

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

The Universe of the Largest Transnational Corporations



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This publication is part of a new series of current studies on FDI and development published by UNCTAD. The series aims to contribute to a better understanding of how transnational corporations (TNCs) and their activities impact on development. The present study quantifies and analyses the past and current trends on the degree of internationalization of the largest TNCs as well as TNCs from developing economies. It aims at stimulating discussion and further research on the subjects addressed.

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Executive summary

TNCs comprise firms from developed countries and, increasingly, developing countries as well. However, when assets, sales and employment of firms from developing economies are compared with those of their counterparts from developed countries, it is clear that the degree of internationalization of the former is lower. An analysis of the evolution of the composition of the world's top 100 largest TNCs and top 50 TNCs from developing economies shows how the geographical and sectoral components have evolved and how some developing economies have emerged as significant actors in international production.

Transnationalization focuses on the intensity of foreign activities in relation to domestic or global activities. Using the Transnationality Index (TNI) developed by UNCTAD, it is shown that the average index value for the developing economies' TNCs has increased over time and is catching up with the world's largest TNCs. Ranking the TNCs by the TNI value shows that over the past years, firms in smaller European countries have dominated the list. This is similarly true for small economies from South and South-East Asia in the list of the largest TNCs from developing economies.

One aspect of transnationality from the operations perspective, not measured by the TNI, is the geographic extensiveness or the degree to which a company's operations and interests are spread in several countries or concentrated in a few. This study presents a graphical approach to transnationality and shows how to compare different firms which dominate the top of the list of the most transnational TNCs. According to this measure, firms from the United States and Germany and firms in the pharmaceuticals industry dominate the top of the list of the most transnational TNCs.

An analysis of the information on the location of foreign affiliates provides a ranking of the most favoured locations by the largest TNCs. It shows that the United Kingdom and the Netherlands are the largest host countries. Brazil and Mexico are also among the top hosts, ahead of other developing economies. It suggests that factors such as the size of the country, human capital and also governance and economic and political stability indices have a positive impact on the choice of locations by the largest TNCs.

I. Introduction

Recent years have seen rapid growth in global trade and foreign direct investment (FDI) in all sectors of activity (UNCTAD, 2006). Transnational corporations (TNCs) from developed countries have been driving this growth, but increasingly, TNCs from developing countries are also contributing. Between 1990 and 2003, the values of assets of foreign affiliates of the world's TNCs increased by a factor of five, and sales and employment have multiplied respectively by three and two (annex table 1). At the same time, world gross domestic product (GDP) in current prices increased by 160 per cent.

After years of rapid expansion fuelled by economic growth, stock market booms and a wave of cross-border mergers and acquisitions, the growth of most of the largest TNCs from developed as well as developing countries came to a sudden halt at the end of the 1990s. Since 2002, however, activities of the largest TNCs appear to be picking up again (UNCTAD, 2005).

Transnationality is a function of the extent to which a firm's activities are located abroad.¹ It refers to the geographic spread of firms and implies the existence of a home country and one or more host countries. According to the *Manual on Statistics of International Trade in Services* (United Nations, 2002), indicators of the significance of the activities of TNCs include sales (turnover) and/or output, employment, value added, exports and imports of goods and services, and the number of enterprises under their control. Although these variables constitute a basic set that can provide answers to the activities of TNCs, they are not necessary readily available, and additional measures of foreign affiliates activities may prove useful in addressing specific issues.

Those quantitative measures are indicators of both the growing economic

importance of TNCs and their potential in global activities, but the distinction between home and foreign countries is also essential in the qualification of internationalization.

The first objective of this publication is to document the relative importance of the world's largest TNCs and changes that have occurred over the period 1993–2003. An analysis of the evolution of the composition of the top 100 largest TNCs and top 50 TNCs from developing economies shows how the geographical and sectoral components have evolved and how some developing economies have emerged as significant actors in international production.

The second objective is to examine the alternative measures of transnationality which are available to assess the degree to which the activities and interests of companies are embedded in their home country or host countries. Given the range of perspectives and dimensions that can be considered, the Transnationality Index (TNI), which was created as a synthetic measure by UNCTAD in the *World Investment Report* (box 1), does not necessarily fully capture all these aspects, and other measures have been developed overtime. Another aspect of transnationality from the operations perspective is the geographic extensiveness or the degree to which a company's operations and interests are spread in several countries or concentrated in a few. Whether a company has a high degree of concentration in a few countries or is equally spread among several countries may reflect different strategies.

Over the years, UNCTAD has developed more sophisticated indices to calculate the intensity of foreign operations according to: (a) the Internationalization Index (II), which is the number of foreign affiliates; and (b) the Network Spread Index (NSI), which is the number of host

countries. In this publication, we compare several measures of transnationality and define a new Transnationality Spread Index (TSI), a composite index of the II and NSI. The use of individual indicators to measure corporate internationalization is more or less appropriate and composite indicators are generally more reliable, taking into account several variables combining different aspects of internationalization. A graphical approach to transnationality is suggested in this publication with a four-dimension graph. The surface of the quadrilateral gives a measure of the most transnational firm based on multidimensional aspects.

Finally, an analysis of the information on the location of foreign affiliates suggests that location-specific advantages of host countries – such as the potential size and economic development

of the market, level of education and good governance – are significant factors explaining the spread of activities of TNCs outside their national boundaries. This publication examines some of the factors that influence the choice of whether to establish a foreign affiliate in a particular country.

In the following chapters, this publication analyses the universe of the largest TNCs globally and those from developing countries (chapters 2 and 3), the market concentration of these firms (chapter 4) and the internationalization of their activities (chapter 5). Chapter 6 asks the questions of how transnational are TNCs and proposes a new graphical approach to transnationality. Chapter 7 analyzes the most-preferred locations by the largest TNCs and the last chapter concludes the publication.

Box 1. The largest TNCs in the *World Investment Report*

A first list of the world's largest non-financial TNCs based in developed countries was published in the *World Investment Report 1993*. It contained 100 firms ranked by foreign assets for 1990 and included data on the activities of these companies, i.e. assets, sales and employment. In the *World Investment Report 1994*, the list was based on data gathered for 1992 and the same ranking has been published regularly since. Financial firms are not included because of the different economic functions of assets of financial and non-financial firms.

For the first time, in the *World Investment Report 1995*, an index of transnationality was calculated as the average of foreign assets to total assets, of foreign sales to total sales and of foreign employment to total employment. Also, a first list of the top 50 largest TNCs based in developing countries, ranked by foreign assets in 1993, was published in that report.

Findings in this publication are based on publications of the top TNCs from developed and developing countries in the *World Investment Report* since 1995. The source of the largest TNCs tables is published in the *World Investment Report*. It was developed during 1997 and 1998 to originally cover the internationalization strategies of a selection of the world's largest enterprises. It covers the so-called "largest" TNCs from developed and developing countries and economies in transition.

All table ranking the largest non-financial TNCs by their foreign assets and published in the *World Investment Report* series are available at www.unctad.org/wir. The last two years are reproduced in annex tables 2 to 7.

Source: UNCTAD.

II. The universe of the largest TNCs: 2004 snapshot

The universe of TNCs is large, diverse and expanding. By the early 1990s, there were an estimated 37,000 TNCs in the world, with 170,000 foreign affiliates. Of these, 33,500 were parent corporations based in developed countries. Today, there are an estimated 77,000 TNCs in the world, with more than 770,000 foreign affiliates. These affiliates generated an estimated \$4.5 trillion in value added, employed some 62 million workers and exported goods and services valued at more than \$4 trillion (UNCTAD, 2006).

Even those figures probably understate the role of TNCs in the global economy, both because of measurement difficulties, and because firms carry out their transnational activities through a variety of non-equity arrangements – subcontracting, franchising, licensing and the like, as well as through the formation of strategic alliances. These forms of

international expansion occur with little or no FDI, and are therefore only partially captured by FDI data or by firm-level data defined by equity participation.

TNCs comprise firms from developed countries and, increasingly, developing economies as well, reflecting the substantial increase of FDI from these economies over the past decade (UNCTAD, 2006). However, when comparing foreign to total assets, sales and employment ratios of TNCs from developing economies with those of their counterparts from developed countries, it is clear that the degree of internationalization of the former is lower (table 1).

This chapter looks at the universe of the largest TNCs: the 100 largest non-financial TNCs worldwide ranked by foreign assets and the top 50 TNCs from developing economies.

Table 1. Snapshot of the largest TNCs: assets, sales and employment, 2004
(Billions of dollars, thousand of employees and per cent)

	Top 100 (World)	Top 50 (Developing countries)
Assets		
Foreign	4,728	336.9
Total	8,852	1,073.2
Foreign/Total	53.4	31.4
Sales		
Foreign	3,407	323.0
Total	6,102	738.2
Foreign/Total	55.8	43.8
Employment		
Foreign	7,379	1,109.0
Total	14,850	3,364.0
Foreign/Total	49.7	33.0

Source: UNCTAD/Erasmus University database.

A. The top 100 TNCs

In 2004, the top 100 TNCs accounted for 11 per cent, 16 per cent and 12 per cent respectively of the estimated foreign assets, sales and employment of all TNCs operating in the world, thus playing a

major role in international production. Following a slowdown of their expansion in 2000, their activities increased significantly in 2003 and 2004. Overall, the rankings in the top 100 list in 2004

have remained relatively stable compared to the past few years. General Electric, Vodafone and Ford Motor headed the list, jointly holding about \$877 billion in foreign assets, corresponding to nearly 19 per cent of total foreign assets of the top 100 largest TNCs (UNCTAD, 2006).

Six industries still dominated the list – motor vehicles, pharmaceuticals, telecommunications, utilities, petroleum and electrical/electronic equipment accounted for more than 60 per cent of the activities of the largest TNCs. A large group of new TNCs has emerged in recent years in service industries that are relatively new to FDI – notably telecommunications, electricity, water and postal services – many of which were former State-owned monopolies. In 2004,

these industries accounted for almost 20 per cent of the first 100 entries.

In 2004, 85 per cent of the top 100 TNCs were headquartered in the Triad (European Union, Japan and the United States), with TNCs headquartered in the United States dominating the list with 25 entries. Five countries (the United States, United Kingdom, Japan, France and Germany) accounted for 73 per cent of the top 100 firms, while the EU alone represented 53 per cent of all entries. Five TNCs originating from developing economies (the largest number ever) were also ranked in the top 100 in 2004. It is noteworthy that some large TNCs that had their origin in developing countries are now registered in the European Union.²

B. The top 50 TNCs from developing economies

TNCs from developing economies have kept expanding their activities abroad. In 2004, their foreign assets climbed to \$337 billion, from \$249 billion in 2003. As in 2003, the five largest TNCs accounted for almost half of the foreign assets of the top 50. With foreign assets of \$68 billion, Hutchison Whampoa (Hong Kong, China) continued in the leading position, accounting for as much as 20 per cent of the top 50's foreign assets. Petronas (Malaysia), Singtel (Singapore), Samsung Electronics (the Republic of Korea), CITIC Group (China) and Cemex (Mexico) occupied the following positions, accounting for another 25 per cent (UNCTAD, 2006).

The regions and countries of origin of the top 50 TNCs have changed little over the years, and their geographic representation still favours South, East and South-East Asia. In 2004, Asia strengthened its dominance in the top 50, with 38 enterprises making the list. The other 12 enterprises came from South

Africa (five), Mexico (four) and Brazil (three). Hong Kong, China (10) and Singapore (seven) were the most important home economies of the top 50 TNCs and Taiwan Province of China, with five companies in the top 50, was in third place.

The top 50 TNCs operate in a wide range of industries. In 2004, the most important was the electrical/electronic equipments and computer industry, with a large number of companies from Asia, and the second most important, the food and beverages industry. Other relatively well-represented industries in the top 50 included petroleum, telecommunications and transportation.

In 2004, the top five companies in the top 50 list were also part of the world's 100 largest non-financial TNCs. It is likely that in the future an increasing number of TNCs from developing economies will enter the list of the top 100, since outward FDI from these countries is expanding (UNCTAD, 2006). For the time being, though, the large gap between TNCs from

the developed and developing groups remains. For instance, the total foreign assets of the top 50 TNCs from developing economies in 2003 amounted to roughly

the amount of foreign assets of a single firm, General Electric, the world's largest TNC.

C. TNCs from Central Europe, South-East Europe and the Commonwealth of Independent States

After the reclassification of the eight European Union-acceding countries from Central Europe as developed countries, the review of the top 25 TNCs from Central and Eastern Europe has been discontinued. This list was published for the first time in the World Investment Report 1999. The largest companies from the Czech Republic, Hungary and Slovenia are small even compared with TNCs from developing

economies, or have disappeared after having merged with European counterparts.

The largest non-financial TNCs from South-East Europe and the Commonwealth of Independent States (CIS) have always been smaller than the listed TNCs from developing countries, with the exception of the largest Russian firm Lukoil, which ranks each year among the top 10 of the largest TNCs from developing countries.

III. The growing importance of TNCs over the period 1993–2003

In the early 1990s, more than 90 per cent of all TNCs were headquartered in the developed world and less than 1 per cent originated from Central and Eastern Europe. Those from developing countries accounted for approximately 8 per cent of all parent corporations, as reported by UNCTAD (1994). Today, parent corporations from developing economies

account for a quarter of all TNCs and five of them are ranked among the 100 largest in the world. This chapter looks at the universe of the largest TNCs over time: the 100 largest non-financial TNCs worldwide ranked by foreign assets and the top 50 non-financial TNCs from developing economies.

A. The top 100 TNCs from 1993 to 2003

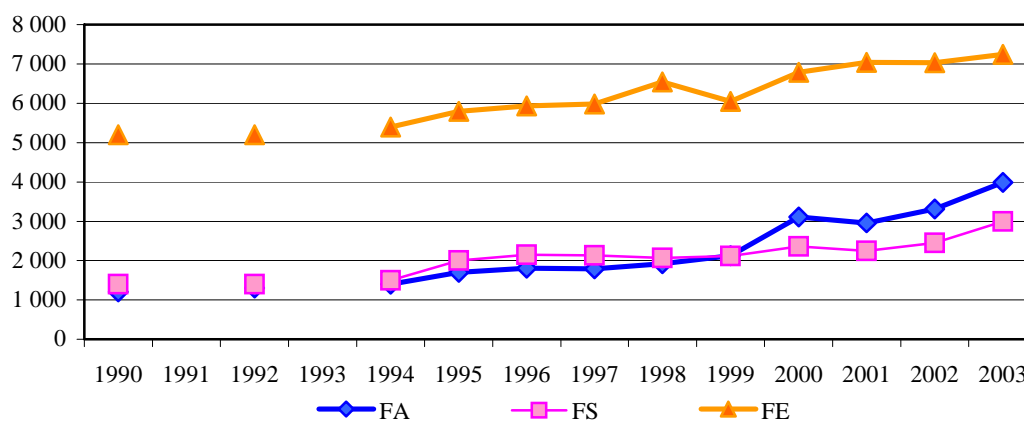
The largest 100 TNCs ranked by foreign assets had about \$3.4 trillion in global assets in 1993, of which about \$1.3 trillion was held outside their respective home countries. These firms accounted for an estimated one third of the combined outward FDI of their countries of origin. All were headquartered in developed countries and 85 per cent originated from the Triad. In 2003, 85 per cent of the top 100 TNCs were still headquartered in the Triad, but came from 19 countries instead of 12 in 1993.

important industries remained in the highest rankings. In the petroleum industry, for instance, Shell and Exxon, which were number one and two respectively in 1993, remained among the top 10 TNCs. Motor companies such as Ford, General Motors and Toyota – ranked seventh, fourth and sixth respectively – also remained among the top 10. Globally, 10 of the top 20 companies in 2003 were already in the top 20 in 1993.

While a number of new companies from the services sector assumed high rankings on the list over the decade, some companies in the more traditionally

Over the period, foreign assets owned by the largest TNCs multiplied by a factor of three, foreign sales more than doubled and foreign employment grew by 135 per cent (figure 1).

Figure 1. The 100 largest non-financial TNCs – Foreign assets, foreign sales and foreign employment, 1990–2003
(Billions of \$ and thousand of employees)



Source: UNCTAD/World Investment Report, 1992 to 2005.

B. The top 50 TNCs from developing economies

The largest 50 TNCs from developing economies had about \$293 billion in global assets in 1993, about a tenth of the global assets of the 50 largest TNCs (\$2.71 trillion). In 2003, the comparison remained similar and even decreased slightly, to 9 per cent. In terms of the size of total assets and total sales, as well as foreign assets and foreign sales, TNCs from developing countries were significantly smaller than the largest TNCs worldwide. However, the largest company in terms of total assets, Samsung Electronics (Republic of Korea), had total assets equivalent to those of Sony (Japan). The largest developing-country TNC, judging by the size of its foreign assets, was Cemex S.A. (Mexico), followed by Hutchinson Whampoa Ltd. (Hong Kong, China). These two companies were still in the top five of TNCs from developing economies in 2003.

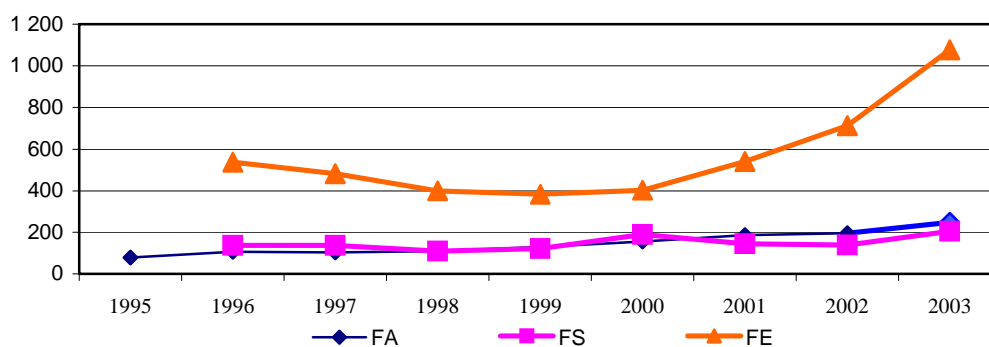
However, in terms of foreign assets, in 1993 none of these TNCs were ranked in the 100 world's largest. The first two companies from developing countries to make the list (in 1995) were a TNC from the Republic of Korea (Daewoo) and a petroleum company from the Bolivarian Republic of Venezuela (Petroleos de Venezuela). From 1993 to 2003, the largest TNCs from developing economies expanded their activities abroad. In 2003,

four of them were ranked among the world's largest.

In 1993, 10 TNCs were headquartered in Brazil and nine in the Republic of Korea. Overall, there were 33 TNCs from Asia and 17 from Latin America. Many new companies entered the top 50 during the period, but the number of host countries remained equal to 10 economies. However, during the period 1993–2003, Asia strengthened its dominance in the top 50, with 39 enterprises on the list. As for the world's largest TNCs, new companies in the telecommunications and utilities industries emerged among the top 50, but companies from the electrical/electronic and computers equipment sectors remained an important component of the list. The food products and the hotel industries, which were together a dominant sector in 1993, were still important elements of activity in 2003.

Since 2000, foreign employment by the largest TNCs from developing countries has risen significantly, reflecting the externalization of productive activities in labour-intensive industries (UNCTAD, 2006). Foreign assets also more than doubled between 1995 and 2003. On the other hand, foreign sales increased at a much slower pace (figure 2).

Figure 2. The top 50 TNCs based in developing economies – Foreign assets, foreign sales and foreign employment, 1995–2003
(Billions of \$ and thousand of employees)



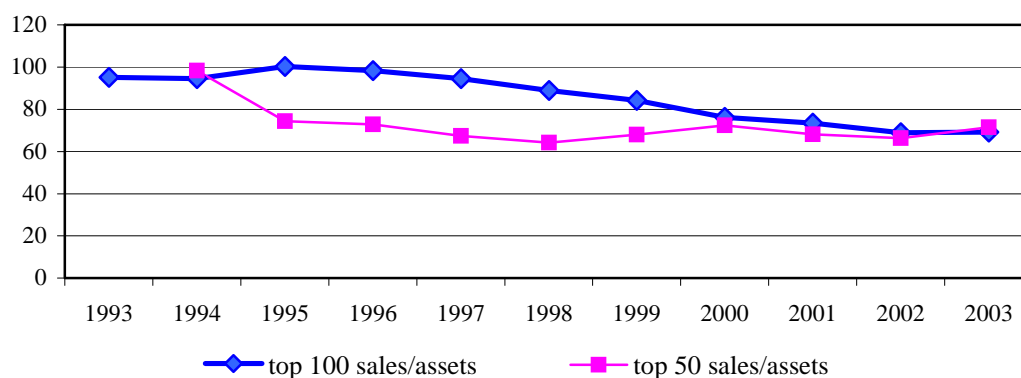
Source: UNCTAD/World Investment Report, 1992 to 2005.

C. Performance indicators

The sales-to-assets ratio shows how well a firm's assets are being put to use. If this ratio is high, the implication is that the company is using its assets more effectively to generate sales. This ratio for the top 100 largest TNCs decreased over the period 1993–2003. This is probably because operations became more capital-intensive and therefore more capital was

needed to generate the same amount of sales. This is also certainly a consequence of the shift towards more services industries in the top 100. The sales-to-assets ratio of the top 50 TNCs from developing economies is somewhat lower, but remained relatively stable over the period (figure 3).

Figure 3. The sales-to-assets ratio of the largest TNCs, 1993–2003

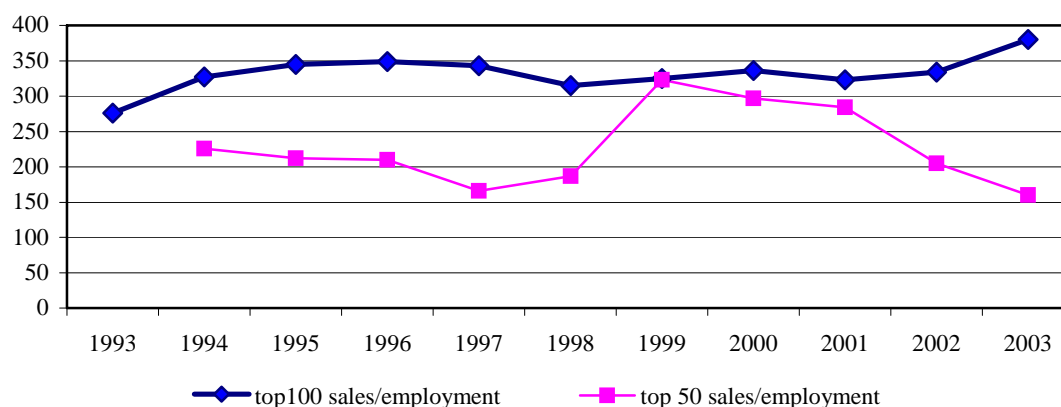


Source: UNCTAD/World Investment Report, 1992 to 2005.

The ratio of sales-to-employment shows the amount of sales per employee and provides a proxy for labour productivity. This ratio is increasing over time for the top 100 largest TNCs, as expected given the evolution of the sales-to-assets ratio. The efficiency rate of sales-to-employment is much lower in the top 50 companies and shows a peak in 1999,

which corresponds to a high level of economic activity in the world followed by a downturn in the following year (annex figure 1). However, the recovery of the world economy in 2002 and 2003 is not reflected in the revival of this ratio, which decreased to its lowest level since 1997 (figure 4).

Figure 4. The sales-to-employment ratio of the largest TNCs, 1993–2003
(Thousands of \$ per employee)



Source: UNCTAD/World Investment Report, 1995 to 2005.

The above ratios are highly dependent on the industry composition of the top 100 and top 50. These indicators differ across sectors of activity much more than between firms within the same sector. An analysis of 10 companies from the top 100 and top 50 for which information is available in 1993 and 2003 shows that the sales-to-employment ratios increased significantly (table 2). On the other hand, while the sales-to-asset ratio for the largest TNCs decreased, it increased significantly for the largest TNCs from developing economies, and is even higher than for the largest TNCs. This reflects the difference between manufacturing firms, which over

time have been using their assets more efficiently, and new firms, which joined the top 100 more recently and are more capital intensive.

A sectoral analysis is useful in looking at the evolution of these ratios over the period. The selected industries – motor vehicle and electronics – comparing the same set of companies in 1993 and 2003, show that the sales-to-employment ratio increased and the sales-to-assets ratio decreased (table 2). As expected, the motor vehicle industry had a much higher volume of assets and employees for the same amount of sales than the average value of the top companies.

Table 2. Performance ratios for selected TNCs and selected industries, 1993 and 2003

	Sales to Assets		Sales to employment (Thousands of \$ per employee)	
	1993	2003	1993	2003
Top 100, average value for 10 TNCs ¹	0.81	0.75	376	552
Top 50, average value for 10 TNCs ²	0.68	0.82	180	440
Motor vehicles (nine firms)	0.85	0.70	310	440
Electronics (five firms)	0.93	0.88	200	250

Source: UNCTAD/*World Investment Report*, 1995 and 2005.

¹ The 10 TNCs are: Royal Dutch Shell, IBM, General Motors, General Electric, Toyota, Ford Motor, Hitachi, Sony, Nestlé and Nissan Motor. Motor vehicles include in addition Volkswagen, Renault, Volvo, Honda and Fiat. Electronic equipment includes Hitachi, Sony, Siemens, Philips and Matsuhita.

² The 10 TNCs are: Cemex (Mexico), Hutchinson Whampoa (Hong Kong, China), Samsung (Republic of Korea), Jardine Holdings (Hong Kong, China), Petroleo Brasileiro (Brazil), Hyundai Motor (Republic of Korea), Keppel Corp. (Singapore), LG electronics (Republic of Korea), Acer (Taiwan Province of China) and Citic Pacific (Hong Kong, China).

IV. Measures of size and concentration

There is a large disparity in terms of size as measured by foreign assets between the largest firms at the top of the list and firms ranked in the second half. The foreign assets of the largest TNC, General Electric, were more than 10 times larger than the firm ranked 52 in 2003. A ranking by total assets would exhibit a similar result, with the exception of some German TNCs, which would rank in a higher position (Daimler/Chrysler, Volkswagen, Deutsche Post and Deutsche Telekom).

Ranking the companies by foreign sales gives a different result with petroleum TNCs at the four top positions in the list and three motor vehicles TNCs in the top 10 (table 3). As for assets, the largest TNC in terms of foreign sales (British Petroleum) is 10 times larger than the firm ranked 55. Ranking the companies by foreign employment gives yet another picture, with two retail and two food and beverages TNCs in the top 10 positions (table 3).

Table 3. Ranking the largest TNCs by foreign sales and foreign employment, 2003

Rank	Foreign Sales	Foreign Employment
1	British Petroleum Company	Wal-Mart Stores
2	ExxonMobil Corporation	Nestlé SA
3	Royal Dutch/Shell Group	Siemens AG
4	Total	McDonald's Corporation
5	Toyota Motor Corporation	Veolia Environment SA
6	Chevron Texaco Corporation	Koninklijke Ahold
7	Volkswagen Group	IBM
8	Siemens AG	Unilever
9	Ford Motor Company	Deutsche Post
10	IBM	Volkswagen Group

Source: UNCTAD/World Investment Report, 2005.

The list of the world's 100 largest TNCs can be used as a proxy to calculate international market concentration over the period 1993–2003. Similarly, the list of the top 50 TNCs from developing economies over the period 1995–2003 is also used to calculate the relative concentration ratios among these firms.

The most widely used indexes are the k-firms concentration ratio (CR_k) and the Herfindhal (or Herfindhal–Hirschman) Index (H) measured by the sum of market shares (\sum_i) of all n firms (box 2). We can apply these measures to the top 100 firms for the largest TNCs and the top 50 firms for developing economies.³

Casual observation reveals that the importance of the five and 10 largest TNCs among the world's 100 largest have remained relatively stable over time. In contrast, the

concentration ratio of the top-ranked firms in the 50 TNCs based in developing economies has evolved over time, resulting in more and more concentration (table 4).

Table 4. K firms concentration ratios, 1993–2003 (Percentage)

The largest 100 TNCs				
Year	1993	1995	1998	2003
CR ₅	28	21	26	24
CR ₁₀	41	33	40	37
CR ₂₀	66	59	60	52
The top 50 based in developing economies				
Year	1995	1998	2003	
CR ₅	40	35	47	
CR ₁₀	52	58	62	
CR ₂₀	74	86	78	

Source: UNCTAD.

Box 2. How to measure market concentration of firms

In order to judge the relative amount of concentration in any industry, economists commonly use two measures: the concentration ratio and the Herfindahl (or Herfindahl–Hirschman) Index.

Concentration ratio

The concentration ratio is expressed by the term CR_k , which stands for the percentage of the market sector controlled by the biggest k firms. For example, $CR_5 = 70$ per cent would indicate that the top five firms control 70 per cent of a market. The problem with this measure is that CR_5 does not indicate what the relative size of the five largest companies is. It may be that CR_5 means that one company controls 50 per cent of the market, while the others each have 5 per cent. Usually, k firms' concentration ratios look at the top five, top 10 and more, if useful.

Herfindahl (or Herfindahl-Hirschman) Index

The H index is a far more precise tool for measuring concentration. It is obtained by squaring the market-share of each of the players, and then adding up those squares

$$\text{Formula}$$
$$H = \sum_{i=1}^n (\Pi_i)^2$$

where Π is the market share of every firm in the market, and n is the number of firms.

The H Index has a value smaller than one, except in the case of a monopoly. It gives added weight to the biggest companies. The higher the index, the more concentration and (within limits) the less open market competition. A small index indicates a competitive industry with no dominant players. In order to get a feel for the meaning of the index, it is often useful to look at the inverse of the index. If all firms have an equal share, the reciprocal of the index shows the number of firms in the industry. When firms have unequal shares, the reciprocal of the index indicates the “equivalent” number of firms in the industry.

Source: UNCTAD.

To compare the two sets of data, the H Index is calculated for the top 50 companies of both groups in 2003 and confirms that the level of concentration is much higher for firms based in developing economies than for the world's largest TNCs (table 5).

This H measure makes it possible to calculate a “number equivalent” of companies. ($N^* = 1/H$ where N^* is the

potential number of companies of the same size which could exist for a given degree of concentration.) The number equivalent of the largest TNCs is more than twice the number equivalent of firms from developing economies. This result confirms the higher level of concentration of assets within a few companies for developing economies.

Table 5. H Index and number equivalent, 2003

	CR ₅	H Index	Number equivalent
The largest 50 TNCs	31%	0.0329	30
The top 50 TNCs in developing economies	47%	0.0795	13

Source: UNCTAD.

V. The Transnationality Index from 1993 to 2003

Transnationalization focuses on the intensity of foreign activities in relation to domestic or global activities. The Transnationality Index (TNI) published by UNCTAD is a composite of three ratios: foreign assets–total assets, foreign sales–total sales and foreign employment–total employment. The conceptual framework underlying this index helps to assess the degree to which the activities and interests of companies are embedded in their home country or host countries.⁴

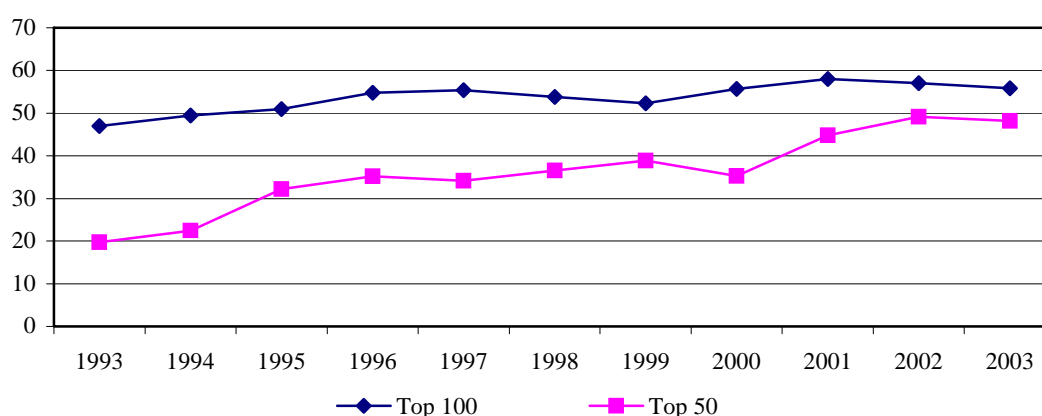
A high TNI value may raise questions about a home country's locational advantages (a small market, for example) or indicate strong international competitiveness on the part of the home country firms. A drawback of this index is that it does not take into account the size of the home country, nor does it distinguish between companies whose activities are concentrated in a few foreign countries and companies whose activities are spread across numerous host countries.

A. TNI values over the period 1993–2003

The average TNI is higher for the largest 100 non-financial TNCs, but over the recent past the index for the top 50 based in developing economies has increased dramatically and is catching up with the world's largest TNCs (figure 5). This strong increase in the TNI for the top 50 since 2001 even occurred against a backdrop of a decline in almost all other indicators – foreign as well as total – in

TNC activities. The average TNI for the top 100 TNCs decreased in 2002 and 2003, possibly reflecting the fact that TNCs are focusing more on their domestic markets at a time of worldwide economic difficulties. It is notable, however, that for those companies at the top of the 100 largest list, the TNI recovered in 2003, a fact that the average TNI for the whole group does not reflect (box 3).

Figure 5. Average TNI, 1993–2003



Source: UNCTAD/World Investment Report, 1995 to 2005.

Note: The average value is the sum of the TNI values of all the companies, divided by the total number of companies.

Box 3. How to measure the average TNI?

TNI is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment. The simple average value is the sum of the TNI values of all companies, divided by the total number of companies. It shows a slight decline for all TNCs in 2003 (figure 5).

Another approach would be to consider weighting the TNI by the size of each company in the list. This average value would reflect the behaviour of the largest companies, which tend to be more transnationalized as shown below (box table 3.1). The first 10 firms show a higher TNI value than the next 10 or the last 10 in the top 100. This relationship between the size and the TNI does not seem to exist for TNCs from developing economies.

Box table 3.1. Relationship between the size and the TNI value

	World's Largest TNCs Average TNI	TNCs from developing economies Average TNI
Top 10 firms	59.7	46.9
Next 10 firms	56.3	46.9
Bottom 10 firms	52.6	47.8

Source: UNCTAD.

Ranking the TNCs by the TNI value shows a strong presence of TNCs from smaller economies among the top in the 100 largest, suggesting that firms in smaller European countries possess a higher degree of transnationality to stay competitive and compensate for smaller home markets. In 1993, four TNCs from Switzerland in four different sectors of activity (Nestlé, Brown Boveri, Ciba and Holderbank) were among the top 10 firms ranked by their TNI value. In 2003, the origin of the most transnationalized firms as measured by the TNI is more diversified (three firms from the United Kingdom and firms from Australia and Canada), but still includes a number of smaller economies.

In terms of sector, the media industry is represented by three firms while other TNCs are in a wide range of sectors of activity. The average TNI of these

companies has increased from 86.8 in 1993 to 88.7 in 1998 and has since remained relatively stable (table 6).

Table 6. Top 10 most transnationalized firms by country of origin, 1993, 1998 and 2003

Country	1993	1998	2003
Australia	0	0	1
Belgium	1	0	0
Canada	1	2	2
France	1	0	1
Ireland	0	0	1
Netherlands	1	1	1
Sweden	1	2	0
Switzerland	4	3	1
United Kingdom	1	2	3
Average TNI	86.8	88.7	88.4

Source: UNCTAD/World Investment Report, 1995 to 2005.

B. Evolution by region and country

In 1993, all of the world's 100 largest TNCs were based in developed countries: 37 in countries that are today members of the European Union, 32 in the United States, 21 in Japan, and the remaining 10 in Australia, Canada, New Zealand and Switzerland (table 7). Over time, the number of TNCs originating from the EU has increased and represents more than 50 per cent of the entire top 100 TNCs in 2003. There has been a dramatic decrease in the number of firms originating from Japan.

While TNCs from the largest source countries – France, Germany, Japan, the United Kingdom and the United States – have the largest absolute value of assets abroad, firms from smaller countries, such as the Netherlands, Sweden and Switzerland, have a larger share of their assets abroad. Japanese and United States firms are on average among the least internationalized of the top 100, with average TNI values significantly lower than those of European TNCs (table 7). The average TNI has increased in all regions and remains particularly high in small economies.

Table 7. Country composition of the world's top 100 TNCs, transnationality index and number of entries, 1993, 1998 and 2003

Country	Average TNI			Number of entries		
	1993	1998	2003	1993	1998	2003
European Union	56.2	61.5	59.3	37	47	53
France	54.0	58.8	60.9	9	12	15
Germany	45.7	51.4	47.3	11	12	14
United Kingdom	65.6	75.7	69.2	9	10	10
Netherlands	68.9	73.1	73.9	3	5	4
Italy	35.6	48.2	45.1	3	4	3
Sweden	73.8	72.8	73.8	3	4	1
Finland	-	72.8	69.9	-	1	2
Spain	-	29.9	45.5	-	1	3
Belgium	88.3	-	-	1	-	-
Ireland	-	-	95.2	-	-	1
North America	40.3	46.2	48.3	35	29	26
United States	36.7	41.6	44.9	32	26	24
Canada	79.2	86.7	91.2	3	3	2
Japan	33.0	38.7	42.8	21	17	9
Remaining countries	72.7	73.8	64.0	7	8	12
Switzerland	84.6	88.1	74.6	5	4	4
Norway	-	-	50.6	-	-	2
Australia	28.7	69.5	81.1	1	3	2
New Zealand	57.2	-	-	1	-	-
Hong Kong (China)	-	-	71.4	-	-	1
Republic of Korea	-	-	44.1	-	-	1
Malaysia	-	-	25.7	-	-	1
Singapore	-	-	65.3	-	-	1
Bolivarian Republic of Venezuela	-	29.7	-	-	1	-
Total of all 100 listed TNCs	47.0	54.0	55.8	100	100	100

Source: UNCTAD database.

Note: In the aggregate for the European Union, all listed TNCs with dual nationality are only counted once.

Among developing countries TNCs, in the early 1990s the Republic of Korea had the largest number of TNCs in the list; the largest judging by the size of its foreign assets was Daewoo. The largest outward investing economies in Asia and Latin America were home to most of the top 50 TNCs. By 2003, Asia had strengthened its dominance and the importance of TNCs from Latin America and the Caribbean had significantly diminished. Overall, the number of countries represented in the top

50, after having increased, has in fact decreased by 30 per cent compared to 1998 (table 8).

From 1993 to 2003, the composition of the top 50 TNCs from developing economies also experienced an increase in the TNI for several companies (box 4) and on average for all the regions. The value is also much higher in South Africa, but this index has more than doubled in Asia and in Latin America (table 8).

Table 8. Composition of the top 50 TNCs by region and by TNI, number of entries and number of countries, 1993, 1998 and 2003

Region	Average TNI			Number of entries			Number of countries		
	1993	1998	2003	1993	1998	2003	1993	1998	2003
Africa (South Africa)	0.0	45.0	52.1	0	3	4	0	1	1
Asia	20.8	40.9	48.6	33	33	39	7	8	7
Latin America	17.7	24.6	43.7	17	14	7	3	5	2
Total of all 50 listed TNCs	19.7	36.6	48.2	50	50	50	10	14	10

Source: UNCTAD database.

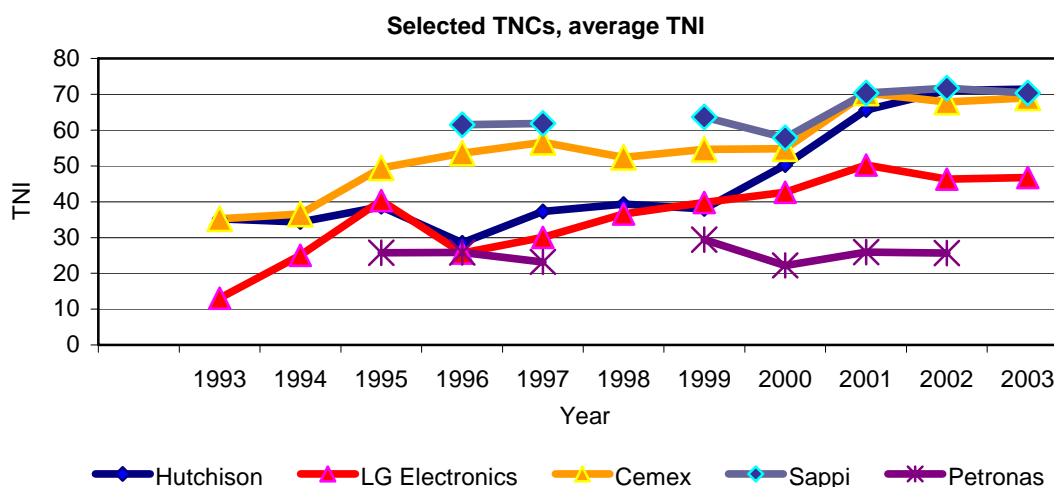
Box 4. Selected TNCs from developing economies

Hutchison Whampoa Ltd. (Hong Kong, China), the first company in terms of foreign assets in the top 50 list, is a large diversified company. It is the world's leading port investor, developer and operator, with 39 ports across nine markets in Asia, South America, West Asia and Africa. With the recent acquisition of Marionnaud from France, it is the largest health and beauty retailer in the world, as well as an international corporation in mobile telecommunications and a large hotels developer and management company. The group also has interests in transportation, energy and water plants. Hutchison dates to the 1800s and has always been a Hong Kong, China-based TNC. In 2004, reported consolidated turnover was approximately \$23 billion, with operations in 52 countries and about 200,000 employees worldwide. Between 1993 and 2003, its total assets multiplied by a factor of 10 and the TNI value increased from 35.3 to 71.4 (box figure 4.1).

LG Electronics, Inc. of the Republic of Korea was established in 1958 as a pioneer in that country's consumer electronics market under the name of GoldStar. It set up its first European Union sales affiliate in Germany in 1980 and its first plant in the United States in 1982. The company changed its name to LG Electronics in 1997.

In 2004, total consolidated sales amounted to \$38 billion, with more than 66,000 employees in 39 countries. From 1993 to 2003, its total assets multiplied by a factor of 2.5 and the TNI value increased from 13.0 to 46.8 (box figure 4.1).

/...

Box 4. (concluded)**Box figure 4.1. The TNI value of selected TNCs from developing economies, 1993–2003**

Cemex (Mexico) is a leading global producer and marketer of quality cement and ready-mix concrete products. Founded in northern Mexico in 1906 as the Cementos Hidalgo plant, it became Mexico's largest cement producer in 1990 and, after the acquisition and integration of Spain's two largest cement companies in 1992, one of the world's largest producers. During the 1990s, Cemex acquired interests in cement producers in Asia and Latin America, and in 2005 acquired the United Kingdom-based RMC group to become one of the world's largest building materials companies. In 2004, its consolidated net sales were \$8 billion, with operations in more than 50 countries. Mexico represented only 34 per cent of its sales revenues, which also originated from the United States (22 per cent), Spain (16 per cent), Latin America, North Africa and Asia. From 1993 to 2003, total assets doubled and the TNI value of the company increased from 35 to 69 (box figure 4.1).

Sappi, Ltd. (South Africa) is the largest African TNC and the world's biggest producer of pulp, coated fine paper and packaging. South African Pulp and Paper Industries Limited registered as a company in 1936 and in the 1960s became one of the leading African companies in this sector. In the 1980s, with the creation of Sappi International and the acquisition of Usulu Pulp Company in Swaziland, it became a truly international company. The expansion in the 1990s focused on Europe (acquisition of Hannover Papier, Germany; and KNP Leykam, United Kingdom) and the United States (acquisition of S.D. Warren). In October 2004, Sappi announced that it had taken a 34 per cent equity stake in the Chinese joint venture company Jiangxi Chenming. In 2004, Sappi's sales were \$4.7 billion, with production facilities in Europe, North America and Southern Africa, and some 16,000 employees. From 1996 to 2003 its TNI value has increased from 61.5 to 70.4 (box figure 4.1)

Petronas, short for PetroliaM Nasional Bhd, is Malaysia's national petroleum corporation, established in 1974. Wholly owned by the Government, the corporation is vested with the entire oil and gas resources of Malaysia. Since its incorporation, the company has grown to be an integrated international oil and gas company, with business interests in 31 countries. By March 2005, the Petronas Group comprised 101 wholly owned subsidiaries, 19 partly owned outfits and 57 associated companies. Ranked third in 2003, the group appeared in the top 50 in 1996. However, its TNI value has remained the same over the period, averaging 25.5, one of the lowest values of the top 50 and far lower than the average value (61.8) of its counterparts from the top 100 (box figure 4.1).

Source: Company websites.

C. Shifts across sectors

The rapid increase in FDI throughout the world has been accompanied by a pronounced change in its sectoral composition, from the primary sector and resource-based manufacturing towards services and technology-intensive manufacturing. The wave of liberalization has had a particularly marked effect on services FDI (telecommunications, utilities, air transportation).

In 1993, three industries (electronics and computers, motor vehicles, and petroleum and mining) accounted for almost 50 per cent of the 100 largest TNCs, followed by the food and tobacco industry. Among the top 100 TNCs, those in electronics and computers had the largest assets abroad in 1993. During the

early 1990s, these companies, pushed by rapidly changing technologies, competition and increasing market segmentation, undertook either large greenfield investments or major acquisitions. However, the value of their foreign assets increased during this period, but not as fast as foreign assets of companies in the telecom, utilities or automobile sectors.

In 2003, the picture had completely changed, with the same three industries accounting only for 30 per cent, followed by the telecom, pharmaceutical and utilities industries (table 9). All services together account for nearly 25 per cent of the largest TNCs, and this sector has increased in terms of representation by 60 per cent for the past five years.

Table 9. Industry composition of the top 100 TNCs, 1993, 1998 and 2003

Industry ranked by number of entries in 2003	Number of entries			Average TNI per industry (Percentage)		
	1993	1998	2003	1993	1998	2003
Petroleum exploration/refining/distribution and mining	12	11	13	50.8	52.7	58.4
Electronics/electrical equipment/computers	21	17	11	44.4	52.6	50.8
Motor vehicles and parts	13	14	11	37.6	49.0	50.0
Telecom	2	6	9	41.4	40.4	49.1
Pharmaceuticals	3	8	8	63.4	64.3	57.2
Utilities	-	3	8	-	26.0	49.9
Retailing	-	3	5	-	52.0	50.9
Food/beverages/tobacco	11	10	4	53.4	74.3	65.8
Trading	7	4	4	29.3	24.6	36.8
Chemicals	7	8	3	43.6	58.5	52.2
Metals	7	2	3	41.8	45.5	58.6
Media	1	2	3	91.3	86.7	83.6
Machinery/engineering	1	-	1	44.2	-	51.9
Construction, building materials	3	1	1	71.9	90.5	95.2
Diversified	2	6	5	33.6	38.0	65.2
Other	10	5	11	49.0	69.9	55.0
Total	100	100	100	47.0	54.0	58.7

Source: UNCTAD database.

Among the 21 firms in the electronics/electrical equipment in 1993, 11 are still ranked in the top 100. Two other TNCs (Motorola and Alcatel) are still

on the list but have been reclassified as belonging to the telecom industry. Four TNCs no longer rank in the top 100 (but are ranked in the next 30). Only four

companies have disappeared or do not exist under their original name. Also, in 1993, seven of the top TNCs in electronics and computers were Japanese. In 2003, only three were, with three from the United States and other firms from Germany, the Netherlands and the Republic of Korea.

In the food products and tobacco industries (which had 11 entries in 1993), many firms still existed in 2003, but were too small in terms of foreign assets compared with other TNCs to appear in the top 100. Two of three tobacco firms were still in the top 100 (BAT and Philip Morris, renamed Altria) and one of the largest, Unilever was classified as a diversified company.

Companies in the oil industry – typically prominent among the top 100 TNCs – grew slowly due to falling demand and declining oil prices at least until the early part of this decade, and their ranking generally declined. Traditionally, these companies have held a large share of their assets abroad, in response to the dispersed geographical location of oil deposits and also reflecting the capital intensity of this industry. The average TNI for the industry has also increased significantly over the past 10 years.

The largest automobile manufacturers from the United States, Japan, Germany, France and Sweden were all ranked among the first half of the largest TNCs in 1993. Today, their importance is even larger, and eight of them are ranked among the top 30. They maintained their ranking and increased the average TNI value of the sector, despite rationalizations and cost-cutting measures that resulted in a certain decrease of assets and employment.

In 1993, among the 10 TNCs in chemicals and pharmaceuticals, seven firms were European and three were based

in the United States. Japanese companies in these industries did not rank among the top 100, despite significant acquisitions made in the United States and Europe. In 2003, the situation was unchanged, with seven firms from Europe and six from the United States. This industry is one of the few to have experienced a decrease in the average TNI value over the recent past due to consolidation of activities in the home market.

The top 50 TNCs from developing countries span a completely different range of activities. Although the electronics sector remains one of the most important industries, the three most important sectors taken together (electronics, food, beverages and tobacco, and diversified activities) accounted for 50 per cent of all TNCs in 1993 and only 40 per cent in 2003 (table 10). The strength of food, beverages and tobacco was based more on home markets in the early 1990s, led by Brazilian TNCs and to a lesser extent the Philippines. By 2003, the food industry had become more internationalized and firms originated mainly from members of the Association of South-East Asian Nations (ASEAN), specifically Malaysia, Singapore, Thailand and the Philippines. All the TNCs in electronics and computers originated from Asia and mainly from the Republic of Korea and Taiwan Province of China.

Similar to their counterparts from developed countries, most firms and almost all sectors of activity have experienced a significant increase in the average TNI value over the past 10 years or so. Since 1993, in two of the most significant sectors of activity, the average TNI has been multiplied by a factor of almost four for the food and beverages industry, and almost two for the electronics and electrical equipment industry.

Table 10. Industry composition of the top 50 TNCs, 1993, 1998 and 2003

Industry ranked by number of entries in 2003	Number of entries			Average TNI		
	1993	1998	2003	1993	1998	2003
Electronics/electrical equipment/computers	7	4	11	28.1	39.3	52.3
Petroleum exploration/refining/distribution and mining	3	5	7	3.0	18.7	26.1
Food/beverages/tobacco	7	8	4	15.3	47.0	59.1
Construction, building materials	4	6	4	23.2	30.2	52.1
Transports	1	3	3	23.2	50.5	47.5
Telecommunications	-	-	3	-	-	55.1
Hotels and Tourism	3	1	3	33.0	35.4	74.7
Metals	3	3	2	8.2	27.2	51.1
Chemicals	1	1	1	11.5	7.7	36.7
Paper	2	1	1	26.0	63.8	70.4
Trading	1	3	-	46.7	38.6	-
Diversified	12	11	4	20.0	40.1	55.0
Other	6	4	7	15.0	31.3	35.5
Total/average	50	50	50	19.7	36.6	48.2

Source: UNCTAD database.

VI. How transnational are TNCs?

The degree of international involvement of a firm can be measured in various ways. Transnationality is a function of the extent to which a firm's activities are located abroad.

- (a) From the operations perspective, key dimensions include the intensity or relative importance of a TNC's foreign operations, as measured by various variables: the geographical spread of its operations, the mode of foreign operations and the degree of integration of the production process across locations.
- (b) From the stakeholders' perspective, key dimensions include the nationality composition of managers or board members, the nationality composition of shareholders, the international mobility and international experience of managers,

and the composition of the labour force by nationality.

- (c) From the perspective of the spatial organization of management, key dimensions include the extent and spread of the location of regional headquarters in host countries, and the legal nationality(ies) of a TNC.

Given the range of perspectives and dimensions that can be considered for each, the degree of transnationality of a TNC cannot be fully captured by a single synthetic measure — it requires a variety of indicators. Some of these can be expressed as indices calculated or estimated on the basis of empirical data; others may consist of empirical data not expressed as indices; and still others may be expressed in qualitative rather than quantitative form.

A. The geographical extensity dimension

One aspect of transnationality from the operations perspective, not included in UNCTAD's TNI, is the intensity of foreign operations according to the number of foreign affiliates. The "Internationalization Index (II)" — the ratio of the number of foreign to the total number of affiliates — shows that, on average, more than 65 per cent of the affiliates of the top 100 TNCs are located abroad. The information on foreign affiliates by TNCs' home countries and industries shows that the II, like the TNI, is the highest for the top TNCs from small countries (such as Belgium, Finland, Ireland and Switzerland) and for machinery and equipment, construction and building materials, and chemicals and pharmaceuticals industries (annex tables 2 and 3). The TNI, as well as the II, gives an idea of the degree of embeddedness and interests of a company in the home country versus abroad. The level and pattern of trade can also be affected by the intensity

of foreign operations, i.e. by the share of business activities abroad.

Another aspect of transnationality from the operations perspective is the geographic extensiveness or the degree to which a company's operations and interests are spread in several countries or concentrated in a few. The relevance of this concept of transnationality has several aspects: the spread of operations into many countries affects the strategic stance of the company; it also affects its ability to develop and spread knowledge and innovation and its strategies towards labour or Governments. The indicators used for this concept are the number of foreign countries in which the TNC has affiliates and the almost identical Network Spread Index (NSI) measured as the ratio of the number of host economies over the number of all potential host economies (number of economies which were in receipt of inward

FDI).⁵ On average, the top TNCs have affiliates in 39 foreign countries and an NSI of almost 18 percent. Ranking the TNCs by the number of host countries shows that European countries rank high, with 14 companies in the top 20 and an average of 71 host countries (annex table 8).

The II shows that, on average, more than 50 per cent of the affiliates of the top 50 developing country TNCs are located abroad (annex tables 4 and 5). This index is the highest for TNCs from Hong Kong (China), the Republic of Korea and Singapore, and for the electrical/electronic industry. On average, the top 50 TNCs have affiliates in 13 foreign countries, which is much less than in the case of the top 100 TNCs, though the East Asian firms at the top of the list come close to the

average for their counterparts from developed countries (with an average of 36 host economies).

A correlation analysis (Spearman rank correlation) of the different measures of transnationality yields a rather low rank-correlation coefficient (table 11). The highest rank correlation is between the II and NSI values. These indicators of the spread of TNCs' operations are derived using the number of affiliates and number of host countries, but do not reflect the size of activities in each country, mainly because no reliable data exist on the latter. These indices underline the fact that TNCs can transnationalize considerably without having to spread their foreign assets extensively.

Table 11. Rank correlations among the transnationality indices

	Foreign assets	TNI	II	NSI
Foreign assets	1			
TNI	-0.055	1		
II	-0.049	0.281	1	
NSI	0.117	0.087	0.461	1

Source: UNCTAD.

Note: The TNI is a composite of three ratios – foreign assets/total assets, foreign sales/total sales and foreign employment/total employment. It is an indication of foreign activities relative to total activities.

The II is the ratio of the number of foreign affiliates to total affiliates.

The NSI is the number of host economies in which a TNC is located to all potential host economies.

One way to take into account the spread of the operations of a company is to consider the number of affiliates in each country – ideally, it should be the amount of sales by country – as an indicator of the activities of a company in each host country. The concentration spread of activities – in our case the number of affiliates – also reflects the magnitude of internationalization. A high degree of concentration in a few countries may reflect a different strategy than equal spread among foreign countries.

In this publication, we define a Transnationality Spread Index (TSI) to

take into account the number of foreign affiliates and the magnitude of diversification of the activities. It is an evolution of the NSI:

$TSI = II \times \text{number equivalent of host countries (NEC)}$.

The NEC is the inverse of the level of concentration of foreign affiliates in n countries measured by the equivalent of the Herfindhal index H , ($NEC = 1/H$).

$H = \text{SUM } (q_i)^2$ where q_i is the number of foreign affiliates in country i divided

by the total number of foreign affiliates, $i = 1, n$.

An analysis of the top 100 TNCs shows that ranking the firms by TSI gives a more diversified group of TNCs (annex table 8). Firms from the United States and Germany dominate the first quartile of the list, with 10 and seven entries respectively. By sector of activity, the pharmaceutical industry dominates the first quartile with

B. A graphical approach to transnationality

As mentioned above, the use of individual indicators to measure corporate internationalization is more or less appropriate for a limited task. Composite indicators are generally more reliable to take into account several variables combining structural and performance indicators. In order to take into account the TNI, the II, the NSI and the NEC, a multidimensional graph could be used to plot the value of these measures on four axes.

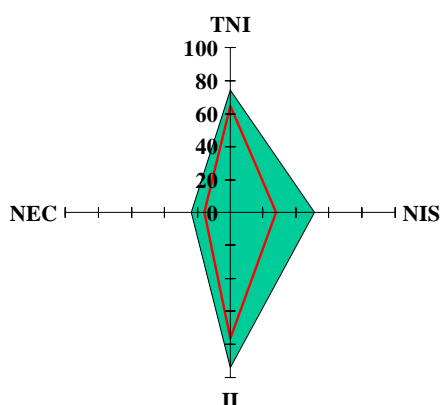
The surface of the quadrilateral would give a measure of the most transnational firm based on multidimensional aspects. The following examples show the results of this analysis. The most transnational firm according to this measure is the Swiss food and beverages firm Nestlé, followed by two German firms, Deutsche Post and BASF. German firms as well as firms from the

six entries. As expected, the results of ranking TNCs by this TSI index give a completely different picture than ranking of companies by the size of their foreign assets or even the TNI value. Here, the size of the company is not a determinant factor in the transnationality of its operations. The index gives a picture that relies more on the geographic spread of the activities of a company.

United States are well represented at the top of the list. Firms in the pharmaceuticals industry dominate the top of the list of the most transnational TNCs with six entries (table 12).

When looking at the top 50 companies ranked on multidimensional criteria, it is possible to calculate average values for the components and therefore determine an average firm for the sample. This average firm is represented on each graph by a red line and shows how Nestlé is more internationalized in all components. On the contrary, for Deutsche Post, it shows how the German TNC deviates from an average firm in the sample for the TNI value. The larger the value of NEC, the more diversified is the choice of locations by the firm. In this case, Deutsche Post does far better than the average firm.⁶

NESTLÉ



DEUTSCHE POST

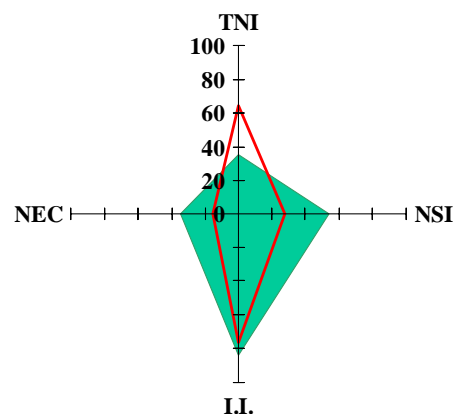


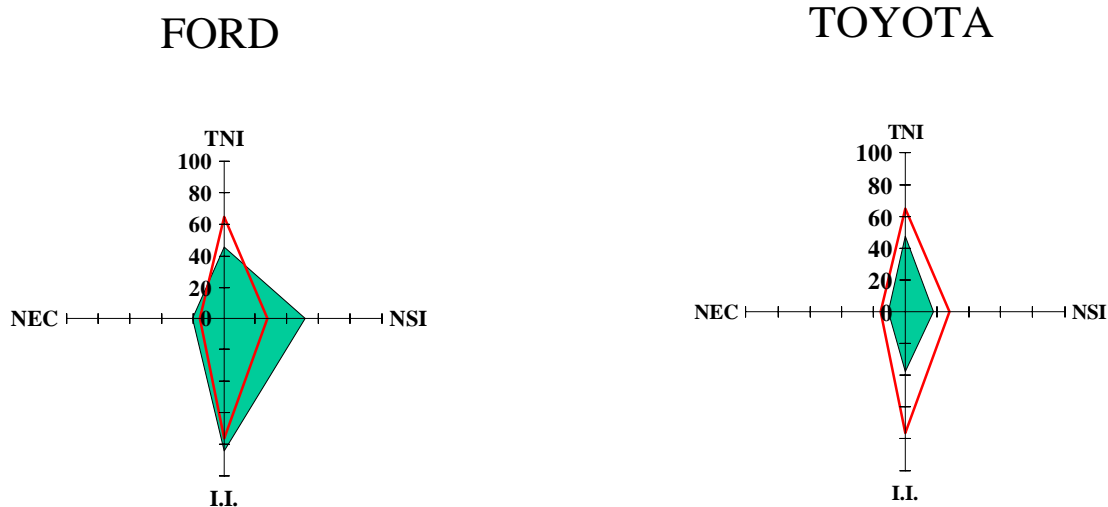
Table 12. The 50 most transnational TNCs, ranked by the surface of the quadrilateral calculated with four measures of transnationality

Rank	TNC	Home country	Industry	TNI	NSI	II	NEC	Surface	Rank by assets
1	Nestlé	Switzerland	Food & Beverages	74.1	51.1	94.0	23.8	6 292	30
2	Deutsche Post	Germany	Transport & Storage	34.9	53.7	83.9	34.6	5 246	42
3	BASF	Germany	Chemicals	54.9	39.0	79.5	38.0	5 172	48
4	Ford Motor	United States	Motor vehicles	45.5	51.8	84.1	20.2	4 666	3
5	Siemens	Germany	Electrical/Electronics	65.3	44.2	74.5	20.5	4 522	17
6	Nokia	Finland	Telecommunications	71.2	28.4	95.2	24.7	4 418	69
7	IBM	United States	Electrical/Electronics	52.6	33.2	92.1	23.1	4 070	31
8	Shell	UK/Netherlands	Petroleum	71.8	49.0	48.9	16.8	3 967	7
9	Norvatis	Switzerland	Pharmaceuticals	57.0	29.5	90.6	19.4	3 607	50
10	Roche Group	Switzerland	Pharmaceuticals	91.5	24.2	87.4	15.6	3 560	27
11	Bayer	Germany	Pharmaceuticals	45.0	35.3	73.8	21.8	3 388	64
12	Total	France	Petroleum	74.1	33.2	69.6	14.0	3 387	9
13	Volvo	Sweden	Motor vehicles	73.5	27.4	73.0	17.9	3 316	62
14	Unilever	UK/Netherlands	Diversified	64.5	43.7	60.5	9.3	3 312	43
15	Abbott Laboratories	United States	Pharmaceuticals	47.3	27.4	83.7	21.7	3 215	80
16	Sanofi-Aventis	France	Pharmaceuticals	59.3	32.1	87.0	10.9	3 146	39
17	Alcan	Canada	Metal & Metal products	84.4	25.3	93.3	9.7	3 106	54
18	Exxon-Mobil	United States	Petroleum	66.1	26.3	74.2	17.7	3 085	6
19	Philips	Netherlands	Electrical/Electronics	85.8	25.8	69.6	13.9	3 084	44
20	Altria Group	United States	Tobacco	36.0	28.4	83.8	22.9	3 072	52
21	LMVH	France	Textile and Leather	60.4	24.7	75.9	18.3	2 933	78
22	Procter & Gamble	United States	Diversified	58.3	25.8	80.9	14.5	2 804	38
23	GlaxoSmithKline	United Kingdom	Pharmaceuticals	68.0	24.7	69.0	16.1	2 798	56
24	Robert Bosch	Germany	Machinery & Equipment	51.9	19.5	72.5	25.3	2 784	96
25	Lafarge	France	Non-metallic products	80.6	26.8	79.6	7.0	2 710	46
26	Pinault-Printemps	France	Wholesale trade	56.3	28.4	63.9	16.2	2 682	63
27	Publicis	France	Business services	82.3	23.2	86.3	8.5	2 667	88
28	United Technology	United States	Transport Equipment	54.4	28.4	81.8	8.6	2 520	71
29	BAT	United Kingdom	Tobacco	66.2	28.9	68.3	8.0	2 486	67
30	Alcoa	United States	Metal & Metal products	46.1	23.7	86.3	13.6	2 467	87
31	Metro AG	Germany	Retail	44.1	25.8	73.1	15.5	2 421	83
32	Dupond Nemours	United States	Chemicals	49.0	20.5	72.8	18.7	2 388	75
33	France Telecom	France	Telecommunications	45.5	25.3	55.9	21.4	2 366	10
34	Pfizer	United States	Pharmaceuticals	47.5	19.5	79.4	17.5	2 345	23
35	CHR	Ireland	Lumber & Building materials	95.2	20.5	88.5	4.8	2 325	86
36	Stora Enso	Finland	Paper	68.6	20.5	80.4	10.7	2 324	74
37	Hewlett Packard	United States	Electrical/Electronics	51.5	22.6	83.3	10.8	2 253	40
38	Cadbury Schweppes	United Kingdom	Food & Beverages	87.0	15.3	80.0	11.3	2 218	92
39	Saint Gobain	France	Non-metallic products	70.8	24.2	77.4	5.6	2 208	49
40	BAE Systems	United Kingdom	Transport Equipment	73.5	25.3	82.0	3.1	2 205	95
41	Fiat	Italy	Motor vehicles	58.3	21.0	77.8	11.4	2 204	29
42	Motorola	United States	Telecommunications	53.6	19.5	63.4	18.2	2 203	97
43	Suez	France	Utilities	74.7	23.2	63.9	7.9	2 151	11
44	Sony	Japan	Electrical/Electronics	56.6	22.6	78.9	8.8	2 130	33
45	Matsushiba	Japan	Electrical/Electronics	46.8	24.2	54.4	17.2	2 094	81
46	BP	United Kingdom	Petroleum	82.1	15.3	51.3	15.6	2 058	5
47	Holcim	Switzerland	Non-metallic products	75.3	14.2	69.6	13.9	2 035	91
48	Honda	Japan	Motor vehicles	72.0	15.3	76.7	11.1	1 960	19
49	Thyssenkrupp	Germany	Metal & Metal products	45.2	24.7	58.2	12.5	1 925	79
50	Hutchinson Whampao	Hong Kong (China)	Diversified	71.4	21.0	80.9	3.9	1 896	16
Average value				64.4	27.7	76.2	15.5	3 037	

Source: UNCTAD.

In the automobile industry, a comparison of TNCs shows that for the same degree of TNI, Ford Motor Company is far more internationalized than Toyota

(box 5). Also, the graph for Toyota shows that the company is less transnationalized than the average firm in all components.



Box 5. The motor vehicle industry: Ford and Toyota, two distinct expansion strategies

Ford Motor Company (United States) celebrated its 100th anniversary in June 2003. It has major production facilities in Europe (United Kingdom, Germany, Belgium, Spain, Sweden and several other countries), in the Americas (Canada, Mexico, Brazil, Argentina) in Australia and in South Africa. It has established affiliates in 98 countries.

Ford Motor has operated in Europe from almost the very start of its history and before World War II, production centres in France, Germany and the United Kingdom were producing their own separate model lines. In the 1960s, Ford Europe was restructured and rationalization of model ranges was introduced in all countries. In the domestic market, Ford Motor expanded through acquisitions of other companies (Lincoln and Mercury). At the end of the 1980s, Ford Motor expanded its international network through the acquisition of European automobile companies. In 1987, it acquired 75 per cent interest in Aston Martin and, in 1989, a minority control of 15 per cent in Jaguar. In the 1990s, the Premium Automotive Group was created as a section of Ford Motor and included Aston Martin (100 per cent since 1994), Jaguar, Land Rover (purchased from BMW in 2000) and Volvo (buyout in 1998). Ford Motor also owns a 33 per cent control stake in Mazda from Japan and has developed a joint venture project with Mahindra in India.

Toyota Motor Corporation (Japan) was established in 1937 and has production bases in 26 countries and affiliates in 34 countries. Production of vehicles outside Japan began in 1959 at a small plant in Brazil, and continued with a growing network of overseas plants in Latin America and Asia.

In contrast to Ford's internationalization process, Toyota started by expanding abroad in developing countries. The first plant in the United States was not established until 1988 and in Europe in 1992 (United Kingdom). The expansion of Toyota has been realized through a global network of research and production facilities aiming at developing the same range of products adapted to the three major markets of Japan, North America and Europe. Today, Toyota owns two other automobile companies in Japan (Daihatsu and Hino) and in 2005 created a new entity in the Czech Republic in partnership with Peugeot–Citroën from France.

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Box 5. (concluded)

Both TNCs generate their revenues mainly from the motor vehicle industry, with an increasing share of revenues from financial and customer services (for Ford Motor through Ford Motor Credit and Hertz). Total revenues and vehicle sales units are very similar for the two companies (box table 5.1) and both have sales representatives in more than 140 countries. The sales distribution may also reflect the importance of the home market and different strategies of diversification (box table 5.1).

Box table 5.1. Ford Motor and Toyota: Data for 2004

Variable	Ford	Toyota
Total revenues (\$ billion)	172	163
% Motor vehicle	85.6	92.3
% Other resources	14.4	7.7
Vehicles unit sales (thousands)	6 798	6 719
Home market	United States/Canada	Japan
United States/Canada	53.30%	34.30%
Europe	36.40%	13.40%
Rest of the world	10.30%	21.00%
TNI	45.5	47.3
Internationalization Index	84.1	37.6
Number of host countries	98	34

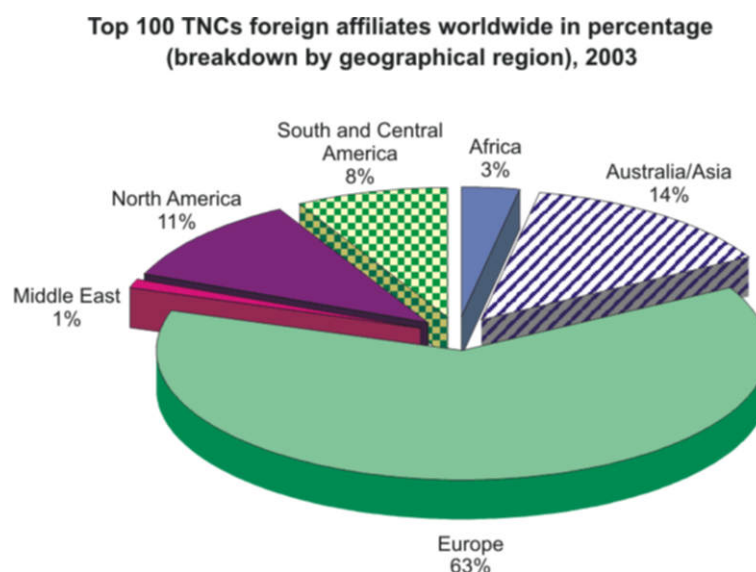
Source: UNCTAD.

C. Other perspectives

A subsidiary perspective refers to regionalism. It may be relevant to ask whether the operations and interests of a firm are concentrated in a region or equally spread among several regions. Figure 6 gives insights into the regional dimension of transnationality in terms of the distribution of foreign affiliates of TNCs.

The breakdown by home country of TNCs shows that the European Union is a favourite region for the location of foreign

affiliates of the largest TNCs from most countries. Top TNCs from the United States spread their affiliates in all regions, whereas Japanese TNCs are less involved in Africa (table 13). French companies are relatively more involved in Africa. German TNCs are more present in South-Eastern Europe and the Commonwealth of Independent States. The cultural and linguistic dimension of operations is even clearer when looking at the spread of operations of TNCs from Spain.

Figure 6. Regional distribution of the affiliates of the largest 100 TNCs

Source: UNCTAD (2005).

Table 13. Distribution of the locations of affiliates of the largest TNCs by region, 2003

	Europe	Africa	Asia & Pacific	LAC	West Asia	SEE+CIS	Other countries
TNCs from the United States	21%	24%	18%	19%	6%	8%	4%
TNCs from Japan	29%	10%	21%	21%	5%	6%	8%
TNCs from France	27%	25%	14%	18%	6%	5%	5%
TNCs from Germany	23%	21%	12%	22%	7%	10%	5%
TNCs from Spain	36%	3%	3%	54%	0%	0%	3%

Source: UNCTAD.

In addition to assessing the transnationality from an operational perspective, by indicators such as those discussed above, one can also try to do so from other perspectives. For example, Table 14 (UNCTAD, 2004) gives the regional composition of directors from the boards of 42 of the top 100 TNCs, providing an indicator based on the stakeholders' perspective. It shows that top TNCs originating in Europe have a much

higher representation of non-home country nationals among their directors than do top TNCs from the United States and Japan. The percentages are 33 for the European Union, 47 for Switzerland, 18 for the United States and 2 for Japan. Within the European Union, the highest percentage applies to TNCs from the United Kingdom (52 per cent).

Table 14. Regional composition of directors on the boards of 42 of the largest 100 TNCs, grouped by home region/country, 2003

Region/economy	Number of TNCs	Number of directors	Board members by nationality																	
			Total		European Union		United States		Japan		Asia ^a		Latin America and the Caribbean		Africa		Central and Eastern Europe		Other ^b	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Total European Union	22	291	97	33	44	15	32	11	3	1	3	1	7	2	2	1	1	0	5	2
Belgium	1	12	6	50	4	33	2	17												
Netherlands	2	22	9	41	7	32	1	5											1	5
Spain	2	33	4	12	2	6						2	6							
France	4	58	20	34	8	14	6	10	3	5		1	2						2	3
Germany	6	64	5	8	2	3	1	2			1	2					1	2		
United Kingdom	7	102	53	52	21	21	22	22			2	2	4	4	2	2			2	2
Switzerland	4	38	18	47	14	37	2	5	1	3			1	3						
United States	6	67	12	18	5	7							5	7					2	3
Canada	1	15	6	40			6	40												
Japan	8	123	3	2	1	1	1	1					1	1						
Hong Kong, China	1	14	11	79	8	57													3	21
Total	42	548	147	27	72	13	41	7	4	1	3	1	14	3	2	0	1	0	10	2

Source: UNCTAD.

^a Includes West Asia.

^b Australia, Canada, New Zealand and Switzerland.

VII. Most favoured locations by TNCs

As shown in the previous chapter, the number of host countries for foreign affiliates of TNCs can capture the geographic spread of a company's operations and interests. Geographic and cultural distances have received a great deal of attention in the international business literature and have been identified as a key factor in explaining foreign market attractiveness (Kogut and Singh, 1998).⁷ Johansson and Vahlne (1977, 1990) argued that TNCs expand first in geographically proximate markets and as experiential learning is built up, firms venture into more distant markets.

The development of the theory of the multinational enterprise has followed two main approaches: location theory, which deals with the reasons underlying the choice of host country for FDI, and industrial organization theory, which is concerned with competition and performance of foreign and domestic firms. In the latter case, firms possess firm-specific advantages, which can be exploited profitably across national borders. In the context of market-seeking investment, internalization advantages and country-specific advantages are both important to the explanation of foreign direct investment and the establishment of foreign subsidiaries (Rugman and Verbeke, 2004).

An analysis of the information on the location of foreign affiliates suggests that the most frequent host country by these 100 largest TNCs is the Netherlands, where 91 of the 100 have at least one affiliate, followed by the United Kingdom with 86. However, there are four Dutch companies, which by definition cannot have foreign affiliates in their own country; and a similar situation applies for instance to 12 British TNCs. To take into account the number of TNCs originating from one location/economy, the Location Intensity is defined as follows: the total number of TNCs having at least one affiliate in the country, divided by 100,

minus the number of TNCs from this country listed in the top 100.

Based on this measure, the United Kingdom is the most favoured location, followed by the Netherlands and the United States (annex table 9). There are eight European countries in the top 10 and Poland is the most favoured location among the new European Union countries.

Among developing countries, Brazil hosts the largest number of the top 100 TNCs (75), followed by Mexico and Hong Kong, China. In the top 10 of the most favoured locations in developing economies, there are five countries from East and South-East Asia, four from Latin America and the Caribbean, and Turkey.

The Inward FDI Performance Index defined by UNCTAD (2004) ranks countries by the FDI they receive relative to their economic size, calculated as the ratio of a country's share in global FDI inflows to its share in global GDP. A value greater than one indicates the country receives more FDI than others compared to its relative economic size. The index thus captures the influence on FDI of factors other than the market size, assuming that, other things being equal, size measured by GDP is the "baseline" for attracting investments. However, the ranking of 103 countries hosting at least five TNCs' foreign affiliates when compared with their ranking in terms of FDI performance index (UNCTAD, 2004) is not correlated. The Spearman rank correlation coefficient for the two variables is not significantly different from zero ($R_s = 0.0285$) mainly because the Performance Index does not take into account other location-specific variables, which may be more relevant in the attractiveness of a country.

The opportunities to locate in developing economies have been based on expectations (e.g. market size potential, rapidly expanding economy) but also with due considerations regarding many challenges (e.g. available working force,

technical risk, cultural environment, country risk assessment).

The economic size of the host economy as measured by its GDP per capita influenced FDI decisions, but labour is another factor important to foreign investors. Thus, a high level of human capital would positively attract foreign firms. The human resources base is generally measured by educational enrolments and literacy rates. The Human Capital Index (HCI) used here is a weighted average of the literacy rate and enrolment ratios (secondary school and tertiary education) calculated by UNCTAD (2005).

Other factors are diverse, ranging from the business climate, the presence of natural resources, infrastructure, skills and technologies. Macroeconomic factors played a crucial role in the past in attracting FDI, but the dynamics of FDI require an analysis beyond such macroeconomic variables and a simple review of the recent studies suggests a much higher correlation between FDI and governance (both from the public and private sectors) than between FDI and macroeconomic variables.⁸ These studies have examined the consequences of governance and misgovernance for development and how a country risk could have an impact on global investment strategies by TNCs. Simple deductive reasoning would imply that good governance is also a relevant factor explaining the most favoured locations by TNCs to set up foreign affiliates.

Corruption is commonly defined as the abuse of public office for private gain. Governance is a much broader notion, which is defined as the traditions and institutions that determine how authority is exercised in a particular country. This includes (a) the process by which Governments are selected, held accountable, monitored and replaced; (b) the capacity of Governments to manage resources efficiently and formulate,

implement and enforce sound policies and regulations; and (c) the respect of citizens and the State for the institutions that govern economic and social interactions among them (Kaufmann et al., 2000).

A wide variety of cross-country indicators is produced by a range of organizations (government agencies, commercial-risk-rating agencies, international organizations, think tanks and other NGOs) and cover various dimensions of governance. Since all of the variables used to measure governance are highly correlated, only a few variables will be considered in the analysis:

- (a) The Euromoney Global Political Risk Map gives a measure of country risk on the basis of political risk, economic performance, debt indicators, credit rating and access to finance and capital markets.⁹
- (b) The Economist Intelligence Unit (EIU) country risk index is calculated using two distinct perspectives:
 - (1) broad risk, i.e. political and economic; and
 - (2) specific risk, i.e. currency, banking sector risk and sovereign risk.¹⁰
- (c) The Corruption Perception Index (CPI), compiled at the University of Passau (Germany), is based on multiple surveys.¹¹
- (d) The government effectiveness index published by the World Bank Institute (WBI), combines perception of the quality of public service provision, the quality of bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the Government's commitment to policies. It is one of the six indices published by WBI on governance.¹²

The ranking of the top 50 developing economies in terms of the number of locations for foreign affiliates (annex table 9) is compared with the ranking of the same economies based on several indicators, including the size, human capital endowment, government

effectiveness and economic and political stability. Spearman rank correlation values are calculated and the results (table 15) show all the variables related to size, human capital and governance are significantly correlated as expected.

Table 15. Rank correlations between countries' popularity rank, size and good governance
(Spearman rank correlation values)

Variable	Value	t statistics
<i>Size</i>		
GDP per Capita	0.495	3.95
<i>Human Capital</i>		
	0.570	4.80
<i>Governance</i>		
Euromoney Risk Map	0.480	3.79
EIU score index	0.344	2.54
CPI	0.430	3.30
Government effectiveness	0.450	3.50

Source: UNCTAD.

These results are derived from a single factor analysis and do not take into account multicollinearity among the variables. Location-specific variables such as the level of infrastructure (education, financial development, legal development) and the economic size or development of the market are all significant factors explaining the localization of the activities of TNCs, but are also highly correlated with each other.

Modeling the choice of locations by TNCs on the basis of the most favoured locations gives an indication on the importance of good governance and also on the limited significance of the results due to econometric problems related to model specification and lack of data availability for several countries (box 6).

Box 6. A simplified model of location-specific advantages

The purpose of the analysis is to examine some of the factors that influence the choice to establish a foreign affiliate in a particular country. The ranking of developing countries in terms of the frequency of host country for TNCs (LI = location intensity) is used as a dependent variable and the following model includes location-specific variables mentioned above:

Model: $LI = f(\text{GDP per capita, population, human capital, governance, financial development})$

GDP per capita and population are used as size variables. The level of the Human Capital Index (HCI) and good governance are expected to positively influence the choice of a location by foreign investors. The measure of HCI used is a weighted average of the literacy rate and enrolment ratios (secondary and tertiary education) calculated by UNCTAD (2005). The measure of governance used is the government effectiveness index published by the World Bank Institute (WBI).

The importance of an effective financial system to economic development is well substantiated in the literature. Quantity indicators based on monetary and credit aggregates are the traditional measures of financial development. Broad money M2 is often taken as an adequate measure of the size of the financial sector and the ratio of money supply (M1) to M2 is negatively related to a country's level of financial development or sophistication. Other indicators such as the money/GDP ratio, which measures the degree of monetization in the economy or domestic credit as a percent of GDP, are also associated with the size of the financial sector but are not reported in the following results.

The high growth rates that some developing economies have enjoyed in the past 10 years may be a relevant factor explaining over time the choice of a location by a firm. However, it is a dynamic process, which is difficult to compare to the snapshot figure of location intensity in 2003.¹³ Similarly, the removal of trade barriers occurring in developing economies since the end of the 1980s has certainly contributed over time to the popularity of some of these countries as observed in 2003

Several other variables, such the legal or accounting environment and cultural distance, are not readily available. Consequently, variables to be considered in this model are only snapshot figures in 2002 and 2003, and the model is a simplified approach which may not be correctly specified.

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Box 6. (concluded)

Data, excluding tax haven countries, are available for only 44 developing economies. Size variables are in logarithms and a two-stage least squares estimation procedure is used in this analysis to deal with multicollinearity problems among variables as far as possible.

The results of the estimation are summarized in box table 6.1. They suggest that the decision to select a location is impacted by the size of a country measured by its population rather than its GDP per capita. This is mainly the result of multicollinearity among variables. Human capital is also a positive determinant although the degree of significance is lower than for the other variables. The good governance index is positive and significant as expected. The variable tested to capture the level of development of the financial sector as the expected sign but is not statistically significant. Other alternative variables provide an even inferior statistical validation of the model.

Box table 6.1. Estimation results of the model with Two-Stage Least Squares

	Coefficient	t-Statistics
GDP per capita (log)	-0.497	-0.27
Population (log)	2.612	2.42
Human capital (HCI)	26.282	1.47
Good governance	10.328	2.59
Financial development (M1/M2)	-2.325	-0.59

Note: Adjusted R-squared = 0.368 ; S.E. of regression = 15.56.

Source: UNCTAD.

The results of the econometric analysis would suggest that the decision to select a location is impacted by the size of a country measured by its population and by good governance rather than its GDP per capita. This is mainly the result of multicollinearity among variables. A number of recent studies of governance and corruption, based on simple empirical observations, using available worldwide indices, have shown that, on average, per capita income and the quality of governance are strongly positively correlated across countries.¹⁴ The causality link between income and governance is far

from being explained: (a) better governance exerts a powerful effect on per capita income; (b) higher incomes lead to improvements in governance; and (c) there are other factors to be considered. Kaufmann and Kraay (2002) discussed the surprising finding of negative feedback from income to governance attributed, at least partly, to a consequence of State capture by largest institutions (private or public). More research is needed to take into account these causality links in order to determine the factors having a strong positive influence on the choice of locations by the largest TNCs.

VIII. Conclusions

A. The relative importance of the world's largest TNCs

The universe of TNCs comprises firms from developed countries and increasingly developing countries. During the past 10 years, foreign assets owned by the largest TNCs have tripled and foreign sales have more than doubled. At the same time, in terms of the size of total assets and total sales, as well as foreign assets and foreign sales, TNCs from developing countries remain significantly smaller than the largest TNCs worldwide. However, the internationalization of activities is increasing for TNCs from developing economies and is catching up to the world's largest firms.

In developing economies, there is a large disparity in terms of size as measured by foreign assets between the largest firms at the top of the list and firms ranked in the second half. The levels of concentration and dominance are much higher for firms based in developing economies than for the world's largest TNCs.

All sectors of activities are affected by the internationalization of activities and the geographical extensiveness, or the degree to which a company's operations and interests are spread in several countries, is also increasingly considered an important element in the strategy adopted by TNCs.

B. The degree of transnationality

Transnationalization focuses on the intensity of foreign activities in relation to domestic or global activities. The Transnationality Index (TNI) published by UNCTAD is a composite of three ratios – foreign assets/total assets, foreign sales/total sales and foreign employment/total employment. The average TNI is higher for the largest TNCs, but over the recent past the index for the top 50 based in developing economies has increased dramatically and is catching up with the world's largest TNCs.

Similar to their counterparts from developed countries, most firms and almost all sectors of activity have experienced a significant increase in the average TNI value over the past 10 years or so. In the most significant sectors of activity, the average TNI has been multiplied by a factor of almost four since 1993 for the food and beverages industry and almost two for the electronics and electrical equipment industry.

Given the range of perspectives and dimensions that can be considered to assess the degree of transnationality of a TNC, a single synthetic measure cannot fully capture the phenomenon. One aspect of transnationality from the operations perspective, not included in UNCTAD's TNI, is the geographic extensiveness or the degree to which a company's operations and interests are spread in several countries or concentrated in a few.

In this publication, we define a Transnationality Spread Index (TSI) to take into account the number of foreign affiliates and the magnitude of diversification of the activities. A graphical approach to transnationality shows for example that German firms as well as firms from the United States are better represented at the top of the list. Sectorally, firms in the pharmaceuticals industry, using this index, dominate the list of the most transnational TNCs.

C. Most favoured locations for foreign affiliates

The ability of TNCs to contribute to international economic integration is a result both of their attributes and of how they respond to the economic and policy environment in which they operate. An analysis of the information on the location of foreign affiliates suggests that the most frequently chosen host countries by the largest TNCs are the United Kingdom and the Netherlands. Brazil and Mexico are the largest developing countries chosen as hosts by these companies.

The extent to which individual countries become part of, and benefit from, the emerging integrated international production system depends upon the interaction of their location-specific advantages with the changing firm-specific advantages that TNCs enjoy in the context of integrating their functional activities on a regional or global basis. Results of

Spearman rank correlations show variables such as the size of the country, human capital and governance indices have positive and significant correlations with the most favoured locations by the largest TNCs.

In the globalizing world economy, developing countries see FDI as a factor that can contribute to their long-term development. The continued need of firms to improve their competitiveness by expanding into new markets, reducing costs, maximizing their profitability and accessing natural resources and strategic assets abroad provides strong incentives for further FDI in developing countries. It is likely that the number of foreign affiliates and of host countries will also increase in the future due to the increasing complexity for organizing international production.

D. The need for more information on the activities of TNCs

The degree of international involvement of a firm can be measured in various ways. The geographical extensity dimension is an important measure as it may be relevant to ask whether the operations and interests of a firm are concentrated in a region or equally spread among several regions. There are many aspects of TNC activities that involve considerable influence or control over the operations of firms outside the home country, but these are not covered by the current system of FDI statistics and surveys. There is a need to collect and analyze data on TNCs activities in host countries, such as sales, imports and exports, employment, wages and salaries, research and development expenditure and capital intensity, in order to better assess the impact of the activities of the largest TNCs on the world economy, as well as on home and host countries.

UNCTAD convened an expert meeting on capacity-building in the area of FDI statistics in Geneva in December 2005 to discuss key issues on the compilation of FDI statistics and particularly on the activities of direct investment enterprises.¹⁵ Data should be reliable, comparable, useful, and should cover a comprehensive set of information on the activities of TNCs, including all the variables that may influence the choice of location in establishing a foreign affiliate. These details are essential for countries to analyse the process of globalization in all its dimensions, including its impact on sustainable economic development and the formulation of development-oriented policies.

Notes

¹ See G. Ietto-Gillies (2005).

² Anglo American (merger of Anglo American Corporation of South Africa and Minorco from Luxembourg) and SAB Miller (merger of South African Breweries and Miller Brewing Company) are two noticeable examples. Mittal Steel, founded and owned by the Indian Mittal family, is registered in the Netherlands and headquartered in the United Kingdom.

³ These results cannot, of course, be compared directly with the usual use of the Herfindahl index to evaluate concentration by *industry*. The top 100 and 50 represent a number of industries.

⁴ There are in the literature many indices based on this concept of intensity. See, for example, Dunning (1996), Sullivan (1994) and Ramaswamy et al. (1996).

⁵ Ietto-Gillies (1998). Sanders and Carpenter (1998) use the number of countries as a percentage of the highest number of countries with subsidiaries in the sample.

⁶ Of course, a more detailed analysis would also take into account other factors, including the strategies pursued by different companies.

⁷ Cultural distance is different from geographical distance. Empirical evidence suggests the importance of geography in determining

international economic interactions and in shaping the structure of production across space (Overman et al., 2001). Ghemawat (2001) suggested that four dimensions of distance – namely cultural, administrative, geographic and economic – influence companies considering global expansion.

⁸ Recent work has been carried out by Galan and Gonzales-Benito (2001), Habib and Zurawicki (2002), Javalgi et al. (2003), La Porta et al. (1999, 2000); Kaufmann, D. and A. Kraay (2002), among others.

⁹ The methodology is available at www.euromoney.com.

¹⁰ See www.eiuresources.com.

¹¹ Information on data and methodology are available at www.transparency.org.

¹² Available at www.worldbank.org/wbi/governance.

¹³ This variable was suggested by Rossi and Volpin (2004) as a control factor but shows a small and non-significant value.

¹⁴ See Kaufmann and Kraay (2002) for a review.

¹⁵ The UNCTAD secretariat prepared a note (UNCTAD/TD/B/COM.2/EM.18/2) on these issues.

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Annexes

Annex table 1. Selected indicators of FDI and international production, 1990-2003

(Billions of dollars and per cent)

Item	Value at current prices						
	(Billion dollars)		%				
	1990	2 003	1991–1995	1996–2000	2001	2002	2003
FDI inflows	208	633	21.2	39.7	-40.9	-13.3	-11.7
FDI outflows	239	617	16.4	36.3	-40.0	-12.3	-5.4
FDI inward stock	1,769	7,987	9.5	17.3	7.1	8.2	19.1
FDI outward stock	1,785	8,731	9.1	17.4	6.8	11.0	19.8
Cross-border M&As	151	297	24.0	51.5	-48.1	-37.8	-19.6
Sales of foreign affiliates	5,727	16,963	10.6	8.7	-3.0	14.6	18.8
Gross product of foreign affiliates	1,476	3,573	5.3	7.7	-7.1	5.7	28.4
Total assets of foreign affiliates	5,937	32,186	12.2	19.4	-5.7	41.1	3.0
Export of foreign affiliates	1,498	3,073	7.1	4.8	-3.3	4.9	16.1
Employment of foreign affiliates (thousands)	24,471	53,196	2.3	9.4	-3.1	10.8	11.1
GDP (in current prices)	22,610	36 327	5.2	1.3	-0.8	3.9	12.1
Gross fixed capital formation	4,905	7 853	5.6	1.6	-3.0	0.5	12.9
Royalties and licences fees receipts	30	93	14.3	8.0	-2.9	7.5	12.4
Export of goods and non-factor services	4,261	9 216	8.7	3.6	-3.3	4.9	16.1

Source : UNCTAD, based its FDI/TNC database (www.unctad.org/fdistatistics) and UNCTAD estimates.

Annex table 2. The world's 100 largest TNCs, ranked by foreign assets, 2003
(Millions of dollars and number of employees)

Ranking by:				Assets		Sales		Employment		TNI ^b	No. of affiliates				
Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Foreign	Total	Foreign ^e	Total	Foreign	Total	(Per cent)	Foreign	Total	II ^c
1	77	37	General Electric	United States	Electrical & electronic equipment	258 900	647 483	54 086	134 187	150 000	305 000	43.2	1068	1398	76.39
2	7	95	Vodafone Group Plc	United Kingdom	Telecommunications	243 839 ^f	262 581	50 070	59 893	47 473	60 109	85.1	71	201	35.32
3	72	12	Ford Motor Company	United States	Motor vehicles	173 882 ^f	304 594	60 761	164 196	138 663 ^p	327 531	45.5	524	623	84.11
4	90	65	General Motors	United States	Motor vehicles	15 4466 ^f	448 507	51 627	185 524	104 000	294 000	32.5	177	297	59.60
5	10	78	British Petroleum Company Plc	United Kingdom	Petroleum expl./ref./distr.	141 551	177 572	192 875	232 571	86 650	103 700	82.1	60	117	51.28
6	31	41	Exxonmobil Corporation	United States	Petroleum expl./ref./distr.	116 853 ^f	174 278	166 926	237 054	53 748 ^p	88 300	66.1	218	294	74.15
7	22	80	Royal Dutch/Shell Group	United Kingdom/ Netherlands ^g	Petroleum expl./ref./distr.	112 587 ^f	168 091	129 864	201 728	100 000 ^p	119 000	71.8	454	929	48.87
8	68	94	Toyota Motor Corporation	Japan	Motor vehicles	94 164 ^f	189 503	87 353	149 179	89 314	264 410	47.3	124	330	37.58
9	16	48	Total	France	Petroleum expl./ref./distr.	87 840 ^f	100 989	94 710	118 117	60 931	110 783	74.1	419	602	69.60
10	62	69	France Telecom	France	Telecommunications	81 370 ^f	126 083	21 574	52 202	88 626	218 523	48.8	118	211	55.92
11	14	58	Suez	France	Electricity, gas and water	74 147 ^f	88 343	33 715	44 720	111 445	172 291	74.7	605	947	63.89
12	89	34	Electricite De France	France	Electricity, gas and water	67 069	185 527	16 062	50 699	51 847 ⁱ	167 309	32.9	204	264	77.27
13	80	63	E.On	Germany	Electricity, gas and water	64 033 ^f	141 260	18 659	52 330	29 651	69 383	41.2	478	790	60.51
14	85	74	Deutsche Telekom AG	Germany	Telecommunications	62 624	146 601	23 868	63 023	75 241 ^p	248 519	37.0	97	178	54.49
15	59	67	RWE Group	Germany	Electricity, gas and water	60 345	98 592	23 729	49 061	53 554 ^p	127 028	50.6	377	650	58.00
16	23	23	Hutchison Whampoa Limited	Hong Kong, China	Diversified	59 141	80 340	10 800	18 699	104 529	126 250	71.4	1900	2350	80.85
17	32	40	Siemens AG	Germany	Electrical & electronic equipment	58 463 ^f	98 011	64 484	83 784	247 000	417 000	65.3	753	1011	74.48
18	53	46	Volkswagen Group	Germany	Motor vehicles	57 853 ^f	150 462	71 190	98 367	160 299	334 873	52.9	203	283	71.73
19	21	35	Honda Motor Co Ltd	Japan	Motor vehicles	53 113 ^f	77 766	54 199	70 408	93 006 ^p	131 600	72.0	102	133	76.69
20	34	89	Vivendi Universal	France	Diversified	52 421 ^f	69 360	15 764	28 761	32 348 ^j	49 617	65.2	106	238	44.54
21	42	83	ChevronTexaco Corp.	United States	Petroleum expl./ref./distr.	50 806	81 470	72 227	120 032	33 843	61 533	59.2	93	201	46.27
22	3	30	News Corporation	Australia	Media	50 803	55 317	17 772	19 086	35 604 ^j	38 500	92.5	213	269	79.18
23	65	29	Pfizer Inc	United States	Pharmaceuticals	48 960 ^f	116 775	18 344	45 188	73 200 ^p	122 000	47.5	73	92	79.35
24	93	85	Telecom Italia Spa	Italy	Telecommunications	46 047	101 172	6 816	34 819	14 910	93 187	27.0	33	73	45.21
25	50	18	BMW AG	Germany	Motor vehicles	44 948	71 958	35 014	47 000	26 086	104 342	54.0	129	157	82.17
26	60	53	Eni Group	Italy	Petroleum expl./ref./distr.	43 967 ^f	85 042	29 341	58 112	36 658	76 521	50.0	154	226	68.14
27	4	9	Roche Group (Umoe AS)	Switzerland	Pharmaceuticals	42 926	48 089	22 790	23 183	57 317 ^p	65 357	91.8	139	159	87.42
28	95	79	DaimlerChrysler AG	German and American	Motor vehicles	41 696 ^f	225 143	55 195	153 992	76 993	362 063	25.2	281	558	50.36
29	44	32	Fiat Spa	Italy	Motor vehicles	41 552	79 160	36 078	53 353	88 684	162 237	58.3	339	436	77.75
30	15	3	Nestlé SA	Switzerland	Food & beverages	41 078 ^f	72 402	44 308	65 329	247 506	253 000	74.1	471	501	94.01
31	55	5	IBM	United States	Electrical & electronic equipment	40 987 ^f	10 4457	55 369	89 131	180 515 ^p	319 273	52.6	315	342	92.11
32	83	47	ConocoPhillips	United States	Petroleum expl./ref./distr.	36 510 ^f	82 402	29 428	90 491	14 982 ^j	39 000	38.4	103	147	70.07
33	46	31	Sony Corporation	Japan	Electrical & electronic equipment	35 257 ^f	84 880	44 366	64 661	96 400	162 000	56.6	236	299	78.93
34	58	71	Carrefour SA	France	Retail	34 323 ^f	49 335	39 368	79 780	138 283	419 040	50.6	128	231	55.41
35	96	24	Wal-Mart Stores	United States	Retail	34 018	104 912	47 572	256 329	361 765	1500 000	25.0	67	83	80.72
36	69	54	Telefonica SA	Spain	Telecommunications	33 466 ⁿ	66 825	10 508	32 054	85 765 ^p	148 288	46.9	133	199	66.83
37	36	70	Veolia Environnement SA	France	Water Supply	33 399 ^f	49 154	17 578	32 283	205 694	309 563	62.9	424	760	55.79
38	43	21	Procter & Gamble	United States	Diversified	33 361	57 048	27 719	51 407	68 694 ^p	110 000	58.3	174	215	80.93
39	41	10	Sanofi-Aventis	France	Pharmaceuticals	33 024 ^f	44 484	12 291	22 247	36 576	75 567	59.3	335	385	87.01
40	57	16	Hewlett-Packard	United States	Electrical & electronic equipment	32 144 ^f	74 708	43 843	73 061	73 158 ^j	142 000	51.5	179	215	83.26

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Annex table 2. The world's 100 largest TNCs, ranked by foreign assets, 2003 (continued)
(Millions of dollars and number of employees)

Ranking by:			Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)	No. of affiliates		
Foreign assets	TNI ^b	II ^c				Foreign	Total	Foreign ^e	Total	Foreign	Total		Foreign	Total	II ^c
41	92	77	Mitsubishi Corporation	Japan	Wholesale trade	31 258 ^f	78 342	20 054	130 912	14 765 ^j	49 219	28.4	170	314	54.14
42	87	13	Deutsche Post AG	Germany	Transport and storage	29 524	195 748	19 714	45 166	175 775	383 173	34.9	341	406	83.99
43	35	62	Unilever ^g	United Kingdom/ Netherlands	Diversified	28 654 ^f	47 952	27 635	48 186	179 000	234 000	64.5	316	522	60.54
44	6	49	Philips Electronics	Netherlands	Electrical & electronic equipment	28 524	36626	31 594	32 773	136 750	164 438	85.8	263	378	69.58
45	63	91	Nissan Motor Co Ltd	Japan	Motor vehicles	28 517	73 388	42 002	64 082	50 836 ^q	123 748	48.5	58	146	39.73
46	11	27	Lafarge SA	France	Non-metallic products	28 127	31 365	13 117	15 415	50 524	75 338	80.6	389	489	79.55
47	66	56	Repsol YPF SA	Spain	Petroleum expl./ref./distr.	27 933	48 034	14 515	40 710	14 924	30 644	47.5	81	124	65.32
48	48	28	BASF AG	Germany	Chemicals	27 099	42 437	21 999	37 653	37 054	87 159	54.9	206	259	79.54
49	25	33	Compagnie De Saint-Gobain SA	France	Non-metallic mineral products	27 056	38 008	23 834	33 967	122 696	172 811	70.8	612	791	77.37
50	45	6	Novartis	Switzerland	Pharmaceuticals	26 748 ^f	49 317	16 076	24 864	41 031	78 541	57.0	232	256	90.63
51	84	75	Mitsui & Co Ltd	Japan	Wholesale trade	26 262 ^f	62 709	47 508	105 936	10826 ^j	39 735	38.0	198	364	54.40
52	86	14	Altria Group Inc	United States	Tobacco	25 711 ^f	96 175	34 371	60 704	40 557 ^o	165 000	36.0	196	234	83.76
53	78	81	Endesa	Spain	Electric services	25 488	58 155	6 228	18 328	12 939	26 777	42.0	85	177	48.02
54	8	4	Alcan Inc.	Canada	Metal and metal products	25 275 ^f	31 957	13 172	13 640	38 000	49 000	84.4	306	328	93.29
55	26	90	BHP Billiton Group	Australia	Mining & quarrying	24 254	36 675	17 673	24 943	25 294	35 070	69.7	42	98	42.86
56	28	50	Glaxosmithkline Plc	United Kingdom	Pharmaceuticals	23 893	42 813	32 296	35 006	56 360 ^g	100 919	68.0	158	229	69.00
57	82	55	Renault SA	France	Motor vehicles	22 342 ^f	71 283	27 330	42 353	34 921 ^p	130 740	40.9	136	207	65.70
58	37	93	Anglo American	United Kingdom	Mining & quarrying	21 623	43 105	10 872	18 562	151 000	193 000	62.3	197	524	37.60
59	19	87	Koninklijke Ahold	Netherlands	Retail	20 884	29 552	47 744	63 282	189 945 ^g	257 140	73.3	74	164	45.12
60	20	64	AES Corporation	United States	Electricity, gas and water	20 871 ^f	29 904	6 257	8 415	216 22 ^j	30 000	72.1	56	93	60.22
61	54	22	Dow Chemical Company	United States	Chemicals	20 039	41 891	19 810	32 623	22 964 ^p	46 400	52.7	216	267	80.90
62	18	43	Volvo AB	Sweden	Motor vehicles	19 451	31 787	23 160	24 023	47 603	75 740	73.5	233	319	73.04
63	47	57	Pinault-Printemps Redoute SA	France	Wholesale trade	19 254 ^f	30 649	16 828	30 767	51 847	100 779	56.3	287	449	63.92
64	74	42	Bayer AG	Germany	Pharmaceuticals/chemicals	18 892	47 020	17 033	32 334	48 700	115 400	45.0	236	320	73.75
65	1	1	Thomson Corporation	Canada	Media	18 418	18 732	7 943	8 159	38 350	39 000	98.0	300	310	96.77
66	33	36	Singtel Ltd.	Singapore	Telecommunications	17 911	21 668	4 672	6 884	8 642 ^j	19 081	65.3	23	30	76.67
67	30	52	British American Tobacco Plc ^g	United Kingdom	Tobacco	17 871 ^f	33 891	27 972 ^k	41 832	68 702	86 941	66.2	248	363	68.32
68	81	99	National Grid Transco	United Kingdom	Energy	17 563	41 780	7 673	15 848	9 029	27 308	41.2	42	244	17.21
69	24	2	Nokia	Finland	Telecommunications	17 050 ^f	29 273	36 763	37 202	28 979	51 359	71.2	98	103	95.15
70	99	84	Hitachi Ltd	Japan	Electrical & electronic equipment	16 296	89 545	21 177	80 602	80 226	326 344	23.0	309	670	46.12
71	49	20	United Technologies Corporation	United States	Transport equipment	16 212	34 648	14 257	31 034	143 000	203 300	54.4	345	422	81.75
72	94	68	Petronas - Petrolia Nasional Bhd ⁱ	Malaysia	Petroleum expl./ref./distr.	16 114	53 457	8 981	25 661	3 625	30 634	25.7	234	411	56.93
73	38	92	McDonald's Corporation	United States	Retail	15 913	25 525	11 101	17 140	240 142	418 000	61.5	26	67	38.81
74	27	25	Stora Enso OYJ	Finland	Paper	15 910	22 646	10 382	15 373	29 156	42 814	68.6	229	285	80.35
75	61	44	Du Pont (E.I.) De Nemours	United States	Chemicals	15 840 ^f	37 039	14 888 ^l	26 996	39 657 ^j	81 000	49.0	115	158	72.78
76	12	82	Rio Tinto Plc	United Kingdom	Mining & quarrying	15 419	24 015	9 773	10 009	26 000	36 016	78.0	68	145	46.90
77	98	86	Duke Energy Corporation	United States	Electricity, gas and water	15 414 ^f	56 203	5 537	22 529	4 652 ^j	23 800	23.8	33	73	45.21
78	40	38	Lvmh Moët-Hennessy Louis Vuitton SA	France	Textile and leather	15 386 ^h	24 356	8 285	15 063	35 360	56 241	60.4	296	390	75.90
79	73	66	Thyssenkrupp AG	Germany	Metal and metal products	15 237 ^f	36 641	20 074	45 641	92 179 ^j	184 358	45.2	389	668	58.23
80	67	15	Abbott Laboratories	United States	Pharmaceuticals	15 214	26 715	7 703	19 681	33 166 ^j	72 181	47.3	103	123	83.74

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Annex table 2. The world's 100 largest TNCs, ranked by foreign assets, 2003 (concluded)
(Millions of dollars and number of employees)

Ranking by:			Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)	No. of affiliates		
Foreign assets	TNI ^b	II ^c				Foreign	Total	Foreign ^e	Total	Foreign	Total		Foreign	Total	Foreign
81	70	76	Matsushita Electric Industrial Co., Ltd.	Japan	Electrical & electronic equipment	14 739 ^f	69 449	42 025	69 839	170 965	290 493	46.8	274	504	54.37
82	100	100	Verizon Communications	United States	Telecommunications	13 831 ^f	165 968	2 449	67 752	17 269 ^j	203 100	6.8	13	219	5.94
83	76	88	Metro AG	Germany	Retail	13 600 ^f	33 571	32 104	67 690	107 210	242 010	44.1	245	549	44.63
84	29	39	Norsk Hydro Asa	Norway	Diversified	13 429	32 729	23 158	25 716	30 866	44 602	66.8	254	335	75.82
85	52	97	Christian Dior SA	France	Textiles	13 388	31 895	8 461	15 745	36 391	56 815	53.3	10	35	28.57
86	2	8	CRH Plc	Ireland	Lumber and other building materials dealers	13 184 ^f	13 976	13 070	13 608	51 694	54 239	95.2	421	476	88.45
87	64	61	Scottish Power	United Kingdom	Electric Utilities	12 991	24 665	4 753	10 352	6 663	14 339	48.4	71	115	61.74
88	71	72	Alcoa	United States	Metal and metal products	12 931 ^f	31 711	8 319	21 504	70 700	120 000	46.1	104	188	55.32
89	9	11	Publicis Groupe SA	France	Business services	12 919 ^f	13 400	4 367	4 879	21 451	35 166	82.3	295	342	86.26
90	97	73	Marubeni Corporation	Japan	Wholesale trade	12 814 ^f	39 722	25 175	73 815	1 723 ^j	24 417	24.5	161	293	54.95
91	13	60	Holcim AG	Switzerland	Non-metallic mineral products	12 808 ^g	20 091	6 596	10 187	46 946	48 200	75.3	105	170	61.76
92	5	17	Cadbury Schweppes Plc	United Kingdom	Food & beverages	12 804	14 209	8 862	10 525	48 390	55 799	87.0	94	113	83.19
93	79	26	Wyeth	United States	Pharmaceuticals	12 776	29 727	6 269	15 851	21 617 ^j	52 385	41.3	67	84	79.76
94	88	96	Statolil Asa	Norway	Petroleum expl./ref./distr.	12 721	33 174	9 684	37 239	7 491	19 326	34.4	35	112	31.25
95	17	98	BAE Systems Plc	United Kingdom	Transport equipment	12 695	16 802	17 530	22 450	48 900	72 300	73.8	57	248	22.98
96	56	19	Robert Bosch GmbH	Germany	Machinery and equipment	12 683 ^m	40 410	32 761 ^m	45 919	123 000	232 000	51.9	210	256	82.03
97	51	45	Motorola Inc	United States	Telecommunications	12 618	32 098	17 983	27 058	48 400 ^j	88 000	53.6	79	109	72.48
98	39	51	Bertelsmann	Germany	Media	12 498 ^f	25 466	14 694	21 219	46 157	73 221	60.5	320	468	68.38
99	75	7	Samsung Electronics Co., Ltd.	Republic of Korea	Electrical & electronic equipment	12 387 ^h	56 524	41 362	54 349	19 026 ^j	55 397	44.1	80	89	89.89
100	91	59	International Paper Company	United States	Paper	12 088	35 525	6 992	25 179	28 980	82 800	32.3	93	148	62.84

Source: UNCTAD/Erasmus University database.

^a All data are based on the companies' annual reports unless otherwise stated.

^b TNI is the abbreviation for "Transnationality Index". The Transnationality Index is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c II is the abbreviation for "Internationaization Index". The Index is calculated as the number of foreign affiliates divided by number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

^d Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

^e Foreign sales are based on the origin of the sales unless otherwise stated.

^f In a number of cases companies reported only partial foreign assets. In these cases, the ratio of the partial foreign assets to the partial (total) assets was applied to total assets to calculate the total foreign assets. In all cases, the resulting figures have been sent for confirmation to the companies.

^g Data for outside Europe.

^h Foreign assets data are calculated by applying the share of both foreign sales in total sales and foreign employment in total employment to total assets.

ⁱ Data were obtained from the company as a response to an UNCTAD survey.

^j Foreign employment data are calculated by applying the share of both foreign assets in total assets and foreign sales in total sales to total employment.

^k In a number of cases companies reported only partial region-specified sales. In these cases, the ratio of the partial foreign sales to the partial (total) sales was applied to total sales to calculate the total foreign sales. In all cases, the resulting figures have been sent for confirmation to the companies.

^l Foreign sales are based on customer location.

^m Data for outside Western Europe

ⁿ Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets this year.

^o Foreign employment data are calculated by applying the share of foreign employment in total employment of Philip Morris in the previous year to total employment of Altria Group this year.

^p Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment this year.

^q Foreign employment data are calculated by applying the average of the shares of foreign employment in total employment of all companies in the same industry (left out the extremes) to total employment.

Note: The list includes non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.

Annex table 3. The world's 100 largest TNCs, ranked by foreign assets, 2004
(Millions of dollars and number of employees)

Ranking by:				Assets		Sales		Employment		TNI ^b	No. of affiliates				
Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	(Per cent)	Foreign	Total	II ^c
1	68	55	General Electric	United States	Electrical & electronic equipment	448 901	750 507	56 896	152 866	142 000	307 000	47.8	787	1157	68.02
2	4	93	Vodafone Group Plc	United Kingdom	Telecommunications	247 850	258 626	53 307	62 494	45 981	57 378	87.1	70	198	35.35
3	67	65	Ford Motor	United States	Motor vehicles	179 856	305 341	71 444	171 652	102 749 ^g	225 626	48.7	130	216	60.19
4	90	71	General Motors	United States	Motor vehicles	173 690	479 603	59 137	193 517	114 612 ^h	324 000	34.0	166	290	57.24
5	10	44	British Petroleum Company Plc	United Kingdom	Petroleum expl./ref./distr.	154 513	193 213	232 388	285 059	85 500	102 900	81.5	445	611	72.83
6	38	37	ExxonMobil	United States	Petroleum expl./ref./distr.	134 923	195 256	202 870	291 252	52 968 ⁱ	105 200	63.0	237	314	75.48
7	25	88	Royal Dutch/Shell Group	United Kingdom/Netherlands	Petroleum expl./ref./distr.	129 939 ^j	192 811	170 286 ^j	265 190	96 000	114 000	71.9	328	814	40.29
8	62	91	Toyota Motor Corporation	Japan	Motor vehicles	122 967	233 721	102 995	171 467	94 666	265 753	49.4	129	341	37.83
9	20	48	Total	France	Petroleum expl./ref./distr.	98 719	114 636	123 265 ^k	152 353	62 227	111 401	74.3	410	576	71.18
10	66	47	France Télécom	France	Telecommunications	85 669	131 204	24 252	58 554	81 651	206 524	48.7	162	227	71.37
11	49	60	Volkswagen	Germany	Motor vehicles	84 042	172 949	80 037 ^k	110 463	165 152	342 502	56.4	147	228	64.47
12	16	22	Sanofi-Aventis	France	Pharmaceuticals	82 612	104 548	15 418	18 678	68 776	96 439	77.6	207	253	81.82
13	61	54	Deutsche Telekom AG	Germany	Telecommunications	79 654	146 834	47 118 ^l	71 868	73 808	244 645	50.0	266	390	68.21
14	60	62	RWE Group	Germany	Electricity, gas and water	78 728	127 179	23 636	52 320	42 370	97 777	50.1	345	552	62.50
15	19	59	Suez	France	Electricity, gas and water	74 051	85 788	38 838 ^k	50 585	100 485	160 712	75.2	546	846	64.54
16	81	79	E.on	Germany	Electricity, gas and water	72 726	155 364	21 996	60 970	32 819 ^j	72 484	42.7	303	596	50.84
17	13	6	Hutchison Whampoa	Hong Kong, China	Diversified	67 638	84 162	17 039	23 037	150 687 ^h	180 000	79.3	94	103	91.26
18	39	49	Siemens AG	Germany	Electrical & electronic equipment	65 830	108 312	59 224	93 333	266 000	430 000	62.0	605	852	71.01
19	3	4	Nestlé SA	Switzerland	Food & beverages	65 396 ^j	76 965	68 586 ^{k,l}	69 778	240 406	247 000	93.5	460	487	94.46
20	92	28	Electricité De France	France	Electricity, gas and water	65 365	200 093	17 886 ^l	55 775	50 543 ^m	156 152	32.4	240	299	80.27
21	29	87	Honda Motor Co Ltd	Japan	Motor vehicles	65 036	89 483	61 621	79 951	76 763	137 827	68.5	76	188	40.43
22	52	73	Vivendi Universal	France	Diversified	57 589	94 439	11 613	26 607	23 377	37 906	55.4	245	435	56.32
23	48	83	ChevronTexaco	United States	Motor vehicles	57 186	93 208	80 034 ^l	150 865	31 000	56 000	56.6	121	250	48.40
24	34	23	BMW AG	Germany	Motor vehicles	55 726	91 826	40 198	55 050	70 846 ^m	105 972	66.9	124	153	81.05
25	93	80	Daimler Chrysler B	United States/Germany	Motor vehicles	54 869	248 850	68 928	176 391	101 450 ^h	384 723	29.2	324	641	50.55
26	79	34	Pfizer Inc	United States	Pharmaceuticals	54 055	123 684	22 977	52 516	50 287 ^m	115 000	43.7	82	104	78.85
27	65	42	ENI	Italy	Petroleum expl./ref./distr.	50 212	98 553	47 749 ^{k,l}	89 840	30 186	71 497	48.8	162	222	72.97
28	41	90	Nissan Motor Co Ltd	Japan	Motor vehicles	49 553	94 588	55 638	79 268	112 530 ^m	183 607	61.3	53	140	37.86
29	54	7	IBM	United States	Computer and related activities	47 928	109 183	60 656 ^k	96 293	175 832 ^m	329 001	53.4	338	371	91.11
30	85	78	ConocoPhillips	United States	Petroleum expl./ref./distr.	46 321	92 861	40 945 ^l	143 183	14 048 ^m	35 800	39.2	44	85	51.76
31	40	39	Hewlett-Packard	United States	Computer and related activities	45 816	76 138	50 543 ^k	79 905	93 188 ^m	151 000	61.7	106	144	73.61
32	87	68	Mitsubishi Corporation	Japan	Motor vehicles	43 867	87 879	5 476	38 319	22 485 ^o	51 381	36.0	212	357	59.38
33	76	97	Telefonica SA	Spain	Telecommunications	43 224 ⁱ	86 448	15 060 ^k	37 650	78 099 ^j	173 554	45.0	62	279	22.22
34	14	11	Roche Group	Switzerland	Pharmaceuticals	42 884	51 322	24 794	25 149	35 587 ^h	64 703	79.0	137	158	86.71
35	94	56	Telecom Italia Spa	Italy	Telecommunications	41 747	104 349	8 231 ^k	38 786	16 331	91 365	26.4	75	111	67.57

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Annex table 3. The world's 100 largest TNCs, ranked by foreign assets, 2004 (continued)

Ranking by:				Assets		Sales		Employment		TNI ^b	No. of affiliates				
Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	(Per cent)	Foreign	Total	II ^c
36	23	95	Anglo American	United Kingdom	Mining & quarrying	40 460 ^j	53 451	16 819 ^j	26 268	163 522 ^{h,j}	209 000	72.7	173	502	34.46
37	55	31	Fiat Spa	Italy	Motor vehicles	39 658	77 971	31 281	57 990	87 761 ^h	160 549	53.2	362	456	79.39
38	9	57	Unilever	United Kingdom/ Netherlands	Diversified	38 415	46 141	44 361	50 121	171 000 ^l	223 000	82.8	314	466	67.38
39	58	86	Carrefour	France	Retail	36 756	53 090	45 874	90 230	142 129 ^l	430 695	51.0	130	311	41.80
40	46	29	Procter & Gamble	United States	Diversified	36 128	61 527	31 399	56 741	62 731 ^m	110 000	57.0	357	447	79.87
41	47	17	Sony Corporation	Japan	Electrical & electronic equipment	35 959	87 309	48 285	69 077	90 092 ^h	151 400	56.9	395	471	83.86
42	71	69	Mitsui & Co Ltd	Japan	Wholesale trade	35 749	72 929	14 071 ^p	32 587	17 614 ^m	38 210	46.1	243	411	59.12
43	97	18	Wal-Mart Stores	United States	Retail	34 525	120 223	56 277 ^k	285 222	410 000	1710 000	24.1	80	96	83.33
44	89	14	Deutsche Post AG	Germany	Transport and storage	33 178	208 888	25 560	53 601	149 201	379 828	34.3	710	834	85.13
45	26	33	Compagnie De Saint-Gobain SA	France	Non-metallic mineral products	31 952	42 071	27 144 ^l	39 765	129 034 ^m	181 228	71.8	622	787	79.03
46	50	72	Veolia Environnement SA	France	Water Supply	31 946	49 396	13 788	30 636	146 249 ^h	251 584	55.9	484	852	56.81
47	7	38	Philips Electronics	Netherlands	Electrical & electronic equipment	30 330	41 848	36 155	37 646	134 814	161 586	84.0	313	425	73.65
48	12	12	Lafarge SA	France	Non-metallic products	30 127	33 742	15 146	17 925	52 365 ^q	77 075	80.6	397	460	86.30
49	72	81	Repsol YPF SA	Spain	Petroleum expl./ref./distr.	29 846	53 044	17 216	51 764	16 162 ^h	33 337	46.0	61	121	50.41
50	30	9	Novartis	Switzerland	Pharmaceuticals	29 081	54 469	27 917 ^k	28 247	43 163 ^l	81 392	68.4	253	280	90.36
51	32	50	GlaxoSmithKline	United Kingdom	Pharmaceuticals	28 971	43 607	34 057	37 275	44 679 ^l	100 019	67.5	196	277	70.76
52	80	82	Endesa	Spain	Electric services	28 786 ⁿ	65 423	10 407 ^{k,l}	27 472	12 953	26 985	43.3	87	175	49.71
53	56	41	Bayer AG	Germany	Pharmaceuticals/chemicals	28 577	51 493	20 913 ^{k,l}	36 950	48 700 ^l	112 500	51.8	214	293	73.04
54	83	20	Altria Group Inc	United States	Tobacco	28 545	101 648	48 388	89 610	64 023	156 000	41.0	199	242	82.23
55	53	24	BASF AG	Germany	Chemicals	27 771	46 197	27 715	46 609	35 289	81 955	54.2	241	298	80.87
56	5	5	Alcan Inc.	Canada	Metal and metal products	25 455	33 341	23 381	24 885	71 000	82 000	85.6	269	289	93.08
57	6	64	Koninklijke Ahold	United States/Netherlands	Retail	24 659	28 202	51 668	64 567	206 057 ^h	231 003	85.6	173	287	60.28
58	74	53	Renault SA	France	Motor vehicles	24 406	83 009	33 004	50 555	54 390	130 573	45.4	143	208	68.75
59	95	46	Petronas - Petrolam Nasional Bhd	Malaysia	Petroleum expl./ref./distr.	22 647 ⁿ	62 915	10 567 ^r	36 065	4 016 ^h	33 944	25.7	167	234	71.37
60	51	26	Dow Chemical Company	United States	Chemicals	22 196	45 885	25 107	40 161	23 841	43 000	55.4	201	250	80.40
61	21	30	Volvo	Sweden	Motor vehicles	21 730	33 698	26 643 ^k	28 630 ^m	52 550	81 080	74.1	244	307	79.48
62	22	67	AES Corporation	United States	Electricity, gas and water	21 022	29 732	7 273 ^k	9 486	22 106	30 000	73.7	60	101	59.41
63	42	61	British American Tobacco	United Kingdom	Tobacco	20 664 ^l	34 139	12 496 ^l	22 721	40 275 ^l	60 953	60.5	204	319	63.95
64	35	84	McDonald's Corp.	United States	Retail	20 565	27 838	12 539	19 065	240 142 ^s	418 000 ^s	65.7	34	76	44.74
65	44	75	Pinault-Printemps Redoute SA	France	Wholesale trade	20 543	31 261	16 943	30 064	50 416 ^m	95 397	58.3	138	250	55.20
66	84	99	National Grid Transco	United Kingdom	Energy	20 315	47 727	7 356 ^l	16 504	8 565	24 406	40.7	259	223	13.90
67	82	74	Matsushita Electric Industrial Co., Ltd.	Japan	Electrical & electronic equipment	20 129	77 381	34 013	80 538	184 110 ^m	334 752	41.1	277	492	56.30
68	64	27	United Technologies Corporation	United States	Transport equipment	19 493	40 035	18 670	37 445	103 330	209 700	49.3	356	443	80.36
69	63	89	Metro AG	Germany	Retail	19 371	38 264	34 294	70 042	105 230	217 424	49.3	262	681	38.47
70	1	1	Thomson Corporation	Canada	Media	19 221	19 643	7 837	8 098	38 926	40 000	97.3	268	279	96.06
71	27	45	Coca-Cola Company	United States	Food & beverages	19 204	31 327	15 245 ^l	21 962	40 400	50 000	70.5	58	80	72.50
72	24	3	Nokia	Finland	Telecommunications	19 034	30 877	35 904 ^k	36 340	30 589 ^m	53 511	72.5	125	131	95.19
73	33	98	Singtel Ltd.	Singapore	Telecommunications	18 641	21 626	5 211	7 465	8 676	19 155	67.1	99	104	18.85
74	86	52	Johnson & Johnson	United States	Pharmaceuticals	18 339	53 317	19 578	47 348	41 622 ^m	109 900	37.9	138	732	68.95
75	17	92	Diageo Plc	United Kingdom	Consumer Goods/Distillers & Vintners	18 147	25 661	13 715	16 544	29 922 ^m	38 955	77.0	171	248	36.07

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Annex table 3. The world's 100 largest TNCs, ranked by foreign assets, 2004 (concluded)

Ranking by:				Assets		Sales		Employment		TNI ^b	No. of affiliates				
Foreign	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Foreign ^e	Total	Foreign ^f	Total	Foreign	Total	(Per Foreign)	Total	II ^c	
76	18	2	Mittal Steel Company NV	Netherlands/ United Kingdom	Steel	17 720 ^j	19 153	20 186 ^k	22 197	150 437 ^l	164 000	77.0	110	305	95.42
77	36	15	Inbev	Netherlands	Consumer Goods/Brewers	17 177 ^q	25 330	6 452 ^q	10 639	49 457 ^q	77 000	64.2	115	136	84.56
78	11	32	Astrazeneca Plc	United Kingdom	Pharmaceuticals	17 176	25 616	20 318	21 426	52 700	64 200	81.3	166	210	79.05
79	15	43	L'Air Liquide Groupe	France	Commodity Chemicals	17 166	19 648	9 053	11 642	24 412	35 900	77.7	266	365	72.88
80	57	35	Abbott Laboratories	United States	Pharmaceuticals	17 133	28 768	8 438	19 680	31 037 ^m	60 600	51.2	81	103	78.64
81	96	77	Hitachi Ltd	Japan	Electrical & electronic equipment	16 832 ⁿ	93 510	22 451 ^k	83 435	104 533	347 424	25.0	385	722	53.32
82	77	63	Thyssenkrupp AG	Germany	Metals and metal products	16 683	41 137	21 433	48 850	93 027	184 358	45.0	400	655	61.07
83	91	76	Marubeni Corporation	Japan	Wholesale trade	16 581	40 415	7 424	28 085	7 597 ^l	24 106	33.0	160	291	54.98
84	37	66	Bertelsmann	Germany	Media	15 973	28 563	14 847	21 128	48 916	76 266	63.4	334	561	59.54
85	31	10	Stora Enso	Finland	Paper	15 467	22 355	10 319	15 392	29 959	43 779	68.2	254	286	88.81
86	75	13	Samsung Electronics	Republic of Korea	Electrical & electronic equipment	15 399	66 665	55 604	71 563	21 259	61 899	45.0	75	87	86.21
87	78	21	Wyeth	United States	Pharmaceuticals	15 293	33 630	7 502 ^k	17 358	22 794 ^m	51 401	44.3	78	95	82.11
88	2	16	CRH Plc	Ireland	Lumber and other building material dealers	15 192	16 165	14 920	15 918	57 882	60 411	94.5	484	573	84.47
89	#	#	Verizon	United States	Telecommunications	15 170	165 958	2 127	71 300	12 731 ^m	210 000	6.1	32	467	6.85
90	88	85	Statoil Asa	Norway	Petroleum expl./ref./distr.	14 934	41 100	8 806 ^l	45 248	11 349	23 899	34.4	60	135	44.44
91	73	36	Scottish Power	United Kingdom	Electric utilities	14 760	27 708	5 096	12 539	6 934	16 142	45.6	87	115	75.65
92	70	25	Bristol-Myers Squibb	United States	Pharmaceuticals	14 708	30 435	8 767	19 380	20 116 ^m	43 000	46.8	74	92	80.43
93	99	94	Duke Energy Corporation	United States	Electricity, gas and water	14 669	55 470	2 305	22 503	3 944 ^m	21 500	18.3	33	94	35.11
94	98	96	CITIC Group	China	Diversified	14 452	84 744	1 746	6 413	15 915 ^h	93 323	20.4	14	59	23.73
95	28	19	BHP Billiton Group	Australia	Mining & quarrying	14 225	21 510	17 673	24 943	25 980 ^m	35 070	70.4	75	90	83.33
96	45	58	Christian Dior SA	France	Textiles	14 177	35 242	10 513 ^l	16 391	41 254	61 515	57.1	21	32	65.63
97	69	70	Alcoa	United States	Metals and metal products	14 084	32 609	8 994	23 478	71 200	119 000	47.1	114	194	58.76
98	59	51	Motorola Inc	United States	Telecommunications	13 900	30 889	17 729 ^l	31 323	34 544 ^m	68 000	50.8	65	93	69.89
99	8	8	Nortel Networks	Canada	Telecommunications	13 854	16 984	9 260 ^k	9 828	25 160	34 150	83.2	58	64	90.63
100	43	40	Lvmh Moët-Hennessy Louis Vuitton SA	France	Textiles and leather	13 685	27 919	10 160	15 674	37 118	56 509	59.8	313	426	73.47

Source: UNCTAD/Erasmus University database.

^a All data are based on the companies' annual reports unless otherwise stated. Data on affiliates is based on the Dun and Bradstreets 'Who owns Whom' database.

^b TNI, the Transnationality Index, is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c II, the "Internationalization Index", is calculated as the number of foreign affiliates divided the number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

^d Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

^e In a number of cases, companies reported only partial foreign assets. In these cases, the ratio of the partial foreign assets to the partial (total) assets was applied to total assets to calculate the total foreign assets. In all cases, the resulting figures were sent

^f Foreign sales are based on the origin of the sales, unless otherwise stated.

^g Data for outside North America.

^h Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment of 2004.

ⁱ Foreign data is calculated by applying the share of the foreign into the total component of 2002 to the total component of 2004.

^j Data for outside Europe.

^k Foreign sales are based on customer location.

^l In a number of cases companies reported only partial region-specified sales. In these cases, the ratio of the partial foreign sales to the partial (total) sales was applied to total sales to calculate the total foreign sales. In all cases, the resulting figures were sent

^m Foreign employment data are calculated by applying the share of both foreign assets in total assets and foreign sales in total sales to total employment.

ⁿ Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets of 2004.

^o Foreign employment data are calculated by applying the average of the shares of foreign employment in total employment of all companies in the same industry (omitting the extremes) to total employment.

^p Data were obtained from the company in response to an UNCTAD survey.

^q Data for outside Western Europe.

^r Foreign sales data are calculated by applying the share of foreign sales in total sales of the previous year to total sales of 2004.

^s Employment data is based on the data of 2003.

Note: The list covers non-financial TNCs only. In some companies, foreign investors may hold a minority share of more than 10 per cent.

Annex table 4. The top 50 TNCs from developing countries, 2003^a
(Millions of dollars, number of employees)

Ranking by			Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)	No. of affiliates		
Foreign assets	TNI ^b	II ^c				Foreign	Total	Foreign ^e	Total	Foreign	Total		Foreign	Total	II ^c
1	7	41	Hutchison Whampoa Limited	Hong Kong, China	Diversified	59 141	80 340	10 800	18 699	104 529	126 250	71.4	1900	2350	80.85
2	27	39	Singtel Ltd.	Singapore	Telecommunications	17 911 ^f	21 668	4 672	68 848	8 642 ⁿ	21 716	43.1	23	30	76.67
3	42	35	Petronas - Petrolia Nasional Bhd ^g	Malaysia	Petroleum expl./ref./distr.	16 114	53 457	8 981	25 661	3 625	30 634	25.7	167	234	71.37
4	26	48	Samsung Electronics Co., Ltd.	Republic of Korea	Electrical & electronic equipment	12 387 ^j	56 524	41 362	54 349	19 026 ⁿ	55 397	44.1	80	89	89.89
5	12	36	Cemex S.A.	Mexico	Construction Materials	11 054	16 021	5 189	7 167	17 051 ⁿ	25 965	69.0	35	48	72.92
6	23	37	América Móvil	Mexico	Telecommunications	8 676	13 348	3 107	7 649	8 403 ⁿ	18 471	50.4	12	16	75.00
7	31	24	China Ocean Shipping (Group) Company ^o	China	Transport and storage	8 457	18 007	6 076 ^m	9 163	4 600	64 586	40.1	22	56	39.29
8	46	7	Petroleo Brasileiro S.A. - Petrobras	Brazil	Petroleum expl./ref./distr.	7 827	53 612	8 665	42 690	5 810	48 798	15.6	13	79	16.46
9	25	47	LG Electronics Inc.	Republic of Korea	Electrical & electronic equipment	7 118 ^l	20 173	14 443 ^m	29 846	36 268	63 951	46.8	134	151	88.74
10	16	34	Jardine Matheson Holdings Ltd	Hong Kong, China	Diversified	6 159	8 949	5 540 ^j	8 477	57 895 ⁿ	110 000	62.3	16	23	69.57
11	10	14	Sappi Limited	South Africa	Paper	4 887 ^f	6 203	3 287	4 299	9 454 ⁿ	16 939	70.4	115	456	25.22
12	33	45	Sasol Limited	South Africa	Industrial chemicals	4 226	10 536	5 033	9 722	5 643	31 150	36.7	21	25	84.00
13	50	30	China National Petroleum Corporation ^o	China	Petroleum expl./ref./distr.	4 060	97 653	5 218	57 423	22 000	1 167 129	5.0	119	204	58.33
14	22	2	Capitaland Limited	Singapore	Real estate	3 936	10 316	1 449	2 252	5 033 ⁿ	10 175	50.7	2	61	3.28
15	8	43	City Developments Limited	Singapore	Hotels	3 879 ^{k,f}	7 329	703 ^k	930	11 549 ^f	13 703	70.9	228	275	82.91
16	4	49	Shangri-La Asia Limited	Hong Kong, China	Hotels and motels	3 672	4 743	436	542	12 619 ^h	16 300	78.4	29	31	93.55
17	15	33	Citic Pacific Ltd.	Hong Kong, China	Construction	3 574 ^f	7 167	2 409	3 372	8 045	12 174	62.5	2	3	66.67
18	45	16	CLP Holdings	Hong Kong, China	Electricity, gas and water	3 564	9 780	298	3 639	488 ^f	4 705	18.3	3	11	27.27
19	41	21	China State Construction Engineering Corporation	China	Construction	3 417	9 677	2 716	9 134	17 051	121 549	26.4	28	75	37.33
20	24	22	MTN Group Limited	South Africa	Telecommunications	3 374	4 819	1 308	3 595	2 601	6 063	49.8	6	16	37.50
21	2	26	Asia Food & Properties	Singapore	Food & beverages	3 331	3 537	1 232	1 273	32 295 ^o	41 800	89.4	2	4	50.00
22	11	46	Flextronics International Ltd.	Singapore	Electrical & electronic equipment	3 206 ^k	5 634	4 674	8 340	80 091 ⁿ	82 000	70.2	92	106	86.79
23	30	17	Companhia Vale do Rio Doce	Brazil	Mining & quarrying	3 155 ^f	11 434	6 513	7 001 ^f	224 ^f	29 632	40.5	16	55	29.09
24	29	10	YTL Corp. Berhad	Malaysia	Utilities	2 878	6 248	489	1 060	1 518 ⁿ	4 895	41.1	24	115	20.87
25	20	38	Hon Hai Precision Industries	Taiwan Province of China	Electrical & electronic equipment	2 597	6 032	4 038	10 793	78 575 ^o	93 109	54.9	25	33	75.76
26	9	11	China Resources Enterprises ^g	Hong Kong, China	Petroleum expl./ref./distr.	2 364	4 034	2 542	4 450	76364 ⁿ	80 000	70.4	4	19	21.05
27	49	1	Oil & Natural Gas Corp.	India	Petroleum expl./ref./distr.	2 328	15 249	648 ^d	9 370	4 515 ^o	38 033	11.4	1	40	2.50
28	5	31	Neptune Orient Lines Ltd.	Singapore	Transport and storage	2 266	4 064	4 705	5 523	10 367 ⁿ	11 322	77.5	6	10	60.00
29	37	4	United Microelectronics Corporation	Taiwan Province of China	Electrical & electronic equipment	2 251	10 302	1 891	2 781	1 045 ⁿ	10 576	33.2	7	75	9.33
30	44	20	Singapore Airlines Limited	Singapore	Transport and storage	2 118	11 278	2 932	6 182	2 465 ⁿ	29 734	24.8	4	11	36.36
31	32	19	Metalurgica Gerdau S.A. ^g	Brazil	Metal and metal products	2 056 ^f	4 770	2 096	4 531	5 334	19 597	38.9	19	53	35.85
32	21	27	Barloworld Ltd	South Africa	Diversified	1 967	3 482	2 380	4 574	10 514 ^f	22 749	51.6	2	4	50.00
33	40	50	Quanta Computer Inc	Taiwan Province of China	Computer and related activities	1 934	4 593	737	8 657	5 772 ^o	17 318	28.0	4	4	100.00
34	1	42	First Pacific Company Limited ^g	Hong Kong, China	Electrical & electronic equipment	1 910	2 074	2 162	2 162	46 926	46 951	97.3	28	34	82.35

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Annex table 4. The top 50 TNCs from developing countries, 2003^a (concluded)
(Millions of dollars, number of employees)

Ranking by				Assets		Sales		Employment		TNI ^b (Per cent)	No. of affiliates				
Foreign assets	TNI ^b	II ^c	Corporation	Home economy	Industry ^d	Foreign	Total	Foreign ^e	Total	Foreign	Total	Foreign	Total	II ^c	
35	43	40	Hyundai Motor Company	Republic of Korea	Motor vehicles	1 780 ⁱ	20 334	12 008	20 935	4 825	51 837	25.1	8	10	80.00
36	36	18	Taiwan Semiconductor Manufacturing Co Lt	Taiwan Province of China	Computer and related activities	1 539	11 957	3 787 ^f	6 067	4 442	16 997	33.8	4	12	33.33
37	17	3	Benq Corp.	Taiwan Province of China	Computer and related activities	1 497	2 778	1 838	3 774	11 100	14 911	59.0	1	14	7.14
38	48	23	China National Offshore Oil Corp. ^g	China	Petroleum and natural gas	1 467	14 479	1 877	6 507	1 000	24 000	14.4	41	105	39.05
39	19	28	Fraser & Neave Limited	Singapore	Food & beverages	1 395	4 536	1 232	2 140	9 951 ⁿ	12 878	55.2	80	148	54.05
40	39	25	Swire Pacific Limited ^g	Hong Kong, China	Business services	1 387 ^f	12 060	1 042	2 263	18 791	56 700	30.2	231	470	49.15
41	35	9	Keppel Corporation Limited	Singapore	Diversified	1 361	5 928	898	3 496	11 364	20 402	34.8	10	53	18.87
42	3	29	Yue Yuen Industrial Holdings Limited ^g	Hong Kong, China	Textile and leather	1 317	2 569	2 470	2 520	241 800	242 000	83.1	18	33	54.55
43	13	32	Acer Inc.	Taiwan Province of China	Electrical & electronic equipment	1 244	3 451	3 637	4 640	5 374 ^o	6 368	66.3	9	14	64.29
44	28	8	Delta Electronics Inc.	Taiwan Province of China	Electronics	1 219	1 861	266	1 458	1 356 ^k	3 238	41.9	13	78	16.67
45	38	12	Grupo Bimbo SA De Cv	Mexico	Food	1 156	2 716	1 417	4 153	15 525 ^f	70 644	32.9	50	232	21.55
46	14	5	China Minmetals Corporation ^g	China	Metals mining and processing	1 150	5 352	1 933	1 168	973	33 000	63.3	22	162	13.58
47	6	44	The MUI Group	Malaysia	Hotels	1 135	1 840	499	621	9 022 ^o	11 000	74.7	166	199	83.42
48	18	13	Gruma S.A. De C.V.	Mexico	Food & beverages	1 086	2 081	1 396	2 051	8 519	15 104	58.9	12	52	23.08
49	47	6	Hongkong Electric Holdings Limited	Hong Kong, China	Electricity, gas and water	1 074	7 305	258	1 449	295 ^h	2 092	15.5	1	7	14.29
50	34	15	Nan Ya Plastics Corporation	Taiwan Province of China	Rubber and plastics	1 030	8 576	936	5 052	16 478 ^y	22 027	35.1	3	11	27.27

Source: UNCTAD/ Erasmus University database.

^a All data are based on the companies' annual reports unless otherwise stated.

^b TNI is the abbreviation for "Transnationality Index". The Transnationality Index is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c II is the abbreviation for "Internationlaization Index". The Index is calculated as the number of foreign affiliates divided by number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

^d Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

^e Foreign sales are based on the origin of the sales. In a number of cases companies reported only sales by destination.

^f In a number of cases companies reported only partial foreign assets. In these cases, the ratio of the partial foreign assets to the partial (total) assets was applied to total assets to calculate the total foreign assets.

^g Data were obtained from the company as a response to an UNCTAD survey.

^h Foreign employment data are calculated by applying the share of foreign assets in total assets to total employment.

ⁱ Foreign assets are calculated by applying the share of foreign employment in total employment to the balance total assets.

^j Data for outside Hong Kong (China) and mainland China.

^k Data for outside Asia.

^l Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets this year.

^m Foreign sales data are calculated by applying the share of foreign sales in total sales of the previous year to total sales this year.

ⁿ Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment this year.

^o Foreign employment data are calculated by applying the average of the shares of foreign employment in total employment of all companies in the same industry (left out the extremes) to total employment.

Annex table 5. The top 50 TNCs from developing countries, 2004

Ranking by			Corporation	Home economy	Industry ^d	Assets		Sales		Employment		No. of affiliates		II ^c	
Foreign assets	TNI ^b	II ^c				Foreign	Total	Foreign ^e	Total	Foreign	Total	TNI ^b (Per cent)	Foreign		Total
1	7	41	Hutchison Whampoa Limited	Hong Kong, China	Diversified	59 141	80 340	10 800	18 699	104 529	126 250	71.4	1900	2350	80.85
2	27	39	Singtel Ltd.	Singapore	Telecommunications	17 911 ^f	21 668	4 672	68 848	8 642 ⁿ	21 716	43.1	23	30	76.67
3	42	35	Petronas - Petrolim Nasional Bhd ^u	Malaysia	Petroleum expl./ref./distr.	16 114	53 457	8 981	25 661	3 625	30 634	25.7	167	234	71.37
4	26	48	Samsung Electronics Co., Ltd.	Republic of Korea	Electrical & electronic equipment	12 387 ^j	56 524	41 362	54 349	19 026 ⁿ	55 397	44.1	80	89	89.89
5	12	36	Cemex S.A.	Mexico	Construction Materials	11 054	16 021	5 189	7 167	17 051 ⁿ	25 965	69.0	35	48	72.92
6	23	37	América Móvil	Mexico	Telecommunications	8 676	13 348	3 107	7 649	8 403 ⁿ	18 471	50.4	12	16	75.00
7	31	24	China Ocean Shipping (Group)	China	Transport and storage	8 457	18 007	6 076 ^m	9 163	4 600	64 586	40.1	22	56	39.29
8	46	7	Petroleo Brasileiro S.A. - Petrobras	Brazil	Petroleum expl./ref./distr.	7 827	53 612	8 665	42 690	5 810	48 798	15.6	13	79	16.46
9	25	47	LG Electronics Inc.	Republic of Korea	Electrical & electronic equipment	7 118 ^f	20 173	14 443 ^m	29 846	36 268	63 951	46.8	134	151	88.74
10	16	34	Jardine Matheson Holdings Ltd	Hong Kong, China	Diversified	6 159	8 949	5 540 ^j	8 477	57 895 ⁿ	110 000	62.3	16	23	69.57
11	10	14	Sappi Limited	South Africa	Paper	4 887 ^f	6 203	3 287	4 299	9 454 ⁿ	16 939	70.4	115	456	25.22
12	33	45	Sasol Limited	South Africa	Industrial chemicals	4 226	10 536	5 033	9 722	5 643	31 150	36.7	21	25	84.00
13	50	30	China National Petroleum Corporation ^w	China	Petroleum expl./ref./distr.	4 060	97 653	5 218	57 423	22 000	1 167 129	5.0	119	204	58.33
14	22	2	Capitaland Limited	Singapore	Real estate	3 936	10 316	1 449	2 252	5 033 ⁿ	10 175	50.7	2	61	3.28
15	8	43	City Developments Limited	Singapore	Hotels	3 879 ^{k,l}	7 329	703 ^k	930	11 549 ^t	13 703	70.9	228	275	82.91
16	4	49	Shangri-La Asia Limited	Hong Kong, China	Hotels and motels	3 672	4 743	436	542	12 619 ⁿ	16 300	78.4	29	31	93.55
17	15	33	Citic Pacific Ltd.	Hong Kong, China	Construction	3 574 ^f	7 167	2 409	3 372	8 045	12 174	62.5	2	3	66.67
18	45	16	CLP Holdings	Hong Kong, China	Electricity, gas and water	3 564	9 780	298	3 639	488 ^t	4 705	18.3	3	11	27.27
19	41	21	China State Construction Engineering	China	Construction	3 417	9 677	2 716	9 134	17 051	121 549	26.4	28	75	37.33
20	24	22	MTN Group Limited	South Africa	Telecommunications	3 374	4 819	1 308	3 595	2 601	6 063	49.8	6	16	37.50
21	2	26	Asia Food & Properties	Singapore	Food & beverages	3 331	3 537	1 232	1 273	32 295 ^o	41 800	89.4	2	4	50.00
22	11	46	Flextronics International Ltd.	Singapore	Electrical & electronic equipment	3 206 ^k	5 634	4 674	8 340	80 091 ⁿ	82 000	70.2	92	106	86.79
23	30	17	Companhia Vale do Rio Doce	Brazil	Mining & quarrying	3 155 ^f	11 434	6 513	7 001 ^f	224 ^t	29 632	40.5	16	55	29.09
24	29	10	YTL Corp. Berhad	Malaysia	Utilities	2 878	6 248	489	1 060	1 518 ⁿ	4 895	41.1	24	115	20.87
25	20	38	Hon Hai Precision Industries	Taiwan Province of China	Electrical & electronic equipment	2 597	6 032	4 038	10 793	78 575 ^o	93 109	54.9	25	33	75.76
26	9	11	China Resources Enterprises ^u	Hong Kong, China	Petroleum expl./ref./distr.	2 364	4 034	2 542	4 450	76 364 ⁿ	80 000	70.4	4	19	21.05
27	49	1	Oil & Natural Gas Corp.	India	Petroleum expl./ref./distr.	2 328	15 249	648 ^o	9 370	4 515 ^o	38 033	11.4	1	40	2.50
28	5	31	Neptune Orient Lines Ltd.	Singapore	Transport and storage	2 266	4 064	4 705	5 523	10 367 ⁿ	11 322	77.5	6	10	60.00
29	37	4	United Microelectronics Corporation	Taiwan Province of China	Electrical & electronic equipment	2 251	10 302	1 891	2 781	1 045 ⁿ	10 576	33.2	7	75	9.33
30	44	20	Singapore Airlines Limited	Singapore	Transport and storage	2 118	11 278	2 932	6 182	2 465 ⁿ	29 734	24.8	4	11	36.36
31	32	19	Metalurgica Gerdau S.A. ^u	Brazil	Metal and metal products	2 056 ^f	4 770	2 096	4 531	5 334	19 597	38.9	19	53	35.85
32	21	27	Barloworld Ltd	South Africa	Diversified	1 967	3 482	2 380	4 574	10 514 ^t	22 749	51.6	2	4	50.00
33	40	50	Quanta Computer Inc	Taiwan Province of China	Computer and related activities	1 934	4 593	737	8 657	5 772 ^o	17 318	28.0	4	4	100.00
34	1	42	First Pacific Company Limited ^u	Hong Kong, China	Electrical & electronic equipment	1 910	2 074	2 162	2 162	46 926	46 951	97.3	28	34	82.35

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Annex table 5. The top 50 TNCs from developing countries, 2004 (concluded)

Ranking by			Corporation	Home economy	Industry ^d	Assets		Sales		Employment		TNI ^b (Per cent)	No. of affiliates		
Foreign assets	TNI ^b	II ^c				Foreign	Total	Foreign ^e	Total	Foreign	Total		Foreign	Total	II ^c
35	43	40	Hyundai Motor Company	Republic of Korea	Motor vehicles	1 780 ^f	20 334	12 008	20 935	4 825	51 837	25.1	8	10	80.00
36	36	18	Taiwan Semiconductor Manufacturing Co Lt	Taiwan Province of China	Computer and related activities	1 539	11 957	3 787 ^f	6 067	4 442	16 997	33.8	4	12	33.33
37	17	3	Benq Corp.	Taiwan Province of China	Computer and related activities	1 497	2 778	1 838	3 774	11 100	14 911	59.0	1	14	7.14
38	48	23	China National Offshore Oil Corp. ^g	China	Petroleum and natural gas	1 467	14 479	1 877	6 507	1 000	24 000	14.4	41	105	39.05
39	19	28	Fraser & Neave Limited	Singapore	Food & beverages	1 395	4 536	1 232	2 140	9 951 ⁿ	12 878	55.2	80	148	54.05
40	39	25	Swire Pacific Limited ^g	Hong Kong, China	Business services	1 387 ^f	12 060	1 042	2 263	18 791	56 700	30.2	231	470	49.15
41	35	9	Keppel Corporation Limited	Singapore	Diversified	1 361	5 928	898	3 496	11 364	20 402	34.8	10	53	18.87
42	3	29	Yue Yuen Industrial Holdings Limited ^g	Hong Kong, China	Textile and leather	1 317	2 569	2 470	2 520	241 800	242 000	83.1	18	33	54.55
43	13	32	Acer Inc.	Taiwan Province of China	Electrical & electronic equipment	1 244	3 451	3 637	4 640	5 374 ^o	6 368	66.3	9	14	64.29
44	28	8	Delta Electronics Inc.	Taiwan Province of China	Electronics	1 219	1 861	266	1 458	1 356 ^k	3 238	41.9	13	78	16.67
45	38	12	Grupo Bimbo SA De Cv	Mexico	Food	1 156	2 716	1 417	4 153	15 525 ^f	70 644	32.9	50	232	21.55
46	14	5	China Minmetals Corporation ^g	China	Metals mining and processing	1 150	5 352	1 933	1 168	973	33 000	63.3	22	162	13.58
47	6	44	The MUI Group	Malaysia	Hotels	1 135	1 840	499	621	9 022 ^o	11 000	74.7	166	199	83.42
48	18	13	Gruma S.A. De C.V.	Mexico	Food & beverages	1 086	2 081	1 396	2 051	8 519	15 104	58.9	12	52	23.08
49	47	6	Hongkong Electric Holdings Limited	Hong Kong, China	Electricity, gas and water	1 074	7 305	258	1 449	295 ^h	2 092	15.5	1	7	14.29
50	34	15	Nan Ya Plastics Corporation	Taiwan Province of China	Rubber and plastics	1 030	8 576	936	5 052	16 478 ^y	22 027	35.1	3	11	27.27

Source: UNCTAD/ Erasmus University database.

^a All data are based on the companies' annual reports unless otherwise stated.

^b TNI is the abbreviation for "Transnationality Index". The Transnationality Index is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c II is the abbreviation for "Internaionalization Index". The Index is calculated as the number of foreign affiliates divided by number of all affiliates (Note: Affiliates counted in this table refer to only majority-owned affiliates).

^d Industry classification for companies follows the United States Standard Industrial Classification as used by the United States Securities and Exchange Commission (SEC).

^e Foreign sales are based on the origin of the sales. In a number of cases companies reported only sales by destination.

^f In a number of cases companies reported only partial foreign assets. In these cases, the ratio of the partial foreign assets to the partial (total) assets was applied to total assets to calculate the total foreign assets.

^g Data were obtained from the company as a response to an UNCTAD survey.

^h Foreign employment data are calculated by applying the share of foreign assets in total assets to total employment.

ⁱ Foreign assets are calculated by applying the share of foreign employment in total employment to the balance total assets.

^j Data for outside Hong Kong (China) and mainland China.

^k Data for outside Asia.

^l Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets this year.

^m Foreign sales data are calculated by applying the share of foreign sales in total sales of the previous year to total sales this year.

ⁿ Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment this year.

^o Foreign employment data are calculated by applying the average of the shares of foreign employment in total employment of all companies in the same industry (left out the extremes) to total employment.

Annex table 6. The top 25 TNCs from Central Europe, 2002

Rank		Corporation	TNI	Industry	Assets		Sales		Employment		TNI %
2003	1998				Foreign	Total	Foreign	Total	Foreign	Total	
1	2	Gorenje Gospodinjski Aparati	Slovenia	Domestic appliances	312.8	632.8	531.6	755.6	731.0	8 772.0	42.7
2	.	Mercator d.d., Poslovni sistem	Slovenia	Retail trade	224.6	1 040.0	139.1	1 331.0	1 893.0	14 331.0	15.1
3	7	Kirka Group	Slovenia	Pharmaceuticals	180.7	577.9	282.6	367.7	817.0	4 332.0	42.3
4	9	Petrol Group	Slovenia	Petroleum and natural gas	108.5	623.5	67.0	1 154.6	25.0	1 632.0	8.2
5	.	Richter Gedeon Ltd.	Hungary	Pharmaceuticals	105.6	742.7	70.3	388.1	1 996.0	5 124.0	23.8
6	14	Malév Hungarian Airlines	Hungary	Transportation	105.0	280.0	291.0	392.0	28.0	2 851.0	37.6
7	6	MOL Hungarian Oil and Gas Plc.	Hungary	Petroleum and natural gas	95.9	3 243.2	819.2	3 850.0	776.0	15 218.0	9.8
8	.	BLRT Grupp AS	Estonia	Shipbuilding	66.2	116.0	53.7	111.3	1 778.0	3 642.0	51.4
9	12	Zalakerámia Rt.	Hungary	Clay product and refractory	65.0	120.0	39.0	64.0	1 889.0	2 921.0	59.9
10	.	Intereuropa d.d.	Slovenia	Trade	45.0	216.0	36.0	182.0	701.0	2 422.0	23.2

Source: UNCTAD survey of top TNCs in Central and Eastern Europe.

Annex table 7. The top 10 TNCs from South-East Europe and the CIS, 2003

Ranking by		Corporation	Home country	Industry	Assets		Sales		Employment		TNI ^b (Per cent)
Foreign assets	TNI ^a				Foreign	Total	Foreign	Total	Foreign	Total	
1	4	Lukoil JSC	Russian Federation	Petroleum and natural gas	7 247	26 674	16 260	22 118	13 929 ^c	150 000	36.7
2	10	Norilsk Nickel, OJSC MMC	Russian Federation	Mining	1 518	5 916	1 518	11 263	1 569	96 620	13.6
3	3	Novoship Co.	Russian Federation	Transportation	1 107	1 213	317	395	65	4 782	57.6
4	2	Pliva d.d.	Croatia	Pharmaceuticals	925	1 629	908	1 078	3 500	6 780	64.2
5	5	Rusal	Russian Federation	Metals mining services	691	31 199	3 660	4 509	5 490	63 458	33.7
6	1	Primorsk Shipping Corporation	Russian Federation	Transportation	382 ^d	442	104 ^e	134	1 305 ^f	2 611 ^f	71.3
7	7	Mechel	Russian Federation	Metal and metal products Food and beverages/	121	1 835	1 048	2 050	12 578	84 982	24.2
8	6	Podravka Group	Croatia	pharmaceuticals	104	571	210	480	1 241	7 376	26.3
9	8	Far Eastern Shipping Co.	Russian Federation	Transport	52 ^d	160	57 ^e	180	166 ^g	4 000	22.8
10	9	Alrosa	Russian Federation	Nonmetallic mineral mining	46	4 630	886	1 955	8 ^g	46 998	15.4

Source: UNCTAD.

^a Based on survey responses and annual reports.

^b TNI is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^c Foreign employment data are calculated by applying the share of foreign employment in total employment of 2001 to total employment of 2003.

^d Foreign assets data are calculated by applying the share of foreign assets in total assets of the previous year to total assets of 2003.

^e Foreign sales data are calculated by applying the share of foreign sales in total sales of the previous year to total sales of 2003.

^f 2002 data.

^g Foreign employment data are calculated by applying the share of foreign employment in total employment of the previous year to total employment of 2003.

Annex table 8. Transnationality indices for the world's largest TNCs, 2003

Corporation	Home economy	Industry	Host countries ^a	Total affiliates	Foreign affiliates ^a	II ^c	NEC	TSI
BASF AG	Germany	Chemicals	74	259	206	79.54	38.00	30.22
Deutsche Post AG	Germany	Transport and storage	102	406	341	83.99	34.60	29.06
Nokia	Finland	Telecommunications	54	103	98	95.15	24.70	23.50
Nestlé SA	Switzerland	Food & beverages	97	501	471	94.01	23.80	22.37
IBM	United States	Electrical & electronic equipment	63	342	315	92.11	23.10	21.28
Altria Group Inc	United States	Tobacco	54	234	196	83.76	22.90	19.18
Robert Bosch GmbH	Germany	Machinery and equipment	37	109	79	72.48	25.30	18.34
Abbott Laboratories	United States	Pharmaceuticals	52	123	103	83.74	21.70	18.17
Novartis	Switzerland	Pharmaceuticals	56	256	232	90.63	19.40	17.58
Ford Motor Company	United States	Motor vehicles	98	623	524	84.11	20.20	16.99
Bayer AG	Germany	Pharmaceuticals/chemicals	67	320	236	73.75	21.80	16.08
Siemens AG	Germany	Electrical & electronic equipment	84	1 011	753	74.48	20.50	15.27
Lvmh Moët-Hennessy Louis Vuitton SA	France	Textile and leather	47	390	296	75.90	18.30	13.89
Pfizer Inc	United States	Pharmaceuticals	34	92	73	79.35	17.50	13.89
Roche Group (Umoe AS)	Switzerland	Pharmaceuticals	46	159	139	87.42	15.60	13.64
Du Pont (E.I.) De Nemours	United States	Chemicals	39	158	115	72.78	18.70	13.61
Exxonmobil Corporation	United States	Petroleum expl./ref./distr.	50	294	218	74.15	17.70	13.12
Volvo AB	Sweden	Motor vehicles	52	319	233	73.04	17.90	13.07
Motorola Inc	United States	Telecommunications	37	468	320	68.38	18.20	12.44
DaimlerChrysler AG	German and American	Motor vehicles	46	558	281	50.36	24.10	12.14
France Telecom	France	Telecommunications	48	211	118	55.92	21.40	11.97
Procter & Gamble	United States	Diversified	49	215	174	80.93	14.50	11.73
Alcoa	United States	Metal and metal products	45	342	295	86.26	13.60	11.73
Metro AG	Germany	Retail	49	335	245	73.13	15.50	11.34
Glaxosmithkline Plc	United Kingdom	Pharmaceuticals	47	229	158	69.00	16.10	11.11
Pinault-Printemps Redoute SA	France	Wholesale trade	54	449	287	63.92	16.20	10.36
Total	France	Petroleum expl./ref./distr.	63	602	419	69.60	14.00	9.74
Philips Electronics	Netherlands	Electrical & electronic equipment	49	378	263	69.58	13.90	9.67
Holcim AG	Switzerland	Non-metallic mineral products	27	113	94	83.19	11.50	9.57
Sanofi-Aventis	France	Pharmaceuticals	61	385	335	87.01	10.90	9.48
Matsushita Electric Industrial Co., Ltd.	Japan	Electrical & electronic equipment	46	504	274	54.37	17.20	9.35
Volkswagen Group	Germany	Motor vehicles	29	283	203	71.73	12.80	9.18
Marubeni Corporation	Japan	Wholesale trade	32	170	106	62.35	14.60	9.10
Alcan Inc.	Canada	Metal and metal products	48	328	306	93.29	9.70	9.05
Cadbury Schweppes Plc	United Kingdom	Food & beverages	29	84	67	80.00	11.30	9.01
Renault SA	France	Motor vehicles	28	207	136	65.70	13.70	9.00
Hewlett-Packard	United States	Electrical & electronic equipment	43	215	179	83.26	10.80	8.99
Norsk Hydro Asa	Norway	Diversified	15	35	20	57.14	15.70	8.97
Fiat Spa	Italy	Motor vehicles	40	436	339	77.75	11.40	8.86
Stora Enso OYJ	Finland	Paper	39	285	229	80.35	10.70	8.60
Honda Motor Co Ltd	Japan	Motor vehicles	29	133	102	76.69	11.10	8.51
AES Corporation	United States United Kingdom/	Electricity, gas and water	25	93	56	60.22	13.70	8.25
Royal Dutch/Shell Group	Netherlands	Petroleum expl./ref./distr.	93	929	454	48.87	16.80	8.21
British Petroleum Company Plc	United Kingdom	Petroleum expl./ref./distr.	29	117	60	51.28	15.60	8.00
International Paper Company	United States	Paper	25	148	93	62.84	11.80	7.41
Thyssenkrupp AG	Germany	Metal and metal products	47	668	389	58.23	12.50	7.28
United Technologies Corporation	United States	Transport equipment	54	422	345	81.75	8.60	7.03
Sony Corporation	Japan	Electrical & electronic equipment	43	299	236	78.93	8.80	6.95
BMW AG	Germany	Motor vehicles	30	157	129	82.17	8.10	6.66
Samsung Electronics Co., Ltd.	Republic of Korea	Electrical & electronic equipment	30	89	80	89.89	7.30	6.56
Deutsche Telekom AG	Germany	Telecommunications	27	178	97	54.49	11.80	6.43

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Annex table 8. Transnationality indices for the world's largest TNCs, 2003 (concluded)

Corporation	Home economy	Industry	Host countries ^a	Total affiliates	Foreign affiliates ^a	II ^c	NEC	TSI
Telefonica SA	Spain	Telecommunications	20	199	133	66.83	9.40	6.28
Hitachi Ltd	Japan	Electrical & electronic equipment	43	670	309	46.12	12.50	5.76
Repsol YPF SA	Spain	Petroleum expl./ref./distr.	19	124	81	65.32	8.70	5.68
Unilever	United Kingdom/ Netherlands	Diversified	83	522	316	60.54	9.30	5.63
Lafarge SA	France	Non-metallic mineral products	51	489	389	79.55	7.00	5.57
British American Tobacco Plc	United Kingdom	Tobacco	55	363	248	68.32	8.00	5.47
Singtel Ltd.	Singapore	Telecommunications	13	30	23	76.67	7.00	5.37
Suez	France	Electricity, gas and water	44	947	605	63.89	7.90	5.05
Carrefour SA	France	Retail	21	231	128	55.41	8.90	4.93
Mitsubishi Corporation	Japan	Wholesale trade	34	314	170	54.14	9.10	4.93
Mitsui & Co Ltd	Japan	Wholesale trade	37	364	198	54.40	8.90	4.84
Anglo American	United Kingdom	Mining & quarrying	34	524	197	37.60	12.80	4.81
BHP Billiton Group	Australia	Mining & quarrying	19	98	42	42.86	11.20	4.80
Veolia Environnement SA	France	Water Supply	44	760	424	55.79	8.60	4.80
Publicis Groupe SA	France	Business services	44	293	161	54.95	8.50	4.67
Eni Group	Italy	Petroleum expl./ref./distr.	33	226	154	68.14	6.50	4.43
Compagnie De Saint-Gobain SA	France	Non-metallic mineral products	46	791	612	77.37	5.60	4.33
Endesa	Spain	Electric services	15	177	85	48.02	8.90	4.27
Telecom Italia Spa	Italy	Telecommunications	14	73	33	45.21	9.00	4.07
Toyota Motor Corporation	Japan	Motor vehicles	34	330	124	37.58	10.70	4.02
General Motors	United States	Motor vehicles	39	297	177	59.60	6.70	3.99
General Electric	United States	Electrical & electronic equipment	50	1 398	1 068	76.39	5.20	3.97
Bertelsmann	Germany	Media	33	468	320	68.38	5.70	3.90
Wyeth	United States	Pharmaceuticals	15	112	35	31.25	12.20	3.81
ConocoPhillips	United States	Petroleum expl./ref./distr.	27	147	103	70.07	5.00	3.50
Dow Chemical Company	United States	Chemicals	38	267	216	80.90	4.30	3.48
CRH Plc	Ireland	Lumber and other building materials dealers	39	100	72	72.00	4.80	3.46
E.On	Germany	Electricity, gas and water	30	790	478	60.51	5.60	3.39
Xerox Corporation	United States	Electrical & electronic equipment	39	115	28	24.35	13.60	3.31
Petronas - Petrolim Nasional Bhd	Malaysia	Petroleum expl./ref./distr.	8	411	234	56.93	5.80	3.30
Hutchison Whampoa Limited	Hong Kong, China	Diversified	40	2 350	1 900	80.85	3.90	3.15
Nissan Motor Co Ltd	Japan	Motor vehicles	16	146	58	39.73	7.90	3.14
ChevronTexaco Corp.	United States	Petroleum expl./ref./distr.	30	201	93	46.27	6.50	3.01
Rio Tinto Plc	United Kingdom	Mining & quarrying	18	145	68	46.90	6.40	3.00
Vodafone Group Plc	United Kingdom	Telecommunications	19	201	71	35.32	8.40	2.97
Wal-Mart Stores	United States	Retail	10	83	67	80.72	3.30	2.66
Thomson Corporation	Canada	Media	22	310	300	96.77	2.70	2.61
Christian Dior SA	France	Textiles	16	476	421	88.45	2.90	2.56
BAE Systems Plc	United Kingdom	Transport equipment	48	256	210	82.03	3.10	2.54
News Corporation	Australia	Media	24	269	213	79.18	3.00	2.38
Statoil Asa	Norway	Petroleum expl./ref./distr.	11	248	57	22.98	9.10	2.09
Electricite De France	France	Electricity, gas and water	16	264	204	77.27	1.80	1.39
RWE Group	Germany	Electricity, gas and water	32	650	273	42.00	3.00	1.26
Vivendi Universal	France	Diversified	16	238	106	44.54	2.50	1.11
Scottish Power	United Kingdom	Electric Utilities	31	188	104	55.32	2.00	1.11
Duke Energy Corporation	United States	Electricity, gas and water	6	73	33	45.21	2.20	0.99
Koninklijke Ahold	Netherlands	Retail	8	164	74	45.12	2.00	0.90
McDonald's Corporation	United States	Retail	12	67	26	38.81	2.20	0.85
Verizon Communications	United States	Telecommunications	11	219	13	5.94	9.90	0.59
National Grid Transco	United Kingdom	Energy	7	244	42	17.21	3.20	0.55

Annex table 9. The most favoured locations for FDI by the top 100 TNCs, 2003

All economies			Developing economies		
Rank	Economy	Location Intensity	Rank	Economy	Location Intensity
1	United Kingdom	97.7	1	Brazil	75.0
2	Netherlands	94.8	2	Mexico	72.0
3	United States	92.0	3	Hong Kong (China)	66.6
4	Canada	86.7	4	Singapore	64.6
5	France	82.3	5	Argentina	63.0
6	Germany	81.4	6	China	60.0
7	Italy	78.3	7	Bolivarian Republic of Venezuela	56.0
8	Spain	77.3	8	Turkey	52.0
9	Switzerland	77.1	9	Taiwan Province of China	49.0
10	Brazil	75.0	10	Malaysia	46.5
	Belgium	75.0	11	Chile	46.0
12	Mexico	72.0	12	Colombia	44.0
13	Poland	69.0	13	South Africa	43.0
14	Hong Kong (China)	66.6	14	Republic of Korea	42.4
15	Australia	66.3	15	India	38.0
16	Japan	65.9	16	Thailand	36.0
17	Singapore	64.6	17	Peru	34.0
18	Austria	63.0	18	United Arab Emirates	31.0
	Czech Republic	63.0	19	Philippines	29.0
	Argentina	63.0	20	Indonesia	28.0
21	Ireland	62.6		Panama	28.0
22	Portugal	62.0	22	Morocco	27.0
23	Sweden	60.6	23	Egypt	26.0
24	China	60.0	24	Bermuda	23.0
25	Denmark	58.0	25	Ecuador	22.0
26	Bolivarian Republic of Venezuela	56.0	26	Kenya	20.0
27	Finland	54.1		Uruguay	20.0
28	New Zealand	54.0	28	Costa Rica	19.0
29	Turkey	52.0		Guatemala	19.0
	Hungary	52.0	30	Nigeria	17.0
31	Luxembourg	51.0	31	Dominican Republic	16.0
32	Taiwan Province of China	49.0		El Salvador	16.0
33	Slovakia	48.0		Tunisia	16.0
34	Norway	47.9	34	Côte d'Ivoire	15.0
35	Malaysia	46.5		Viet Nam	15.0
36	Chile	46.0	36	Cayman Islands	14.0
37	Russia	45.0	37	Cameroon	12.0
38	Colombia	44.0		Nicaragua	12.0
39	South Africa	43.0	39	Saudi Arabia	12.0
40	Republic of Korea	42.4	40	Bahamas	11.0
41	India	38.0		Bolivia	11.0
42	Thailand	36.0		Islamic Republic of Iran	11.0
43	Peru	34.0		Pakistan	11.0
44	Greece	32.0	44	Honduras	10.0
45	United Arab Emirates	31.0	45	Gabon	9.0
46	Romania	30.0		Ghana	9.0
47	Philippines	29.0		Lebanon	9.0
48	Indonesia	28.0		Mozambique	9.0
	Panama	28.0		Islamic Republic of Tanzania	9.0
50	Morocco	27.0		Algeria	9.0

Source: UNCTAD, based on Dun & Bradstreet, *Who Owns Whom* database.

Annex figure 1. Annual average growth rates of total real gross domestic product

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http://www.unctad.org/en/docs/wir2006_en.pdf.

World Investment Report 2006. FDI from Developing and Transition Economies: Implications for Development. An Overview. 50 p. http://www.unctad.org/en/docs/wir2006overview_en.pdf.

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http://www.unctad.org/en/docs/wir2004_en.pdf.

World Investment Report 2004. The Shift Towards Services. An Overview. 62 p.

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World Investment Report 2003. FDI Policies for Development: National and International Perspectives.

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http://www.unctad.org/en/docs/wir2003overview_en.pdf.

World Investment Report 2002: Transnational Corporations and Export Competitiveness. 352 p. Sales No. E.02.II.D.4. \$49.

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<http://www.unctad.org/wir/contents/wir01content.en.htm>.

World Investment Report 2001: Promoting Linkages. An Overview. 67 p.

<http://www.unctad.org/wir/contents/wir01content.en.htm>.

Ten Years of World Investment Reports: The Challenges Ahead. Proceedings of an UNCTAD special event on future challenges in the area of FDI.

UNCTAD/ITE/Misc.45. <http://www.unctad.org/wir>.

World Investment Report 2000: Cross-border Mergers and Acquisitions and Development.

368 p. Sales No. E.99.II.D.20. \$49.

<http://www.unctad.org/wir/contents/wir00content.en.htm>.

World Investment Report 2000: Cross-border Mergers and Acquisitions and Development. An Overview. 75 p.

<http://www.unctad.org/wir/contents/wir00content.en.htm>.

World Investment Directories

(For more information visit

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World Investment Directory 2004: Latin America and the Caribbean. Volume IX. 599 p. Sales No.

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World Investment Directory 2003: Central and Eastern Europe. Vol. VIII. 397 p. Sales No. E.03.II.D.24. \$80.

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Investment Policy Review – Uzbekistan.. 65 p. UNCTAD/ITE/IIP/Misc. 13.

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http://www.unctad.org/en/docs/ps1dited2v6_p1_en.pdf
(part one).

International Investment Instruments: A Compendium. Vol. V. 505 p. Sales No. E.00.II.D.14. \$55.

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http://www.unctad.org/en/docs/poiteiitm29_en.pdf.

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<http://www.unctad.org/en/docs/poiteipcm8.en.pdf>.

Foreign Direct Investment in Africa: Performance and Potential. 89 p. UNCTAD/ITE/IIT/Misc.15. Free of charge. Also available from
<http://www.unctad.org/en/docs/poiteiitm15.pdf>.

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