CHAPTER II

BENCHMARKING FDI PERFORMANCE AND POTENTIAL

A. Introduction and methodology

Benchmarking national economies is now an important tool for policy-making (Lall, 2001b). Comparisons with similar economies are a good indication of how well countries are doing against the competition, while comparisons with better performing economies can show where to head in the future. Since attracting FDI is now an important policy concern for countries at all levels of development, it is useful to develop benchmarks of inward FDI performance.

One simple way to benchmark FDI performance is to compare the absolute values of inflows or the shares of FDI in national investment. The *World Investment Report* has long provided such data (see tables in annex B). These comparisons do not, however, take into account the size of the host economy. It is a reasonable assumption that the larger the economy (as measured by GDP) the more FDI it will get. It is more interesting to assess how successful an economy is in attracting FDI after taking size into account. This can implicitly capture the effect of other factors to which foreign investors are sensitive: political and macroeconomic stability, the FDI policy regime, industrial competitiveness, natural and human resources, and the like.

WIR01 introduced an Inward FDI Index to benchmark success in attracting FDI.[1] This chapter simplifies and revises that index, renaming it the *UNCTAD Inward FDI Performance Index*. The Inward FDI Performance Index is the ratio of a country's share in global FDI flows to its share in global GDP. Countries with an index value of one receive FDI exactly in line with their relative economic size. Countries with an index value greater than one attract more FDI than may be expected on the basis of relative GDP. They may have exceptionally welcoming regulatory regimes, be very well managed in macroeconomic terms, or have efficient and low-cost business environments. They may offer other competitive attractions: good growth prospects, ample and economical skilled labour, natural resources, good R&D capabilities, advanced infrastructure, efficient financial support or well-developed supplier clusters. Or they may have privileged access or a favourable location for exporting to large markets, or serve as entrepôt bases or tax havens, and so on. On the other hand, countries with index values below one may suffer from instability, poor policy design and implementation or competitive weaknesses in their economies.

The Inward FDI Performance Index should be treated with care as an indicator of countries' inward FDI positions. There are problems in compiling and comparing FDI inflow data.[2] Tax havens will tend to show massive inflows in relation to their size. Some countries may have "lumpy" inflows for short periods, say because of newly discovered resources, mega M&As involving foreign investors or large privatizations. Economies that have been relatively isolated from international capital flows and have recently opened up may also get a substantial wave of FDI. Even countries with steady FDI inflows may change ranks if their share in global GDP changes.

To offset these problems, the coverage of the Index excludes most tax havens (it ends up with a sample of 140 countries) and uses data for three-year periods rather than a single year. However, this does not overcome all the difficulties, as noted in the discussion below. The Index is calculated for two periods spanning the past decade: 1988-1990 and 1998-2000.

WIR02 also constructs an index to rank countries according to their *potential* to attract FDI: the *UNCTAD Inward FDI Potential Index*. It is not possible, with the

available data, to capture the host of factors that can affect FDI (figure II.1). Social, political and institutional factors are difficult to quantify at the national level. It is particularly difficult to compare how efficiently policies are implemented. Many economic and competitiveness factors – of the type relevant to foreign investors – are also difficult to benchmark. Take, for instance, the skills available for manufacturing or services. Data on enrolments in formal education, generally used to benchmark the skill base, cannot capture the availability or quality of specific skills. There are similar problems in comparing technological capabilities or infrastructure. Such factors as the strength of local suppliers or the efficacy of support institutions are even more difficult to measure. Finally, FDI decisions depend also on the *perception* of individual TNCs, and this may be at variance with data based on past performance.

This said, it is still useful to benchmark the key measurable factors (apart from the size of an economy) that are expected to affect inward FDI. After examining a large number of variables, construction of the FDI Potential Index settled on eight; the final index is then an unweighted average of their normalized values.[3] The variables are *the rate of growth of GDP; per capita GDP; shar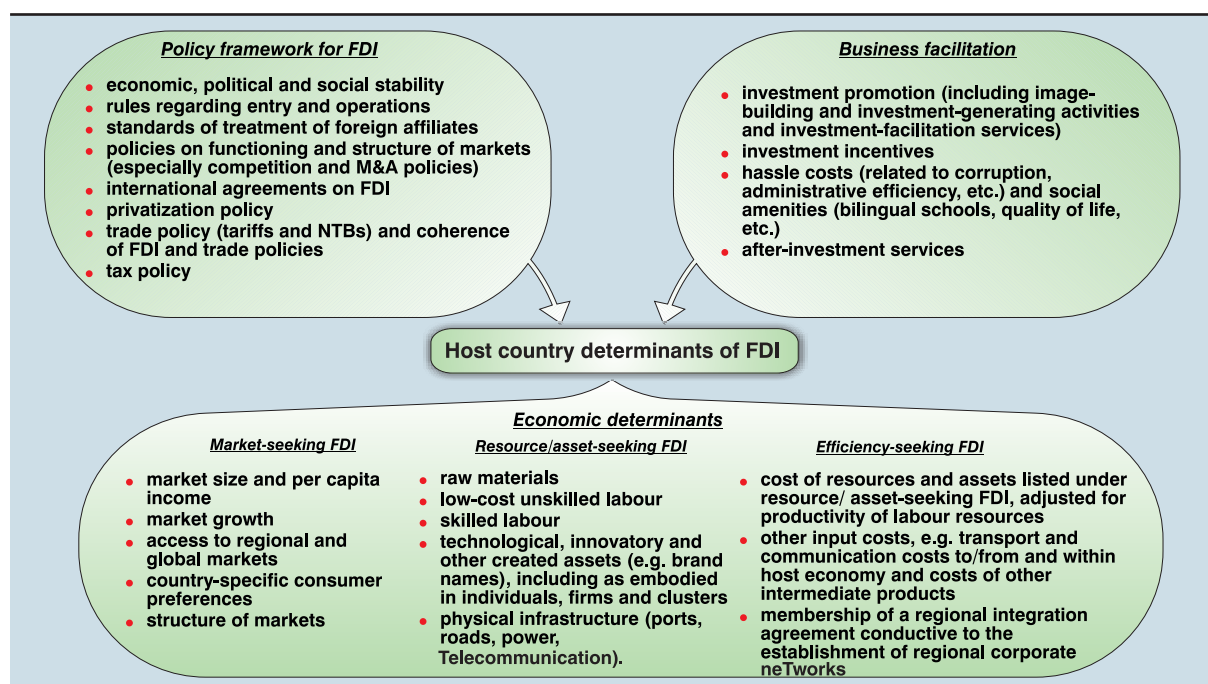e of exports in GDP; telephone lines per 1,000 inhabitants; commercial energy use per capita; share of R&D expenditures in gross national income; share of tertiary students in the population; and country risk*. The annex to this chapter gives the rationale for their inclusion, a brief description and sources of information for these variables. The FDI Potential Index is also calculated for the two periods, 1988-1990 and 1998-2000.

Note that these two indices are not intended to provide a full-blown model of FDI location or to measure the impact of FDI on host economies. The exercise is more modest: to provide useful data to policy-makers and analysts on relative performance.

B. The UNCTAD Inward FDI Performance Index

The Inward FDI Performance Index values for countries vary widely (table II.1). There are nine countries with FDI Performance Index values of one (whose inward FDI matches their size). There are 31 countries for which FDI is more or less in line with their size (taking a broader median FDI Performance Index ranging from 1.2 to 0.8), 43 countries that get more FDI than expected given their size, and 66 that get less.

Figure II.1. Host country determinants of FDI

Policy framework for FDI
- economic, political and social stability
- rules regarding entry and operations
- standards of treatment of foreign affiliates
- policies on functioning and structure of markets (especially competition and M&A policies)
- international agreements on FDI
- privatization policy
- trade policy (tariffs and NTBs) and coherence of FDI and trade policies
- tax policy

Business facilitation
- investment promotion (including image-building and investment-generating activities and investment-facilitation services)
- investment incentives
- hassle costs (related to corruption, administrative efficiency, etc.) and social amenities (bilingual schools, quality of life, etc.)
- after-investment services

Host country determinants of FDI

Economic determinants

Market-seeking FDI
- market size and per capita income
- market growth
- access to regional and global markets
- country-specific consumer preferences
- structure of markets

Resource/asset-seeking FDI
- raw materials
- low-cost unskilled labour
- skilled labour
- technological, innovatory and other created assets (e.g. brand names), including as embodied in individuals, firms and clusters
- physical infrastructure (ports, roads, power, Telecommunication).

Efficiency-seeking FDI
- cost of resources and assets listed under resource/ asset-seeking FDI, adjusted for productivity of labour resources
- other input costs, e.g. transport and communication costs to/from and within host economy and costs of other intermediate products
- membership of a regional integration agreement conductive to the establishment of regional corporate neTworks

Source: UNCTAD, *WIR98*, p. 91.

Table II.1. **Values of and country rankings by the UNCTAD Inward FDI Performance Index and Inward FDI Potential Index, 1988-1990 and 1998-2000ᵃ**

| Economy | FDI Performance Index | | | | FDI Potential Index | | | |
| | Value | | Rank | | Score 0-1 | | Rank | |
	1988-1990	1998-2000	1988-1990	1998-2000	1988-1990	1998-2000	1988-1990	1998-2000
Albania	3.9	0.6	12	81	0.165	0.207	97	100
Algeria	0.0	0.3	126	111	0.198	0.216	76	96
Angola	-0.0	5.1	129	3	0.151	0.166	105	126
Argentina	1.2	1.4	48	37	0.204	0.317	72	55
Armenia	0.2	2.5	112	15	0.204	0.170	71	123
Australia	2.8	0.6	22	88	0.475	0.569	15	16
Austria	0.4	0.7	98	75	0.458	0.524	17	23
Azerbaijan	9.2	3.3	3	8	0.224	0.174	64	121
Bahamas	0.5	1.1	82	48	0.342	0.462	28	28
Bahrain	1.9	1.3	31	40	0.324	0.430	33	30
Bangladesh	0.0	0.1	127	122	0.098	0.162	130	128
Belarus	0.1	0.5	122	90	0.312	0.305	36	58
Belgium and Luxembourg	3.9	13.8	13	1	0.516	0.604	11	10
Benin	2.6	0.8	23	71	0.086	0.160	134	130
Bolivia	1.0	3.0	54	10	0.154	0.266	103	76
Botswana	2.2	0.3	29	109	0.297	0.346	41	45
Brazil	0.4	1.3	95	42	0.209	0.241	70	89
Brunei Darussalam	0.0	0.1	125	128	0.315	0.424	35	33
Bulgaria	0.8	1.8	67	24	0.301	0.321	39	53
Burkina Faso	0.1	0.2	116	116	0.137	0.185	112	113
Cameroon	-0.3	0.1	137	120	0.164	0.181	99	115
Canada	1.3	1.6	46	30	0.618	0.629	2	5
Chile	3.7	2.3	15	17	0.239	0.342	56	47
China	0.9	1.2	61	47	0.234	0.251	59	84
Colombia	0.4	0.7	96	77	0.213	0.242	69	88
Congo, Dem. Rep. of the	-0.1	0.2	134	118	0.097	0.085	131	138
Congo	0.3	0.7	107	79	0.171	0.207	91	101
Costa Rica	2.6	1.0	24	56	0.223	0.316	65	56
Côte d'Ivoire	0.4	0.9	101	64	0.150	0.195	107	108
Croatia	0.8	1.7	65	27	0.218	0.343	68	46
Cyprus	1.9	0.4	35	102	0.331	0.414	30	34
Czech Republic	2.8	2.5	20	13	0.325	0.380	31	39
Denmark	0.8	2.8	62	12	0.517	0.615	10	8
Dominican Republic	1.9	1.6	32	31	0.191	0.328	80	52
Ecuador	1.5	1.2	41	45	0.171	0.199	92	107
Egypt	2.8	0.5	21	91	0.172	0.287	90	66
El Salvador	0.2	1.1	111	50	0.127	0.332	119	49
Estonia	9.4	2.3	2	16	0.282	0.391	47	37
Ethiopia	0.1	0.5	118	97	0.085	0.171	135	122
Finland	0.5	1.9	81	22	0.559	0.626	6	6
France	0.9	0.8	60	69	0.510	0.553	13	19
Gabon	1.4	0.5	44	96	0.188	0.253	81	83
Gambia	1.9	0.9	34	62	0.199	0.250	75	85
Georgia	0.5	1.4	88	36	0.235	0.140	58	134
Germany	0.3	1.3	106	43	0.520	0.547	9	20
Ghana	0.2	0.3	113	107	0.140	0.179	110	117
Greece	1.3	0.1	45	125	0.301	0.414	40	35
Guatemala	2.0	0.5	30	94	0.110	0.234	125	91
Guinea	0.6	0.3	74	106	0.129	0.203	118	106
Guyana	0.7	2.2	72	19	0.110	0.351	127	43
Haiti	0.4	0.1	102	124	0.065	0.133	139	136
Honduras	1.2	1.0	49	53	0.155	0.232	101	93
Hong Kong, China	5.4	5.9	4	2	0.441	0.589	21	13
Hungary	5.0	1.1	6	49	0.274	0.357	48	42
Iceland	0.3	0.4	104	98	0.516	0.604	12	9
India	0.1	0.2	121	119	0.165	0.204	96	104
Indonesia	0.8	-0.6	63	138	0.203	0.189	73	110
Iran, Islamic Rep. of	-0.1	0.0	135	135	0.154	0.278	102	69
Ireland	0.7	5.1	71	4	0.377	0.599	25	11
Israel	0.4	0.8	100	70	0.388	0.531	24	21
Italy	0.6	0.2	79	115	0.412	0.464	23	27
Jamaica	1.9	1.7	33	26	0.186	0.265	83	79
Japan	0.0	0.1	128	131	0.557	0.586	7	14
Jordan	0.4	0.6	97	86	0.179	0.301	87	60
Kazakhstan	3.3	2.0	17	21	0.269	0.260	49	82
Kenya	0.5	0.2	90	117	0.127	0.168	120	124
Korea, Republic of	0.5	0.6	93	87	0.449	0.558	19	18
Kuwait	0.0	0.0	124	132	0.229	0.425	61	32
Kyrgyzstan	3.9	1.0	14	55	0.186	0.139	82	135
Latvia	4.7	1.6	7	32	0.358	0.289	26	65
Lebanon	0.1	0.1	117	126	0.141	0.297	109	62
Libyan Arab Jamahiriya	0.5	-0.1	86	136	0.182	0.218	85	95
Lithuania	1.0	1.5	56	33	0.332	0.304	29	59
Madagascar	0.5	0.4	89	99	0.121	0.184	121	114
Malawi	1.1	1.0	51	61	0.150	0.203	106	105

Table II.1. Values of and country rankings by the UNCTAD Inward FDI Performance Index and Inward FDI Potential Index, 1988-1990 and 1998-2000ᵃ (concluded)

Economy	FDI Performance Index				FDI Potential Index			
	Value		Rank		Score 0-1		Rank	
	1988-1990	1998-2000	1988-1990	1998-2000	1988-1990	1998-2000	1988-1990	1998-2000
Malaysia	4.4	1.2	8	44	0.252	0.368	52	40
Mali	0.3	0.7	105	76	0.132	0.216	117	97
Malta	2.4	4.6	28	5	0.324	0.500	34	24
Mexico	1.5	0.7	42	78	0.196	0.278	77	70
Moldova, Republic of	1.7	1.7	38	29	0.285	0.194	46	109
Mongolia	0.8	0.5	66	93	0.254	0.266	51	75
Morocco	0.6	0.4	76	101	0.178	0.237	88	90
Mozambique	0.3	1.8	109	23	0.068	0.178	137	118
Myanmar	1.9	0.6	36	82	0.067	0.083	138	139
Namibia	0.5	0.9	94	63	0.164	0.279	98	68
Nepal	0.1	0.0	120	133	0.110	0.163	126	127
Netherlands	3.1	3.3	19	7	0.520	0.592	8	12
New Zealand	4.0	1.0	10	54	0.429	0.492	22	25
Nicaragua	0.0	3.1	123	9	0.087	0.206	133	102
Niger	0.7	0.1	69	121	0.102	0.185	128	112
Nigeria	4.0	0.8	11	72	0.134	0.204	114	103
Norway	0.9	1.0	59	60	0.560	0.634	5	4
Oman	1.2	0.1	47	130	0.306	0.335	38	48
Pakistan	0.6	0.2	77	114	0.141	0.159	108	132
Panama	-2.8	2.5	139	14	0.225	0.384	63	38
Papua New Guinea	5.1	1.5	5	34	0.160	0.263	100	80
Paraguay	0.6	0.6	75	85	0.182	0.213	84	99
Peru	0.2	0.8	114	68	0.174	0.282	89	67
Philippines	1.7	0.6	39	89	0.139	0.265	111	78
Poland	1.9	1.4	37	38	0.256	0.329	50	51
Portugal	3.2	0.9	18	65	0.288	0.411	43	36
Qatar	-0.1	0.5	133	92	0.451	0.530	18	22
Romania	0.8	1.0	64	57	0.201	0.248	74	87
Russian Federation	0.3	0.3	108	104	0.310	0.291	37	64
Rwanda	0.6	0.1	73	129	0.072	0.094	136	137
Saudi Arabia	0.3	0.1	103	127	0.222	0.332	66	50
Senegal	0.6	0.6	78	83	0.133	0.180	116	116
Sierra Leone	1.0	0.0	55	134	0.101	0.078	129	140
Singapore	13.8	2.2	1	18	0.470	0.641	16	3
Slovakia	1.5	1.5	40	35	0.287	0.361	44	41
Slovenia	0.6	0.3	80	110	0.291	0.429	42	31
South Africa	-0.0	0.2	131	113	0.220	0.266	67	77
Spain	2.5	1.1	26	52	0.353	0.455	27	29
Sri Lanka	0.5	0.4	85	103	0.135	0.187	113	111
Sudan	-0.1	1.0	132	58	0.047	0.166	140	125
Suriname	-12.7	-2.0	140	140	0.166	0.315	94	57
Sweden	0.9	4.1	57	6	0.608	0.650	3	2
Switzerland	1.4	1.4	43	39	0.594	0.617	4	7
Syrian Arab Republic	0.5	0.3	92	105	0.171	0.320	93	54
Taiwan Province of China	0.9	0.3	58	112	0.444	0.570	20	15
Tajikistan	0.7	0.6	70	80	0.240	0.176	55	120
Macedonia, TFYR	0.5	0.9	91	66	0.194	0.250	78	86
Thailand	2.6	1.3	25	41	0.235	0.298	57	61
Togo	1.1	1.2	52	46	0.166	0.177	95	119
Trinidad and Tobago	2.4	2.8	27	11	0.227	0.295	62	63
Tunisia	0.7	0.8	68	67	0.179	0.268	86	74
Turkey	0.5	0.1	83	123	0.192	0.275	79	72
Uganda	-0.0	1.0	130	59	0.115	0.228	123	94
Ukraine	0.4	0.5	99	95	0.287	0.261	45	81
United Arab Emirates	0.1	-0.1	115	137	0.324	0.488	32	26
United Kingdom	3.3	1.8	16	25	0.478	0.559	14	17
United Republic of Tanzania	0.1	0.6	119	84	0.120	0.161	122	129
United States	1.1	0.8	50	74	0.649	0.666	1	1
Uruguay	0.5	0.3	87	108	0.233	0.348	60	44
Uzbekistan	0.3	0.4	110	100	0.251	0.233	53	92
Venezuela	0.5	1.1	84	51	0.246	0.269	54	73
Viet Nam	1.0	2.0	53	20	0.134	0.277	115	71
Yemen	-0.6	-1.0	138	139	0.090	0.216	132	98
Zambia	4.2	1.7	9	28	0.111	0.160	124	131
Zimbabwe	-0.2	0.8	136	73	0.152	0.147	104	133

Source: UNCTAD.

a Covering 140 countries.

Notes: The Inward FDI Performance Index for 1988-1990 for some countries refer to periods different from 1988-1990 as follows: 1989-1991 for Myanmar, 1990-1992 for Slovenia, 1991-1993 for Mongolia; 1992-1994 for Albania, Armenia, Belarus, Bulgaria, Czech Republic, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia, Ukraine and Uzbekistan; 1993-1995 for Croatia and Kyrgyzstan, and 1994-1996 for Azerbaijan, Georgia, Tajikistan and the former Yugoslav Republic of Macedonia. For other notes, please see annex table A.II.2.

How do regions fare according to the Index? The developed world is more or less balanced in terms of the FDI it receives vis-à-vis its economic size – with index-values at or close to one in both periods (table II.2). However, within the group of developed countries, there are interesting differences: the European Union scores highest and "other developed countries"[4] the lowest (the latter reflecting the low score for Japan). In considering performance on the basis of the Index, it is important to recall that the greater part of FDI in developed countries takes place in the form of M&As. Thus, the implications for them of a given position on the Index may be different, to some extent, from those for countries for which the same position primarily reflects greenfield investments. In both cases, however, similar (relative) additions are being made to host country production that is part of the international production systems of foreign firms, and many of the longer-term consequences are similar.[5]

The transition economies of CEE have ranked, as a group, at almost the same level throughout the decade, and receive more or less the FDI that their GDP would warrant. The developing world as a whole has also maintained its score over time, but its FDI inflows reflect its relative size. Among developing regions, Africa shows a large fall in its score, with both subgroups losing ground. In particular, "other Africa" (sub-Saharan Africa) goes from a score of 0.8 to 0.6, suggesting a loss in its relative attractiveness, even given its low share of global GDP. By contrast, Latin America and the Caribbean show a marked improvement in their scores. This reflects the strong performance of countries in South America; other countries in the region, including Mexico, show a significant fall in ranking.

Asia as a whole moves from a score of above one to below one. This reflects weakened performance in West Asia and East and South-East Asia. There is, however, a marked difference between the two subregions. West Asia has a very low score in both periods (the lowest of all regions in the second), while East and South-East Asia retain a value of well above one in both. South Asia improves its score, but from a very low base; by the end of the decade its score was the second lowest of those for all developing regions.

The country rankings for FDI performance yield interesting findings. The top 20 countries include five small developed countries, 12 developing economies and three from CEE (figure II.2). The bottom 20 countries are mainly developing countries, including several LDCs, but they also include Japan and Greece.

There is marked *heterogeneity* among countries with similar FDI performance, largely reflecting the effect of short-term factors. In 1998-2000, for instance, the global leaders are Belgium/Luxembourg, Hong Kong (China) and Angola. Belgium/Luxembourg, as a rich economy located in the heart of Europe, is expected to have (and retain) a high rank. Angola, by contrast, scores high towards the end of the period because it received a surge of FDI in petroleum in response to more stable political conditions; the surge took it to second place from 129th position in 1988-1990. One implication of this difference in the underlying factors between the two is that a rich and well-located country that does well on the Index may expect to sustain good performance over time, while a poor country that receives a sudden inflow may not, once investments have "adjusted" to its new situation unless it leverages the large inflows to grow rapidly.

Table II.2. Inward FDI Performance Index, by region, 1988-1990 and 1998-2000

Region	1988-1990	1998-2000
World	**1.00**	**1.00**
Developed countries	**1.01**	**1.00**
Western Europe	1.28	1.72
European Union	1.28	1.74
Other Western Europe	1.33	1.22
North America	1.12	0.82
Other developed countries	0.29	0.12
Developing countries	**0.99**	**0.99**
Africa	0.80	0.52
North Africa	0.84	0.42
Other Africa	0.77	0.60
Latin America and the Caribbean	0.91	1.37
South America	0.72	1.28
Other Latin America and the Caribbean	1.33	1.57
Asia	1.07	0.85
West Asia	0.26	0.11
Central Asia	..	1.58
South, East and South-East Asia	1.31	1.00
East and South-East Asia	1.73	1.20
South Asia	0.12	0.16
The Pacific	4.40	0.58
Central and Eastern Europe	**0.89[a]**	**0.98**

Source: UNCTAD.

[a] 1992-1994. As most of the countries in this region did not exist in their present form before 1992, the period for the Index is adjusted.

Figure II.2. The UNCTAD Inward FDI Performance Index, by host economy: the top 20 and the bottom 20, 1998-2000
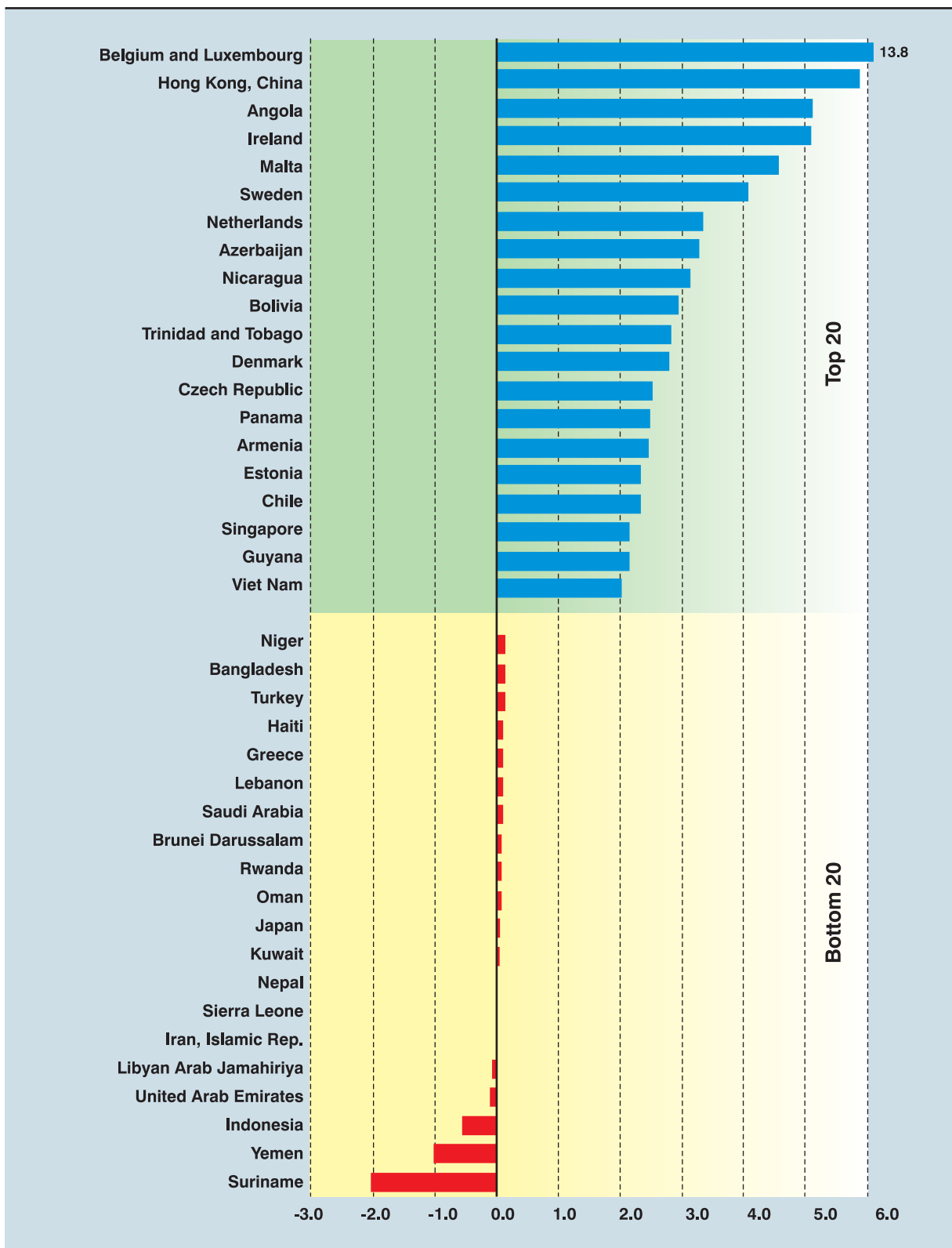
Source: UNCTAD.

Largely because of the influence of short-term factors, Performance Index rankings change dramatically over the two periods.[6] There are thus 37 countries that improved their rank by 20 or more places over the period and 43 that lost 20 or more places. The biggest "winners", apart from Angola, are Panama, Nicaragua and Armenia. Oman, Greece, Botswana and Sierra Leone, on the other hand, moved down the list. Note again that the shifts in ranks reflect not only relative changes in FDI inflows but also in relative GDP; thus, a drop in rank might well indicate, for instance, improved prosperity with relatively higher GDP and stable FDI.

Many of the rankings in the latest period are in line with expectations, but they also contain surprises. Countries with Performance Index values of more than one include several advanced industrial economies whose FDI performance reflects high incomes and technological strengths (e.g. the United Kingdom) or a location within large regional markets such as the EU (e.g. Ireland). In some countries, like Sweden, the high index value reflects large M&A activity (Sweden has one of the largest jumps in ranking). Some economies such as Hong Kong (China) and Singapore, are strategically placed as service centres for large dynamic hinterlands or as export bases (but Singapore loses rank because FDI growth has not kept pace with income growth, probably reflecting, at least partly, the adverse impact of the Asian financial crisis on the regional market in which it is located). In many other countries with high scores, the scores reflect the end of political or economic crises, transition from command to market-oriented economies, or massive privatization programmes.

Countries with low index values that receive less FDI than warranted by their size, also vary greatly. Some are very large economies that attract large amounts of FDI, albeit low in relation to GDP (United States). Others traditionally have been relatively closed to FDI (e.g. Japan and the Republic of Korea, though the latter moves up in the ranks because of recent liberalization). Some have attracted significant FDI in the past, but in the recent period are suffering from economic or political shocks (e.g. Indonesia). Many are simply poor or have not improved their investment climate sufficiently to compete effectively for FDI.

C. The UNCTAD Inward FDI Potential Index

The Inward FDI Potential Index also yields interesting results. In contrast to the Performance Index that is based on FDI inflows, this index is based largely on structural economic factors that tend to change fairly slowly over time. As a result, the index values for countries are fairly stable over time,[7] and correspond by and large to levels of economic development. The top 20 economies, based on the Inward FDI Potential Index in 1998-2000 include all four high-income developing economies (Hong Kong, China; Republic of Korea; Singapore; and Taiwan Province of China), as well as mature industrial countries (figure II.3). The bottom 20 ranks are all held by developing countries.

Most developed countries tend to sustain similar ranks over time, while some developing countries and economies in transition make large upward or downward leaps. The largest improvements in the FDI Potential Index ranks are by Guyana, El Salvador and Lebanon, and the largest declines by Georgia, Tajikistan and Moldova.

D. Comparing rankings on the two Indices

The FDI Potential Index does not, for reasons given above, "explain" flows of FDI in a statistical sense. However, it is useful to *compare the rankings based on the two indices* as a rough guide to whether countries are performing adequately given their (restricted set of) structural assets.

The ranking of countries according to the Performance and Potential Indices yields a fourfold matrix, as follows:

• countries with high FDI performance (i.e. above the mid-point of the ranking by performance of all countries) and high potential (i.e. above the mid-point of the ranking by the potential of all countries): the "front-runners";

• countries with high FDI performance (i.e. above the mid-point of the ranking by performance of all countries) and low potential (i.e. below the mid-point of the ranking by the potential of all countries): the " above-potential economies";

Figure II.3. The UNCTAD Inward FDI Potential Index,[a] by host economy: the top 20 and the bottom 20, 1998-2000
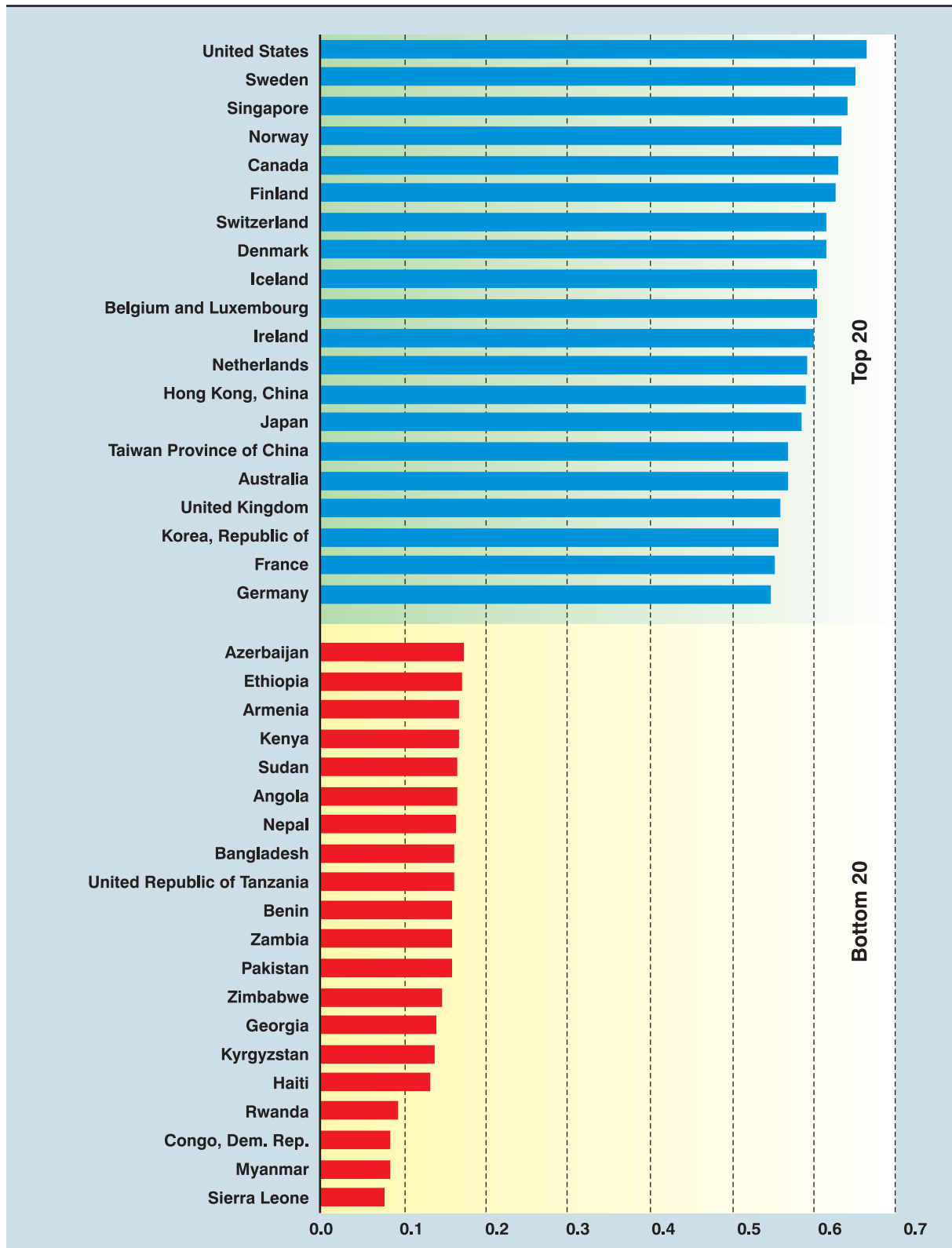
Source: UNCTAD.

[a] Based on eight economic and policy variables.

- countries with low FDI performance (i.e. below the mid-point of the ranking by performance of all countries) and high potential (i.e. above the mid-point of the ranking by the potential of all countries): the " below-potential economies"; and

- countries with low FDI performance (i.e. below the mid-point of the ranking by performance of all countries) and low potential (i.e. below the mid-point of the ranking by the potential of all countries): the "under-performers".

In 1998-2000, there are 42 front-runners, countries that combine strong potential and performance (table II.3). This group includes leading industrial countries like France, Germany,[8] Sweden, Switzerland and the United Kingdom, Asian "tigers" – including newer ones – such as Hong Kong (China), Malaysia, Singapore and Thailand, and well-performing (at the time) Latin American economies such as Argentina and Chile. It also includes strong entrants to the FDI scene such as Costa Rica, Hungary, Ireland and Poland.

Table II.3. **Country classification by FDI performance and potential, 1988-1990 and 1998-2000**

	High FDI performance	Low FDI performance
1998-2000		
High FDI potential	**Front-runners** Argentina, Bahamas, Bahrain, Belgium and Luxembourg, Bulgaria, Canada, Chile, Costa Rica, Croatia, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Germany, Guyana, Hong Kong (China), Hungary, Ireland, Israel, Latvia, Lithuania, Malaysia, Malta, Namibia, Netherlands, New Zealand, Norway, Panama, Peru, Poland, Portugal, Singapore, Slovakia, Spain, Sweden, Switzerland, Thailand, Trinidad and Tobago and United Kingdom.	**Below-potential** Australia, Austria, Belarus, Botswana, Brunei Darussalam, Cyprus, Egypt, Greece, Iceland, Islamic Republic of Iran, Italy, Japan, Jordan, Kuwait, Lebanon, Mexico, Oman, Qatar, Republic of Korea, Russian Federation, Saudi Arabia, Slovenia, Suriname, Syrian Arab Republic, Taiwan Province of China, United Arab Emirates, United States and Uruguay.
Low FDI potential	**Above potential** Angola, Armenia, Azerbaijan, Bolivia, Brazil, China, Côte d'Ivoire, Ecuador, Gambia, Georgia, Honduras, Jamaica, Kazakhstan, Kyrgyzstan, Malawi, Mozambique, Nicaragua, Papua New Guinea, Republic of Moldova, Romania, Sudan, TFYR Macedonia, Togo, Tunisia, Uganda, Venezuela, Viet Nam and Zambia.	**Under-performers** Albania, Algeria, Bangladesh, Benin, Burkina Faso, Cameroon, Colombia, Dem. Rep. of Congo, Congo, Ethiopia, Gabon, Ghana, Guatemala, Guinea, Haiti, India, Indonesia, Kenya, Libyan Arab Jamahiriya, Madagascar, Mali, Mongolia, Morocco, Myanmar, Nepal, Niger, Nigeria, Pakistan, Paraguay, Philippines, Rwanda, Senegal, Sierra Leone, South Africa, Sri Lanka, Tajikistan, Turkey, Ukraine, United Republic of Tanzania, Uzbekistan, Yemen and Zimbabwe.
1988-1990		
High FDI potential	**Front-runners** Australia, Azerbaijan, Bahrain, Belgium/ Luxembourg, Botswana, Canada, Chile, China, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Greece, Hong Kong (China), Hungary, Kazakhstan, Latvia, Lithuania, Malaysia, Malta, Mongolia, Netherlands, New Zealand, Norway, Oman, Poland, Portugal, Republic of Moldova, Singapore, Slovakia, Spain, Sweden, Switzerland, Taiwan Province of China, Tajikistan, Thailand, Trinidad and Tobago, United Kingdom and United States.	**Below-potential** Austria, Bahamas, Belarus, Brazil, Brunei Darussalam, Bulgaria, Colombia, Finland, Georgia, Germany, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Panama, Qatar, Republic of Korea, Russian Federation, Saudi Arabia, Slovenia, South Africa, Ukraine, United Arab Emirates, Uruguay, Uzbekistan and Venezuela.
Low FDI potential	**Above-potential** Albania, Argentina, Benin, Bolivia, Dominican Republic, Ecuador, Egypt, Gabon, Gambia, Guatemala, Guinea, Honduras, Indonesia, Jamaica, Kyrgyzstan, Malawi, Mexico, Myanmar, Niger, Nigeria, Papua New Guinea, Philippines, Rwanda, Sierra Leone, Togo, Tunisia, Viet Nam and Zambia.	**Under-performers** Algeria, Angola, Armenia, Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, Dem. Rep. of Congo, El Salvador, Ethiopia, Ghana, Guyana, Haiti, India, Islamic Republic of Iran, Jordan, Kenya, Lebanon, Libyan Arab Jamahiriya, Madagascar, Mali, Morocco, Mozambique, Namibia, Nepal, Nicaragua, Pakistan, Paraguay, Peru, Republic of Congo, Romania, Senegal, Sri Lanka, Sudan, Suriname, Syrian Arab Republic, TFYR Macedonia, Turkey, Uganda, United Republic of Tanzania, Yemen and Zimbabwe.

Source: UNCTAD.

The group of above-potential economies comprise mainly countries without strong structural capabilities that have done well in attracting FDI. Most are relatively poor and lack a strong industrial base. Note that Brazil appears in this category because, while its potential remained relatively stable over the 1990s at a level comparable to those of other Latin American host countries (table II.1), by the end of the decade it was building upon its capabilities to attract FDI in line with its size, especially through privatization (in 1988-1990 it showed strong potential but low performance). China is also in this group, although a decade ago (1988-1990) it was listed in the group of front-runners. This is because its ranking on the FDI Potential Index (based, it should be recalled, on eight variables) slipped below the mid-point of the ranking of all countries, even though its score for the Index rose between these two periods (table II.1).

The group of below-potential economies include many rich and relatively industrialized economies that have a weak FDI performance because of policy and a tradition of low reliance on FDI (e.g. Japan, Italy, Taiwan Province of China and the Republic of Korea, especially in the earlier period), political and social factors or weak competitiveness (not captured by the variables used here). The United States also falls within this category in the latest period, as FDI inflows to this country are relatively low given the relative size of the economy, even though it is the largest host country with the highest score on the Potential Index. The group also includes developing countries that are relatively capital-abundant (e.g. Saudi Arabia), or where FDI flows may not reflect the extent of TNC participation adequately because of a reliance on local financing (Botswana). Mexico appears, on the basis of the latest data, to have a relatively weak FDI performance with lower potential; at the start of the decade it had a strong FDI performance. The weaker performance in the later period reflects slow growth in FDI inflows relative to the world average, and, more importantly, faster growth in GDP relative to the world average.

The under-performers are generally poor countries that, for economic or other reasons, do not attract their expected share of global FDI. Some countries in the group of above-potential economies moved into this group after a significant decline in FDI inflows caused by a major financial crisis over the past decade (e.g. Indonesia, the Philippines).

Other changes in country positioning are also interesting. There are policy implications for the countries that remain in the same category over time: the front-runners need to retain their competitive edge and ability to attract FDI, the under-performers have to improve both, and so on. Similarly, there are implications for countries that retain high potential but slide in terms of FDI attracted (Australia is a good example): if they wish to attract more FDI, they may need to address specific problems related to poor investor perceptions. Countries that move from under-performers to above-potential economies (e.g. Armenia) need to strive to build their competitive potential quickly to retain their edge in attracting investors.

This analysis can offer many interesting insights for FDI analysis and policy. However, the indices are still at a formative stage. There is much that can be done to improve, broaden and deepen them, in particular the Inward FDI Potential Index. It does not include a number of factors that are known to affect international investment flows, and there may be more appropriate variables that could replace some of those now used; the problem is, of course, to obtain satisfactory quantitative data for a large number of countries. It is hoped that this constraint will, at least in part, be relieved over time.

Notes

[1] The *WIR01* Inward FDI index was the unweighted average of a country's share in global FDI flows divided by three things: its share in global GDP, its share in global employment and its share in global exports. The Inward FDI Performance Index introduced here is a simplified version in which the employment and export variables have been dropped – the former because of its overlap with GDP as a measure of market size and economic strength, and the latter because of the ambiguous nature of its relationship to FDI. Other indices have been developed to measure and rank countries' relative performance and/or attractiveness with respect to inward FDI. The *FDI Confidence Index*, constructed by A.T. Kearney, uses data from an annual survey of senior executives of the world's 1,000 largest corporations. That index is a weighted average of the number of high, medium, low and no-interest responses to a question about the likelihood of investment in a country in the next one to three years (Kearney, A.T, 2001). Another index is the *FDI Sustainability Index*, developed by The Economist Advisory Group to score subsidiary sustainability, supplemented by the inclusion of qualitative factors at the firm, industry, regional, national and global levels. The *Transnationality Index*, developed by UNCTAD to measure the overall significance of international production in an economy, is another measure (see chapter I).

[2] Some problems in the use of flow data for deriving the Index are noted in the annex to this chapter.

[3] Each variable is normalized to make it comparable to the others: a score of one is assigned to the highest value the variable takes for the economies in the sample, and a score of zero to the lowest value. The other countries are assigned scores between one and zero, taking into account their distance from the highest and the lowest. This is done by taking the value of a variable for a country, subtracting from it the lowest value for that variable among the countries, and dividing the result by the difference between the highest and lowest values of that variable among the countries (see annex to this chapter).

[4] These include Australia, Israel, Japan and New Zealand.

[5] See *WIR00* for a comparative discussion of cross-border M&As and greenfield FDI.

[6] The correlation between the ranks in the Inward FDI Performance Index in the two periods is 0.48.

[7] The rank correlation coefficient of the Inward FDI Potential Index over the two periods is 0.84, much higher than for the Performance Index (0.48).

[8] Were it not for the acquisition of Mannesmann by VodafoneAirTouch in 2000, Germany would be in the group of below-potential economies.

[9] GDP, which indicates market size as well as the overall economic strength of an economy and is undoubtedly an important determinant of FDI inflows, has been omitted because it is factored into the Inward FDI Performance Index.

Annex on methodology and data used for calculating UNCTAD's Inward FDI Performance Index and Inward FDI Potential Index

The UNCTAD Inward FDI Performance Index

The UNCTAD Inward FDI Performance Index is formulated as follows:

$$INDi = \frac{FDI_i \, / \, FDI_w}{GDP_i \, / \, GDP_w}$$

Where,
IND_i = The Inward FDI Performance Index of the ith country
FDI_i = FDI inflows in the ith country
FDI_w = World FDI inflows
GDP_i = GDP in the ith country
GDP_w = World GDP.

As in the case of the Inward FDI Index of *WIR01*, three-year averages of FDI inflows and GDP are used for calculating this Index. The use of FDI flow data has certain problems. In addition to imperfect reporting and non-inclusion of certain items in FDI data by some countries (see definitions and sources in annex B), problems arise on account of the growing importance of M&As as a mode of FDI entry. M&As not only exacerbate the lumpiness of FDI inflows, but may also distort the relationship between FDI inflows as reported in balance-of-payments (or financial) terms and the real resource flows expected to accompany them. Nevertheless, data on FDI inflows are the best practical means for building the Index: reliable FDI stock data (i.e. that are not simply aggregations of flow data) are available for fewer countries, especially developing countries, than flow data. Moreover, they do not show the current value of stocks, which may be misleading if inflows took place some years earlier.

Table II.1 gives the UNCTAD Inward FDI Performance Index and rankings by the index for 1988-1990 and 1998-2000 for all countries for which data are available.

The UNCTAD Inward FDI Potential Index

The Inward FDI Potential Index is the average of the scores on eight variables for each country. The score for each variable is derived as follows: the value of a variable for a country is taken, and subtracted from it is the lowest value for that variable among the countries; the result is then divided by the difference between the highest and lowest values of that variable among the countries. The country with the lowest value is given a score of zero and the country with the highest value, a score of one. Mathematically, it is expressed as

$$Score \; = \; \frac{V_i \, - \, V_{min}}{V_{max} \, - \, V_{min}}$$

where,
V_i = the value of a variable for the county i
V_{min} = the lowest value of the variable among the countries
V_{max} = the highest value of the variable among the countries.

The Inward FDI Potential Index uses indicators for key FDI determinants on which comparable data are available. This set of variables does not, of course, cover all the important factors affecting FDI. However, the excluded variables are difficult to benchmark across large numbers of countries (see figure II.1 for a comprehensive list). The choice of variables is based on findings of studies on FDI determinants (*WIR98*; Dunning, 1993). The correlation between each of a number of variables considered to be important, including the variables selected for the construction of the FDI Potential Index, and the FDI Performance Index is shown in annex table II.1.

The eight variables comprising the Inward FDI Potential Index are:

- *GDP per capita.*[1] This variable shows the level of economic development of a host country. It captures the size and sophistication of the demand for goods and services. It also shows the availability of developed institutions, good living conditions and the like, all of which attract FDI. In addition, higher per capita GDP often connotes higher labour productivity and stronger innovative capabilities, all conducive to FDI. (On the other hand, it also denotes higher wages, which might adversely affect low-cost labour-seeking FDI. On balance, however, low wages *per se* are not a major factor inducing FDI.)

- *Real GDP growth (for the past 10 years).* This variable is a predictor of the future size of a host-country market, one of the main determinants of FDI. Higher growth can also mean rising productivity that could induce other kinds of FDI.

- *Exports as a percentage of GDP.* This shows the degree of international exposure of a country. International business

through trade generally lays the ground for inward (as well as outward) FDI and the international production that serves to substitute for or complement trade. (FDI, in turn, can affect the export-GDP ratio positively. This would have to be taken into account in order to establish a clear causal relationship between the two. In the present analysis, the export ratio is included as an approximate

Table II.4. Correlation between the UNCTAD Inward FDI Performance Index and factors determining FDI, 1998-2000

Independent variable	FDI inflows share/GDP share
Economic determinants	
GDP[a]	-0.024
* GDP growth rates[b]	0.018
* GDP per capita[a]	0.310
Exports[c]	0.060
* Share of exports in GDP[c]	0.376
Share of trade in GDP[d]	0.549
* Telephone lines per 1,000 inhabitants[e]	0.327
Road nertworks per 1,000 inhabitants[c]	0.141
Railways, goods transported (ton-km. per $ million of GDP)[f]	-0.006
* Commercial energy use per capita[g]	0.125
Internet users as a % of total population[h]	0.106
* Share of R&D expenditures in GDP[i]	0.193
Science and engineering students as a % of total population[j]	0.107
Tertiary gross enrolment ratio as a % of relevant age group[k]	0.094
* Students enrolled in tertiary institutions as a % of total population[l]	0.150
Number of employees[m]	-0.071
Labour cost per worker (in manufacturing)[n]	0.234
Consumer price index[o]	0.182
External debt as a % of GDP[p]	0.027
Policy and business facilitation determinants	
* Country risk[q]	0.262
Corruption[f]	0.286
FDI regulation[k]	-0.283
Property rights[k]	-0.197
Trade policy[k]	-0.226
Number of bilateral investment treaties[r]	-0.098
Number of double taxation treaties[r]	-0.062
Number of investment promotion agencies[r]	-0.042
Number of export processing zones[r]	-0.044

Source: UNCTAD.

[a]   Based on 192 countries.
[b]   Based on 177 countries.
[c]   Based on 181 countries.
[d]   Based on 178 countries.
[e]   Based on 188 countries.
[f]   Based on 90 countries.
[g]   Based on 130 countries.
[h]   Based on 185 countries.
[i]   Based on 81 countries.
[j]   Based on 140 countries.
[k]   Based on 154 countries.
[l]   Based on 167 countries.
[m]   Based on 149 countries.
[n]   Based on 78 countries.
[o]   Based on 161 countries.
[p]   Based on 136 countries.
[q]   Based on 138 countries.
[r]   Based on 189 countries.

Note: * denotes the variables selected for constructing the Inward FDI Potential Index. Correlation based on raw data for a cross-section of countries.

indicator of the openness of an economy and the attendant competitive advantages that serve to attract FDI.)

- *Number of telephone lines per 1,000 inhabitants.* Telecommunications (as well as road and railway networks, not included in the analysis) are part of the basic physical infrastructure needed to conduct business. Their availability (and cost) is particularly important for FDI, as TNCs seek to coordinate production activity across countries.[2]

- *Commercial energy use per capita.* This is a proxy for the availability and cost of energy, which is an important input for many production activities and can be expected to be a factor influencing FDI, particularly of an efficiency-seeking type.

- *R&D expenditures as a percentage of gross national income.* This indicates the technological capabilities of a host economy, including innovative capacity – an important factor attracting created-asset-seeking FDI. In products and processes that are knowledge-based, competition tends to be severe and, as R&D activities in these areas are costly and risky, the quest for such assets is a driving force for international production.

- *Students in tertiary education as a percentage of total population.* This is a measure of the extent of higher education and related skills that a country's workforce embodies. An educated and skilled workforce is an inducement for FDI in industries facing global and regional competition.

- *Country risk.* This includes the political and commercial risks related to investing in a country. Political risk is related to factors such as a government's ability to fulfil its commitments and commercial risk to factors such as currency shortages (which affect the ability to remit profits) and sudden devaluations or financial crises that affect the ability of investors to plan for and meet financial commitments. Country risk is an indicator of the degree of political, economic and social stability of a country. The higher the risk assessment for a country, the less attractive it is for investors. Country risk assessments are provided by a number of institutions. Country ratings (on a scale of 0-100; the higher the number, the lower the risk) prepared by the PRS (Political Risk Services) Group/International Country Risk Guide, a country risk assessment company based in the United States, are used to measure country risk.[3] In choosing this variable, country rankings from Euromoney and country risks from Coface, an export credit insurance company in France, were also examined.[4]

The raw data and scores for each of the variables listed above are given in annex tables A.II.1 and A.II.2.

Notes

[1] GDP, which indicates market size as well as the overall economic strength of an economy and is undoubtedly an important determinant of FDI inflows, has been omitted because it is factored into the Inward FDI Performance Index.

[2] Road and railway networks that determine the costs of transporting goods and people are also an important aspect influencing investors. They have not been included in the index because of a lack of data for a number of countries and also to minimize the number of variables.

[3] The country rating is based on a set of 22 components grouped into three major categories of risk: political risk comprising 12 components (government stability; socio-economic conditions; investment profile; internal conflict; external conflict; corruption; military in politics; religious tensions; law and order; ethnic tensions; democratic accountability; and bureaucratic quality), financial risk comprising 5 components (foreign debt as a percentage of GDP; foreign debt service as a percentage of exports; current account as a percentage of exports; net liquidity as months of import cover; and exchange rate stability); and economic risk comprising 5 components (GDP per head of population; real annual GDP growth; annual inflation rate; budget balance as percentage of GDP; and current account balance as a percentage of GDP). In calculating the risk rating, the political risk rating contributes 50 per cent of the composite rating, while the other two risk categories each contribute 25 per cent. For further details, see International Country Risk Guide (www.ICRGOnline.com).

[4] The correlation between the country risk variable by PRS and the Inward FDI Performance Index is 0.262, while the correlation with Euromoney's country risk is 0.169, and that with Coface's country risk is 0.238. The correlation result is better for the country risk variable of PRS than that of Coface, and the former variable was available on its website for a longer time series.