

On the Economic Dimensions of Corporate Social Responsibility

Exploring *Fortune* Global 250 Reports

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The macro-level debate on the economic impact of multinational enterprises (MNEs) is still unsettled. This article explores micro-level evidence by examining what *Fortune* Global 250 firms themselves report about their economic impact. Such reporting embodies corporate attempts to account for their economic implications, in addition to the environmental and social aspects of their activities that have traditionally received more attention in the context of corporate responsibility. Firms' reports turn out to provide a rich illustration of the mechanisms through which MNEs (can) affect economic development (including sheer size, technology transfer, and backward linkages) and of how such impacts are being operationalized and measured. The authors test which MNEs are most likely to disclose information on the various mechanisms and find that it is influenced by region, sector, and size but not by profitability. Implications of this exploratory study for research and practice are discussed.

Keywords: *corporate social responsibility; economic impact; foreign direct investment; multinationals; reporting*

The economic impact of multinational enterprises (MNEs) on host countries is receiving growing attention from academics and policy makers alike. There is a long-standing, predominantly macro-economic debate on the role of foreign direct investment (FDI) in host-country growth,

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especially in relation to developing countries. Although important insights about the various mechanisms through which FDI can affect economic growth have emerged, the empirical evidence on its exact consequences for host countries' economies is still far from conclusive, as noted, for example, by Caves (1996), Rodrik (1999), and Meyer (2004). On the one hand, the rise in worldwide FDI since the 1980s has been hailed by many as an important means to complement domestic savings; transfer skills, knowledge, and technology; improve competition; and increase the quantity and quality of employment and, thus, furthering economic growth and social development. On the other hand, however, MNEs have been accused of crowding out local firms, using technology that is not always appropriate for local circumstances, creating merely low-wage jobs, contributing to so-called McDonaldization of lifestyles, manipulating transfer prices (and, thus, reducing the tax base), and (ab)using their powerful political and economic position in host countries (Kolk, Van Tulder, & Westdijk, 2006).

As input into this unresolved debate, calls have been made recently to concentrate less on the macro level of analysis and more on micro-level, firm-specific behaviors to yield insights into "the role of MNEs in society" broadly defined, particularly using the expertise from the field of international business (Meyer, 2004, p. 261). Such a focus on the impact of firms falls in line with recent policy attention to MNEs' potential contribution to alleviating poverty (e.g., in realizing the Millennium Development Goals). It also links to attempts by firms themselves, particularly in the past decade, to account for their implications for society and the environment through corporate reporting. Such disclosure practices have traditionally focused more on the environmental and social aspects (see, e.g., Chapple & Moon, 2005; Kolk, 2005; Line, Hawley, & Krut, 2002; Maignan & Ralston, 2002); only very recently are the economic dimensions receiving more attention as part of a trend toward corporate social responsibility (CSR) or so-called triple bottom line reporting (people, planet, profit) both by firms and academics. How firms report on these economic dimensions of CSR is very relevant because it sheds light on not only their perceptions regarding impact but also how such impacts are being operationalized and measured and differ across types of firms. Such information should be helpful for further research regarding the economic impact of MNEs, also at the macro level (and not limited to developing countries only), and for managers and policy makers interested in assessing and guiding MNE behavior.

This article, thus, aims to make a contribution to the debate on the role of FDI in development (and host economies in general) by exploring how MNEs currently report on economic impact. The tendency that firms

increasingly publish triple bottom line reports (usually with titles such as corporate social responsibility or sustainability report; see, e.g., KPMG, 2005) offers the opportunity to assess this information as disclosed by firms themselves. Through an analysis of the reports published by the *Fortune* Global 250, we document the current situation regarding these firms' self-reported economic impact and the mechanisms through which they contribute to host economies, illustrated with noteworthy examples. In addition, an assessment is made subsequently of which firms are most likely to report on the various aspects, looking at sector of activity and country of origin, as well as firm size and profitability. The implications of these findings are discussed in the final section of this article, accompanied by recommendations for further fine-tuning and application. Before moving to the empirical sections, however, we first briefly discuss the main impacts of MNEs on economic development as identified by the literature.

Literature Review: MNEs' Impacts on Economic Development

Considerable academic attention has been paid to the impact of FDI and MNEs on economic development and economic growth. Much of this has focused on developing countries (or the smaller subset of so-called emerging economies in which most FDI takes place). In this section, we first briefly discuss the divergent evidence that has been found thus far (for more extensive overviews, see, e.g. Meyer, 2004). Consequently, we focus on the main mechanisms through which MNEs can affect host countries, such as technology transfer or the creation of linkages with local firms. As these occur at the individual firm level and can, to a certain extent, also be influenced by the MNEs themselves, these mechanisms are most likely to be referred to in corporate reporting on the economic dimensions of their CSR strategies.

If one should draw just a single conclusion from the large number of existing studies on the effect of FDI on economic development, it would be that the empirical evidence on this issue is extremely mixed. On the one hand, De Mello (1999), Sjöholm (1997b), and Xu (2000) found that foreign investors increase growth in host countries. Baldwin, Braconier, and Forslid (1999) showed that domestic technological progress was aided by foreign technological progress, and studies by Borensztein, De Gregorio, and Lee (1998) and the Organization for Economic Cooperation and Development (1998) also come to the conclusion that FDI had a larger impact on economic growth

than domestic firms' investments. On the other hand, a study by Kawai (1994), using a set of Asian and Latin American countries, indicates that an increase in FDI generally had a negative effect on growth (with the exception of Singapore, Taiwan, Indonesia, the Philippines, and Peru). In Central Eastern European countries, the impact of FDI on growth proved to be negative as well (cf. Djankov & Hoekman, 1999; Konings, 2000; Mencinger, 2003; United Nations Economic Commission for Europe, 2001). Finally, in their study on 72 countries, Carkovic and Levine (2000) found a negative impact of FDI on income and productivity growth.

Studies that use industry-level rather than macro-economic data (often focusing on productivity growth as equivalent of economic growth) do not yield consistent results either. Some authors indeed found positive results of FDI on productivity in a diverse range of countries. This included the manufacturing industry in Indonesia (Anderson, 2001; Sjöholm, 1997a), Mexico (Blomström & Wolff, 1994; Kokko, 1994; Ramírez, 2000), Uruguay (Kokko, Tansini, & Zejan, 1996), and China (Liu, Parker, Vaidya, & Wei, 2001). Others found negative effects of FDI on the productivity of local firms. Using Venezuelan data, Aitken and Harrison (1999) concluded that productivity in local firms decreased, whereas productivity in foreign firms and firms with significant foreign participation increased. Haddad and Harrison (1993) and Aitken, Harrison, and Lipsey (1996) did not find positive productivity spillovers in Morocco, Venezuela, or Mexico.

A good understanding of the impact of FDI on development seems to necessitate attention to the underlying processes (such as technology transfer and linkage creation) that shape this relationship, especially from a policy perspective (Chung, Mitchell, & Yeung, 2003). However, although empirical studies cited above indicate that there are several ways in which local firms may be affected by foreign subsidiaries, they fail to give explicit empirical attention to the specific mechanisms through which FDI may affect development (Alfaro & Rodríguez-Clare, 2004). In this study, we focus exactly on those mechanisms and on the roles that MNEs (try to) play in enhancing their potential positive effects.

The different ways through which these (either positive or negative) effects of MNEs and FDI for economic development can occur can essentially be grouped into three main groups of mechanisms: size effects, structural effects, and skills and technology effects. Size effects refer to the most direct or static contribution of FDI to host countries and encompass the net contribution that a foreign subsidiary makes to, for example, capital formation or employment. By adding to the host country's savings and investments, FDI enlarges the production base at a higher growth rate than would

have been possible if a host country had to rely on domestic sources of savings alone. In addition, an investment by a multinational firm may increase employment by hiring workers.

Yet most of the anticipated gains of foreign capital are usually attributed to the more indirect effects of FDI (also named spillovers). These mechanisms include either structural change in markets (competition), multiplier effects (backward linkages with suppliers), or the transfer of skills and technologies.

Structural effects brought about by the entry of an MNE might occur both horizontally (competition) and vertically (linkages with buyers and suppliers). An investment of an MNE in a local economy can stimulate competition and improve the allocation of resources, especially in those industries where high-entry barriers reduced the degree of domestic competition (e.g., utilities). However, fears are often expressed that MNEs, with their superior technology, greater possibilities for using economies of scale, and access to larger financial resources, may outcompete local, often much smaller firms (“crowding out”). In a strict economic sense, crowding out does not have to be problematic, as long as local firms are replaced by competing, more efficient firms. Yet if crowding out leads to increased market concentration, the risk of monopoly rents and deterioration of resource allocation (and, thus, reduced economic growth) increases. These potential effects can also extend to, for example, capital markets. If FDI is financed by local borrowing, credit constraints for local firms may very well increase (Harrison & McMillan, 2003).

The linkages of the MNE affiliate with local buyers and suppliers form the main channel through which interindustry spillovers can occur. Backward linkages are sourcing relations with suppliers and are created when MNE affiliates buy their inputs from local firms (Alfaro & Rodríguez-Clare, 2004; Rasiah, 1994). This might raise not only the overall output of local supplier firms but also their productivity and product quality, as MNEs provide technical and managerial assistance (McIntyre, Narula, & Trevino, 1996). Forward linkages refer to relations with buyers—either consumers or other firms using the MNE’s intermediate products as part of their own production process (Aitken & Harrison, 1999). Buyers of MNE products could benefit from products with lower prices or better quality and from the marketing knowledge of the MNE.

Transfer of knowledge and skills may also take place in other areas. Because MNEs are frequently key actors in creating and controlling technology (Markusen, 1995; Smarzyska, 1999), their affiliates can be important sources for spreading managerial skills and expertise on products or

production processes—either intentionally or unintentionally—to host-country firms (Blomström, Globerman, & Kokko, 1999). This may induce local firms to update their own production methods. Technology transfer and spillover effects can also result from labor migration of MNE-trained workers to local firms. However, if technological upgrading becomes too dependent on decisions by foreign MNEs, this might impair the development of a local innovative basis. Moreover, MNEs' (capital-intensive) technologies may not always be appropriate for developing country (labor-intensive) contexts (Caves, 1996), with local firms facing difficulty in absorbing foreign technologies and skills.

This overview of the literature illustrates that at the macro level, there is considerable understanding of the mechanisms through which MNEs and FDI affect host countries. Conclusive evidence on the outcomes of these processes is lacking, however. Partly, this is because of the relative novelty of explicitly including MNEs and firm-specific behavior in such analyses as well as persistent data availability problems at the macro but particularly the micro level. In this article, we venture to make a contribution to both aspects by examining what MNEs themselves report about their economic impact and the underlying mechanisms through which that impact occurs and how these reporting practices differ across firms. By doing so, this study provides information on not only how economic impacts and mechanisms could potentially be “measured” at the firm level but also the current extent of MNEs' “awareness” and the factors that influence this level of self-reporting.

Sample and Data Collection

The emergence of corporate nonfinancial (sustainability, CSR) reporting has incited disclosure of not only social and environmental impacts but also a firm's economic impacts. We therefore collected and analyzed the contents of these nonfinancial reports. The set of firms targeted was the *Fortune* Global 250—the first half of the *Fortune* Global 500 list as published on July 26, 2004. In the period from September 2004 to January 2005, all 250 firms were scrutinized for their most recent corporate report dealing with environmental, social responsibility, and/or sustainability issues. This could be either a separate report or if not available, the annual financial report if it contained this kind of information. Web sites were visited to actively search for reports, and if this did not yield results, the firms were contacted, several times if necessary, by letter, mail, and/or phone to have certainty

about reporting by the whole set of 250 firms. Of the 250 firms, 161 published nonfinancial reports, whereas the remainder confirmed not to report (and, hence, were counted as nonreporters in consequent analysis).

The contents of the 161 reports thus collected were subsequently carefully analyzed to see to what extent MNEs reported on or referred to their economic impacts. We included four key variables in this respect, based on the mechanisms that were identified above. First, whether firms mention and report on their economic impact at all (impact); and then, whether they pay attention to each of the three main mechanisms distinguished in the literature: the overall size of their presence (size), the structural changes brought about by their affiliates—focusing specifically on linkages with local firms (link)—and finally, activities related to transferring technology to local firms (tech).

Firms were scored on each of these variables in two ways: first, by indicating the absence or presence of this information (resulting in binary variables) and second, by collecting explicit statements and “best practices” from the reports. Because of the exploratory nature of the study and the novelty of examining firms’ information by these means, we felt that documenting and presenting interesting examples could be useful for a better understanding of the specifics of the impacts as well as potentially helpful for managers and policy makers interested in pursuing the issue.

In the analysis of the reports, we considered MNEs’ impacts on competition because in addition to linkages, this is the other key part of the structural effects outlined in the literature review. However, this issue turned out to receive very little attention in the MNEs’ nonfinancial reports. Less than 10% of the reports included statements on firms’ approaches to competition, and even if so, usually in rather general terms. One of the most explicit statements originated from ABB Group (2004), which noted that it

is committed to fair and open competition in markets around the world and would take immediate steps under its “zero tolerance” ruling to address any incidents of non-compliance among its employees or other actions which restrict or distort competition in violation of applicable anti-trust laws. (p. 22)

In addition, particularly for Japanese MNEs, “fair competition” does not refer to their own behavior but rather, to fair competition among their suppliers (those that compete for an order with the MNE in question). Competition, therefore, will not be further included in the subsequent examination.

Table 1
Economic Issues Included in *Fortune* Global 250 Reports, 2004

	Percentage of Reports ^a	Percentage of Sample ^b
Impact	25.5	16.4
Size	18.6	12.0
Link	14.3	9.2
Tech	6.8	4.4

a. Refers to the percentage of reports that include a reference to one of the economic issues (i.e., $n = 161$).

b. Refers to the percentage of all Global *Fortune* 250 firms that refer to a selected economic issue.

MNE Reporting on Economic Impacts

Table 1 gives a general overview of the economic issues that MNEs include in their reports. It shows that about one quarter of the firms that publish a nonfinancial report address the topic of the impact of their activities on host economies, which corresponds to slightly more than 16% of the total *Fortune* Global 250. As discussed more extensively below, firms that report on their economic impact most often do so by referring to size effects, followed by linkage creation. Technology transfer is mentioned considerably less.

Size Effects

A good example of an MNE reporting on size effects is Alcoa (2004), which mentioned strengthening “local and national economies through well-paying jobs, taxes paid, and local purchases” (p. 48), for example, through its subsidiary Suriname Aluminum Company (Suralco), which in 2002, “accounted for roughly 15% of Suriname’s gross domestic product—more if multiplier effects are taken into account” (p. 48). Other firms also relate their business to the size of local economies. RWE (2004) described itself as the “world’s third-largest water supplier” (p. 32) and “the largest private water company in both Indonesia and Thailand, for example” (p. 68). BT (2004) calculated its direct and indirect contribution to British employment and GDP and concluded that it supported “almost 1.7% of all employment in the UK” (p. 22). In a similar manner, Telefónica (2004, p. 83) reported its revenues to account for 1% of GDP in Argentina and up to 2.36% in Peru.

MNEs frequently refer to size effects by including numbers of jobs created. Examples include Vivendi Universal's (2004) subsidiary in sub-Saharan Africa ("600 direct jobs," p. 14) or Coca-Cola (2004), which claimed that "the Coca-Cola system" is "Africa's largest private sector employer" with "nearly 60,000 employees" (p. 16). ExxonMobil (2004, p. 20) is the only firm out of the entire *Global Fortune 250* that related its activities most directly to economic growth by stating that in its Chad-Cameroon project,

the annual growth rate of Chad's GDP has soared to nearly 11 per cent since construction began, compared to a rate of just 1 percent in prior years. Economic growth is projected to rise even higher as project revenues begin flowing to the two governments. (p. 20)

A notable element of corporate reporting on size impacts is that particularly European and Japanese MNEs have started to report on their "added value" to society and stakeholders and include figures on (cash) value added to different (stakeholder) groups or on how expenses are distributed. A wide variety of ways to do this can be found, in the categories mentioned, in calculation methods, and in the presentation of figures or percentages during just one or more years. Although the range of approaches hampers comparisons, the trend toward specification of contributions offers insight into different means of reporting about economic impacts on society or as BASF (2004) put it, "Unlike the statement of income, the value added statement is not from the shareholder's perspective, but explains BASF's contribution to private and public income" (p. 57).

In its report, BASF (2004) explained that the value added created (6.3% lower in 2003 than in 2002) results from the business performance minus costs of materials, depreciation and amortization, and other expenses. It was distributed in 2003 versus 2002, respectively, over employees (68.1% vs. 64.8%), creditors (4.2% vs. 4.2%), dividends to shareholders (9.0% vs. 8.6%), state (16.4% vs. 13.8%), the firm itself (1.5% vs. 7.6%), and minority interests (0.8% vs. 1.0%). Another example is Unilever (2004, p. 3), which included a section titled "Creating Value, Sharing Wealth" in which it pictured the development of total shareholder return (1999 to 2003) and gave the distribution of cash value added over employees (46.5%), invested in business for future growth (20.8%), providers of capital (21.6%), governments (only direct corporate taxation, 10.6%), and local communities (only voluntary contributions to charities and nongovernmental organizations, 0.5%).

The notion of CSR accounting ("CSR Accounting: Creation and Allocation of Added Value") was introduced by Ito-Yokado (2004, p. 3). This very clearly outlines that 84% of the firm's revenues go to the business

associates (for costs of goods sold, sales expense, etc.) and the other 16% consists of added value produced through Ito-Yokado's business activities. The report subsequently gives the division of the different categories and has a separate table in which the components are explained. BP (2004, p. 9) included, in addition to quantified distribution over the different groups, a graph in its sustainability report with "stakeholder and benefits" and mentioned, for example, that it provides employment for 103,700 people and works with communities located near more than 100 major sites and with nearly 135,000 suppliers and contractors.

Tax issues are sometimes mentioned as part of this distribution of value added, but often addressed separately as well, as one of the size effects of MNEs. Our analysis shows that about one in six reports analyzed tax issues to some extent, most often to just highlight the amount of taxes paid or at best, with a geographical breakdown of taxes such as in the reports of Norsk Hydro and BT. Alcoa (2004, p. 49) mentioned its effective tax rate (33.5%), whereas ExxonMobil (2004, p. 18) calculated that its operations generated US\$200 million in taxes per day. Pemex (2004) made a particularly interesting observation regarding its taxes, stating that "in spite of Pemex's efforts in 2003, the net return after taxes showed a deficit of 41.7 billion pesos, which reveals the need to modify the current fiscal regime to promote the company's health and growth" (p. 7).

Overall, MNEs do not differentiate between their impact on home and host countries, let alone developing countries specifically, thus, hampering an assessment of the impact of FDI. In a few cases, however, some of this information is presented. Dow Chemical (2004) gave figures for salaries, taxes, and purchasing per region (North America, Europe, Latin America, Pacific). Telefónica (2004) indicated, for six countries in South America, how it contributes to the economies and their development by listing economic data (percentage of revenue, in relation to GNP; number of employees; and local suppliers). Shell (2004) also paid attention to economic benefits to society, listing amounts paid on sales taxes and excise duties, corporate taxes, royalties, expenses on goods and services from locally owned firms in developing countries, and investments in social programs.

Linkage Creation

Another dimension that we studied in the reports is linkage creation. Although linkages can be both vertical and horizontal (the latter representing, for example, joint ventures), the vast majority of firms report on vertical linkages when discussing their ties with local firms. Exceptions include

RWE (2004), which reported on its 20-year-old Egyptian joint venture, and PepsiCo (2004) which highlighted that through its 40 Chinese joint ventures, it employs “more than 10,000 Chinese people directly and an estimated 150,000 indirectly” (p. 27). In most cases, however, firms mention vertical linkage creation, in particular with suppliers. Several firms reported on the precise number of goods and services bought from suppliers, thus, indicating their impact on local firms. Procter & Gamble (2004), for example, “purchased more than \$25 billion in materials and services to manufacture and market [their] products. [They] employ locally and purchase the majority of [their] raw materials within those regions where [they] manufacture [their] products” (p. 50). In a similar manner, HBOS (2004) reported to have “20,000 suppliers” and to have spent “over £2 billion each year on procurement” (p. 6). Telefónica (2004, p. 84) not only splits out its amount of purchases by the countries in which it operates but also details the percentage of local suppliers in relation to their total purchases, which exceeded “90% on average” both by value and number of contracts. However, because in their list of top 10 suppliers large MNEs such as Ericsson, IBM, Alcatel, and Nokia dominate, these local suppliers may likely be foreign owned as well.

Technology Transfer

Firms are least likely to report on the final aspect, which concerns activities related to technology transfer. In fact, of the total sample, only 11 referred to technology transfer, and this included some rather general statements. The few firms that reported in more detail on their activities usually discussed involvement in training of either their own employees or those of local suppliers. ExxonMobil (2004), for example, stated it “recognize[s] its responsibility to support the development of local economic capacity by providing training and development opportunities for local business” (p. 20). More concretely, BP (2004) “has been active in programmes designed to strengthen small and medium enterprise (SME) sectors” (p. 35), for example, in Azerbaijan, where “300 training courses” were run and “100 companies” were helped “by providing consultancy and business advice” (p. 35). PepsiCo (2004) found that because of its agricultural development programs, crop yields have significantly improved. In China, for example, “PepsiCo funded a \$20 million, comprehensive agro-technology program that introduced state-of-the-art seed development techniques and farming practices to China,” thereby “benefiting 1,100 farming families” (PepsiCo, 2004, p. 27). Finally, Unilever (2004, p. 12) reported

that its Vietnamese subsidiary “consciously sought to develop a range of sourcing and distribution partnerships with local companies that require the transfer of technology capabilities” (p. 12).

Exploring Drivers of MNE Impact Reporting

The preceding analysis shows that MNEs have started to report on economic impacts, particularly size effects, and that interesting and explicit examples and “best cases” exist. Although this is instructive to firms, policy makers, and other stakeholders (including researchers) for different reasons, it is also notable that the overall percentage that currently provides information is still rather limited. This raises the question of which firms are most likely to report in general on economic impacts and the various mechanisms. A better insight into the factors that play a role in this respect can also be helpful for those who, for example, want to encourage investment of particular firms (e.g., the ones that are most explicit about impacts or seem to contribute most to one or more dimensions) and devise appropriate regulation and/or incentives or aim to improve transparency of the nondisclosing firms. Below we examine to what extent reporting on the four key variables differs across firms originating from particular regions (countries) and sectors and with different size and profitability characteristics. These are aspects that have often been included in existing studies on corporate nonfinancial (environmental and social) disclosure, that draw from institutional or legitimacy theory, or that use stakeholder approaches (e.g., Adams, Hill, & Roberts, 1998; Berthelot, Cormier, & Magnan, 2003; Kolk, 2005; Sharfman, Shaft, & Tihanyi, 2004).

First, differences in regulatory pressure (Davidson & Worrell, 2001; Sharfman et al., 2004) as well as public pressure more generally (Kolk, 2005) across countries have been shown to significantly influence the extent to which firms engage in social or environmental activities. Although there is less strict regulation on firms regarding their economic contributions (e.g., on the extent of technology transfer), we expect that firms that are highly pressured to be transparent on the social and environmental dimensions of their CSR activities will experience similar pressures regarding the economic dimensions. Given our somewhat limited sample size, we clustered the countries together in four main regional groups (North America, Europe, Asia, and developing countries). Although there is still noticeable variance in regulatory pressure within each group, differences across groups have shown to be significantly larger (Kolk, 2005).

In addition to variation in regulatory pressures, differences have been established in corporate CSR reporting across sectors because of, for example, industry levels of diversification, global integration, or local responsiveness (see Sharfman et al., 2004). Because the main mechanisms through which MNEs economically affect the countries in which they operate differ in importance across industries (e.g., technology transfer is likely more central in technology-intensive industries, whereas local linkages are more often created in locally responsive industries), we expect that firm reporting on these issues will differ across industries. We classified the 250 firms in our sample in eight different industry groupings by aggregating *Fortune* sector classifications.

Studies on environmental disclosure also show that the size of firms is important for environmental accountability (Adams et al., 1998; Gray, Kouhy, & Lavers, 1995; Neu, Warsame, & Pedwell, 1998). The logic behind these findings is that with increasing size, firms become more visible and so do their environmental impacts, thus, exposing them to increased public pressure to report more extensively. We measure the variable *logsales* as the logarithm of a firm's total sales.

Finally, it is often suggested that higher levels of environmental disclosure contribute to economic performance and profitability (Al-Tuwaijri, Christensen, & Hughes, 2004). Although the causal relation may also run the other way round, in our cross-section data, we expect a positive relationship between economic performance and environmental disclosure. Profitability (ROS) is measured as return on sales; both variables are taken from the *Fortune* Global list.

Given that the number of firms that actually reported on their economic impact is relatively low, we first discuss the relationship between the dependent and independent variables based on simple correlation coefficients and analysis of variance before testing the significance of each in a regression analysis. Table 2 explores to what extent reporting differs across firms from different sectors and countries of origin using ANOVA. Both the total number of firms and the percentage share in the sample that report on a particular dimension are reported (e.g., 41 of the 250 *Fortune* Global Firms report on their economic impact, which equals 16%). Table 2 indicates that both sector-level pressures and regional (institutional) differences significantly influence the extent of reporting on economic impact. In particular, the attention for technology transfer seems to differ across sectors, whereas this effect is not significant for the creation of linkages and for size effects. Companies in the oil industry are most prone to report on their economic impact, followed by chemical and pharmaceutical companies and other manufacturing. In contrast, firms active in finance, trade and retail, and

Table 2
Reporting on Economic Issues by Sector and Region, Total Number of Firms, and Percentage Share of Sample

	Number				Percentage of sample			
	Impact	Size	Link	Tech	Impact	Size	Link	Tech
Total	41	30	23	11	16	12	9	4
By sector								
Automotive	4	3	2	0	20	15	10	0
Chemicals & pharmaceuticals	4	3	1	1	31	23	8	8
Electronics	3	2	2	0	13	9	9	0
Oil	7	4	4	4	35	20	20	20
Other manufacturing	7	5	5	4	25	18	18	14
Finance	4	3	3	0	6	5	5	0
Trade & retail	3	2	1	0	8	6	3	0
Other services	9	8	5	2	19	17	11	4
<i>F</i>	2.29**	1.40	1.25	3.83***				
By region								
Asia	5	4	2	1	11	9	5	2
Europe	26	17	14	7	28	18	15	8
North America	10	9	7	3	10	9	7	3
Developing	0	0	0	0	0	0	0	0
<i>F</i>	5.36***	2.14*	2.29*	1.22				

* $p < .10$. ** $p < .05$. *** $p < .01$.

electronics are least likely to discuss activities related to their economic impact. Although sector effects can significantly explain the variation in reporting on technology transfer, region of origin influences the extent to which firms report on the size of their impact and the extent of linkage creation. The descriptive statistics indicate that impact reporting predominantly occurs in Europe.

Table 3 gives descriptive statistics and correlation coefficients for the continuous variables in the models. Correlation coefficients between the four dependent variables—impact, size, link, and tech—are all significant, as expected, although not all values are extremely high, indicating that each still measures a different dimension of MNE impact. This is further illustrated by the correlations with logsales, which is correlated with technology transfer and linkage creation but not with size effects.

Combining each of the four dependent variables (impact, size, link, and tech) with all four independent variables (sector, region, ROS, logsales)

Table 3
Descriptive Statistics and Correlation Coefficients ($n = 250$)

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Impact	0.16	0.37	1				
2. Size	0.12	0.33	0.83***	1			
3. Link	0.09	0.29	0.72***	0.65***	1		
4. Tech	0.04	0.21	0.48***	0.28***	0.54***	1	
5. ROS	5.61	8.40	-0.04	-0.03	-0.01	0.02	1
6. Logsales	4.58	0.23	0.16**	0.04	0.20***	0.17***	-0.05

Note: ROS = profitability.

** $p < .05$. *** $p < .01$.

in regression analyses could shed more light on the relative importance of each of the individual drivers. In view of the dichotomous nature of the dependent variables, ordinary least squares regression could not be used. Instead, logistic regression was applied. The results of these logistic regression analyses are displayed in Tables 4 and 5. Table 4 gives the statistics of overall model fit, as well as the coefficients and odds ratios— $\exp(B)$ —for the individual variables (ROS and logsales) and categories within variables (sector and region). For the categorical variables, the Wald statistics test the significance of the coefficients in relation to the reference category (other services and North America, respectively) and not whether the variable sector or region as a whole significantly explain the variance in the dependent variable. Therefore, likelihood tests are conducted and reported in Table 5. These statistics test the significance of the change of the $-2 \log$ likelihood value between the unrestricted model (all four independents included) and the restricted model (all but the variable in question included).

The results for the first model (with impact as dependent variable) indicate that both region and sector effects most significantly explain the diversity in impact reporting, whereas the effect of firm size is only barely significant. The other models in the tables, however, indicate that these region, sector, and size effects are not similar for all mechanisms through which FDI can contribute to development. Reporting on size effects differs by sector and region, but not by firm size (i.e., it is not the case that larger firms also report more on the size of their impacts). However, larger firms do report more on their extent of linkage creation and technology transfer. Finally, variation in reporting on technology transfer is mostly explained by sector effects, whereas linkage creation is dominated by home country (region) institutional environments.

Table 4
Logistic Regressions (n = 250)

	Impact		Size		Link		Tech	
	<i>b</i>	Exp(<i>B</i>)	<i>b</i>	Exp(<i>B</i>)	<i>b</i>	Exp(<i>B</i>)	<i>b</i>	Exp(<i>B</i>)
Constant	-9.31** (4.96)	0.00	-2.56 (0.32)	0.08	-14.98*** (8.71)	0.00	-20.37** (6.32)	0.00
ROS	0.66 (0.07)	1.93	-0.22 (0.01)	0.80	1.16 (0.16)	3.18	2.99 (0.64)	19.83
Logsales	1.56* (2.98)	4.77	0.13 (0.02)	1.14	2.72** (6.2)	15.13	3.56** (4.27)	35.15
Automotive	-0.39 (0.27)	0.67	-0.27 (0.12)	0.76	-0.77 (0.60)	0.46	-10.16 (0.01)	0.00
Chemicals & pharmaceuticals	0.65 (0.72)	1.92	0.32 (0.16)	1.37	-0.37 (0.10)	0.69	0.80 (0.36)	2.23
Trade & retail	-0.99 (1.80)	0.37	-1.25 (2.21)	0.29	-1.64 (2.00)	0.19	-9.15 (0.02)	0.00
Other manufacturing	0.56 (0.84)	1.76	0.09 (0.02)	1.09	0.84 (1.35)	2.31	1.75* (3.27)	5.78
Electronics	-0.42 (0.28)	0.66	-0.68 (0.58)	0.51	-0.16 (0.03)	0.85	-9.46 (0.01)	0.00
Finance	-1.60** (5.69)	0.20	-1.52** (4.37)	0.22	-1.29 (2.63)	0.28	-9.54 (0.03)	0.00
Oil	1.13 (2.13)	3.10	0.64 (0.62)	1.90	0.23 (0.06)	1.26	1.03 (0.76)	2.80
Asia	0.46 (0.49)	1.59	0.15 (0.04)	1.16	-0.23 (0.06)	0.79	1.18 (0.80)	3.26
Developing countries	-6.72 (0.17)	0.00	-6.51 (0.15)	0.00	-5.74 (0.12)	0.00	-8.98 (0.01)	0.00
Europe	1.48*** (10.57)	4.40	0.89* (3.57)	2.44	0.98* (3.28)	2.67	1.32 (2.52)	3.72
$\chi^2(12)$	41.40***		19.83*		25.54**		35.92***	
-2 Log likelihood	181.36		163.38		127.83		54.22	
Pseudo R^2 (Nagelkerke)	0.26		0.15		0.21		0.44	

Note: Wald statistics in parenthesis below the coefficients. ROS = profitability.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Table 5
Likelihood Tests for Logistic Regressions: χ^2 Statistics

Variable (<i>df</i>)	Impact	Size	Link	Tech
ROS (1)	0.07	0.01	0.14	0.49
Logsales (1)	2.95*	0.02	6.30**	4.56**
Sector (7)	20.80***	12.12*	10.91	26.45***
Region (3)	19.42***	8.77**	7.22*	4.59

Note: ROS = profitability.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Discussion and Conclusion

This article set out to explore how MNEs themselves account for their economic impact, thus, linking the still unresolved macro debates on the economic (and other) consequences of FDI for host countries to micro-level, firm-specific behaviors, following recent suggestions in this direction (Meyer, 2004). Partly driven by institutional and stakeholder pressures, firms are increasingly disclosing information about the social, environmental, and very recently, economic implications of their activities in non-financial triple bottom line reports. Focusing on the three main mechanisms through which MNEs can affect host countries—size effects, structural (linkages) effects, and skill and technology transfer—we examined in detail what the 250 largest firms worldwide report on their economic impact. We also explored potential drivers of such reporting activities.

The detailed description of the contents of the reports shows that this is a new area not only for researchers but also for firms. Although more than a quarter of the *Fortune* Global 250 firms that disclosed nonfinancial information reported in some way on their economic impact, the variety of the issues discussed and the methods of measurement differed enormously across firms. Still, some interesting results have been found.

First, quotes from firms' reports provide a rich illustration of the sheer size of the impact on host (but also home) economies of even one single firm. Examples such as BT (2004), with direct and indirect employment effects of almost 2% of the workforce of a nation as large as the United Kingdom, or Alcoa (2004) accounting for 15% of a host country's GDP illustrate how much an individual firm—and, hence, firm strategy—can shape macro-economic outcomes. Second, the detailed description of projects aimed at technology transfer or the creation of linkages with

suppliers—and sometimes both at the same time—gives insight into not only how such often rather abstract processes take place in practice but also how firms themselves (can) benefit from these activities.

In addition, the analysis shows that firms tend to highlight individual examples and projects rather than giving an overall insight into their impact (although some exceptions exist, such as Telefónica, 2004). This applies to not only size effects but also activities related to technology transfer and linkage creation. This may be because of the relative novelty of the subject and the absence of information systems within firms to obtain and consequently disclose such data. Yet it also raises questions about the intentions of firms for including such information in their nonfinancial reports, which relate to suspicions about such reports as merely “greenwashing” or “bluewashing” (cf. Ramus & Montiel, 2005). It is noteworthy, for example, that the oil industry is most active in impact reporting, whereas its practices are often considered to be harmful for host-country development. In addition, it is likely that the examples presented in the reports are the best practices or indeed “showcases” and that the consequences of MNE behavior are not always so beneficial in other circumstances. The entire lack of information on potentially negative impacts supports such concerns.

Finally, the exploration of drivers of reporting indicates that firms’ domestic (regional) institutional context as well as sector dynamics explain reporting on impacts. Especially European firms seem active in reporting on their economic impact, from which firms in other regions can learn. The largest firms in the sample are also the ones most likely to give more specific information on the individual mechanisms that we distinguished (in particular technology transfer and linkage creation). Moreover, technology transfer is mentioned particularly by manufacturing firms, whereas variation in linkage creation is explained by region of origin rather than sector. If reporting is a reflection of actual impacts, then it might be suggested that policy makers in host countries should try to attract large European firms, which are more likely to create linkages with local firms. And along these same lines, if policy makers are interested particularly in technology transfer, it seems better to focus on attracting firms to particular sectors, with manufacturing firms being more important potential sources of knowledge than, for example, service firms. However, because it is obviously doubtful whether self-reporting reflects actual behavior, what can be said at least is that European firms are more open and transparent about their economic impact, which shows a greater awareness. It also gives policy makers and other stakeholders better opportunities to approach these firms to discuss the mechanisms through which they can contribute to economic development

and growth. As part of this dialogue, firms can also be requested to explicitly report on particular aspects to show and reflect on impacts on host countries (e.g., when policy makers want to involve MNEs in policy alleviation and other activities to further development).

Our findings show that a number of firms are reporting about economic impact and the various mechanisms, and we have given some interesting examples of how this is being done. This might inspire managers who want to increase their accountability on these aspects and adapt their measurement and reporting systems accordingly. For researchers, such increased levels of reporting will be interesting as well. This study points to ways of assessing impacts at the micro level, although the data are still sparse and have several limitations, including the fact that they are self-reported. However, in view of the increasing pressure on firms to report, also exemplified by the rise of reporting guidelines, it can be expected that more information will become available in the years to come. External verification of reported data, which is increasing, especially on the part of European and also Japanese firms (Kolk, 2005), may also mean that the reliability will improve. If so, there will be ample opportunities for interesting further research into the impact of MNEs on host countries, with larger data sets that also allow for investigations of determinants and patterns over time.

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