

Selected indicators of FDI and international production, 1982-2002
(Billions of dollars and per cent)

| Item | Value at current prices (Billion dollars) | | | | | | Annual growth rate (Per cent) | | | |
|--|--|--------|---------------------|-------------------|-----------|-----------|----------------------------------|------|-------------------|------------------|
| | 1982 | 1990 | 2002 | 1988-1990 | 1991-1995 | 1996-2000 | 1999 | 2000 | 2001 | 2002 |
| FDI inflows | 59 | 209 | 651 | 23.1 | 21.1 | 40.2 | 57.3 | 29.1 | -40.9 | -21.0 |
| FDI outflows | 28 | 242 | 847 | 25.7 | 16.5 | 35.7 | 80.5 | 9.5 | -40.8 | -9.0 |
| FDI inward stock | 802 | 1 954 | 7 123 | 14.7 | 9.3 | 17.2 | 19.4 | 18.9 | 7.5 | 7.8 |
| FDI outward stock | 595 | 1 763 | 6 868 | 18.0 | 10.6 | 16.8 | 18.2 | 19.8 | 5.5 | 8.7 |
| Cross-border M&As ^a | - | 151 | 370 | 25.8 ^b | 24.0 | 51.5 | 44.1 | 49.3 | -48.1 | -37.7 |
| Sales of foreign affiliates | 2 737 | 5 075 | 17 685 ^c | 16.0 | 10.1 | 10.9 | 13.3 | 19.6 | 9.2 ^c | 7.4 ^c |
| Gross product of foreign affiliates | 640 | 1 458 | 3 437 ^d | 17.3 | 6.7 | 7.9 | 12.8 | 16.2 | 14.7 ^d | 6.7 ^d |
| Total assets of foreign affiliates | 2 081 | 5 899 | 26 543 ^e | 18.8 | 13.9 | 19.2 | 20.7 | 27.4 | 4.5 ^e | 8.3 ^e |
| Export of foreign affiliates | 722 | 1 197 | 2 613 ^f | 13.5 | 7.6 | 9.6 | 3.3 | 11.4 | -3.3 ^f | 4.2 ^f |
| Employment of foreign affiliates (thousands) | 19 375 | 24 262 | 53 094 ^g | 5.5 | 2.9 | 14.2 | 15.4 | 18.5 | -1.5 ^g | 5.7 ^g |
| GDP (in current prices) | 10 805 | 21 672 | 32 227 ^h | 10.8 | 5.8 | 1.3 | 3.5 | 2.6 | -0.5 | 3.4 ^h |
| Gross fixed capital formation | 2 286 | 4 819 | 6 422 ⁱ | 13.4 | 4.2 | 1.0 | 3.5 | 2.8 | -3.9 | 1.3 ⁱ |
| Royalties and licences fees receipts | 8 | 30 | 72 ^j | 21.3 | 14.3 | 6.2 | 5.7 | 8.2 | -3.1 | - |
| Export of goods and non-factor services | 2 053 | 4 300 | 7 838 ^k | 15.6 | 5.4 | 3.4 | 3.3 | 11.4 | -3.3 | 4.2 ^k |

Source: Adapted from UNCTAD (2003): World Investment Report 2003, Table I.1, p3.

Appendix 3.1a

FDI PERFORMANCE INDEX: Full Results

The Performance Index is shown for three-year periods to offset annual fluctuations in the data. The indices cover 140 economies for as much of the period as the data permit; however, some economies in transition could not be ranked in the early years for lack of data or because they did not exist as separate countries. The indices exclude tax havens, which for tax rather than productive reasons tend to have massive FDI inflows in relation to their economic size.

**FDI Performance Index 1999-2001.
(140 economies)**

| Rank | Economy | Score | Rank | Economy | Score |
|-------------|------------------------|--------------|-------------|--------------------|--------------|
| 1 | Belgium and Luxembourg | 10.955 | 71 | Venezuela | 0.902 |
| 2 | Angola | 6.455 | 72 | Mexico | 0.900 |
| 3 | Hong Kong, China | 6.387 | 73 | Costa Rica | 0.871 |
| 4 | Ireland | 5.861 | 74 | Austria | 0.855 |
| 5 | Malta | 4.465 | 75 | Romania | 0.810 |
| 6 | Singapore | 3.978 | 76 | Tunisia | 0.763 |
| 7 | Sweden | 3.857 | 77 | Ghana | 0.736 |
| 8 | Netherlands | 3.740 | 78 | Peru | 0.726 |
| 9 | Denmark | 3.485 | 79 | United States | 0.719 |
| 10 | Brunei Darussalam | 3.445 | 80 | Colombia | 0.700 |
| 11 | Czech Republic | 2.929 | 81 | South Africa | 0.696 |
| 12 | Gambia | 2.861 | 82 | Benin | 0.669 |
| 13 | Nicaragua | 2.810 | 83 | Nigeria | 0.639 |
| 14 | Bolivia | 2.735 | 84 | Uzbekistan | 0.634 |
| 15 | Kazakhstan | 2.714 | 85 | Myanmar | 0.630 |
| 16 | Congo, Rep. | 2.519 | 86 | Cote d'Ivoire | 0.627 |
| 17 | Guyana | 2.316 | 87 | Belarus | 0.532 |
| 18 | Moldova, Republic of | 2.314 | 88 | Ukraine | 0.524 |
| 19 | Chile | 2.273 | 89 | Madagascar | 0.514 |
| 20 | Cyprus | 2.227 | 90 | Philippines | 0.514 |
| 21 | Estonia | 2.211 | 91 | Australia | 0.495 |
| 22 | Croatia | 2.003 | 92 | Korea, Republic of | 0.483 |
| 23 | Jamaica | 2.001 | 93 | Tajikistan | 0.476 |
| 24 | Mozambique | 1.939 | 94 | Senegal | 0.475 |
| 25 | Bulgaria | 1.926 | 95 | El Salvador | 0.459 |
| | | | 96 | Lebanon | 0.454 |
| | | | 97 | Iceland | 0.417 |

Appendix 3.1a

| | | | | | |
|-----------|-----------------------------|-------|------------|--------------------------|--------|
| 26 | Slovakia | 1.836 | 97 | Iceland | 0.417 |
| 27 | Trinidad and Tobago | 1.811 | 98 | Qatar | 0.416 |
| 28 | United Kingdom | 1.806 | 99 | Guatemala | 0.405 |
| 29 | TFYR Macedonia | 1.707 | 100 | Uruguay | 0.394 |
| 30 | Canada | 1.642 | 101 | Algeria | 0.386 |
| 31 | Dominican Republic | 1.633 | 102 | Taiwan Province of China | 0.385 |
| 32 | Panama | 1.581 | 103 | Syrian Arab Republic | 0.374 |
| 33 | Azerbaijan | 1.573 | 104 | Paraguay | 0.372 |
| 34 | Namibia | 1.535 | 105 | Slovenia | 0.360 |
| 35 | Ecuador | 1.523 | 106 | Ethiopia | 0.332 |
| 36 | Switzerland | 1.511 | 107 | Kyrgyzstan | 0.321 |
| 37 | Brazil | 1.443 | 108 | Russian Federation | 0.314 |
| 38 | Armenia | 1.423 | 109 | Italy | 0.297 |
| 39 | Germany | 1.419 | 110 | Egypt | 0.286 |
| 40 | United Republic of Tanzania | 1.373 | 111 | Sri Lanka | 0.271 |
| 41 | Spain | 1.314 | 112 | Turkey | 0.268 |
| 42 | Argentina | 1.311 | 113 | Greece | 0.258 |
| 43 | Papua New Guinea | 1.293 | 114 | Guinea | 0.223 |
| 44 | New Zealand | 1.279 | 115 | Botswana | 0.222 |
| 45 | Togo | 1.276 | 116 | Pakistan | 0.200 |
| 46 | Morocco | 1.269 | 117 | Sierra Leone | 0.193 |
| 47 | Poland | 1.256 | 118 | Kenya | 0.192 |
| 48 | Mongolia | 1.252 | 119 | Burkina Faso | 0.182 |
| 49 | Finland | 1.246 | 120 | India | 0.159 |
| 50 | Viet Nam | 1.240 | 121 | Niger | 0.156 |
| 51 | Latvia | 1.210 | 122 | Cameroon | 0.145 |
| 52 | Portugal | 1.184 | 123 | Haiti | 0.119 |
| 53 | Hungary | 1.168 | 124 | Zimbabwe | 0.112 |
| 54 | Jordan | 1.163 | 125 | Bangladesh | 0.111 |
| 55 | Honduras | 1.130 | 126 | Rwanda | 0.072 |
| 56 | Bahrain | 1.126 | 127 | Congo, Dem. Rep. | 0.065 |
| 57 | Sudan | 1.112 | 128 | Japan | 0.058 |
| 58 | Uganda | 1.109 | 129 | Oman | 0.054 |
| 59 | China | 1.107 | 130 | Nepal | 0.044 |
| 60 | Lithuania | 1.098 | 131 | Iran, Islamic Rep. | 0.011 |
| 61 | Thailand | 1.040 | 132 | Kuwait | -0.016 |
| 62 | France | 1.010 | 133 | Malawi | -0.034 |

Appendix 3.1a

| | | | |
|------------|---------------------------|--------|--|
| 63 | Georgia | 1.010 | |
| 64 | Zambia | 1.007 | |
| 65 | Israel | 1.001 | |
| 66 | Bahamas | 0.987 | |
| 67 | Albania | 0.958 | |
| 68 | Mali | 0.923 | |
| 69 | Norway | 0.918 | |
| 70 | Malaysia | 0.904 | |
| 134 | Libyan Arab Jamahiriya | -0.110 | |
| 135 | Saudi Arabia | -0.144 | |
| 136 | United Arab Emirates | -0.187 | |
| 137 | Yemen | -0.203 | |
| 138 | Indonesia | -0.680 | |
| 139 | Gabon | -0.995 | |
| 140 | Suriname | -1.613 | |

Source: UNCTAD Report

(Available at <http://www.unctad.org/Templates/WebFlyer.asp?inuItemID=2471&lang=1>)

Appendix 3.1b

THE INWARD FDI PERFORMANCE INDEX: Methodology

The Inward FDI Performance Index ranks countries by the FDI they receive relative to their economic size. It is the ratio of a country's share in global FDI inflows to its share in global GDP.

A value greater than one indicates that the country receives more FDI than its relative economic size, a value below one that it receives less (a negative value means that foreign investors disinvest in that period).

The index thus captures the influence on FDI of factors other than market size, assuming that, other things being equal, size is the "base line" for attracting investment. These other factors can be diverse, ranging from the business climate, economic and political stability, the presence of natural resources, infrastructure, skills and technologies, to opportunities for participating in privatization or the effectiveness of FDI promotion.

$$IND_i = \frac{FDI_i / FDI_w}{GDP_i / GDP_w}$$

Where,

- IND_i = The Inward FDI Performance Index of the i^{th} country
 FDI_i = The FDI inflows in the i^{th} country
 FDI_w = World FDI inflows
 GDP_i = GDP in the i^{th} country
 GDP_w = World GDP

FDI POTENTIAL INDEX: Full Results

The Potential Index is shown for three-year periods to offset annual fluctuations in the data. The indices cover 140 economies for as much of the period as the data permit; however, some economies in transition could not be ranked in the early years for lack of data or because they did not exist as separate countries. The indices exclude tax havens, which for tax rather than productive reasons tend to have massive FDI inflows in relation to their economic size.

**FDI Potential Index 1999-2001.
(140 economies)**

| Rank | Economy | Score |
|-------------|--------------------------|--------------|
| 1 | United States | 0.689 |
| 2 | Singapore | 0.490 |
| 3 | Norway | 0.489 |
| 4 | United Kingdom | 0.489 |
| 5 | Canada | 0.481 |
| 6 | Germany | 0.457 |
| 7 | Sweden | 0.455 |
| 8 | Belgium and Luxembourg | 0.454 |
| 9 | Netherlands | 0.454 |
| 10 | Finland | 0.445 |
| 11 | Ireland | 0.436 |
| 12 | Japan | 0.428 |
| 13 | Hong Kong, China | 0.424 |
| 14 | France | 0.422 |
| 15 | Switzerland | 0.416 |
| 16 | Denmark | 0.411 |
| 17 | Iceland | 0.410 |
| 18 | Korea, Republic of | 0.408 |
| 19 | Taiwan Province of China | 0.405 |
| 20 | Qatar | 0.404 |
| 21 | Australia | 0.392 |
| 22 | Austria | 0.377 |
| 23 | Israel | 0.376 |
| 24 | United Arab Emirates | 0.364 |
| 25 | Spain | 0.354 |
| 26 | Italy | 0.350 |

| Rank | Economy | Score |
|-------------|----------------------|--------------|
| 71 | Brazil | 0.183 |
| 72 | South Africa | 0.183 |
| 73 | Tunisia | 0.183 |
| 74 | Iran, Islamic Rep. | 0.181 |
| 75 | Viet Nam | 0.179 |
| 76 | Suriname | 0.174 |
| 77 | Gabon | 0.170 |
| 78 | Jamaica | 0.169 |
| 79 | Namibia | 0.168 |
| 80 | Peru | 0.167 |
| 81 | Algeria | 0.166 |
| 82 | Bolivia | 0.163 |
| 83 | Kazakhstan | 0.161 |
| 84 | India | 0.160 |
| 85 | Ukraine | 0.159 |
| 86 | Turkey | 0.159 |
| 87 | Gambia | 0.158 |
| 88 | Yemen | 0.156 |
| 89 | Nigeria | 0.151 |
| 90 | Syrian Arab Republic | 0.151 |
| 91 | Romania | 0.149 |
| 92 | Indonesia | 0.148 |
| 93 | Morocco | 0.148 |
| 94 | Colombia | 0.147 |
| 95 | Uzbekistan | 0.144 |
| 96 | Honduras | 0.143 |

Appendix 3.1c

| | | |
|-----------|---------------------------|-------|
| 26 | Italy | 0.350 |
| 27 | New Zealand | 0.318 |
| 28 | Kuwait | 0.318 |
| 29 | Slovenia | 0.315 |
| 30 | Saudi Arabia | 0.304 |
| 31 | Bahrain | 0.301 |
| 32 | Brunei Darussalam | 0.297 |
| 33 | Malaysia | 0.295 |
| 34 | Portugal | 0.290 |
| 35 | Russian Federation | 0.288 |
| 36 | Greece | 0.285 |
| 37 | Czech Republic | 0.271 |
| 38 | Estonia | 0.269 |
| 39 | Bahamas | 0.267 |
| 40 | China | 0.259 |
| 41 | Hungary | 0.257 |
| 42 | Cyprus | 0.255 |
| 43 | Poland | 0.255 |
| 44 | Malta | 0.254 |
| 45 | Chile | 0.245 |
| 46 | Croatia | 0.244 |
| 47 | Libyan Arab Jamahiriya | 0.240 |
| 48 | Slovakia | 0.238 |
| 49 | Mexico | 0.233 |
| 50 | Oman | 0.222 |
| 51 | Argentina | 0.220 |
| 52 | Thailand | 0.214 |
| 53 | Panama | 0.214 |
| 54 | El Salvador | 0.213 |
| 55 | Latvia | 0.211 |
| 56 | Lithuania | 0.209 |
| 57 | Venezuela | 0.208 |
| 58 | Lebanon | 0.206 |
| 59 | Botswana | 0.206 |
| 60 | Costa Rica | 0.205 |
| 61 | Trinidad and Tobago | 0.202 |
| 62 | Guyana | 0.202 |

| | | |
|------------|---------------------|-------|
| 96 | Honduras | 0.143 |
| 97 | Albania | 0.142 |
| 98 | Papua New Guinea | 0.142 |
| 99 | Uganda | 0.142 |
| 100 | Myanmar | 0.139 |
| 101 | Guatemala | 0.138 |
| 102 | TFYR Macedonia | 0.137 |
| 103 | Ecuador | 0.136 |
| 104 | Congo, Rep. | 0.135 |
| 105 | Angola | 0.131 |
| 106 | Azerbaijan | 0.130 |
| 107 | Paraguay | 0.128 |
| 108 | Mozambique | 0.128 |
| 109 | <td align=" | |

Appendix 3.1c

| | | |
|-----------|--------------------|-------|
| 63 | Belarus | 0.201 |
| 64 | Bulgaria | 0.201 |
| 65 | Dominican Republic | 0.201 |
| 66 | Philippines | 0.195 |
| 67 | Uruguay | 0.192 |
| 68 | Jordan | 0.190 |
| 69 | Mongolia | 0.188 |
| 70 | Egypt | 0.184 |

THE INWARD FDI POTENTIAL INDEX: Methodology

The Inward FDI Potential Index captures several factors (apart from market size) expected to affect an economy's attractiveness to foreign investors. It is an average of the values (normalized to yield a score between zero, for the lowest scoring country, to one, for the highest) of 12 variables (no weights are attached in the absence of *a priori* reasons to select particular weights):

- GDP per capita, an indicator of the sophistication and breadth of local demand (and of several other factors), with the expectation that higher income economies attract relatively more FDI geared to innovative and differentiated products and services.
- The rate of GDP growth over the previous 10 years, a proxy for expected economic growth.
- The share of exports in GDP, to capture openness and competitiveness.
- As an indicator of modern information and communication infrastructure, the average number of telephone lines per 1,000 inhabitants and mobile telephones per 1,000 inhabitants.
- Commercial energy use per capita, for the availability of traditional infrastructure.
- The share of R&D spending in GDP, to capture local technological capabilities.
- The share of tertiary students in the population, indicating the availability of high-level skills.
- Country risk, a composite indicator capturing some macroeconomic and other factors that affect the risk perception of investors. The variable is measured in such a way that high values indicate less risk.
- The world market share in exports of natural resources, to proxy for the availability of resources for extractive FDI.
- The world market share of imports of parts and components for automobiles and electronic products, to capture participation in the leading TNC integrated production systems (WIR02).
- The world market share of exports of services, to seize the importance of FDI in the services sector that accounts for some two thirds of world FDI.

Appendix 3.1d

- **The share of world FDI inward stock, a broad indicator of the attractiveness and absorptive capacity for FDI, and the investment climate.**

Appendix 4.0

The summaries of categories used in constructing the IPRs index

| (1) Coverage (COV) | Available | Not available |
|---|-----------|---------------|
| Patentability of pharmaceuticals | 1/7 | 0 |
| Patentability of chemicals | 1/7 | 0 |
| Patentability of foods | 1/7 | 0 |
| Patentability of plant and animal varieties | 1/7 | 0 |
| Patentability of surgical products | 1/7 | 0 |
| Patentability of microorganisms | 1/7 | 0 |
| Patentability of utility models | 1/7 | 0 |
| (2) Membership in international treaties (MEM) | Available | Not available |
| Paris convention and revisions | 1/3 | 0 |
| Patent cooperation treaty | 1/3 | 0 |
| Protection of new varieties (UPOV) | 1/3 | 0 |
| (3) Loss of protection measures against losses (RIG) | Available | Not available |
| Working requirement | 1/3 | 0 |
| Compulsory licensing | 1/3 | 0 |
| Revocation of patents | 1/3 | 0 |
| (4) Enforcement (ENF) | Available | Not available |
| Preliminary injunction | 1/3 | 0 |
| Contributory infringement | 1/3 | 0 |
| Burden-of-proof reversal | 1/3 | 0 |
| (5) Durations (DUR) | Full | Partial |
| Application-based standard | | |
| X ≥ 20 years | 1 | |
| 0 ≤ x ≤ 20 | | x/20 |
| Grant-based standard: | | |
| x ≥ 17 years | 1 | |
| 0 ≤ x ≤ 17 | | x/17 |

Source: Adapted from Ginarte and Park (1997) and Park and Wagh (2002)

Appendix 4.1

Index of Classification

Classification of DIRPS

| Index Group value | Yes | Otherwise |
|-------------------|-----|-----------|
| [0, 1) | 1 | 0 |
| [1, 2) | 1 | 0 |
| [2, 3) | 1 | 0 |
| [3, 4) | 1 | 0 |
| [4, 5) | 1 | 0 |

Classifications of DRND

| Index Group Value | Yes | Otherwise |
|-------------------|-----|-----------|
| [0, 1) | 1 | 0 |
| [1, 2) | 1 | 0 |
| [2, 3) | 1 | 0 |
| [3, 4) | 1 | 0 |

Classifications of DBMP

| Index Group Value | Yes | Otherwise |
|-------------------|-----|-----------|
| [1] | 1 | 0 |
| [2] | 1 | 0 |
| [3] | 1 | 0 |
| [4] | 1 | 0 |
| [5] | 1 | 0 |

Income Classification Country, Dinc

| Classification | Yes | Otherwise |
|----------------|-----|-----------|
| Hinc-OECD | 1 | 0 |
| Hinc-nonOECD | 1 | 0 |
| UMinc | 1 | 0 |
| LMinc | 1 | 0 |
| LOinc | 1 | 0 |

Note: Index value for DIPRS and DRND which started with bracket "[" and ended with parenthesis ")" is explained as follows; category with, [0, 1), the index value is less than one and including zero. Index value for DBMP with clustered with [] means all categories falls under the exact value.

Appendix 4.2a

Country for IP classification

| Country | [1,2) Country | [2,3) Country | [3,4) Country | [4,5) Country |
|---------------------|------------------|----------------------|---------------------|--------------------|
| Paraguay | Bolivia | Bulgaria | Argentina | Australia |
| | India | Burkina Faso | Brazil | Austria |
| | Portugal | China | Canada | Belgium |
| | Tunisia | Cyprus | Chile | Denmark |
| | Turkey | Finland | Colombia | France |
| | | Iceland | Czech Republic | Germany |
| | | Malaysia | Ecuador | Ireland |
| | | Mexico | Greece | Italy |
| | | Panama | Hungary | Japan |
| | | Peru | Israel | Korea, Republic of |
| | | Romania | New Zealand | Netherlands |
| | | Senegal | Norway | Singapore |
| | | Syrian Arab Republic | Poland | Spain |
| | | Thailand | Russian Federation | Sweden |
| | | Uganda | Sri Lanka | Switzerland |
| | | Uruguay | Trinidad and Tobago | United Kingdom |
| | | Venezuela | | United states |

Appendix 4.2b

Dummy for BMI classification

| [1] Country | [2] Country | [3] Country | [4] Country | [5] Country |
|----------------|----------------|---------------------|----------------|----------------------|
| Australia | Argentina | Cyprus | Bolivia | Burkina Faso |
| Austria | Chile | Czech Republic | Brazil | Colombia |
| Belgium | Hungary | Denmark | Bulgaria | India |
| Canada | Italy | Greece | China | Nicaragua |
| Finland | Korea, Rep. | Mexico | Ecuador | Syrian Arab Republic |
| France | Malaysia | Panama | Israel | Venezuela |
| Germany | Portugal | Poland | Peru | |
| Iceland | Spain | Romania | Russian Fed. | |
| Ireland | Thailand | Senegal | Sri Lanka | |
| Japan | Uganda | Trinidad and Tobago | | |
| Netherlands | | Tunisia | | |
| New Zealand | | Turkey | | |
| Norway | | Uruguay | | |
| Singapore | | | | |
| Sweden | | | | |
| Switzerland | | | | |
| United Kingdom | | | | |
| United States | | | | |

Appendix 4.2c

Dummy for R&D classification

| [0,1) Country | [1,2) Country | [2,3) Country | [3,4) Country |
|-------------------------|------------------|--------------------|------------------|
| Argentina | Australia | Denmark | Finland |
| Bolivia | Austria | France | Israel |
| Brazil | Belgium | Germany | Sweden |
| Bulgaria | Canada | Iceland | |
| Burkina Faso | Czech Republic | Japan | |
| Chile | India | Korea, Republic of | |
| Colombia | Ireland | Netherlands | |
| Cyprus | Italy | Switzerland | |
| Ecuador | New Zealand | United States | |
| Greece | | | |
| Hungary | | | |
| Malaysia | | | |
| Mexico | | | |
| Nicaragua | | | |
| Panama | | | |
| Peru | | | |
| Poland | | | |
| Portugal | | | |
| Romania | | | |
| Senegal | | | |
| Spain | | | |
| Sri Lanka | | | |
| Syrian Arab Republic | | | |
| Thailand | | | |
| Trinidad and Tobago | | | |
| Tunisia | | | |
| Turkey | | | |
| Uganda | | | |
| Uruguay | | | |
| Venezuela | | | |

Appendix 4.2d

World Bank Country Income Classifications (July 2003-July 2004)

| High Income | Upper Middle Income | Lower Middle Income | Low Income | |
|----------------|---------------------|---------------------|------------------|--------------|
| OECD Country | Non-OECD Country | Country | Country | Country |
| Australia | Cyprus | Argentina | Bolivia | Burkina Faso |
| Austria | Israel | Chile | Brazil | India |
| Belgium | Singapore | Czech Republic | Bulgaria | Nicaragua |
| Canada | | Hungary | China | Senegal |
| Denmark | | Malaysia | Colombia | Uganda |
| Finland | | Mexico | Ecuador | |
| France | | Panama | Peru | |
| Germany | | Poland | Romania | |
| Greece | | Trinidad and Tobago | Russian Fed. | |
| Iceland | | Uruguay | | |
| Ireland | | Venezuela | Sri Lanka | |
| Italy | | | Syrian Arab Rep. | |
| Japan | | | Thailand | |
| Korea, Rep. | | | Tunisia | |
| Netherlands | | | Turkey | |
| New Zealand | | | | |
| Norway | | | | |
| Portugal | | | | |
| Spain | | | | |
| Sweden | | | | |
| Switzerland | | | | |
| United Kingdom | | | | |
| United States | | | | |

Source: World Bank (2003) available at: www.worldbank.org

Appendix 5.0

RESET Methodology

According to RESET methodology (Ramsey's, 1969), to detect the general misspecification functional form is fairly simple. To test between two model, for example one with and without logarithm form, the fitted value from the original OLS regression model will be fitted in the respective model.

Therefore, the RESET procedure the two models become;

$$FDI = \alpha_0 + \alpha_1 IPRS + \alpha_2 RDEXP + \alpha_3 BMI + \delta_1 (\hat{FDI})^2 + \delta_2 (\hat{FDI})^3 + \text{error}$$

$$\ln(FDI) = \alpha_0 + \alpha_1 \ln(IPRS) + \alpha_2 \ln(RDEXP) + \alpha_3 \ln(BMI) + \delta_1 (\hat{FDI})^2 + \delta_2 (\hat{FDI})^3 + \text{error}$$

The squared and cubed terms are freely to decide, but in most application cubic terms is proven to be useful.

If the model correctly specified, the F statistic for testing $H_0: \delta_1 = 0, \delta_2 = 0$ in the expanded model above will not be significant. It also can be used to test for robust heteroscedasticity.

Model Specification RESET

| Dep.variable (FDI) | OLS 1 | OLS 2 | ResetOLS 1 | ResetOLS 2 |
|---|-------------------------|-----------------------|----------------------|--------------------|
| Constant | -23084.45 (26834.86) | 5.4132 (1.1463)*** | 7265.381 | 5.3462 |
| IPRS | 11175.35 (6328.638)* | 2.7703 (0.8164)*** | 1609.657 | 1.0915 |
| RDEXP | 8089.332 (5888.695) | 0.5652 (0.2329)** | -8691.211 | 0.1902 |
| BMP | -1919.008 (4244.885) | -0.3865 (0.4944) | -1211.332 | 0.2309 |
| $\delta_1(\hat{FDI})^2$ | | | 5.84E-06 | -0.0515 |
| $\delta_2(\hat{FDI})^3$ | | | 6.20E-10 | 0.0084 |
| Adj-R ² | 0.220885 | 0.486343 | 0.2977 | 0.4912 |
| Ramsey RESET test: F _(2,50) | | | 3.8445 {0.0279}** | 1.2495 {0.2954} |
| No. of obs. | 56 | 56 | 56 | 56 |

Note:

- (i) OLS (1) and OLS (2) regression estimated without and with logarithms term
- (ii) The usual OLS standard errors are in parentheses, ()
- (iii) Value indicates with { } is p-value.
- (v) *** indicates the coefficients significant at 10%, 5% and 1% respectively.

Source:

Procedure adapted from Wooldridge, J.M. 2003. *Introductory Econometrics: A Modern Approach*. 2ed. South-Western. Thomson Learning. USA.

Appendix 5.1

DIPRS and other explanatory variables

| Dep.var (FDI) | Eq.1.2 | Eq.1.3 | Eq.1.4 |
|----------------------|-----------------------|--------------------------|---------------------------|
| Constant | 3.2535 [3.3827] | 4.588960 [1.909247] | 2.083216 [2.432866] |
| IPRS | | 3.129126 [1.414589]** | 5.339311 [1.773657]*** |
| RDEXP | 0.456323 [0.2501]* | | 0.418218 [0.272327] |
| BMI | -0.0919 [0.6043] | -0.157210 [0.612974] | |
| IPRS⊗DIPRS[0, 1) | -34.9411 [36.8894] | | |
| IPRS⊗DIPRS[1, 2) | 6.2336 [4.8936] | | |
| IPRS⊗DIPRS[2, 3) | 4.3549 [3.3254] | | |
| IPRS⊗DIPRS[3, 4) | 4.0289 [2.5700] | | |
| IPRS⊗DIPRS[4, 5) | 4.5196 [2.3424]* | | |
| RDEXP⊗DIPRS[0, 1) | | -0.568369 [0.937289] | |
| RDEXP⊗DIPRS[1, 2) | | 0.199862 [0.952823] | |
| RDEXP⊗DIPRS[2, 3) | | 0.456838 [0.269010]* | |
| RDEXP⊗DIPRS[3, 4) | | 0.573245 [0.344359]* | |
| RDEXP⊗DIPRS[4, 5) | | 1.305980 [0.641543]** | |
| BMI⊗DIPRS[0, 1) | | | 2.677137 [1.624572] |
| BMI⊗DIPRS[1, 2) | | | 1.494850 [1.194528] |
| BMI⊗DIPRS[2, 3) | | | 0.018090 [0.988882] |
| BMI⊗DIPRS[3, 4) | | | -0.430036 [0.592120] |
| BMI⊗DIPRS[4, 5) | | | -0.439528 [0.612743] |
| Adj-R ² | 0.4918 | 0.4744 | 0.5027 |
| No. of obs. | 56 | 56 | 56 |

Note:

DIPRS is dummy variable for level of protection

DIPRS [0, 1]: 1 country

DIPRS [1, 2]: 5 countries

DIPRS [2, 3]: 17 countries

DIPRS [3, 4]: 16 countries

DIPRS [4, 5]: 17 countries

Symbol with \otimes is term interaction operator-times

Value in bracket is robust standard error

The asterisk sign with ** and *** are the significant level at 10, 5, and 1 percent respectively.

Appendix 5.1

DBMP and other explanatory variable

| Dep.var (FDI) | Eq.1.5 | Eq.1.6 |
|--------------------|---------------------------|---------------------------|
| Constant | 5.063919 [1.042880] | 4.951590 [1.194293] |
| IPRS | | 2.781042 [0.996488]*** |
| RDEXP | 0.496466 [0.216086]** | |
| IPRS⊗DBMP1 | 3.113648 [0.820581]*** | |
| IPRS⊗DBMP2 | 2.915674 [0.877096]*** | |
| IPRS⊗DBMP3 | 2.573259 [0.935458]*** | |
| IPRS⊗DBMP4 | 2.512996 [0.955429]** | |
| IPRS⊗DBMP5 | 1.910547 [1.258904] | |
| RDEXP⊗DBMP1 | | 1.202662 [0.655245]* |
| RDEXP⊗DBMP2 | | -0.320297 [0.265081] |
| RDEXP⊗DBMP3 | | 0.627670 [0.182043]*** |
| RDEXP⊗DBMP4 | | 0.524416 [0.334844] |
| RDEXP⊗DBMP5 | | 1.012917 [0.671769] |
| Adj-R ² | 0.4719 | 0.4967 |
| No. of obs. | 56 | 56 |

Note:

DBMP is dummy variable for domestic market transparency

DBMP1: 18 countries

DBMP2: 10 countries

DBMP3: 13 countries

DBMP4: 9 countries

DBMP5: 6 countries

Symbol with \otimes is term interaction operator-times

Value in bracket is robust standard error

The asterisks sign with ** and *** are the significant level at 10, 5, and 1 percent respectively.

Appendix 5.1

Dinc and other explanatory variable

| Dep.var (FDI) | Eq.2.0 | Eq.2.1 | Eq.2.2 |
|---------------------|---------------------------|--------------------------|----------------------------|
| Constant | 5.564883 [1.487740] | 5.204839 [1.474905] | 5.484146 [1.708453] |
| IPRS | | 2.651659 [1.067360]** | 2.661774 [1.171100]** |
| RDEXP | 0.493472 [0.299954] | | 0.666261 [0.237363]*** |
| BMI | -0.314332 [0.658266] | -0.250666 [0.615632] | |
| IPRS⊗DHinc-OECD | 2.750834 [1.048900]** | | |
| IPRS⊗DHinc-nonOECD | 1.464736 [1.071599] | | |
| IPRS⊗DUMinc | 2.831660 [0.969290]*** | | |
| IPRS⊗DLMinic | 2.581794 [1.003381]** | | |
| IPRS⊗DLOinc | 0.747540 [1.376046] | | |
| RDEXP⊗DHinc-OECD | | 1.124822 [0.591683]* | |
| RDEXP⊗DHinc-nonOECD | | 0.559928 [0.842268] | |
| RDEXP⊗DUMinc | | 0.101476 [0.451774] | |
| RDEXP⊗DLMinic | | 0.437755 [0.381063] | |
| RDEXP⊗DLOinc | | 0.635952 [0.273674]** | |
| BMP⊗DHinc-OECD | | | -0.528345 [0.681898] |
| BMP⊗DHinc-nonOECD | | | -1.657366 [0.442770]*** |
| BMP⊗DUMinc | | | 0.114731 [0.620924] |
| BMP⊗DLMinic | | | -0.191922 [0.670902] |
| BMP⊗DLOinc | | | -0.435385 [1.241359] |
| Adj-R ² | 0.5083 | 0.4576 | 0.4789 |
| No. of obs. | 56 | 56 | 56 |

Note:

Country Income Classification, World Bank (as July 2003)

Hinc-OECD: High income Country – OECD (23 countries): US\$ 9076 or more

Hinc-nonOECD: High Income Country – NonOECD (3 countries): US\$ 9076 or more

UMinc: Upper Middle Income Country (11 countries): US\$ 2936 to US\$ 9075

LMinc: Lower Middle Income Country (14 countries): US\$ 736 to US\$ 2935

LOinc: Lower Income Country (5 countries): US\$ 735 or less

Symbol with \otimes is term interaction operator-times

Value in bracket is robust standard error

The asterisks sign with ** and *** are the significant level at 10, 5, and 1 percent respectively.

Appendix 5.1

DRND and other explanatory variable

| Dep.var (FDI) | Eq.1.7 | Eq.1.8 | Eq.1.9 |
|--------------------|---------------------------|---------------------------|----------------------------|
| Constant | 5.360465 [1.434980]*** | 5.386400 [1.419180] | 5.346689 [1.585572]*** |
| IPRS | | 2.757556 [1.008550]*** | 2.876154 [1.046351]*** |
| RDEXP | 0.499022 [0.261947]* | | 0.454387 [0.261870]* |
| BMI | -0.294955 [0.602260] | -0.341767 [0.606532] | |
| IPRS⊗DRND[0, 1) | 2.585305 [1.062815]** | | |
| IPRS⊗DRND[1, 2) | 2.803403 [1.016882]*** | | |
| IPRS⊗DRND[2, 3) | 2.994260 [0.909237]*** | | |
| IPRS⊗DRND[3, 4) | 2.661275 [1.260563]** | | |
| RDEXP⊗DRND[0, 1) | | 0.580082 [0.249575]** | |
| RDEXP⊗DRND[1, 2) | | 0.875885 [1.493034] | |
| RDEXP⊗DRND[2, 3) | | 0.555535 [0.877908] | |
| RDEXP⊗DRND[3, 4) | | 0.423052 [0.688304] | |
| BMP⊗DRND[0,1) | | | -0.627288 [0.808902] |
| BMP⊗DRND[1, 2) | | | 0.369318 [0.725165] |
| BMP⊗DRND[2, 3) | | | -0.406003 [0.473650] |
| BMP⊗DRND[3, 4) | | | -1.531298 [0.290494]*** |
| Adj-R ² | 0.4595 | 0.4562 | 0.4910 |
| No. of obs. | 56 | 56 | 56 |

Note: DRND is a dummy variable for domestic R&D per GNP activity

DRND [0, 1): 30 countries

DRND [1, 2): 14 countries

DRND [2, 3): 9 countries

DRND [3, 4): 3 countries

Symbol with \otimes is term interaction operator

Value in bracket is robust standard error

The asterisks sign with *; ** and *** are the significant level at 10, 5, and 1 percent respectively.