 1999).

These changes are likely to have a particularly profound impact on those firms whose activities take place over distance, namely transnational corporations (TNCs). Distance – geographic, economic, political and cultural – has been a fundamental challenge facing such firms, one that has shaped how they are organized and managed. The possibility of

* Associate Professor of International Business and Management, Baruch College, City University New York, New York, United States. Contact: Lilach_Nachum@baruch.cuny.edu

eliminating the importance of distance (notably geographic distance), and hence the value of physical location, due to technological advances, has critical implications for such firms. It enables them to access remotely resources and other firms and customers, and interact with them electronically, regardless of the physical location of the parties involved (Zaheer and Manrakhan, 2001). Such developments challenge the commonly held assumption (e.g. Dunning 1993) regarding a link between location and the realization of value by firms. They may also modify in a significant manner the assumption that information- and knowledge-related market imperfections tend to increase as the distance between market participants increases (Buckley and Casson 2002).

This possibility of dissociation of physical location from some value creation activities could potentially affect many aspects of international business activity. For example, some benefits of international activity may not necessarily require local presence in foreign markets and can be captured via exports (Nachum and Zaheer 2002). Such circumstances may also introduce new ways by which firms can create and capture value across borders, such as increasing specialization and capitalization on the advantages of different locations, or introducing new ways of interaction over distance with their suppliers and customers (Zaheer and Zaheer, 2001). They may also modify the value of certain firm-specific attributes in affecting the ability of firms to compete successfully in international markets (Dunning and Wymbs 2001; Kotha *et al.*, 2001; Nachum, forthcoming). By modifying the nature of market failures, ICT also change the balance of costs and benefits of the various modalities of international business, and may modify the choices of firms.

Common threads of the books reviewed

The books reviewed here describe and analyze the implications of these developments for TNCs and policymakers. They examine systematically the challenges and opportunities that technological advances open up for TNCs and seek to

provide an appropriate basis for the generation of adequate policy responses and suitable strategies. They provide insights into these new aspects of international operations and assess the extent to which advances in ICT modify traditional ways of operations and hence require different policy and strategic responses.

Information Technology in Multinational Enterprises

Edward Roche and Michael Blaine's edited volume brings together leading international scholars in international business and information technology in an effort to assess and synthesize research in these two areas. This collection of articles accomplishes three major tasks related to the role of ICT in international business. First, it provides a broad and detailed overview of the current state of theoretical and empirical knowledge on the role of ICT in the organization and operation of TNCs and synthesizes the disparate strands of existing research into a more cohesive body of theory. Second, it examines the implications of new technologies and the business opportunities they arise for the organization and conduct of international business. Various articles show how, by easing access to information, ICT affect the cost and efficiency of transactions both in the external market, and within the TNCs, as well as the dispersion of economic activity worldwide and the patterns of specialization. They also explore the role of ICT in the organization and control of TNCs and in the evolution of organizational structure and strategies. Specific attention is given to identifying where ICT can offer critical strategic or competitive advantages to TNCs. Finally, various papers in the book explore the practical problems associated with implementing new technologies in a multi-national, multi-cultural context. These chapters provide a bridge between current theory and current practice and offer academics and practitioners important insights into the ability of advanced digital technology to assist in the control and operation of TNCs and the conduct of international business.

Undertaken by scholars from various disciplines, this book is clearly positioned in the intersection of research on international business and information system and brings a wide

range of distinct disciplinary perspectives to the analysis of these issues.

Global E-Commerce Strategies for Small Businesses

Eduardo da Costa's book outlines ways for small firms in developing countries to go global using ICT. It illustrates how technological advances enable such firms overcome certain limitations that would have otherwise inhibit their global expansion. It describes how the Internet has eliminated the disadvantages of small size in international competition, and has played a major role in helping such firms develop an increasingly powerful international presence. The book then goes on to argue that, in the presence of technological advances, "small is beautiful", and large TNCs may stand at a considerable disadvantage in such circumstances, due to the slow path of decision making and the inflexibility that size entails.

The book is organized in two parts. The first one uses examples and case studies of small firms from several developed and developing countries to show how small and medium-sized enterprises (SMEs) become TNCs, by using the Internet. It then uses the experience of these companies to sketch some generic steps in setting up a global business and offers tools for SMEs to succeed in the global marketplace. Too often e-commerce is viewed from the perspective of large TNCs. This book acknowledges the importance of e-commerce for SMEs. It concludes by outlining a view of the future of international competition, whereby SMEs will have a far larger share of global business activity.

Global Control: Information Technology and Globalization Since 1845

Peter McMahon's book aims to provide a long-term view of the role of ICT in facilitating the pace of globalization. It identifies the key phases of globalization and analyzes the role played by ICT at each of them. It is argued that information systems, along with control technologies, are key to

globalization, and have acted to facilitate the overall trend to spatial reorganization. The book addresses the impact of ICT on globalization from a very broad perspective, encompassing as it does all the dominant institutions of globalization (States, firms and markets), and seeks to show how these institutions, which drive global developments, are themselves transformed by ICT developments.

With specific reference to TNCs, the book shows how ICT has changed the sources of competitive advantages in international competition, by changing the meaning of space and time, and argues that because of their cross border activity, TNCs were best placed to take advantage of these developments. TNCs capable of optimizing their information sources enjoy a real advantage in such a world over firms that are stuck in a particular spatial-temporal context. It further highlights the ability to utilize efficiently information sources as an increasingly important source of advantage for TNCs. TNCs increasingly involve around the processing of information, using ICT, instead of materials, as they did in the past. The book also outlines the implications of ICT for the international organization of business activity by TNCs, involving as it does new relationships with suppliers, customers and employees, with increasing inter-corporate integration. It presents organizational structure as determined by communications and information processing capacity and shows how it is being modified in light of technological changes.

Innovation in Multinational Corporations in the Information Age

Grazia Santangelo's book primarily addresses issues related to the evolution of research and development (R&D) activity by TNCs, in particular, the location of the TNCs' technological development activity. The empirical work relies on a University of Reading database, which documented patents granted to the world's largest industrial firms in the United States between 1969-1995. While the focus of the book is on the location of the production of knowledge and technology by TNCs, it also examines the impact of ICT advances on the activities of these firms. It is argued that the increasing

geographical dispersion of TNC's R&D activities is a major feature of the current information age, in which many new technological combinations between formerly separate activities have become feasible. It demonstrates empirically that the complex character of technology has created new opportunities for generating innovation through a more intensive cross-border interaction and the establishment of international intra-firm coordinated corporate networks.

The book illustrates how technological developments are changing the boundaries of TNCs and affect the evolution of their learning processes. It further shows how the pace of technological change has led to the creation of new forms of inter- and intra-firm organization and vocational strategies. Intra-firm organization has seemed to move from top-down hierarchical structures to more heterarchical structures, based on networks of affiliates actively involved in the overall corporate R&D activity.

At the same time, inter-firm arrangements are increasingly adopted by TNCs as a means of enhancing the overall value of the firm through fruitful exchange of knowledge. The book suggests that the technological shift of the recent decades has generated new challenges to TNCs' competitiveness. To perform effectively in this new environment, TNCs need to adopt international strategies.

Conclusion

Taken together, the books reviewed here suggest that technological advances, combined with the growing component of information and digitalized content in the value chain, introduce new ways of value creation across distance and change fundamentally some aspects of cross border activities. Combining theoretical and empirical research, these books evaluate the strategic and competitive role of ICT in TNCs, and show how digital technology is changing the shape of entire business sectors, the structure of TNCs and the mechanisms through which they buy and sell in different channels. It is argued,

and illustrated empirically, how the vast expansion of ICT has dramatically affected the character of TNCs, and the sources of their competitive advantages. These books document fundamental changes in the nature of international business activity and illustrate the limitations of existing theories to take full account of them.

A fuller understanding of these changes appear to require a multidisciplinary approach, that will combine insights from the rapidly growing literature on information technology in the theories of FDI. There appears to be a common ground to these two fields, that have for the most part, been developed in separation, in that both are associated with processes that take place across political boundaries and have an inherent global aspect. Despite its obvious importance, research on this subject remains largely underdeveloped, due perhaps in part at least to the lack of cross-fertilization between the two disciplines. It is my modest hope that this review has illustrated the richness and importance of these issues and would perhaps stimulate some interest by FDI scholars in this area of research.

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BOOK REVIEWS

Foreign Direct Investment and Technological Change

John Cantwell, editor

(Cheltenham and Northampton, MA, Edward Elgar, 1999),
two volumes, xxiv+518 and x+489 pages

The two volumes of *Foreign Direct Investment and Technological Change* put together already published writings on the subject of technological change, technology transfer and foreign direct investment (FDI). The collection includes seminal theoretical contributions such as early writings by Raymond Vernon, John H. Dunning, Stephen P. Magee, Edwin Mansfield, Peter J. Buckley and Mark Casson, as well as selected subsequent empirical studies. The two volumes together include 41 papers, divided into seven parts, beside an editorial introduction by John Cantwell. These seven parts deal with “Early Analysis and Theoretical Foundations”, “Technology Transfer – Theory”, “Technology Transfer – Historical and Empirical Analysis”, “The Internationalization of Technology Creation”, “Technology-based Inter-company Alliances”, “The Co-evolution of FDI and Technological Development”, and “Geographical Localization in Multinational Corporations and Technology Spillovers”.

Since the material presented in the two volumes includes some of the most seminal writings on the subject and other well-known papers, this review confines itself to the value addition represented by putting the selection together in this form. A collection of already published material can have a value as a handy compendium, besides providing a comprehensive perspective on the subject. Such collections could be particularly useful for students, researchers and teachers.

The disappointment of this reviewer with the collection is its inability to explain the criteria employed by the editor for

the selection of the papers included. The editorial introduction fails to indicate on what basis some of the critical writings were included and others were neglected. Any editor has to draw a line somewhere. But it is generally made clear in some manner what the basis of selection is lest it misleads the uninitiated reader on the contours of literature. In the present case, for instance, not only that classical writings of Steven Hymer, Charles Kindleberger and Richard Caves on the theory of international operations of firms are not included, they fail to get a mention in the editorial introduction altogether. Thus a new entrant to the literature runs the risk of not coming to know of the fundamental contributions that these scholars have made to the subject. Therefore, it would have been useful if the editorial introduction had treated the subject in a more comprehensive manner even if there were problems in including some of these early writings. This selection can be subject to a charge of "sample selection bias" for the selection of later writings, too, in the absence of a clear statement by the editor of the scope or coverage.

In conclusion, the volumes under review miss an opportunity to provide a more representative collection on the subject. Despite the high price tags (not mentioned) generally attached to such volumes, they may still be useful for university libraries to purchase them and use them as handy sources for some of the oldish papers not so easily available.

Nagesh Kumar

Director-General
Research and Information System for the Non-aligned and
Other Developing Countries
New Delhi, India

Transnational Corporations: Fragmentation amidst Integration

Grazia Ietto-Gillies

(London and New York, Routledge, 2002), 219 pages

This remarkable book represents an essential, detailed and highly readable contribution to the study of transnational corporations (TNCs) and globalization processes. The overall picture of the ongoing transformations of the world's largest TNCs is noteworthy. Written in an accessible and competent language, informed by the most thoughtful theories of "transnationalism", the book produces a wealth of data on multiple aspects of the economic integration at the world-wide level. It documents the internationalization, the network spread and the concentration of TNCs with the help of selected indicators. It also provides ideas for both further research and policy intervention.

The book addresses, in particular, the following questions:

- What is the role currently played by TNCs in cross-border integration and globalization?
- What are the main dimensions and objectives of TNC networks?
- What is the nature of the comparative advantages specific to transnationalism?
- What implications can be drawn from the theoretical analysis and empirical evidence?

The ten chapters of the book are structured in four parts, which correspond by and large to each of the above highly topical questions.

Part I provides a state-of-the-art analysis on the role of TNCs, based on comprehensive and up-to-date data, covering not only the most explored and conventional modes of international integration and globalization – such as trade and FDI – but also financial investment, profit from FDI, integration through labour movement, inter-firm partnerships and alliances.

In Part II the author examines the modern TNC as a network institution, focussing on both the dimensions of networks – viz. organization, location and ownership – and their main objectives – that are, strategy, efficiency and control. The internationalization and agglomeration patterns of the world's largest 664 TNCs are explored, using different proxies of implantation abroad and geographical concentration. A rather high level of internationalization of production, coupled with a relatively low degree of agglomeration of affiliates either at home or in the host countries, emerge from the analysis. The locational profiles turn out to be affected by elements that are peculiar to the country of origin of the company, to the industry in which it operates and to its size. These results are further confirmed in the detailed study on the network spread of TNCs' direct activities in the case of the United Kingdom.

The most innovative and original perspective is provided in Part III, where it is convincingly argued that the comparative advantages of modern TNCs mainly rest on two factors: organizational fragmentation through networks; and the ability to operate across different regulatory systems. Therefore, the book brings together in the same framework the two fundamental aspects of cross-border operations, usually taken into account separately in the current literature: the geographical issue and the regulatory issue. It deals with the multifaceted differences in cultural and regulatory regimes – such as taxation, currency regime, labour organization, business culture, etc. – offering a critical account of the successful exploitation of such differences in TNCs' current strategies.

In Part IV the author assesses the implications of the forces at work. The most crucial appear to be the following:

- There are two *dominant* and *irreversible* causes of globalization:
 - the shift to the new technological paradigm represented by information and communication technologies (ICT); and

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- the transformation of the role of TNCs and of their overall configuration.
 - The locational and organizational strategies of TNCs are likely to weaken the power of labour towards capital.

On the first point, it is a matter of fact that ICT have created a rapidly changing environment of expanding opportunities, costs, risks and barriers for development. They are shifting policy options and priorities for all countries in national development efforts. The digital breakthrough is pushing forward the frontiers of what can be done to tackle development, improving socio-economic conditions, expanding knowledge, stimulating economic growth and empowering people to participate in their communities. Skills matter greatly in this more competitive global market. Advanced technologies give an edge in market competition, but acquiring them requires skills, along with the ability to access and absorb new information. Such ability, however, is definitely comparatively greater in firms with specific infrastructure, organization and management that are TNCs. This explains why there has been a shift in attention away from the TNC as a mere vehicle of technology transfer towards the crucial role it plays as a creator of innovation and technological knowledge. On the other hand, as stressed by the author, other driving forces of the globalization process, yet not dominant causes of it (for example, financial transactions), can, and in many cases should, be reversed by political will.

Turning to the second point, the overall perspective of the book, highlighting the view of globalization as a process with different actors, relative positions and diverse modes of participation, suggests a growing and urgent need for deeper coordination, within and across national borders, among actors other than TNCs, in particular labour, national governments, uninational companies, consumers, etc. Again, this is necessary to ensure a full, widespread and active participation in globalization, rendering it *inclusive* instead of *exclusive* and lowering the danger of marginalization.

Overall, the book offers a remarkable conceptual framework on the changing boundaries of modern firms (and, particularly, TNCs) and of the network configuration as the principal form of organization brought about by such changes. As is asked by the author herself in the third part of the book, “do we need theories of the TNC and of transnationalism?” The answer is definitely yes, we do. This book constitutes a notable step forward in this direction, offering important insights into global issues and the intellectual development of international business studies.

The only remark to be raised is probably an underestimation, throughout the book, of the links between space and culture. Indeed, the geographical and institutional dimensions are typically interconnected to a much greater extent than space and regulatory regimes; or, at least, the latter are rather nation-specific and nowadays, with the integration process at the continental level (i.e. the European Union), area-specific (supra-national). In other words, it is very likely to find cultural and institutional differences among regions of the same nation-state, in spite of the relative homogeneity in laws and regulations. Furthermore, it has been shown that TNC networks, both internal (intra-firm) and external (inter-firm) are complementary factors in explaining the patterns of geographical concentration at the sub-national level. The highly location-specific nature of technological competence is one of the main determinants of agglomeration across space, which is often hidden by adopting a purely nation-based approach. Spillovers, particularly those associated with new technological knowledge, tend to be highly concentrated at the geographical level. The localized learning and absorptive capacity, in turn, shape the attractiveness of the region towards inflows of resources. The local dimension of the cumulative nature of the innovation process, which includes also social, cultural and institutional factors, is thus to be seen as central in explaining the locational choices of TNCs.

In sum, this volume should be essential reading not only for scholars and students of international business – and especially those who want to keep abreast of cutting edge

research on the role of TNCs in globalization – but also for practitioners in the fields of industrial policy, business strategy and corporate governance. The reader finds a wealth of information rarely assembled with such a rigour and competence: but, perhaps more importantly, she finds strong support for the positive role that TNCs might play in capitalist development, provided that a system of coherent governance is established across and within national boundaries.

Simona Iammarino

University of Rome “La Sapienza”
Rome, Italy
and
University of Reading
Reading, United Kingdom

The Next Crisis? Direct and Equity Investment in Developing Countries

David Woodward

(London and New York, Zed Books, 2001), 240 pages

These days, David Woodward must look back to his latest book, apparently written two or three years ago, with mixed feelings. On the one hand, he may be regretting an unusually unlucky timing. A polemic book about the inherent risks of excessive foreign direct investment (FDI) would have raised a lot of eyebrows during the corporate gold rush of the late 1990s, but it is likely to find a less eager audience today. On the other hand, he can congratulate himself on having been right on the crisis in Argentina.

Apparently the main reason for writing this book was to warn against the belief that FDI is a panacea for financing growth in developing countries. On the whole, the point is well taken. If large amounts of FDI, buoyed by exuberant expectations on future returns, flow into a (small) developing country, they may temporarily offset current account deficits and prop up exchange rates. In case of a significant shift in expectations, the direction of flows may reverse and trigger a serious current account crisis not unlike the ones that hit many developing countries in the 1980s and the 1990s. Herding behaviour by foreign direct investors is not unheard of, and it has effects that are equivalent to those of financial contagion. The book deserves credit for highlighting this and raising a voice of warning against uncritically basing development strategies on the four most dangerous words of the English language: “This time it’s different”.

However, the book’s agenda goes well beyond that. Large parts are devoted to technical descriptions of the problems with collecting adequate data on FDI flows and investment positions, and to the mechanisms through which transnational corporations may quickly transfer profits, or large parts of their capital stock,

across borders. One cannot help but wonder about the intended audience for this book. It is not members of the international investment community, for they are well aware of it already. It is not policy makers, for it is decidedly too “techy” to be of use to them. It is probably not students either, for the tone is somewhat too polemic for a textbook. Could it be that the author intended it as a cookbook in “healthy scepticism towards FDI” for people who, like himself, work for non-governmental organizations?

Although the book is right on warning against an excessive reliance on FDI as a source of finance, the reader needs to be alert to the fact that the conclusions are based mostly on partial analysis. For example, chapter 5 extensively argues that host-country authorities have insufficient statistical information about the extent of foreign corporate presence and that, in view of an apparent inconsistency between FDI flow and stock figures, stocks are probably understated. Chapter 6, in turn, when reviewing transfer-pricing mechanisms and other ways of misrepresenting profits, asserts that “reported profits [are] unreliable; but the general perception is that the net effect on developing countries is likely to be negative” (p. 75). Both points are valid in their own right, but one tends to cancel the other out. If foreign affiliates are indeed secretly withdrawing capital, it is not easily squared with the notion that the inward capital stocks tend to be understated.

A centrepiece in the book’s scepticism is the assertion (in chapters 7 and 8) that FDI may in some cases lead to a longer-term haemorrhaging of foreign reserves from a host country. This part of the book applies a viewpoint that could be described as static, albeit with explicit reference to the inter-temporal nature of FDI. The life span of investment projects is considered, in several illustrative arithmetic examples, but chiefly to prove the risk that the withdrawal of funds from a host country over time may exceed the initial investment (and hence lead to a net loss of foreign reserves). This line of reasoning further surfaces in chapters 11 and 12, which analyze in detail the cases of a few developing countries in the 1990s that actually had annual FDI

inflows dwarfed by the profit remittances. The book refers to this as a negative “net resource transfer” out of the respective economies.

Again, it is hard to argue against the basic premise that negative scenarios along the lines developed by the author can in fact occur. However, since foreign investors can at most withdraw their initial investment plus such money as they have earned from their operations (including through capital gains), one needs some rather strong assumptions about crowding out to conclude that this puts at risk the host economy as a whole.

Short-term foreign exchange pressures are of course a different matter, but here too there are some extenuating factors. First, FDI is considered by an increasing number of developing countries as a preferred route towards enterprise development – both as a means of overcoming domestic liquidity constraints on productive investment and as a way to boost productivity in the enterprise sector. Arguments such as “[d]irect investment through the purchase of existing capacity in the export sector will have a negative foreign exchange effect even where the production of exports is increased, unless the efficiency with which capital is used increases sufficiently to off-set the other negative foreign exchange effects” (p. 114) recognize the productivity argument but ignore seemingly the possibility that cross-border mergers and acquisitions may boost the total funds available. Second, policy makers are masters of their own destiny in the sense that the continued presence of a healthy enabling environment for investment discourages the withdrawal of funds. If investors retain confidence in the host economy they are likely to reinvest their profits locally. Precisely for this reason, a large (and apparently increasing) proportion of FDI into developing countries consists of reinvested earnings.

The last substantial part of the book (chapters 13 and 14) reviews experience with FDI flows in the Mexican and Asian crises of the 1990s. The reader is left with the impression that, perhaps unsurprisingly, FDI fluctuations had little to do with the Asian crisis (after all, some of the countries affected were

not at all keen on inward FDI prior to the crisis), whereas a reversal of investors' attitudes may have aggravated Mexico's problems. However, argues the book, the Asian crisis had as a consequence "a virtual 'fire sale' of companies and production facilities, in which the prices paid [were] very low; the actual foreign exchange inflow associated with the investment even lower" (p. 196). This almost brings the book into the realm of the conspiracy theories, for while it is true that foreign investors relished the opportunity to penetrate certain markets from which they had previously been excluded, there is no indication that they connived to keep prices low (and in the presence of several interested buyers this is the only thing that could have prevented corporate valuation from reaching a "fair" level).

Taking the book as a whole, the reader may regret the fact that it mostly considers FDI in isolation (or taken together with non-FDI equity investment). After all, several studies have found a consistently lower volatility of FDI flows into developing countries than of portfolio investment and loans. Also, one of the salient features of recent Asian financial crisis was a widespread currency and maturity mismatch, which will generally not occur in the case of FDI-based financing. Maybe the relevant question to ask is therefore not whether FDI is a panacea, but whether it raises fewer problems for developing countries than alternative sources of finance.

Nevertheless, the focus on the fact that FDI is sometimes not all what it may seem to be makes the book a refreshing read. Perfect market economists and other "friends of investment" may not agree with the author, but they should be grateful for the viewpoints which are put to them in such a way that their consideration becomes personally rewarding.

Hans Christiansen

Capital Movements, Investment and Services Division
Organisation for Economic Co-operation and Development
Paris, France

Global Rules for Trade: Codes of Conduct, Social Labeling, Workers' Rights Clauses

Christoph Scherrer and Thomas Greven
(Münster, Westphälisches Dampfboot, 2001), 173 pages

As reliance on moral suasion and voluntary compliance has been inadequate in dealing with labour-right abuses, other means of strengthening the enforcement of labour standards are needed. This premise is the point of departure for this informative, yet rather simple book. Deeming the neo-classical reasoning to be circular in its rejection of labour standards, the authors argue that there is an economic justification for those standards and, accordingly, workers' rights clauses in trade agreements are the preferred mechanisms for enforcing core labour standards.

Social clauses are preferable to other mechanisms, namely codes of conduct and social labelling, for four reasons:

- First, they can help countries overcome the collective-action dilemma. Countries jointly benefit if core labour rights are upheld by all, but should one country seek competitive benefits and unilaterally undercut others, this would place the other countries at a competitive disadvantage, unless of course they too follow suit. Public intervention at the international level, reinforced by sanctions, is then required to assuage the downward pressure on labour standards.
- Second, core labour standards, and their subsequent enforcement through sanctions, are justified in the name of universal rights. As core labour standards have been agreed upon in multilateral negotiations, and reaffirmed in various international fora, their enforcement does not constitute political and cultural imperialism.
- Third, a trade-labour link does not run counter to the tradition of the international trading system. Issues in negotiations at the General Agreement on Tariffs and Trade have widened with each round of negotiations according to economic and political

trends, and this international trading system risks losing legitimacy if widened issues, such as that of labour, are not adequately addressed.

- Fourth, social clauses do not lend themselves to protectionism if multilaterally negotiated. Analyzing social clauses in United States trade legislation (General System of Preferences and Caribbean Basin Initiative) as an empirical basis for evaluating the usefulness of social clause, the authors come to the conclusion that the United States experience has not substantiated the claim of protectionism. If unilaterally imposed clauses are not prone to protectionism, there is even less chance that multilaterally negotiated clauses will be.

Despite the relative merits of the inclusion of a social clause in international trade agreements, the authors point out that a lack of progress in this respect has led to the proliferation of “voluntary” private initiatives aimed at improving working conditions. The book, however, questions how voluntary such initiatives are: “seeing as no company has yet adopted a code of conduct truly voluntarily but only in response to public pressure, there is no reason to believe that a code’s long-term implementation can be secured without further pressure” (p. 129). As the authors do not differentiate between codes of conduct that are intended to be applied internationally across supply chains, and those serving as operational guidelines, their criticism is excessively harsh. Furthermore, both initial and long-term implementation of codes of conduct could be secured as companies realize that responsible behaviour makes good business and adds to the bottom line. Studies have certainly shown that treating workers fairly or creating a safe workplace, issues covered in codes of conduct, can increase a firm’s financial performance.

Nonetheless, the authors raise legitimate concerns about those codes of conduct such as the selective nature of the issues addressed, the lack of transparency and credible verification methods, and the dearth of information concerning their effectiveness. Furthermore, the book warns that codes of conduct

can apply only in export industries and overlook similar abuses in other industries, that the responsibility of Governments for societal welfare could be diverted, and that there might be non-intended implications, for example, boycotts actually hurting workers they are attempting to protect.

As social labelling also relies on consumer decisions, it suffers from shortcomings similar to those of the codes of conduct. The authors note that an especially acute limit to social labelling might be a saturation of the market with labels of no credibility, thereby undermining the very market mechanism that gave rise to those social labels. Certification standards, such as SA 8000, confront partly this problem of credibility, but are affordable only to firms in developed countries that can bear the costs. Furthermore, if labels are awarded for products, companies can offer both a more expensive “fair” product and a cheaper “unfair” product, with *status quo* bad working conditions. Moreover, the book observes that social labelling programmes have focussed on the issue of child labour and thus might not offer a comprehensive solution to other labour-right abuses. Scherrer and Greven, however, are careful in pointing out that private initiatives should be developed further in light of a strong opposition to a workers’ clause in the World Trade Organization (WTO).

Readers unfamiliar with the trade-labour link debate will find a comprehensive introduction to the subject in this book. More substantially, however, the book’s central point, that workers’ rights clause in the WTO are the preferable means to enforcing labour standards than codes of conduct and social labelling, fails to move the debate forward and/or bridge the gap between the antagonistic positions. The authors, when preaching to the converted will incur nods of agreement, but to those on the other side of the fence, the book leaves unaddressed the concern *underlying* the issue of protectionism; namely that of developing countries, given resource and economic restraints, being penalized for their best efforts to improve labour standards. More troubling is that the reader is left unconvinced of the effectiveness of a workers’ rights clause. The authors, in an

earlier chapter, state that “where labor rights are the most violated, a social clause is the least effective” (p. 75) but fail to address this point in later concluding chapters that assess the comparative efficiency of various instruments.

Nonetheless, the book is a timely and crucial reminder of the debate no longer being *whether* core labour standards should be observed, but *how* best to observe them.

Kee Beom Kim

Multinational Enterprises Activities Programme
International Labour Office
Geneva, Switzerland

The opinions expressed are those of the author and do not necessarily reflect those of the International Labour Office.

The Role of Foreign Direct Investment in Brazilian Mining

Flávio E. Novaes Hegenberg

(Rio de Janeiro, Centro de Tecnologia Mineral, Ministério da
Ciência e Tecnologia, 2000), 134 pages

Based on an assessment of prospects for foreign direct investment (FDI) in Brazilian mining, the author of this book argues that FDI indeed could have a positive role in enhancing the competitiveness of that industry and increasing foreign participation in the industry is desirable.

The book begins with an overview of FDI in Brazilian mining since the 1970s. The analysis of FDI data is followed by a discussion of the main shifts in patterns of FDI. The author then proceeds to an assessment of the potential contribution of FDI to trade and technology in specific mining segments in Brazil.

Although Brazil is not considered to be a “mining country”, it has attracted some FDI to certain mining and mining-related activities since the seventies. According to the author, the main motivations for that FDI have been (a) a “verticalization” of activities (as was the case in the the steel and aluminium industries), (b) promoting long-term supplier relations for raw materials (as in the case of Japanese investment in iron ore), and (c) exploiting and protecting proprietary technologies (as in the case of several equipment producers established in Brazil).

In those mining segments in which foreign affiliates play a major role, a sharp market concentration, more developed trade and distribution systems, increasing reliance on imported technology, equipment and machinery for large-scale and high-volume production operations can be observed. The overall impact has been significant cost reduction and greater market control by large producers.

Brazil's attractiveness for mining FDI apparently diminished in the 1990s. The reasons for this were twofold. On the one hand, global mining FDI flows in general shifted away from developing countries. On the other hand, the locational advantages of Brazilian mining weakened in the 1990s due to increasing regulatory barriers, a poor macroeconomic environment, an excessive tax burden, uncertainty about land ownership (the process of the "demarcation of Indian lands") and a lack of clear regulation of informal mining activities, the book states. Such factors might explain to some extent why Brazil did poorly in comparison with other "newly liberalizing countries", such as Chile and Argentina, in attracting FDI to mining activities.

The author notices that, even after some of the local obstacles were lifted in the second half of the 1990s – constitutional barriers to foreign ownership in mining were removed, and macroeconomic conditions improved significantly as inflation came under control –, the influx of FDI into Brazilian mining did not recoup again. Overall FDI in Brazil increased significantly in the late 1990s, but it was directed mainly to service activities (finance and telecommunications). Consequently, the share of mining in FDI diminished sharply.

Brazil has traditionally been an attractive FDI location. Foreign affiliates play a key role in various manufacturing industries and, more recently, as a consequence of privatization, also in services industries (mostly finance and telecommunications). In other industries, such as metallurgy, retail trade, beverages, construction and construction materials, foreign ownership is still relatively limited. This is the result of a lower degree of globalization of those industries in general, as well as the local competitive position of large Brazilian-owned national champions.

In mining, large domestic firms still play a leading role in the metallic, non metallic and oil and gas segments. Even in those segments, the book argues, foreign affiliates can contribute to the competitiveness of Brazilian mining through what the

author defines as “indirect/supporting” participation “through the provision of technology, machinery, equipment, loans, finance, contracts for the provision of part of the production, direct investment, etc”.

There are important opportunities for cooperation between domestic firms and foreign affiliates in modernizing and expanding mining activities. Partnership with foreign affiliates in modernizing equipment and machinery, technology, engineering processes, quality control systems and others, can strengthen the capacity of domestic producers to compete with large TNCs. The author considers closer ties between leading domestic firms, such as Companhia Vale do Rio Doce, and foreign affiliates, could partially compensate for the small inflow of FDI in mining.

The author lists the type of contributions foreign affiliates can make in enhancing technology in Brazilian mining. In the case of the iron-ore segments, foreign affiliates could improve transportation and logistics technology. In the bauxite and aluminium segment, they could improve the use of energy and process technology in the vertically integrated stages of production. In the gold segment, foreign affiliates could contribute “gold-specific” geological evaluation and metallurgical processing technologies, mainly in medium-sized projects. Foreign technology could also enhance domestic capabilities in product differentiation and diversification. It could also contribute to the development of custom-made, “performance-built” steel and aluminium products for higher-value niche markets, which require more sophisticated engineering capabilities.

The book is an enlightening contribution to the study of the development of the mining in Brazil and on the role of FDI in this industry. Despite the fact that mining is one of the branches of the Brazilian economy where domestic firms have already achieved high levels of competitiveness and internationalization, the author convincingly argues that further internationalization and strengthening of domestic firms will require closer ties with

foreign affiliates. Reading this book will be useful for researchers interested in the Brazilian economy in general and particularly for those interested in mining or in natural resources-based branches of the economy. This book will also be interesting to those seeking for a more effective contribution of FDI to Brazilian development through the promotion of trade and technology spillovers.

Mariano F. Laplane

Institute of Economics
Campinas State University
São Paulo, Brazil

JUST PUBLISHED

World Investment Directory: Central and Eastern Europe

(E.03.II.D.12) (\$25)

http://www.unctad.org/en/docs//iteiit20032_en.pdf
(Overview)

http://www.unctad.org/en/subsites/dite/fdistats_files/WID2.htm (country profiles)

Central and Eastern Europe's (CEE) reintegration into the world economy has taken a long and difficult period, propelled by the crumbling of the Berlin Wall in 1989 and culminating in the entry of eight of these countries into the European Union (EU), envisaged for 2004. Immediately after transition had started – and independence had been gained, in many cases – liberalization in trade and capital flows became the main vehicle of reintegration with the rest of the world. As a result, since the mid-1990s, inward FDI has gained importance in an increasing number of CEE countries; data indeed show a major boom in that inward FDI. Outward FDI however has not yet reached a similar level. Moreover, outward FDI of CEE countries is highly concentrated, with the Russian Federation alone accounting for 60% of the total volume. The current issue of the *World Investment Directory: Central and Eastern Europe* not only documents those FDI trends and patterns – together with data on the activities of TNCs – in 19 CEE countries as systematically as possible, but also provides an in-depth analysis and evaluation in its Overview chapter. Beside statistical and company data, the *Directory* also contains information on the regulatory framework affecting FDI, organized country by country. It offers a major update to the first edition of the same volume a decade ago. The data on inward and outward FDI stocks and flows are based on information as of December 2002.

FDI in Least Developed Countries at Glance: 2002

(UNCTAD/ITE/IIA/6)

http://www.unctad.org/en/subsites/dite/LDCs/fdi_ldcs.htm

The 49 least developed countries remain marginal recipients of FDI, with only 2% of all FDI to developing countries or 0.5% of the global total. Under these circumstances, least developed countries continue to promote their countries more actively to foreign investors as revealed by policy changes towards more liberalization and the increasing number of bilateral and multilateral agreements signed or acceded to by these countries. The present publication (2002 edition) provides a description of the recent trends in FDI to least developed countries and changes that have taken place in relevant areas of the regulatory legal framework, followed by individual country profiles where data for each country is provided in detail.

An Investment Guide to Nepal: Opportunities and Conditions
Co-published with the International Chamber of Commerce

(UNCTAD/IIA/4)

<http://www.unctad.org/en/pub/investguide.en.htm>

An Investment Guide to Nepal provides an objective overview of investment opportunities and conditions in Nepal to potential foreign investors. After an executive summary, the *Guide* contains a chapter on the operating environment (which deals with such matters as infrastructure, labour and taxation), one on opportunities (which highlights those in agro-processing, hydropower and tourism) and one on the FDI regulatory framework. It also includes a brief chapter summarizing the perceptions of investors, both foreign and domestic, already in the country. The appendices provide pointers to sources of further information, including a list of 60 major foreign investors. Wherever possible, the guide provides comparative indicators for the South Asian region: income, education, wages in certain industries etc. *An Investment Guide to Nepal* is the fifth concrete product of a collaborative venture between UNCTAD and the International Chamber of Commerce (ICC), aimed at bringing together two parties with complementary interests: firms that seek new locations and countries that seek new investors. This

Guide is a particularly useful tool for all potential investors looking for both basic and more advanced information on Nepal.

Investment Policy Review of Botswana

(UNCTAD/ITE/IPC/Misc.10)

<http://www.unctad.org/ipr/botswana.pdf>

Botswana emerged from a least developed country status within one generation and is now a middle-income country. FDI was a major factor in this dramatic change. Botswana wants to continue to grow rapidly and to diversify its economy, with domestic business becoming the driving force of that growth. However, the role of FDI will remain critical as Botswana continues to need some of the components of the FDI package, especially managerial, technical and professional skills, hard and soft technologies and access to, and the knowledge of, export markets. Chapter I of this book highlights that, although large-scale, but concentrated in mining, FDI has had little direct impact on employment. Also, linkages with the local economy appear to have been weak, one of the reasons being a dearth of local businesses. Chapter II reviews Botswana's regulatory framework for FDI. The general investment climate is good in many respects. Areas that are not yet serious impediments to FDI but need action include work and residence permits, urban land availability and titles registration. This chapter also makes a case for a modern foreign investment law consolidating the high standards of treatment and protection that Botswana has been giving to foreign investors, while at the same time dealing with its concerns in a constructive manner. Chapter III argues that sustained FDI into all sectors will be needed to help achieve the objectives set out in "Vision 2016", a long-term national development plan. This requires a coherent FDI strategy, including taking full advantage of market access arrangements; reinforcing such temporal advantages through attention to sustained long-term policy actions aimed at direct competitiveness factors; the encouragement of local private business and the development of human resources; and ensuring the coherence and consistency of Botswana's policies, including investment promotion efforts. Chapter IV sums up the main conclusions and recommendations.

Investment Policy Review of Lesotho

(UNCTAD/ITE/IPC/Misc.25/Corr.1)

http://www.unctad.org/en/docs//iteipcmisc25corr1_en.pdf

Lesotho has few endowments other than the natural beauty of its environment, water, cheap labour and some deposits of minerals and diamonds. Yet, Lesotho has been able to attract FDI, thanks to trade preferences allowed by the development provisions of the WTO Agreements. Chapter I of this report concludes that, for growth, employment and export revenues, the economy depends on an export-oriented apparel industry, controlled by foreign affiliates. Such FDI, however, is traditionally “footloose” and could relocate when trade privileges are phased out one day. This can be a cause for concern because local linkages in Lesotho are negligible: there are practically no spin-offs or subcontracting activity. Chapter II reviews the investment framework. Lesotho is largely open to FDI and treats foreign investors well. But the legal framework for investment is weakly developed and requires streamlining to enhance transparency and consistency. Improvements are recommended in business taxation, land regulation, work and residence permits, industrial and trade licensing, competition policy and some aspects of foreign exchange control. Chapter III considers investment strategy. The challenge for Lesotho is not just to attract more FDI, but also to diversify it away from apparel. There is unexploited FDI potential in the services and natural resources sectors. FDI in manufacturing, too, should be encouraged. To do so, Lesotho needs to develop a competitive base for manufacturing FDI; exploit more fully its complementarities with the economy of its giant neighbour that surrounds it on all sides – South Africa; improve access to other large markets; and build up its own capabilities in manufacturing, services and agriculture. These targeted measures on the part of Lesotho would need to be complemented by home-country measures, including a potential from long-term free access to other markets, notably to that of South Africa. Chapter IV recapitulates the main conclusions and recommendations.

Análisis de las Políticas de Inversión de Ecuador
(S.01.II.D.31) (\$25)

Spanish version of the *Investment Policy Review of Ecuador*, which provides a road map for a better use of the country's untapped potential in terms of both natural and competitive labour resources. It suggests policies and actions in areas, such as macroeconomic stabilization, restoration of social consensus, improvement of legal framework for investment, implementation of viable privatization programmes, improvement of physical infrastructure and long-term benefits from FDI, and implementation of an investment promotion programmes.

Press materials on FDI issued from January to April 2003

(Please visit <http://www.unctad.org/press> for details)

Title	Date	Document symbol	http:
<i>Press releases and notes to correspondents</i>			
Enlargement of the European Union: A Boost to FDI in Central and Eastern Europe?	4/9/2003	TAD/INF/NC/51	http://www.unctad.org/Templates/webflyer.asp?docid=3368&intItemID=1634&lang=1
FDI, Competitiveness and Technology: What Role for Governments?	3/25/2003	TAD/INF/NC/49	http://www.unctad.org/Templates/webflyer.asp?docid=3342&intItemID=1634&lang=1
Export Processing Zones at Risk? The WTO Rules on Subsidies: What Options for the Future?	1/23/2003	TAD/INF/NC/48	http://www.unctad.org/Templates/webflyer.asp?docid=3154&intItemID=1634&lang=1
<i>E-briefs</i>			
FDI Flows to Italy Climb, Bucking Downward I Global Trend	4/24/2003	TAD/INF/B35/E	http://www.unctad.org/sections/press/inbrief/ib03021_en.pdf
Sweden Boosts Investments Abroad	4/7/2003	TAD/INF/B33/E	http://www.unctad.org/sections/press/inbrief/ib03019_en.pdf
FDI Increasing to Many Eastern European Countries	3/27/2003	TAD/INF/B32/E	http://www.unctad.org/sections/press/inbrief/ib03018_en.pdf
FDI to Netherlands Continues Decline	3/21/2003	TAD/INF/B31/E	http://www.unctad.org/sections/press/inbrief/ib03017_en.pdf
Investment Trends Mixed for Six European Countries	3/14/2003	TAD/INF/B30/E	http://www.unctad.org/sections/press/inbrief/ib03016_en.pdf
UNCTAD Launches World Investment Directory Online	2/27/2003	TAD/INF/B28/E	http://www.unctad.org/sections/press/inbrief/ib03014_en.pdf
Has Globalization Changed the Rules of the Game for Attracting FDI?	2/19/2003	TAD/INF/B26/E	http://www.unctad.org/sections/press/inbrief/ib03012_en.pdf
FDI to ASEAN Region Rose Last Year	2/13/2003	TAD/INF/B24/E	http://www.unctad.org/sections/press/inbrief/ib03010_en.pdf

Books on FDI and TNCs received since December 2002

- Andreff, Wladimir, *Les multinationales globales*, nouvelle édition (Paris: Éditions La Découverte, 2003), 123 pages.
- Attracting Private Investment: Putting the Policy Frameworks in Place: Experiences from Slovenia and South East Europe* (Ljubljana: Investment Compact for South East Europe, 2002), 142 pages.
- Jost, Thomas and Peter Nunnenkamp, *Bestimmungsgründe deutscher Direktinvestitionen in Entwicklungs- und Reformländern: Hat sich wirklich etwas verändert?* (Kiel: Kiel Institute for World Economics, 2002), 77 pages.
- Liuhto, Kari and Jari Jumpponen, *The Russian Eagle Has Landed Abroad: Evidence Concerning the Foreign Operations of Russia's 100 Biggest Exporters and Banks* (Lappeenranta: Lappeenranta University of Technology, 2003), 145 pages.
- Rugman, Alan M. and Joseph R. D'Cruz, *Multinationals as Flagship Firms: Regional Business Networks*, first paperback edition (Oxford and New York: Oxford University Press, 2003), 219 pages.
- World Bank, *Global Economic Prospects and the Developing Countries 2003* (Washington, D.C.: World Bank, 2003), 219 pages.

Submission statistics

Figure 1. *Transnational Corporations*: breakdown of manuscripts as of 31 December 2002

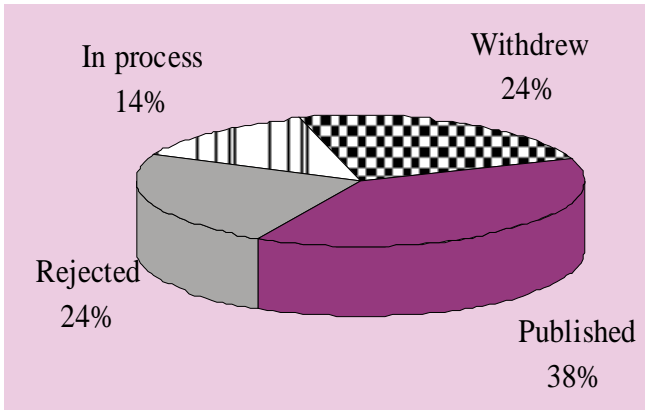
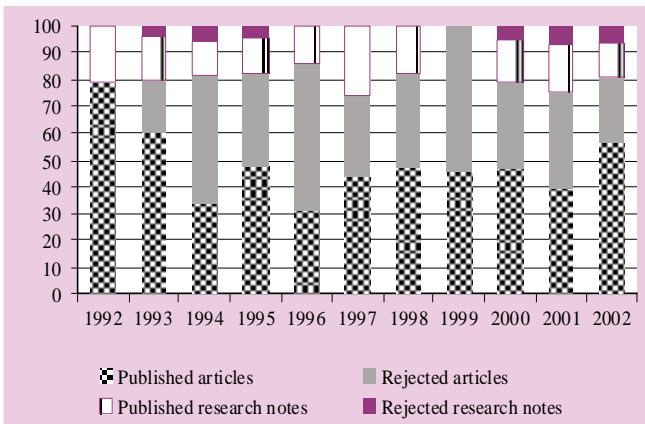


Figure 2. *Transnational Corporations*: breakdown of manuscripts since inception



GUIDELINES FOR CONTRIBUTORS

I. Manuscript preparation

Authors are requested to submit three (3) copies of their manuscript in English, with a signed statement that the text (or parts thereof) has not been published or submitted for publication elsewhere, to:

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Articles should, normally, not exceed 30 double-spaced pages (12,000 words). All articles should have an abstract not exceeding 150 words. Research notes should be between 10 and 15 double-spaced pages. Book reviews should be around 1,500 words, unless they are review essays, in which case they may be the length of an article. Footnotes should be placed at the bottom of the page they refer to. An alphabetical list of references should appear at the end of the manuscript. Appendices, tables and figures should be on separate sheets of paper and placed at the end of the manuscript.

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A. **Quotations** should be double-spaced. Long quotations should also be indented. A copy of the page(s) of the original source of the quotation, as well as a copy of the cover page of that source, should be provided.

B. **Footnotes** should be numbered consecutively throughout the text with Arabic-numeral superscripts. Footnotes should not be used for citing references; these should be placed in the text. Important substantive comments should be integrated in the text itself rather than placed in footnotes.

C. **Figures** (charts, graphs, illustrations, etc.) should have headers, subheaders, labels and full sources. Footnotes to figures should be preceded by lowercase letters and should appear after the sources. Figures should be numbered consecutively. The position of figures in the text should be indicated as follows:

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D. **Tables** should have headers, subheaders, column headers and full sources. Table headers should indicate the year(s) of the data, if applicable. The unavailability of data should be indicated by two dots (..). If data are zero or

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Bhagwati, Jagdish (1988). *Protectionism* (Cambridge, MA: MIT Press).

Cantwell, John (1991). “A survey of theories of international production”, in Christos N. Pitelis and Roger Sugden, eds., *The Nature of the Transnational Firm* (London: Routledge), pp. 16-63.

Dunning, John H. (1979). “Explaining changing patterns of international production: in defence of the eclectic theory”, *Oxford Bulletin of Economics and Statistics*, 41 (November), pp. 269-295.

United Nations Centre on Transnational Corporations (1991). *World Investment Report 1991: The Triad in Foreign Direct Investment*. Sales No. E.91.II.A.12.

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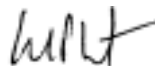
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Editor

Transnational Corporations

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