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# *Transnational Corporations*

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## Contents

# FDI, regional differences and economic growth: panel data evidence from China

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This article investigates for China the proposition that economic and technological conditions in a host country modify the relationship of inward foreign direct investment (FDI) with growth. Data are employed for China as a whole, and for 29 provinces in sub-samples, for 1989-1999. We find that host country conditions impact strongly on the growth relationship at both the national and the provincial levels. Our results demonstrate that FDI favours growth in the economically stronger provinces, and that the full benefits of FDI are realized when competition (of both foreign and local origin) in local markets is at its strongest. From our results it is clear that policies need to be crafted at the provincial level to maximize the growth benefits of FDI. Market reform emerges as a very successful general policy that increases growth in a wide range of circumstances and which, our results suggest, is bolstered in its effects by FDI in the more developed provinces.

## Introduction

Development economists have long argued that countries pursuing externally oriented development strategies are more likely to achieve higher rates of economic growth than those that are internally focused. A number of studies have examined the relationship between inward FDI and economic growth in the

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developing host countries.[1] A generally accepted conclusion is that FDI has played a significant role in promoting economic growth in host countries because FDI represents "the transmission to the host country of a package of capital, managerial skills, and technical skills" (Johnson, 1972, p. 2). An interesting finding of previous studies is that the economic and technological conditions of a recipient economy influence the extent to which FDI contributes to growth.

FDI in China is one of the most palpable outcomes of China's Open Door Policy, which was adopted in December 1978. Already in 1993, China held a position second only to the United States as the largest host country for FDI (UNCTAD, 1994). By the end of 1998, China had attracted $267 billion worth of FDI, and had approved 324,712 foreign-invested projects (*Almanac of China's Economy*, 1999, p. 81).

The geographical distribution of FDI in China is characterized by its concentration in the eastern coastal area. As shown in table 1, between 1989-1998 the eastern region has attracted most FDI. The central and western regions attracted only 9 per cent and 3 per cent of the total FDI inflows, respectively. In terms of per capita FDI, the central and western regions achieved only $8.63 and $1.67, respectively, far behind the level of the eastern region's $45.98 and the national average of $21.19.

Considerable qualitative evidence on the positive effects of inward FDI on the Chinese economy has been found in recent years (Kueh, 1992; Lardy, 1995; Henley et al., 1999). Shang-Jin Wei (1995) finds statistical evidence that FDI is positively associated with cross-city differences in growth rates in China. In his comment on Wei's work, Wing Thye Woo (1995) argues that FDI is correlated with total factor productivity (TFP) growth because the incidence of FDI is a good proxy for the degree of economic liberalization; and the greater the degree of liberalization, the higher the TFP growth. Other studies draw a conclusion similar to Wei (1995). For example, Stephane Dees' (1998) evidence supports the view that FDI affects China's growth through the diffusion of ideas; Chung Chen et al. (1995) find that FDI has been positively associated with economic growth and the increase of total fixed assets investment in China; Peter J. Buckley et al. (2001) find that FDI improves the performance of Chinese indigenous firms. The above empirical findings point to the collective

[1] For a literature survey, see de Mello, 1997.

importance of the elements in the package of resources associated with FDI (Dunning, 1977, 1993).

The vast land area of China is inevitably associated with enormous contrasts in conditions, both natural and artificial, between provinces. The degree of economic development is substantially different across the provinces of China, and the geographic distribution of FDI is characterized by its concentration in coastal areas. Whilst an overall positive impact of FDI on growth is supported by the empirical literature, China's large absolute size and economic diversity may mean that this finding masks wholly mixed impacts between geographic and economic areas. The aim of this article is to shed some light on how the FDI-growth relationship is affected by regional differences in China at the provincial level.

The article proceeds as follows: the following section reviews the literature; data and methodology are briefly explained next; the empirical results are presented in the subsequent section; and concluding remarks are offered in the last section.

Table 1. Geographical distribution of FDI in China by region,[a] 1989-1998

| Year | FDI inflows ($100 million) | | | FDI inflows per person ($) | | |
|---|---|---|---|---|---|---|
| | Eastern region | Central region | Western region | Eastern region | Central region | Western region |
| 1989 | 28.12 | 1.17 | 1.22 | 5.54 | 0.46 | 0.28 |
| 1990 | 29.72 | 1.22 | 0.72 | 5.91 | 0.45 | 0.16 |
| 1991 | 38.88 | 1.68 | 0.68 | 7.78 | 0.61 | 0.16 |
| 1992 | 97.94 | 7.25 | 1.96 | 19.75 | 2.64 | 0.46 |
| 1993 | 236.83 | 23.80 | 10.14 | 48.40 | 8.79 | 2.38 |
| 1994 | 290.89 | 25.99 | 14.03 | 59.93 | 9.71 | 3.32 |
| 1995 | 324.58 | 33.24 | 11.42 | 67.45 | 12.57 | 2.73 |
| 1996 | 365.20 | 39.21 | 8.13 | 76.58 | 15.01 | 1.97 |
| 1997 | 385.65 | 47.90 | 11.68 | 81.76 | 18.55 | 2.86 |
| 1998 | 394.96 | 44.21 | 9.42 | 86.73 | 17.52 | 2.39 |
| Total[b] | 2 193 (88%) | 226 (9%) | 69 (3%) | 45.98 | 8.63 | 1.67 |

*Source*: authors' own calculations from *China Statistical Yearbook* (various issues).

[a] The geographical grouping of the provinces is as follows: eastern region: Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shangdonh, Guangdong and Guangxi; central region: Shangxi, Neimenggu, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan; western region: Sichuan, Guizhou, Yunnan, Shanxi, Gansu, Qinghai, Ningxia and Xinjiang.

[b] The bottom row shows the total FDI inflows and percentages and average per capita FDI.

## FDI and growth

Many studies discuss the ways in which inward FDI can contribute to the growth of a host country economy (see, for example, Wei, 1995; Balasubramanyam et al., 1996; de Mello, 1997). In general, these studies argue that the impact of FDI on growth is complex. First, through capital accumulation in a recipient economy, FDI is expected to be growth enhancing by encouraging the incorporation of new inputs and technologies into the production function of a host economy. Second, FDI improves the efficiency of locally-owned host country firms via contact and demonstration effects, and their exposure to fierce competition. Last and most importantly, FDI is believed to be a leading source of technological change and human capital augmentation in developing countries. Technological progress takes place through a process of "capital deepening" in the form of the introduction of new varieties of knowledge-based capital goods. It also proceeds via specific productivity-increasing labour training and skills acquisition promoted by transnational corporations (TNCs). A recent embellishment in the growth literature is to highlight the dependence of the domestic growth rate on the state of technology relative to that in the rest of the world (de Mello, 1999).

The basic shortcoming of conventional neo-classical growth models, as far as FDI is concerned, is that long-run growth can only be achieved by technological progress, which is considered to be exogenous. FDI would only affect output growth in the short run and, in the long run, under the conventional assumption of diminishing returns to capital inputs with a given technology, FDI would have no permanent impact on output growth. Within the new growth framework, FDI is treated as one of the factor inputs along with labour and (domestic) capital and is expected to promote growth in the long run. Whether or not technological progress is best described as exogenous to the world as a system, the role of FDI in diffusing technology (both hard and soft) to developing countries appears clear.[2] Under either interpretation, technology created in the developed

[2] The development literature does not much concern itself with the motive for FDI. However, there are reasons for believing that FDI should not be regarded as homogeneous to the degree to which it bears technology. This is likely to be influenced by the motive for FDI. For instance, it is expected that the greater the extent to which market power is a motive, then the lower the incentive for technology transfer. This motive would be more prominent in markets where competition is lower (Buckley and Clegg, 1991).

world is exogenous to a developing country. Consequently, a positive relationship between FDI and long run growth in a developing host country should be expected.

The lessons from developed economies are that the productivity of foreign capital is dependent on initial conditions in a host country. Eduardo Borensztein et al. (1998) highlight the twin roles of the introduction of advanced technology and the degree of absorptive capability in the host country as determinants of economic growth. Luiz R. de Mello (1997) argues that an increase in the productivity of FDI can only be achieved if there is already a sufficiently high level of human capital in a recipient economy. These authors agree that preconditions in recipient economies help convert new capital effectively into higher levels of output in the host countries.

It is also important to evaluate the extent of complementarity between domestic investment and FDI. Under complementarity, innovations embodied in FDI may create, rather than reduce, rents accruing to older technologies (Young, 1993). If FDI is expected to affect growth positively, some degree of complementarity with domestic investment needs to be at work.

It should be pointed out that the direction of causation may run either way. FDI may be drawn to regions of faster growth or greater potential because their growth prospects have made it more attractive to foreign TNCs. De Mello (1997) envisions a case in which the size of the consumer market in a recipient economy is getting larger, as a result of faster growth leading to rapid increases in the potential purchasing power of consumers in a host country. Consequently, it is tenable that growth itself may be an important determinant of FDI in addition to those listed above.

Within an evaluation of the impact of FDI-induced technological change on growth in developing countries, Magnus Blomström, Robert Lipsey and Mario Zejan (1994) find that the positive and statistically significant impact of FDI is stronger, the higher the level of development in a host country. Pursuing the effects of preconditions in a developing host country, Borensztein et al. (1998) find that FDI is more productive than domestic investment only when the host country has a minimum threshold stock of human capital. However, de Mello (1999) found a positive impact for FDI on output growth regardless of the technological status of a host country as a technological leader or follower, but this result did not apply when

growth was replaced by technological change (measured by TFP). In this case, FDI exerted a positive impact on TFP only for technological leaders, while a negative relationship arose between FDI and TFP for technological followers.

The findings reviewed above collectively suggest that the way in which FDI affects growth is likely to depend on the economic and technological conditions in a host country. The evidence to date points to an increasing relationship between the level of development in a recipient economy and the productivity benefits associated with inward FDI.

Empirical findings have so far not offered clear-cut conclusion with respect to the causality between FDI and growth. The surge of FDI might be associated with domestic policy variables, and this was evidenced in the case of Latin America (Elias, 1990). De Mello (1996) finds that FDI plays a determinant role in increasing both output and TFP in Chile, while capital accumulation and TFP growth precede FDI in Brazil. In both cases the direction of the relevant causalities cannot be determined. The direction of causality between FDI and growth may well depend on the determinants of FDI. If the determinants have strong links with growth in the host country, growth may be found to cause FDI, while output may grow faster when FDI takes place in other circumstances (de Mello, 1997).

## The model and data

The conventional approach to investigating the relationship between growth and FDI involves running regressions for the rate of output growth on the rate of FDI growth. Often, additional explanatory variables (for example, the rate of growth of the domestic capital stock, domestic labour force growth) are included in order to control for other influences upon the rate of economic growth. As we have noted, such models are often presented in terms of a production function-type of framework that treats FDI (foreign capital) as a factor input.

Conventional neo-classical growth models in the Solovian tradition predict that the elasticity of output with respect to capital should be equal to the share of capital in total output. However, empirical estimations of this relationship have commonly been flawed. As is well known, in the case of cross-country and time-series estimations, the correlation between the error term and the regressors in standard growth accounting-based time-series production function

estimations leads to simultaneity and omitted variables biases. Owing to these biases, cross-sectional estimates frequently point to a much higher value of capital elasticity than is predicted on the basis of the growth models. For example, the correlation between capital per capita and the error term leads to capital elasticity estimates that are well above the capital share in output (Young, 1992, 1995). By including more theoretically germane explanatory variables in our equation, the biases associated with the omission of variables can be substantially reduced.

For these reasons we eschew a growth accounting exercise, and construct our model as follows. Let province *i* and time *j* operate within the following equation, so enabling the impact of FDI on growth to be estimated:

$$Y_{it} = \alpha + \beta_1 K_{dit} + \beta_2 K_{fit} + \beta_3 L_{it} + \beta_4 H_{it} + \beta_5 M_{it} + \beta_6 E_{it} + \beta_7 I_{it} + \varepsilon_{it} \qquad (1)$$

The estimation of equation (1) without due consideration of possible region-specific or time-specific effects could generate misleading results. In the context of panel data, the existence of unobservable growth determinants that are specific to regions can be acknowledged and taken into account in the estimation procedure. Therefore, we estimate equation (1) in the form of what is usually referred to as a fixed effect (FE) model. We do not use a random effects model here since this would require that the omitted variables are uncorrelated with the specified right-hand side variables — an unrealistic assumption in the context of our model.[3] The FE model is as follows:

$$Y_{it} = \alpha_i + \gamma_1 K_{dit} + \gamma_2 K_{fit} + \gamma_3 L_{it} + \gamma_4 H_{it} + \gamma_5 M_{it} + \gamma_6 E_{it} + \gamma_7 I_{it} + \phi_{it} \qquad (2)$$

where $Y$ is the growth rate of GDP;[4] $K_d$ is the growth rate of the domestic capital stock (proxied in the usual way by the share of investment in output); and $K_f$ is the growth rate of the stock of FDI;[5]

[3] There is considerable debate regarding the choice between the fixed effects (FE) model and random effects (RE) model. A common and convenient way forward is to regard the FE regression as a better and less biased one (Griliches, 1984).

[4] The reliability of Chinese statistics is open to question *(Financial Times*, 2002a, 2002b). There appears to be an upward bias in the GDP data arising from over-reporting, and in the FDI data arising from "disguised FDI". This latter can arise where investment ostensibly from, for example, Hong Kong (China) in fact has a mainland Chinese ultimate beneficial owner (Lan and Young, 1996). These inflationary tendencies may mitigate each other to some extent.

[5] The definition of domestic investment is investment in fixed assets, which contribute the greatest part of the capital invested in Chinese-owned firms. This can be considered commensurable with the Chinese data on FDI, which are defined differently from the IMF definition (IMF, 1977), as all expenditures that add to the capital of a firm. The Chinese FDI data have the benefit of not being influenced by the financial positioning between the parent firms and affiliates.

$L$ is the growth rate of the labour force; $H$ is human capital (proxied by the share of university and college students in the population). In contrast with previous studies, our model includes some supplementary variables that have been introduced into the above equation, to capture the determinants of the Solovian type of residual, and thus improve the quality of our estimations. These variables are: the level of marketization, $M$ (proxied by the share of number of employees in private enterprises and self-employed individuals in total employment); the growth rate of provincial exports ($E$); and the growth rate of provincial imports ($I$). Finally, $\alpha$ captures province-specific unobserved inputs, which are assumed to be constant over time, and $\phi$ is a white noise error term.[6]

Positive relationships are expected between the dependent variable and all explanatory variables. If the model specification is reasonable, the estimated coefficient of $K_f$ (i.e. $\gamma_2$) will indicate the direction and magnitude of the impact of FDI on economic performance.

It would be of great interest to experiment with a lag structure in this model, although this would be unusual with panel data in circumstances such as our own. We have 261 observations in the full sample, but a relatively short time series covering 1989-1998. If we were to employ lags, this would adversely affect the number of usable observations particularly in the sub-samples, which are the focus of our analysis. Furthermore, there is no prima facie evidence to suggest that lags would yield a benefit, as argued in UNCTAD (1999, p. 332): "Current growth in a period is always positively and significantly related to FDI inflows in the same period … there is much stronger evidence that the growth rate and FDI inflows coincide in time".

Before the data are described and the estimates reported, a few remarks concerning the model are necessary. It is not the purpose of this article to offer either a new theory or specification of the linkages between FDI and growth. Rather, the main objective is to shed fresh light on these linkages at the provincial (sub-national) level by extending a model that is already familiar from studies at the national level. However, our study does employ additional and theoretically pertinent variables, thereby enabling us to focus on a broader range of issues. Although our model cannot be considered

[6] See, for example, Hsiao (1986) for a discussion of panel data methods.

to be perfect, it can claim to be well justified in the light of our discussion above.

While equation (2) captures the impact of most of the important variables, it does not account for the possibility of bi-directional relationship between growth and FDI highlighted in the recent literature. To capture these possible temporal causality relationships, the technique of Granger-causality can be employed (Granger, 1969, 1980). The test involves estimating the following regressions:

$$Y_t = a_0 + \sum_{j=1}^{8} a_j Y_{t-j} + \sum_{j=1}^{8} b_j K_{f,t-j} + u_t \qquad (3)$$

$$K_{ft} = c_0 + \sum_{j=1}^{8} c_j K_{f,t-j} + \sum_{j=1}^{8} d_j Y_{t-j} + v_t \qquad (4)$$

where $K_{ft}$ and $Y_t$ are stationary time series and $u_t$ and $v_t$ are uncorrelated error terms. By equation (3), $K_f$ Granger causes $Y$ if $b_j \neq 0$. By equation (4), $Y$ Granger causes $K_f$ if $d_j \neq 0$. By-directional Granger causality is obtained if $b_j \neq 0$ and $d_j \neq 0$.

The estimation of equation (2), (3) and (4) is based on a panel of data for 29 out of 31 of China's provinces over the period 1989-1998 for realized FDI.[7] Tibet was excluded because of a lack of reliable data, while Chongqing and Sichuan provinces were included as one combined province, as they were aggregated together in the source data for most of the period. The panel data set yields a total of 261 observations when growth rates are calculated. The data were compiled from various volumes of the *Chinese Statistical Yearbook*, *China Foreign Economic Statistical Yearbook and China Industrial Statistical Yearbook*.

The first part of our investigation of the FDI-growth relationship involves testing equation (3) and (4) to examine the causal relationship between FDI and growth. The second part of our analysis then analyses the bi-directional effects using the full sample of 29 provinces to obtain parameter estimates for China as a whole. The third part of our analysis groups the full sample of provinces into sub-samples based on differences in characteristics between the provinces. These characteristics are: (1) membership of geographic region; (2)

[7] Realized FDI is investment that has been made, as opposed to planned FDI.

economic development levels, proxied by GDP per capita; (3) levels of technological capability, proxied by R&D/GDP; (4) the level of infrastructure, employing the rankings of Amy Y. Liu et al. (1999), which use electricity usage per capita, number of telephones per capita, road-to-land ratio and wage level to measure infrastructure conditions; (5) the degree of inward FDI concentration (FDI intensity), proxied by FDI/total domestic investment); (6) the degree of State-owned enterprise (SOE) concentration (SOE intensity), proxied by the share of SOEs' sales in total sales in the manufacturing sector; and (7) the degree of competition from Chinese locally-owned firms, proxied by the growth rate of sales by domestically-owned firms. This measure follows Blomström, Kokko and Zejan (1994), on which we have improved by calculating the sales of only locally-owned firms. This involves removing the sales of all foreign affiliates, including international joint ventures and wholly-owned affiliates, which gives us a pure measure of Chinese locally-owned sales.

The provinces in the sample are differentiated; in the case of the economic criteria, this involves assigning a rank. Following ranking, the provinces are divided into various pairs of mutually exclusive groups: provinces with high and low income per capita; provinces with high and low technological capability; provinces with better and poorer infrastructure; provinces with high and low levels of FDI intensity; provinces with high and low SOE intensity; and, finally, provinces with high and low degrees of domestic competition. The analysis of these contrasting sub-samples serves to determine how these differences affect the FDI-growth relationship across provinces.

## Empirical Results

We first employ the Granger causality test to examine the relationship between FDI and growth. Equations (3) and (4) were estimated by ordinary least square (OLS) procedure. We chose two year-long lag periods based on the final-prediction-error (FPE) criterion (Akaike, 1969). All the variables were found to be covariance stationary.

We first test if FDI ($K_f$) Granger causes growth ($Y$) by estimating the unrestricted equation (3), and restricted equation (3)

by dropping lagged $K_f$. The $F$ statistic yields a value of 11.548,[8] which exceeds the critical value of $F_{0.01} = 5.53$. Thus, we can reject the null hypothesis ($b_j = 0$) and conclude that adding lagged values of $K_f$ does improve the statistical results. This signals that FDI Granger causes growth. The same procedure was carried out with respect to equation (4) and the result indicates that growth Granger does not cause FDI ( $F$ statistic 3.25, below the critical value of $F_{0.01} = 5.53$).

We now analyze the effects of FDI on growth. Table 2 presents the results for the broad panel from the estimation of equation (2) in which the growth of GDP is generated by growth in domestic investment, FDI, employment, exports and imports, as well as the level of human capital and degree of marketization. In regressions (2.3) to (2.8) various interaction terms are added into the equation to examine whether some variables exert a joint effect on growth.

Table 2 reveals several interesting results concerning the effects of FDI on economic growth. Regressions (2.1) and (2.2) indicate that FDI has a positive impact on economic growth. The addition of some ancillary variables, i.e. the level of marketization, and the growth rates of exports and imports in regression (2.2) does not reduce, but rather increases, the significance of the FDI variable. The level of human capital, proxied by the ratio of number of college students to the total population, does not seem to contribute to growth in regressions (2.2) to (2.8). This variable, although commonly employed in empirical research, might not perform as expected as a proxy for human capital in the case of China. It might be argued that in China the efficiency with which the stock of technical knowledge is translated into technologies in the market, via the higher education system, is very low. This is likely to be a legacy of central planning, which is well known to have been inimical to the commercialization of ideas. Another possible reason is that the rigidity of personnel management systems in State-owned firms prevents well-educated employees from contributing fully to the firm performance. In additional regressions that were run using average wages in each region, in place of the student-population ratio, the results do not change significantly. The

[8] The F statistic can be calculated using: $\frac{(RSS_R - RSS_{UR})/m}{RSS_{UR}/n-k}$, where $m$ in the present case is equal to the number of lagged $K_f$ terms and $k$ is the number of parameters estimated in the unrestricted regression.

insignificant role of human capital in growth found here appears to be consistent with the studies by Wei (1995) that investigated the role of FDI and human capital in economic growth in China. In contrast with the result for human capital, we find as expected that investment (especially domestic investment) and marketization have a positive impact on growth.

The specification in regression (2.3) replaces the FDI variable with the product of FDI and human capital, and yields a coefficient that is positive and statistically highly significant. While this specification follows closely from the framework developed in the second section, the significance of the interaction term may be the result of the omission of other relevant factors, in particular, the FDI variable by itself. Thus, it is necessary to include FDI and human capital individually alongside their product. In this way, we can test jointly whether these variables affect growth by themselves or through the interaction term. This specification is adopted in regression (2.4),

Table 2. FDI and growth of GDP, full sample, 1990-1998

| Variable | (2.1) | (2.2) | (2.3) | (2.4) | (2.5) | (2.6) | (2.7) | (2.8) |
|---|---|---|---|---|---|---|---|---|
| $K_d$ | 0.049 (3.60)*** | 0.046 (3.45)*** | 0.046 (3.32)*** | 0.045 (3.38)*** | 0.023 (1.65)* | 0.029 (1.64)* | 0.046 (3.58)*** | 0.047 (3.63)*** |
| $K_f$ | 0.007 (4.09)*** | 0.008 (4.32)*** | | 0.005 (1.77)* | | 0.002 (0.52) | | -0.005 (-1.08) |
| $L$ | 0.057 (0.39) | 0.096 (0.66) | 0.106 (0.73) | 0.099 (0.68) | 0.119 (0.83) | 0.114 (0.79) | 0.071 (0.50) | 0.061 (0.43) |
| $H$ | 12.77 (2.25)** | -1.889 (-0.26) | -3.874 (-0.53) | -2.684 (-0.37) | -2.228 (-0.31) | -2.17 (-0.30) | -2.79 (-0.39) | -3.121 (-0.44) |
| $M$ | | 0.312 (3.63)*** | 0.315 (3.63)*** | 0.319 (3.70)*** | 0.312 (3.65)*** | 0.314 (3.67)*** | 0.241 (2.91)** | 0.199 (2.18)** |
| $E$ | | 0.017 (1.19) | 0.015 (1.08) | 0.017 (1.18) | 0.016 (1.14) | 0.016 (1.16) | 0.018 (1.28) | 0.017 (1.26) |
| $I$ | | 0.023 (3.76)*** | 0.025 (3.99)*** | 0.023 (3.78)*** | 0.023 (3.79)*** | 0.023 (3.75)*** | 0.022 (3.58)*** | 0.022 (3.58)*** |
| $K_f H$ | | | 2.810 (4.02)*** | 1.059 (0.87) | | | | |
| $K_d K_f$ | | | | | 0.025 (4.57)*** | 0.019 (1.51) | | |
| $K_f M$ | | | | | | | 0.186 (5.33)*** | 0.270 (3.19)*** |
| $N$ | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 |
| $\overline{R}^2$ | 0.34 | 0.41 | 0.41 | 0.41 | 0.42 | 0.42 | 0.44 | 0.44 |

*Source:* authors' calculations.
*Note*: Figures in parentheses are t-statistics (two-tailed tests); ***, ** and * denote significance at the 1 per cent, 5 per cent and 10 per cent levels, respectively.

which shows that the coefficient on FDI is still positive and significant, while the interaction term is no longer significant. This means that the significance of the interaction term is likely to be the result of the omission of the FDI variable itself. Thus, we are unable to link the significance of the $K_f H$ variable in regression (2.3) to the so-called "threshold" effect, i.e. we need to be cautious in averring that in China FDI might promote growth only when human capital reaches a certain level, at least on the basis of our data. However, this does not necessarily mean that the effect of FDI on economic growth has nothing to do with conditions in the host country or local economy. In fact, as we will see later, the effect of FDI on growth in this study is closely associated with provincial differences with respect to technological and market, or industry, conditions.

Domestic investment has been one of the most important factors supporting the continuous economic growth in China since the Open Door Policy. This is reflected throughout table 2 where the $K_d$ variable is positive and statistically significant in all the equations. Similar to the results in column (2.3) and (2.4) with respect to the FDI-human capital variable, the interaction term between domestic and foreign investment is significant in equation (2.5) where the FDI variable is absent, but insignificant in equation (2.6) where the FDI variable is also included. This casts doubt on the existence, as is usually assumed in the literature, of a complementary relationship between the two types of investment. The insignificance of the $K_d K_f$ variable may be related to the structure of domestic investment in China. Investment in infrastructure has been extensive and should, in principle, serve to enhance the role of FDI in promoting growth. However, in practice a substantial share of investment in fixed assets in China is accounted for by industrial projects and real assets that have been State-funded and which have relatively little opportunity to interact positively with incoming foreign capital.

We find that market-oriented reform has been one of the major forces driving economic growth in China. This is reflected in table 2 where the marketization variable in all the equations is positive and statistically significant. It is interesting to see the role of the interaction between FDI and marketization. In contrast to the cases of $K_f H$ and $K_d K_f$, the positive and significant performance of the interaction variable $K_f M$ is invariant of whether the FDI variable is included or excluded in the relevant equations. In addition, the increased value of $\overline{R}^2$ in equations (2.7) and (2.8) also justifies our

inclusion of the marketization variable and of the interaction term $K_f M$ in these regressions.

Of the two trade variables, only that for imports attains significance. These two variables should be interpreted with caution as they refer to trade at the level of the province. As such they are not exclusively concerned with trade in the international sphere — they include inter-provincial trade — and so do not measure only the international trade that brings the Chinese host economy and foreign economies into contact. This dilution of the variables may account for the lack of significance of exports. However, the across-the-board significance of imports is perhaps best understood as a special aspect of market liberalization. Provinces of China have customarily been segmented by restrictive local distribution monopolies. Those provinces with the fastest growth in imports are likely to be those that have embraced liberalization in trade, and that have also provided environments most conducive to economic growth. Our results indicate that the Chinese economy is still at a stage in which growth for the country as a whole has been mainly driven by the expansion of domestic investment and by market-oriented reform, rather by imported technology and the stock of human capital.

As discussed in the preceding section, the FDI-growth relationship may vary across provinces due to various differences specific to the characteristics of these regions. The impact of these differences can be explored by dividing the full sample into sub-samples. Tables 3, 4 and 5 show the results from the estimation of equation (2) for sub-samples to investigate how provincial differences affect the FDI-growth relationship.

Table 3 examines the difference in the way in which our standard model performs between the regions of China. The designation of China on such a regional basis underpins the Open Door Policy, and so the contrasts that arise in table 3 essentially arise from the timetable for the rolling out of that policy, as well as from the underlying economic attractiveness of the provinces within the regions. It is therefore not surprising that, within each of the three classes of region, there is limited variation in economic and policy characteristics. The result is that all but one of the explanatory variables supplementary to domestic investment and FDI fail to reach significance.

Government development policy has managed to foster economically convergent provinces by region. Within these regions the driving force behind growth is confirmed as springing from domestic and foreign investment. Moreover, the significance of these relationships rises in the geographical movement from west to east, as does the size of the adjusted R squared. Therefore, domestic investment contributes insignificantly to growth in the provinces of the western region, significantly in the central region and yet more significantly and strongly in the east. Across the regions, the significance of the impact of FDI parallels that of domestic investment, but is somewhat higher within each region. The strength of the FDI-growth relationship clearly rises from west to east. This suggests that FDI in some way is differentiated from domestic investment. On the basis of theory, we can interpret this as being the result of FDI conferring a package of new resources, in which the elements are qualitatively and quantitatively different from domestic investment.

Although the size of the coefficients on FDI lies below that for domestic investment (where both are significant), it attains its zenith in the eastern region. The key conclusion from the equations in table 3 is that the importance of FDI in driving growth rises in step with the development policy programme of the Government of China.

Table 3. Geographical regions and the FDI-growth relationship, 1990-1998

| Variable | Eastern region (3.1) | Central region (3.2) | Central region (3.3) |
|---|---|---|---|
| $K_d$ | 0.045<br>(2.63)** | 0.061<br>(1.80)* | 0.015<br>(0.78) |
| $K_f$ | 0.041<br>(7.14)*** | 0.010<br>(3.08)* | 0.002<br>(1.84)* |
| $L$ | 0.385<br>(1.38) | 0.241<br>(0.97) | -0.127<br>(-1.04) |
| $H$ | 2.295<br>(0.26) | 20.53<br>(0.62) | 25.93<br>(1.71)* |
| $M$ | 0.318<br>(0.13) | 0.305<br>(1.37) | -0.045<br>(-0.26) |
| $N$ | 108 | 81 | 72 |
| $\overline{R}^2$ | 0.50 | 0.37 | 0.27 |

*Source*: authors' calculations.
*Note*: Figures in parentheses are t-statistics (two-tailed tests); ***, ** and * denote significance at the 1 per cent, 5 per cent and 10 per cent levels, respectively.

Accordingly, FDI should be expected to become still more important to China's development aspirations in the future. The pattern of significance and strength that we observe in the coefficients suggests that domestic investment leads chronologically in creating growth. Surprisingly, this leadership does not apply in the least-developed provinces of the eastern region. It is possible that in these provinces the quality (and perhaps also the quantity) of domestic investment is so low that its impact on growth is negligible.

The human capital variable is unique among the supplementary variables in attaining significance for the provinces of the western region. This signals that between the most economically backward provinces, increases in investment in human capital make a positive contribution to economic growth.

For a deeper understanding of the true impact of the economic and policy variables, we must reclassify the provinces by their economic characteristics, rather than by simple membership of geographical region. Proceeding along these lines we are able to produce tables 4 and 5. The results in equations 4.1 and 4.2, which divide the sample of provinces by GDP per capita, bear a strong resemblance to those in table 3 precisely because development levels rise in the movement from the western region to the eastern region. Thus, we find again that domestic investment is of primary importance in driving economic growth in the less developed provinces. What can be considered as a standard result is obtained for the FDI variable, i.e. that its growth-promoting effects are evident in the developed rather than in the less-developed provinces, which is in line with the result in table 3. This is analogous to the common finding for export-led growth in the development literature. Here, the FDI variable captures an interaction between the domestic and the international sectors, analogous to exporting, and the results show that this interface promotes growth ¾ but contingent upon local development being in the higher end of the distribution. The degree of marketization appears as a significant variable in the low, but not in the high, GDP per capita regions. This result underscores the role played by the movement towards private sector economic activity in the growth process in the poorest provinces. It appears that, in the rich provinces, where the degree of marketization is already very high, the variation in this variable is no longer critical to the growth process, i.e. the main part of the benefits have already been reaped.

Table 4. Provincial economic differences and the FDI-growth relationship: sub-sample results, 1990-1998

| Variable | GDP per capita | | R&D expenditure/GDP | | Level of infrastructure | |
|---|---|---|---|---|---|---|
| | High (4.1) | Low (4.2) | High (4.3) | Low (4.4) | High (4.5) | Low (4.6) |
| $K_d$ | 0.049 | 0.060 | 0.035 | 0.066 | 0.028 | 0.093 |
| | (2.60)*** | (2.76)*** | (2.26)*** | (3.19)*** | (1.56) | (4.13)*** |
| $K_f$ | 0.009 | 0.001 | 0.007 | 0.010 | 0.005 | 0.001 |
| | (2.47)*** | (1.37) | (3.28)*** | (3.30)*** | (2.96)*** | (0.89) |
| $L$ | 0.331 | -0.112 | -0.075 | 0.394 | 0.064 | 0.359 |
| | (1.33) | (-0.67) | (-0.52) | (1.45) | (0.33) | (1.53) |
| $H$ | 0.614 | 6.563 | 1.466 | 0.212 | -0.223 | -23.28 |
| | (0.06) | (0.35) | (0.21) | (2.47)*** | (-0.03) | (-0.74) |
| $M$ | 0.195 | 0.279 | 0.25 | 0.334 | 0.157 | 0.464 |
| | (1.50) | (1.85)* | (2.49)*** | (3.14)*** | (1.30) | (2.19)** |
| $N$ | 126 | 135 | 126 | 135 | 126 | 135 |
| $\overline{R}^2$ | 0.31 | 0.33 | 0.38 | 0.39 | 0.37 | 0.31 |

*Source*: authors' calculations.

*Note*: Figures in parentheses are t-statistics (two-tailed tests); ***, ** and * denote significance at the 1 per cent, 5 per cent and 10 per cent levels, respectively.

In equations 4.3 and 4.4 the provinces are reclassified by provincial research-and-development capability (R&D effort), producing some fresh results. Domestic investment and FDI promote growth in both high and low-research provinces and, at this point, it might be helpful to reflect upon the nature of the data on research. Pure and applied research will be conducted by domestic and foreign-invested firms, and by Government research institutes. There is a well-understood relationship between R&D and growth in locations in which research levels are considerable. But where R&D is low, both in intensity and in absolute terms, our results call to mind that the presence of a relatively few provinces, with effort at the higher end of the low distribution, might be sufficient to lead to a positive relationship with growth.

The human capital variable assumes significance for the sub-sample of provinces with low — but not high — research effort. It appears that growth is promoted by an expansion in the number of tertiary students at the lower end of the distribution, i.e. in the relatively large quantum leap from low participation rates to moderate

rates. From this we can infer that an increase in human capital in the low-research provinces has a synergistic effect with such meagre provincial resources as there are, to stimulate an expansion in growth. In contrast, we find that within the high-research provinces an increase in the abundance of human capital is no longer critical for growth.

The key policy finding from equations 4.3 and 4.4 concerns the influence of marketization. In both high and low-research provinces, marketization augments economic growth. This implies that this policy is of commensurate value whatever the research status of the province, and therefore that it can be pursued with universal benefit to growth. This benefit may derive from the way that private enterprise pursues more aggressively the exploitation of research outputs than does State enterprise.

Turning to equations 4.5 and 4.6, in which provinces are classified by level of infrastructure, we see that some sharp contrasts emerge between the high and low sub-samples. Growth is promoted by domestic investment in the low infrastructure group, but not in the high group. This points to the conclusion that it is domestic investment in infrastructural projects that is playing a leading role in the early stages of the growth process. These projects may well lie in the State sector and, accordingly, this hints at the pivotal part played by the State in raising socially productive capital. For its part, foreign (and therefore also private) capital and knowledge, conferred via FDI, furthers growth in high — but not low — infrastructure provinces. This leads one to believe that, to be productive, FDI calls for an adequate level of infrastructure to be in place. Lastly, in equation 4.6, we find that marketization promotes growth where infrastructure levels are low, suggesting that this policy can be pursued with benefit notwithstanding impoverished provincial foundations. In provinces that are well founded in this respect, marketization has no impact (in equation 4.5), it being probable in these cases that marketization rates have probably already converged, and may lie reasonably close to an upper boundary.

The data by province can also be investigated in terms of regional differences in industrial characteristics that relate primarily to the activities of enterprises. This is the purpose of table 5. Equations 5.1 and 5.2 reclassify provinces by the share of FDI in provincial capital formation. In this way we can discern how the determinants of growth contrast between highly invested provinces and low FDI intensity provinces. Domestic investment remains a powerful factor

in both categories of province, though attaining a higher significance in the highly-invested provinces. This hints at the possibility of a complementary relationship with FDI at the provincial level. In equation 5.1, where provincial FDI intensity is high, the impact of FDI on growth is significantly positive, but there is no such effect where FDI intensity is low. This indicates that FDI's contribution to growth is contingent upon there being a sufficient share of FDI in economic activity. This might be in the same industry — in which case the need for critical mass is implicated — or in different industries, in which event a network of suppliers may be present. This suggestion, that a critical foreign competitive mass is needed to realize the growth benefits of FDI, might link to the incentive for rapid technology and knowledge transfer that comes with effective competition between foreign owned producers.

There are two further significant variables in equation 5.1, namely the growth rate of the labour force and the degree of marketization. The labour force variable captures increases in the

Table 5. Provincial differences in industrial characteristics and the FDI-growth relationship: sub-sample results, 1990-1998

| Variable | FDI/total investment | | SOE's sales/total sales | | Growth of sales by domestically-owned firms | |
|---|---|---|---|---|---|---|
| | High (5.1) | Low (5.2) | High (5.3) | Low (5.4) | High (5.5) | Low (5.6) |
| $K_d$ | 0.051 | 0.048 | 0.048 | 0.044 | 0.047 | 0.082 |
| | (2.79)*** | (2.29)** | (2.84)*** | (1.99)** | (2.66)*** | (3.50)*** |
| $K_f$ | 0.016 | 0.001 | 0.018 | 0.001 | 0.010 | 0.0004 |
| | (4.92)*** | (0.85) | (5.87)*** | (0.63) | (3.88)*** | (0.63) |
| $L$ | 0.529 | -0.166 | 0.469 | -0.001 | 0.348 | 0.023 |
| | (2.06)** | (-1.12) | (1.67)* | (-0.01) | (1.31) | (0.14) |
| $H$ | -3.406 | 32.99 | -0.948 | 18.79 | -3.856 | 21.43 |
| | (-0.35) | (1.94)* | (-0.10) | (1.20) | (-0.39) | (1.29) |
| $M$ | 0.466 | 0.0048 | 0.357 | 0.106 | 0.307 | 0.068 |
| | (3.07)*** | (0.04) | (2.95)*** | (0.76) | (1.83)* | (0.53) |
| $N$ | 126 | 135 | 126 | 135 | 126 | 135 |
| $\overline{R}^2$ | 0.38 | 0.33 | 0.41 | 0.27 | 0.38 | 0.29 |

*Source*: authors' calculations.
*Note*: Figures in parentheses are t-statistics (two-tailed tests); ***, ** and * denote significance at the 1 per cent, 5 per cent and 10 per cent levels, respectively.

abundance of labour of working age. There are two sources of domestic labour growth, one is natural population growth and the other is immigration. The first lays outside the policy domain in the time frame of our study, but not so the second source. The inference is that immigration into highly foreign-invested provinces should be promoted for its positive impact on growth.

The remaining significant variable in equation 5.1 is marketization. Marketization promotes economic growth in high, but not low, foreign-invested provinces. From this we can infer that when the provincial economy is highly foreign-invested, then the expansion of private enterprise contributes significantly to growth. The precise process through which this occurs cannot be elucidated through this present research. It may involve the stimulation, through various means, by foreign affiliates of local private firms' value-adding activities. Again, the competitive process may be pivotal in this finding. The greater the presence of foreign affiliate competitors the more keen the competition, and the more beneficial market reform may be for all producers in the Chinese market.

In equation 5.2, apart from the domestic investment variable, the only significant variable is that for human capital. This significance, in the context of a low foreign-invested environment, suggests a pattern of economic growth drawing on improvements in the quality of labour, and echoes our earlier finding for the western region provinces. It appears that modest improvements in human capital have value in encouraging the early stages of economic growth.

In equations 5.3 and 5.4, the data are re-ordered according to the proportion of State-owned enterprise sales in total sales. This procedure separates provinces in which most of the economic activity is still in State hands from those in which the private sector is now very considerable, owing to the rapid growth of private enterprise. While the domestic investment variable attains significance in both equations, we find that the two equations otherwise contrast markedly. There are four significant variables in equation 5.3, but just one in equation 5.4. Counter to intuition, we find that the FDI variable exerts a significant positive effect on economic growth in those provinces in which State-owned activity is high, rather than where it is low. Here we must reflect on the pattern of inward FDI into China. Typically, much foreign capital has been directed to joint ventures

with State-owned enterprises rather than with enterprises spawned in the private sector. The largest foreign invested projects in China conform to this characterization. This provides a tenable account of why the contribution of FDI to growth has been greatest where SOE activity has been highest, but we cannot conclude that this is the true basis for this finding.

The two further significant variables in equation 5.3 shed more light. The growth rate of the labour force and the degree of marketization both promote economic growth in high State-sector provinces. This again points to the importance of increases in the stock of labour, and possibly of migration, for growth and to the general benefits to be derived from marketization. As this latter variable is based on the proportion of employees who are not in the State sector, we can infer than the movement towards employment in private enterprise in provinces dominated by State enterprise brings considerable benefits for economic growth. The sole significance of the domestic investment variable in equation 5.4 suggests that most of the growth in private enterprise in provinces with low SOE shares has been Chinese-owned enterprise.

The final two equations in table 5 (equations 5.5 and 5.6) divide provinces into those with high and low growth rates of sales by domestically-owned firms, which is intended to reflect the degree of competition from Chinese locally-owned firms. The reasoning is that, where sales by local firms are growing fastest, this will be the result of the growth of Chinese-owned enterprise, which produce substantial volumes of output for the local market. Equation 5.5 duly reports that the FDI variable contributes significantly to growth when domestic competition in local goods markets is keenest. Once again, competition is seen to associate with a positive FDI-growth relationship, this time within the context of domestic competition. Marketization also, within the same environment, promotes growth. In contrast, equation 5.6 reveals that where the degree of Chinese-owned competition is least that no variable, apart from that for domestic investment, records a significant effect on economic growth. The inference to be made here is that, in the absence of effective local competition, the economic factors and policies that would otherwise be relied upon to generate growth are rendered ineffective. This again points to the importance of promoting competitive market structures.

## Conclusions

We find two main strands in our conclusions arising from this study of the FDI-growth relationship in China. Firstly, conditions in the host economy profoundly impact upon the growth relationship. This applies to China at the national as well as at the provincial level. The role of the market reform process deserves special attention, as it pervades the growth process, enabling resources, whatever quality or quantity, to be employed with an efficiency superior to that under State planning and control. Secondly, the quality and quantity of resources is crucial to promoting growth, as witnessed by the significance of domestic and foreign investment and, on occasion, labour growth and human capital.

In agreement with earlier research, our results support the view that externally-oriented development strategies promote economic growth. We have specifically found support for FDI as a channel in this process. The imperative to treat China as a country of discrete provinces is evident from the pattern of results in our estimations. In the full sample, the lack of significance of human capital obscures a subtle relationship which differs between the provinces. We find no evidence of the human capital threshold-effect for FDI, as posited in the development literature. However, we do find that human capital appears to be significant for growth in the less-developed western provinces, and in provinces with low research capability. In other words, the effect of human capital is to favour growth in the economically weaker provinces, i.e. it is independent of FDI. The finding that, in contrast, FDI favours growth in the economically stronger provinces, may partly account for the belief in a "threshold effect".

The findings for each of the variables employed, to some extent, carry some implications for policy; in the context of this study, the implications point to ways to maximize the growth benefits of FDI. It is clear that policy needs to be crafted to suit the characteristics of provinces. However, some policies are more generally applicable than others. Firstly, there is no indication in these data that a stage has been reached in which the growth of domestic investment has become secondary in the growth process, although the contribution of inward FDI can be considerable. Foreign investment appears to be supportive of market reform and growth, but specifically in provinces that have already attained greater development. We find that the full

benefits of FDI are felt when competition in the local market is keen from both foreign and domestic firms. We can no more than surmise that competition, from whichever source, is likely to reduce the incentive to incoming firms to exploit market power, thereby increasing the likelihood of technology and knowledge transfer.

Where it attains significance, the labour variable points to the value of expansion in the workforce, and possibly of inward migration, for economic growth. As we have noted, human capital plays a subtle role in promoting growth. On the basis of our findings, it seems clear that the economically weaker provinces should follow an education policy to raise the stock of human capital, as the greatest returns to growth from such a policy accrue to this group.

Market reform emerges as a successful general policy that betters growth in a wide range of circumstances and which, our results suggest, is bolstered in its effects by FDI in the more developed provinces. The view that inward FDI and the level of marketization are complementary in their action on growth is supported in our study. Accordingly, FDI can be viewed as an integral part of the market reform process towards the promotion of growth. The explicit policy of the Government of China has been to develop first the eastern coastal provinces, and subsequently to roll the programme of reform and marketization westwards through the interior towards the western provinces. The Western Region Development Programme of the Government of China (*Almanac of China's Economy*, 1999) has placed emphasis on investment in infrastructure, the attraction of inward FDI and the upgrading of human capital through education and inward migration. Our results lend support to the FDI and human capital policies, in view of the fact that growth has been responsive to the appropriate variables targeted by the Government.

The key role of liberalization appears to be reinforced by our findings for the variable on the growth of imports. We argue that it is probable that imports reflect an underlying process of liberalization in the host economy, and capture the movement to more effective competition in final markets.

Provinces in China are comparable in economic size to large sovereign developing countries. The political unity of China has meant that a unique opportunity exists to manage the development process, while learning from the experience of the more advanced provinces.

China is moving from a command economy based on central planning and State-owned enterprise towards a market economy in most sectors of activity. This gives the Government of China an unusual degree of control over the market reform process, at least as compared with the many developing countries that have never employed comprehensive State ownership. Perhaps for this reason, our findings reveal especially clear-cut effects on growth arising from market reform policy and the degree of competition in final markets.

Amongst our findings there have been no contrary signs, nor statistical problems that would call into question the reliability of the results. We should, however, note the limitations of this research. The study relies on a small sample. Although the number of provinces is given, the number of years for which suitable data are available must be considered the crucial limiting factor. The FDI-growth relationship is inevitably investigated over a short period of time. On the other hand, in a country such as China in which conditions have changed rapidly, estimation over a longer period would require a thorough exploration of the stability of the relationship. We should also note that there is believed to be a degree of overlap, but not a high degree, between the data on the provinces. The variables employed in this study are, however, believed to be robust and trustworthy, drawing in their construction on a lineage of comparable variables that appears in earlier studies on the FDI-growth relationship in developing countries. One advantage for our study in researching China using these variables is that it is reasonable to have more confidence in the comparability of data collected within one developing country than between a number of separate developing countries.

The low level of FDI in services in China to date justifies the focus on the manufacturing sector in this article. Services FDI has been customarily restricted owing to the official view that the services sector is less productive than manufacturing, and that domestic Chinese enterprises have been far too weak to bear foreign competition. In the future, it will be increasingly the case that research on FDI in services will be needed to investigate the growth process in a comprehensive fashion.

Our findings point collectively, and strongly, to the importance of competition in output markets for the realization of the full growth benefits of FDI. The reform process has clearly borne fruit, but it is naturally bounded when very high degrees of marketization are

achieved. At this upper boundary, the barriers to efficiency that we have been unable to address in this article may become of key importance to future growth. In our study, we cannot capture the full range of factors that impede foreign business in China. Such factors would relate to bureaucratic and discriminatory obstacles, poor intellectual property protection, as well as discretionary measures towards foreign investors. These are substantial issues, and ones that must be addressed in the implementation of China's membership of the World Trade Organization. ■

## References


Akaike, H. (1969). "Fitting autoregressive models for prediction", *Annal of the Institute of Statistical Mathematics*, 2, pp. 243-247.

*Almanac of China's Economy* (1999). (Beijin: Almanac of China's Economy Press).

Balasubramanyam, V.N., M. Salisu and D. Sapsford (1996). "Foreign direct investment and growth: new hypotheses and evidence", Discussion Paper C7/96 (Lancaster: Department of Economics, Lancaster University), mimeo.

Blomström, Magnus, Ari Kokko and Mario Zejan (1994). "Host country competition, labour skills, and technology transfer by multinationals", *Weltwirtschaftliches Archiv*,130, pp. 521-533.

Blomström, Magnus, Robert Lipsey and Mario Zejan (1994). "What explains growth in developing countries", NBER Discussion Paper No. 1924 (Cambridge, MA: NBER), mimeo.

Borensztein, Eduardo, José de Gregorio and Jong-Wha Lee (1998). "How does foreign direct investment affect growth", NBER Working Paper No.5057 (Cambridge, MA: NBER), mimeo.

Buckley, Peter .J. and Jeremy Clegg (1991). "Introduction and statement of the issues", in Peter J. Buckley and Jeremy Clegg (eds.) *Multinational Enterprises in Less Developed Countries* (London: Macmillan), pp. 3-23.

Buckley, Peter J., Jeremy Clegg and Chengqi Wang (2001). "The impact of foreign direct investment on the performance of Chinese locally owned firms". Paper presented in the 27th Annual Conference of European International Business Academy (Paris: ESCP-EAP), mimeo.

Chen, Chung, Lawrence Chang and Yimin Zhang (1995). "The role of foreign direct investment in China's post-1978 economic development", *World Development*, 23 (4), pp. 691-703.

Dees, Stephane (1998). "Foreign direct investment in China: determinants and effects", *Economics of Planning*, 31, pp. 175-194.

de Mello, Luiz R., Jr.(1996). "Foreign direct investment, international knowledge transfers and endogenous growth: time series evidence" (Canterbury: Department of Economics, University of Kent), mimeo.

_____ (1997). "Foreign direct investment in developing countries and growth: a selective survey", *The Journal of Development Studies*, 34 (1), pp.1-34.

_____ (1999). "Foreign direct investment-led growth: evidence from time series and panel data", *Oxford Economic Papers*, 51, pp. 133-151.

Dunning, John H. (1977). "Trade, location of economic activity and the multinational enterprise: a search for an eclectic approach", in Bertil Ohlin, Per-Ove Hesselborn and Per Magnus Wijkman (eds.), *The International Allocation of Economic Activity* (London: Macmillan), pp. 395-418.

_____ (1993). *Multinational Enterprise and the Global Economy* (Wokingham, Berks.: Addison-Wesley).

Elias, V. J. (1990). *Sources of Growth: A Study of Seven Latin American Economies* (San Francisco: ICS Press).

*Financial Times* (2002a). "Report casts doubt over Chinese data", 28 February, p. 14.

_____ (2002b). "Pyramid of power behind the numbers game", 28 February, p. 14.

Granger, C. W. J. (1969). "Investigating causal relations by econometric models and cross spectral methods", *Econometrica*, 37, pp. 47-55.

_____. (1980). "Testing for causality", *Journal of Economic Dynamics and Control*, 2, pp. 32-52.

Griliches, Zvi (1984). "R&D and productivity growth at the firm level", in Z. Griliches (ed.), *R&D, Patents and Productivity* (Chicago: University of Chicago Press), pp.339-74.

Henley, John, Colin Kirkpatrick and Goergina Wilde (1999). "Foreign direct investment in China: recent trends and current policy issues", *The World Economy*, 22(2), pp. 223-243.

Hsiao, Cheng (1986). *Analysis of Panel Data* (Cambridge: Cambridge University Press).

International Monetary Fund (IMF) (1977). *Balance of Payments Manual*, 4th edition (Washington, D.C.: IMF).

Johnson, Harry G. (1972). "Survey of the issues" in Peter Drysdale (ed.), *Direct Foreign Investment in Asia and Pacific* (Toronto: University of Toronto Press), pp. 1-17.

Kueh, Y. Y. (1992). "Foreign investment and economic change in China", *The China Quarterly*, 131, pp. 637-690.

Lan Ping and Stephen Young (1996). "Foreign direct investment and technology transfer: a case-study of foreign direct investment in North China, *Transnational Corporations*, 5 (1), pp. 57-83.

Lardy, R. Nicolas (1995). "The role of foreign trade and investment in China's economic transformation", *The China Quarterly*, 144, pp. 1065-1082.

Liu, Amy Yingli, Shaomin Li and Yuxian Gao (1999). "Location, location, location", *The China Business Review*, March-April, pp. 20-25.

United Nations Conference on Trade and Development (UNCTAD) (1994). *World Investment Report 1994*: *Transnational Corporations, Employment and the Workplace* (New York and Geneva: United Nations), United Nations publication, Sales No. E.94.II.A.14.

_____ (1999). *World Investment Report 1999*: *Foreign Direct Investment and the Challenge of Development* (New York and Geneva: United Nations), United Nations publication, Sales No. E.99.II.D.3.

Wei, Shang-Jin (1995). "Foreign direct investment in China: sources and consequences", in Terutomo Ito and Anne O. Krueger (eds.), *Financial Deregulation and Integration in East Asia* (Chicago: University of Chicago Press), pp. 77-101.

Woo, Wing Thye (1995). "Comment", in Terutomo Ito and Anne O. Krueger (eds.), *Financial Deregulation and Integration in East Asia* (Chicago: University of Chicago Press), pp. 102-105.

Young, Alwyn (1992). "A tale of two cities: factor accumulation and technical change in Hong Kong and Singapore", *NBER Macroeconomics Annual*, pp. 13-54.

_____ (1993). "Substitution and complementarity in endogenous innovation", *Quarterly Journal of Economics*, 108, pp. 775-807.

_____ (1995). "The tyranny of numbers: confronting the statistical realities of the East Asian growth experience", *Quarterly Journal of Economics*, 110, pp. 641-680.

# Market reform and FDI in Latin America: an empirical investigation

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This article relates opportunity, risk and market reform factors to foreign direct investment (FDI) flows in the 1988-1999 timeframe for seven Latin American countries: Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. By focusing on the extent of reform in the region, we extend macroeconomic studies of FDI. We develop hypotheses related to the three primary types of market reform (microeconomic, macroeconomic and institutional) and to traditional opportunity and risk factors. We test them via a pooled, time-series multivariate regression model. We also use a country dummy variable to determine, ceteris paribus, which countries were most successful at attracting FDI. Overall, the model explains almost three-quarters of the variance in FDI flows. The most significant factors explaining FDI flows were gross domestic product, privatization and changes in the consumer price index.

## Introduction

This article examines the relationship of changes in FDI inflows as undertaken by transnational corporations (TNCs) to conditions in seven Latin American countries during the 1988-1999 period. It includes traditional indicators of opportunity and risk (Pindyck, 1993), as well as indicators of three components of market reform: microeconomic, macroeconomic and institutional (Kennedy and Sandler, 1997; Trevino, 1999). By including market reforms, this

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article extends various macroeconomic studies of FDI that related comparative FDI inflows to indicators of risk and opportunity (Aliber, 1970; Daniels and Quigley, 1980; Froot and Stein, 1991; Grosse and Trevino, 1996).

Because companies seldom have sufficient resources to exploit all international opportunities, their potential FDI outflows and countries' inflows are limited for any given period. Thus, countries compete to receive shares of the limited FDI flows (Yean, 1998). But, FDI flows vary among the countries we include in this study and over time. Why, then, does more FDI flow to some countries than to others? Both microeconomic and macroeconomic studies of FDI indicate that companies choose one country over another because of their perceptions of comparative opportunity and risk. Opportunity may be either to gain markets or to acquire resources; risk may be political, monetary or competitive. Because companies' motives, competencies, perceptions, and tolerances for risk may differ substantially, what may be a very attractive country for one company may be simultaneously unattractive for another. Yet, the sum of all companies' decisions determines how much FDI each country receives. Concomitantly, the portion of FDI each country receives varies over time, largely because managers perceive relative changes in countries' opportunities and risks.

Let us turn for a moment to the reasons for examining FDI inflows. Government officials in developing countries acknowledge that they need outside capital to achieve their growth objectives; increasingly, this outside capital must come from FDI. Between 1991 and 1998, the share of FDI in total capital flows to developing countries increased from 28 per cent to 56 per cent (UNCTAD, 1999a). This change occurred partly because industrial countries have generally stabilized foreign aid and loans for development. They have done so because major powers have been less interested in winning allies since the end of the cold war, because many industrial country constituents have become disillusioned about the positive effects of foreign aid on economic growth, and because some public opinion has grown to favour disaster aid over development aid. The change also occurred because of drops in bank lending, as lenders have perceived higher risks of loan and interest repayments.

At the same time, host governments have become more interested in receiving private outside capital in the form of FDI rather than in portfolio flows (loans and short-term investments). This is

because portfolio flows have a potential for higher volatility, such as the volatility that exacerbated recent financial crises in a number of developing countries, such as Mexico and Thailand. Additionally, host governments realize that private companies hold resources other than capital that can aid their development, such as technology, human resource training competencies and access to foreign markets. But companies are reluctant to transfer these resources to countries that limit their control of the facilities that will use them (Moran, 1998), thus governments now encourage FDI. Karl P. Sauvant of UNCTAD's Division on Investment, Technology and Enterprise Development expressed the current interest in FDI among developing countries by saying: "Twenty years or so ago, many governments saw TNCs as the development problem. Today, TNCs are seen as part of the solution" (UNCTAD, 1999b).

Latin America is a useful region for our study because Latin American and Caribbean countries receive a significant portion of the FDI inflows going to developing countries (UNCTAD, 1999a). As is true for the world as a whole, Latin American countries' attitudes towards FDI have become more positive since the 1980s (Grosse, 1999). Nevertheless, Latin American countries' liberalization policies, market reforms and inflows of FDI have varied with each other and over time. The seven countries we include in this study account for over 85 per cent of FDI within Latin America.

What do we mean by microeconomic, macroeconomic and institutional reforms? Microeconomic reforms decentralize economic decision-making by shifting it from the State to the private sector, so that market forces drive competition and thereby increase efficiency. To carry out these reforms, governments may lower trade barriers, reduce price controls and relax capital account restrictions on companies' market entry and exit. Macroeconomic reforms refer to governmental monetary and fiscal policies to reduce inflation and stabilize the exchange rate. Institutional reforms change the State's role from producer to facilitator, i.e. from government-owned to privately owned enterprises and from highly regulated to deregulated private enterprises, so that the private sector is encouraged and empowered to make investments and operating decisions.

Although countries aim to increase investment, their demographics, political attitudes and macroeconomic conditions influence the reforms they enact and the success of the reforms. We refer to these as location-specific determinants. These same location-

specific determinants also influence companies' perceptions of opportunity and risk; thus, they influence FDI movements (Pindyck, 1993). We do, of course, consider these in our model of FDI to Latin America in order to determine to what extent the reforms, rather than these location-specific factors, relate to Latin American FDI inflows. Specifically, we include host country economic size and political risk as opportunity and risk factors within our model. We include current account balance, capital account liberalization, inflation, exchange rate stability, and privatization as location-specific indicators in our model. Note that the distinction between reforms and location-specific factors is not clear-cut. For example, on the one hand, a government may privatize ownership in a company because it wants to make economic reforms. On the other hand, it may privatize to gain funds from sale of its companies in response to political pressures for an increase in short-term spending on social programmes.

In the remainder of this article, we explain our hypotheses and the variables and methodology we use to test them, offer statistical results and discuss the implications for countries trying to increase FDI inflows.

## Hypotheses

Balance-of-payments deficits on current account occur because of excess demand for foreign goods and services. Some of this demand is for capital goods needed for the economic development process; therefore, governments often try to sustain the deficits rather than eliminating them through import restrictions or exchange rate manipulation. Governments may finance these deficits either by spending down their official reserves or by bringing in external capital. We have already discussed limitations on increasing official and portfolio capital inflows; thus, governments must turn increasingly to FDI if they are to sustain their current account deficits. As a result, managers in foreign companies may view host countries' deficits positively because such countries may offer them more favourable operating terms to attract capital inflows from TNCs. In fact, F. Schneider and B. S. Frey (1985), in a study of the economic and political determinants of FDI in developing countries before market reform, confirmed this relationship. Therefore, we expect that:

*H1: The larger a host country's current account deficit, the greater the host country's inward FDI.*

The next two hypotheses relate to macroeconomic stabilization, specifically reforms designed to reduce inflation and to stabilize the exchange rate. A high rate of inflation is a sign of internal economic instability and of a host government's inability to maintain expedient monetary policy. Where inflation rates are high, potential direct investors may perceive difficulty even in making short-term pricing decisions. Inflation also may inhibit export sales from the country, thus making resource-seeking FDI less attractive. For these reasons, companies may avoid making investment in countries with high inflation. In a study before Latin American countries made significant reforms, Schneider and Frey (1985) confirmed that companies invested less in developing countries with high inflation rates. Therefore, we expect that:

*H2: The lower the percentage changes in consumer prices, the greater a host country's inward FDI.*

Foreign investors may gain or lose from a depreciating exchange rate. In terms of gain, they may have more buying power in host countries. Thus, they can gain a larger foreign capacity for the same amount of home-country capital. Further, they can produce more cheaply when a real exchange rate depreciates; thus, they can export more easily and gain from resource-seeking FDI. However, foreign investors may lose because they must incur costs to prevent transaction and translation losses when currencies depreciate. If they believe that depreciation will continue after they enter a country, they may conclude the costs will be too high to justify their investments. In fact, findings by various researchers (Grosse and Trevino, 1996; Froot and Stein, 1991; Klein and Rosengren, 1994; Tuman and Emmert, 1999) are mixed in terms of investors' reactions to exchange rate depreciation. L. Leiderman and A. E. Thorne (1996) reported that FDI into Mexico changed very little after the Mexican currency crisis and devaluation of 1994. Further, in spite of the high value of the United States dollar during much of the 1980s, the United States was a net recipient of FDI. Despite the mixed evidence, we expect that:

*H3: The greater the depreciation of a host country's currency in real terms, the greater the host country's inward FDI.*

The market-size hypothesis suggests that investment will go primarily to markets large enough to support the scale economies needed for production. This reasoning helps to explain why most FDI goes to developed countries rather than to developing countries (Grosse and Trevino, 1996; Ajami and BarNiv, 1984). The reasoning has been pervasive, given that most investment historically has been market seeking, and much of the investment in developing countries has been in response to import substitution policies. However, evidence from studies comparing FDI flows to different emerging economies has been mixed. On the one hand, F. R. Root and A. A. Ahmed (1979) and J. P. Tuman and C. F. Emmert (1999) used gross domestic product (GDP) as a surrogate for market size and found it to be insignificant in explaining FDI among Latin American countries. On the other hand, J. D. Daniels and C. J. Quigley (1980) found that GDP not only was significant but also was the most important variable to explain FDI flows among Latin American countries. Further, UNCTAD (1994) concluded that market size was the main attractiveness for FDI. In spite of mixed prior research results, we expect that:

*H4: The larger a host country's market size, as indicated by GDP, the greater the host country's inward FDI.*

The next three hypotheses examine the relationship between institutional reform and inward FDI in the region. Governments in Latin America have had a pervasive influence on their societies. Historically, they owned major firms and had significant regulatory powers. In a very real sense, the line between business and government was unclear; this created uncertainty for foreign investors in Latin America. During recent market reforms, many traditional roles of government have been transformed. In the present article, we examine three measures of institutional reform: (1) to reduce political risk; (2) to allow market forces to determine capital movements and allocations; and (3) to privatize government-owned companies.

Political risk occurs through expropriation, insurrections and changes in rules (Daniels and Schweikart, 1999). All of these place

companies' FDI at risk or force investors to incur higher costs to reduce their risk. In either case, a country with high political risk is less appealing. However, previous studies (Gross and Trevino, 1996; Tallman, 1988; Kobrin, 1979) reached mixed conclusions about the effect of political risk on FDI. We use an index of composite political risk as an ex post facto proxy of institutional political reform. We expect that Latin American countries with lower political risk will receive more FDI, and we hypothesize that:

*H5: The lower a host country's political risk, the greater the host country's inward FDI.*

Capital markets are responsible for mobilizing and allocating capital and pricing and apportioning risk. Their task is to ensure that capital flows to its most optimal use and is allocated for economic, rather than for political reasons. We reason that, in order for developing countries to attract FDI, they must enforce a capital allocation system with strict and transparent rules and regulations. At the same time, they should not excessively control capital account transactions, such as via exchange-rate controls or restrictions of foreign ownership. In an effort to spur internal development, many Latin American countries have initiated capital market reform. Our proxy for capital market reform measures the degree of government control over capital account transactions. If governments maintain strict control over capital account transactions, such as via foreign exchange controls and restrictions on FDI, then TNCs may be reluctant to invest due to fears about restrictions on new capital formation, divestment and repatriation. Therefore, we expect that:

*H6: The greater a host country's capital markets' liberalization, the greater the host country's inward FDI.*

Latin American countries, like their counterparts in other regions of the world, have been privatizing government-owned companies. The primary reason why is that many of these companies operated inefficiently under government ownership. Through privatization, governments believe the companies will have to become more efficient to survive and that private owners will have better access to the capital, managerial and technical resources needed to help them become more efficient (International Finance Corporation, 1995). Further, governments believe they can reduce fiscal expenditures because they will no longer need to subsidize money-

losing operations. In fact, if the companies become profitable through private ownership, governments can receive tax revenue from them.

Governments may privatize by giving ownership away, such as by allocating shares to their citizens, or by selling ownership; in fact, they have done both. When selling ownership, governments have found domestic and foreign buyers. Sales to the latter result in FDI. And such sales are frequent because foreign TNCs often are the only entities with the requisite capital to make the purchases and are the only organizations that can infuse the necessary resources to improve the operating efficiency sufficiently. R. Devlin and R. Cominetti (1994) and G. Hartenek (1995) have contended that Latin American privatization programmes have given foreign companies more opportunities to invest within host Latin American countries. In fact, a high portion of FDI in both Argentina and Brazil during the period covered in our study was in privatized operations (Chudnovsky and López, 2001a; Laplane, Sarti, Hiratuka and Sabbatini, 2001). Therefore, we expect a positive relationship between privatization and FDI. However, this reasoning seems somewhat tautological. Thus, we believe that privatization increases FDI inflows in another way. Privatization sends a message to potential foreign investors that economic conditions will improve and that the political risk to foreign investors will decrease. For these reasons, we base our hypothesis on the investment link to non-privatized operations and state it as:

*H7: The greater the value of host country privatisations, the greater the value of host country inward FDI.*

## Model

To evaluate these hypotheses, we tested models with multivariate regression equations, specifically pooled time-series and cross-section observations of FDI in seven Latin American countries for the period 1988-1999. As we discovered some non-trivial multicollinearity among the variables (see the covariance matrix in the appendix), we used alternative model specifications to deal with this problem. For example, we first examined exports and imports as separate variables but found that their high correlation argued for using trade (imports and exports) as an independent variable. Eventually, we eliminated this variable entirely due to its high correlation with our market size variable, GDP. We also included year as a dummy variable for the time trend in order to determine

whether FDI increased over time and to control for any effects that time may have on FDI in Latin America. FDI did increase over time, but it was not significant in explaining flows. We have used ordinary least squares to estimate our regression model.

The basic model is:

$$\text{FDI in Latin America} = f(\underset{-}{\text{host country balance of trade}};\ \underset{-}{\text{host country inflation}};\ \underset{-}{\text{real exchange rate}};\ \underset{+}{\text{host country market size}};\ \underset{-}{\text{host country political risk}};\ \underset{+}{\text{capital account liberalization}};\ \underset{+}{\text{privatization}};\ \underset{+}{\text{and year}})$$

where the expected signs of the coefficients are shown above the variables. We also used a country dummy variable to determine countries' abilities to attract investment based on other factors not captured by our statistical model.

We collected data on inward FDI (dependent variable) for each of the seven Latin American countries under study from the International Monetary Fund's *International Financial Statistics.* We measured the independent variables as follows:

- **Current account balance** (CABAL): international economic transactions by host country, annually, 1988-1999; source: UCLA (1998).
- **Capital account liberalization index** (CALIBEX): degree of government control over capital account transactions, annually, 1988-1999; source: ECLAC (1998).
- **Consumer price index** (CPIPC): percentage change in consumer prices in host country currency, annually, 1988-1999; source: *International Marketing Data and Statistics*.
- **Real exchange rate** (RER): real exchange rate of Latin American currency at year-end per United States dollar, annually, 1988-99; sources: IMF's *International Financial Statistics* and *Direction of Trade Statistics*. We estimated this through partner country trade weights, partner country nominal exchange rates, and partner country/ home country price levels.

- **Gross domestic product** (GDP): host country GDP in United States dollars, annually, 1988-1999; source: World Bank (various issues).
- **Privatization** (PRIV): values of domestic privatizations less FDI in privatized sectors, annually 1988-1992; source: *International Marketing Data and Statistics*.
- **Political risk** (PRSK): host country political risk rating, annually; source: *Institutional Investor* (various issues). We used a higher number to indicate more political stability. Thus, although we expected a negative relationship between political risk and FDI, this would show up as a positive coefficient in the equation.

We measured all of the independent variables simultaneously with FDI because we expected the impacts of these factors (e.g. exchange rates, multilateral trade) to occur either simultaneously with inward FDI or with a short lag. Since our analysis is explanatory rather than predictive, we did not lag the independent variables in order to improve the model. Previous research has shown that lag periods between factors that should precede FDI are generally not more than one year; hence the methodology reflects independent variables that are concurrent.

## Statistical results

Table 1 reports our estimation results for all of the independent variables we used in the statistical procedures. We have used ordinary least squares to estimate our regression model. Our results support the market size hypothesis (GDP), as this variable was signed correctly and was significant. This variable adds significantly to the model's ability to explain different levels of FDI in Latin America. The regression results provide support for the hypotheses regarding internal market reform. The capital account liberalization independent variable (CALIBEX) was signed as expected but was not significant. Privatization values, even by subtracting out FDI, were highly significant in explaining inward FDI in Latin America.

The current account balance (CABAL) and the real exchange rate (RER) hypotheses were neither signed correctly nor significant. [1]

[1] Given that current account balance and political risk are highly correlated, separate regressions were run deleting each of these variables. In each case, the remaining variable was positive and significant, although the other results were generally maintained. These results are available from the authors upon request.

The percentage change in consumer prices (CPIPC) was signed correctly and was significant. The political risk variable was signed correctly but was not significant. Overall, the results explain almost three fourths (adjusted $R^2$ = 0.73) of the variation in FDI, and the significance levels for three variables are high, including two that deal with market reform — privatization and price stabilization.

In a large, cross-sectional analysis, lack of sample homogeneity may result in serious inconsistencies in the usual least squares covariance matrix estimator. We used H. White's (1980) estimator for the variance-covariance matrix that is present even with heteroskedasticity. We ran this test for the present sample, and we did not find any sign of heteroskedasticity. Thus, the equations do not appear to be misspecified. Since t-statistics computed from the heteroskedasticity-consistent covariance matrix report a level of significance similar to the original estimators, we report only the results of the ordinary least squares regression.

**Table 1. Regression results on FDI in Latin America**

| Independent variable | OLS model |
|---|---|
| CONSTANT | -1698.77<br>(-2.055)** |
| CABAL | 0.0887<br>(1.615) |
| CPIPC | -0.1988<br>(-1.746)* |
| RER | 6.466<br>(1.086) |
| GDP | 0.0519<br>(3.736)*** |
| PRSK | -0.2318<br>(-1.316) |
| CALIBEX | 0.1345<br>(0.447) |
| PRIV | 0.4307<br>(2.222)** |
| YEAR | 0.1972<br>(0.544) |

Observations: 47
Adjusted $R^2$ = 0.73

* = significant at the 0.10 level; ** = significant at the 0.05 level; *** = significant at the 0.01 level; t-statistics in parentheses.

We used a series of country dummy variables, with Chile as the omitted country in the series, to capture any institutional/country-level effects not captured in the original model. We find that, ceteris paribus, all of the Latin American countries have lower levels of FDI than would be expected by applying Chilean data to them. Except for Peru, all the differences are significant. We show these results ranked by country in table 2. Apparently, there are some variables that our model did not capture, which would explain different successes in attracting FDI. We can only speculate on what they may be. Perhaps Chile's greater success is due to its longer-term reputation as a free-market economy or to its reputation for having a lower level of corruption than the other Latin American countries we included in this study. Another possibility is that countries differ in the effectiveness of their investment promotion agencies, which L. Wells and A. Wint (2000) found important in attracting inflows of FDI.

**Table 2. FDI ranking in Latin America[a]**

| Ranking | Country | Parameter estimate | t-value |
|---|---|---|---|
| 1 | Chile | .. | .. |
| 2 | Peru | -283 | -0.63 |
| 3 | Colombia | -1 328 | -2.97*** |
| 4 | Venezuela | -2 192 | -3.58*** |
| 5 | Argentina | -6 292 | -3.13*** |
| 6 | Mexico | -10 584 | -3.45*** |
| 7 | Brazil | -20 735 | -3.45*** |

[a] Reported values are from the original regression, incorporating dummy variables for countries, using Chile as the omitted variable.

* = significant at the 0.10 level; ** = significant at the 0.05 level;
*** = significant at the 0.01 level; t-statistics in parentheses

## Discussion

We have related inward FDI in seven Latin American countries in the post market-reform era to traditional determinants of FDI and indicators of internal reform. Overall, the estimation results provide strong support for some traditional determinants of FDI and for some of the newer measures we included. We shall now discuss each of the independent variables and the implications of our findings to countries' promotion of inward FDI.

We found a negative, but not significant, relationship between host countries' current account deficits and FDI inflows. We expected a positive relationship because emerging economies need to rely more on long-term capital for economic development and less on political aid and portfolio investments than in earlier years. Yet, we were not totally surprised by our findings. Although current account deficits may enable TNCs to bargain for better operating terms, TNCs may simultaneously view these deficits negatively because they may harbinger a country's future monetary problems. Monetary problems may make companies' capital budgeting more problematic, long-term planning more uncertain, and capital commitment riskier. Nevertheless, FDI inflows to counter the current account deficit is still an alternative to using official reserves, portfolio movements, and government-to-government grants and loans for that purpose. Future research might examine the relationship between FDI and changes in these other categories of capital accounts.

We found the percentage changes in the consumer price index to be significant in explaining FDI flows. The most logical explanation seems to be that TNCs favour environments in which governments maintain expedient monetary policies. Further, with more open economies, a lower inflation rate gives a better indication that a country's output can compete in the future with international competition.

Although we found depreciation in host countries' real exchange rates to be inversely related to inward FDI, this relationship was not significant. This is not surprising because we explained that companies might gain or lose from depreciation. We speculate that TNCs, although preferring to make investment when their currency buys more in the host country, can neither predict when that will occur nor afford to wait for the most propitious time.

In spite of mixed results in earlier studies, we expected that the size of GDP would correlate with FDI inflows, which it did. The relation between GDP and FDI raises another question. Why would companies choose to produce in larger markets rather than exporting to them? The decrease of import restrictions within those markets would seem to enable companies to export more easily to those markets, thus taking advantage of economies of scale within their home countries or lower variable costs within some smaller markets.

A combination of factors may explain the importance of market size. First, saving in transportation costs is undoubtedly a factor for many products, thus TNCs make large investment within large markets to sell products with high transportation costs relative to production costs. Second, many services are impractical to export, thus TNCs must invest within the countries where they want to sell these services. As a consequence, they usually need to make larger investment for larger markets. Third, TNCs made more investment in larger markets during the era of import substitution policies. Given that expansion from retained earnings accounts for a significant part of FDI growth, it is understandable that such expansion will come largely in larger markets. Fourth, TNCs have made much of their FDI through acquisitions, and larger markets have had larger companies with strategic assets available to acquire (Chudnovsky and Lopez, 2001b). Further, by buying these larger local companies (in larger markets), TNCs can more easily gain the necessary scale to tap regional markets efficiently.

Our analysis did not support the political risk hypothesis. This was not surprising inasmuch as prior studies reached mixed conclusions. Perhaps TNCs see political risk as important, but see too little difference among the countries in our study to have much impact on their choice of FDI location. Or, perhaps the fact that most FDI in Latin America is still being made to serve local markets (ECLAC, 2000), a political problem in one will have few global implications. However, if companies move more towards global resource-seeking strategies with production integrated among Latin American countries, work stoppages in one location — due to, for example, local insurrections, rule changes, or corruption — can have global implications. Further, as economies become even more open, companies will have more discretion as to where they produce to serve given markets. In this scenario, companies may understandably put greater emphasis on locating where they perceive political risk to be low.

We found a positive, but not significant, relationship between the degree of host country capital account liberalization and inward FDI. We expected a positive relationship because TNCs would logically prefer certainty, especially in their ability to move funds to meet shareholders' expectations. Capital account restrictions create high uncertainty that may exacerbate the higher risk that TNCs face simply as a result of operating in an unfamiliar setting. However,

given that we did not find this relationship to be significant, we are hesitant to suggest that, by allowing capital account transactions to flow into and out of their countries freely, governments may increase the likelihood of inward FDI.

We found a positive and significant relationship between privatization value and FDI. Inasmuch as we deducted the value of FDI in privatized companies when calculating our independent variable, we believe that this finding is very important. Heretofore, most researchers have questioned if privatization can sustain a continuous inflow of FDI because of the limits on the number of government-owned companies (Salorio and Brewer, 1998). However, our findings suggest that potential investors see privatization as an indication of a country's positive attitude towards private enterprise and a country's likely economic improvement. Thus, a country may continue to attract substantial FDI even after there is little left to privatize because TNCs view the country's lack of a large government sector positively.

There is no doubt that TNCs' influence is widening in developing countries, as evidenced by the increase in inward FDI there. This exploratory article attempts to expand on our understanding of the determinants of cross-border investment at the country level. We examined the question of whether the traditional opportunity and risk factors remain as important in attracting FDI, or whether countries' reform initiatives help to explain their degree of attractiveness. Our model suggests that both factors are important. With the fall of the iron curtain and the expanding nature of globalization, TNCs' investment opportunities have expanded dramatically in recent years. Therefore, it is increasingly important for governments to consider the nature of competition among countries when attempting to attract inward FDI. Obviously, they begin with an established set of resources and capabilities, such as population, disposable income and a skilled workforce. From this position, our study suggests that countries may increase their chances of receiving FDI as they initiate meaningful market reform. ■

## References


Ajami, R. A. and R. BarNiv (1984). "Utilizing economic indicators in explaining foreign direct investment in the U.S.", *Management International Review*, 24 (4), pp. 16-26.

Aliber, R. Z. (1970). "A theory of foreign direct investment", in C. P. Kindleberger, ed., *The International Corporation* (Cambridge, MA: MIT Press), pp. 28-33.

Chudnovsky, D. and A. Lopez (2001a). "El caso Argentino", in D. Chudnovsky, ed., *El Boom de Inversión Directa en el Mercosur* (Madrid: Siglo XXI Editoria Iberoamericana), pp. 51-122.

Chudnovsky, D. and A. Lopez (2001b). "La inversion extranjera directa en el Mercosur: un análisis comparativo", in D. Chudnovsky, ed., *El Boom de Inversión Directa en el Mercosur* (Madrid: Siglo XXI Editoria Iberoamericana), pp. 1-50.

Daniels, J. D. and C. J. Quigley, Jr. (1980). "Pull factors for direct investment: a cross regional comparison", *Foreign Trade Review*, 15 (3), pp. 263-288.

Daniels, J. D. and J.A. Schweikart (1999). "Assessment and management of political risk", in R. L. Tung, ed., *The IEBM Handbook of International Business* (London: International Thomson Business Press), pp. 502-514.

Devlin, R. and R. Cominetti (1994). "La crisis de la empresa publica, las privatizaciones y la equidad social", *Reformas de Politica Publica*, 26 (LC/L 832), (Santiago, Chile: CEPAL), pp.1-35.

*Direction of Trade Statistics* (various issues). (Washington, D.C.: IMF).

Froot, K. A. and J. C. Stein (1991). "Exchange rates and foreign direct investment: an imperfect capital markets approach", *Quarterly Journal of Economics*, 106, pp. 1191-1217.

Grosse, R. (1999). "Investment promotion policies in Latin America" (Glendale, AZ: The American Graduate School of International Management), Case No. 99-7, mimeo.

_____ and L. J. Trevino (1996). "Foreign direct investment in the United States: an analysis by country of origin", *Journal of International Business Studies*, 77 (1), pp. 139-155.

Hartenek, G. (1995). "Privatization as a catalyst for FDI: the case of Argentina", in *Foreign Direct Investment: OECD Countries and Dynamic Economies of Asia and Latin America* (Washington, D.C.: OECD Publications and Information Center) pp. 89-106.

*Institutional Investor* (various issues, semi-annual, 1983-1999). "Rating country risk survey" (New York: Institutional Investor, Inc.).

International Finance Corporation (1995). *Privatization Principles and Practices* (Cambridge, MA: MIT Press).

*International Financial Statistics* (various issues). (Washington, D.C.: IMF).

*International Marketing Data and Statistics* (1997). (London: Euromonitor Publications, Inc.).

Kennedy, R. E. and A. Sandler (1997). "Transition to a market economy: the components of reform", Case No. 9-797-080 (Boston, MA: Harvard Business School), mimeo.

Klein, M. and E. Rosengren (1994). "The real exchange rate and foreign direct investment in the United States: relative wealth versus relative wage effects", *Journal of International Economics*, 36 (3/4), pp. 373-389.

Kobrin, S. J. (1979). "Political risk: a review and reconsideration", *Journal of International Business Studies*, 10 (1), pp. 67-80.

Laplane, M., F. Sarti, C. Hiratuka and R. Sabbatini (2001). "El caso Brasileno" in D. Chudnovsky, ed., *El Boom de Inversión Directa en el Mercosu*r (Madrid: Siglo XXI Editoria Iberoamericana), pp. 123-208.

Leiderman, L. and A. E. Thorne (1996). "The 1994 Mexican crisis and its aftermath: what are the main lessons?" in G.A. Calvo, M. Goldstein and E. Hochreiter, eds., *Private Capital Flows to Emerging Markets After the Mexican Crisis* (Washington, D.C.: Institute for International Economics), pp. 1-43.

Moran, T. H. (1998). *Foreign Direct Investment and Development: the New Policy Agenda for Developing Countries and Economies in Transition* (Washington, D.C.: Institute for International Economics).

Pindyck, R. S. (1993). "A note on competitive investment under uncertainty", *American Economic Review*, 83, pp. 273-277.

Root, F. R. and A. A. Ahmed (1979). "Empirical determinants of manufacturing direct investment in developing countries", *Economic Development and Cultural Change*, 27 (4), pp. 751-767.

Salorio, E. and T. Brewer (1998). "Components of foreign direct investment flows: evidence and implications of differences", *Latin American Business Review*, 1 (2), pp. 27-45.

Schneider, F. and B. S. Frey (1985). "Economic and political determinants of foreign direct investment", *World Development*, 13 (2), pp. 161-175.

Tallman, S. B. (1988). "Home country political risk and foreign direct investment in the United States", *Journal of International Business Studies*, 19 (2), pp. 219-234.

Trevino, L. J. (1999). "Market reform and foreign direct investment in central and eastern Europe: a comparative assessment", in D.K. Despotis and C. Zopounidis, eds., *Proceedings of Decision Sciences Institute, 5th International Conference, Athens, Greece* (Athens: New Technologies Publications), pp. 2043-2045.

Tuman, J. P. and C. F. Emmert (1999). "Explaining Japanese foreign direct investment in Latin America, 1979-1992", *Social Science Quarterly*, 80 (3), pp. 539-541.

United Nations Conference on Trade and Development (UNCTAD) (1994). *World Investment Report 1994: Transnational Corporations, Employment and the Workplace* (New York and Geneva: UNCTAD), United Nations publication, Sales No. E.94.II.A.14.

_____ (1999a). *World Investment Report 1999: Foreign Direct Investment and the Challenge of Development*, (New York and Geneva: UNCTAD), United Nations publication, Sales No. E.99.II.D.3.

_____ (1999b). "Foreign direct investment by transnational corporations can produce major benefits, if the right government policies are in place", UNCTAD Press Release, TAD/INF/2819.

United Nations Economic Commission for Latin America and the Caribbean (ECLAC) (1998). *Indexes of Structural Reform in Latin America*, ECLAC Series on Economic Reform No. 12 (Santiago, Chile: ECLAC).

_____ (2000). *Report on Foreign Direct Investment in Latin America and the Caribbean 2000* (Santiago, Chile: ECLAC).

University of California at Los Angeles (UCLA) (1998). *Statistical Abstract of Latin America* (Los Angeles: Latin America Center Publications, UCLA), vol. 34.

Wells, L. and A. Wint (2000). *Marketing a Country: Promotion as a Tool for Attracting Foreign Investment* (Washington, D.C.: The World Bank).

White, H. (1980). "Heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity", *Econometrica,* 48, pp. 817-838.

World Bank (various years). *World Development Report* (New York: Oxford University Press).

Yean, T. S. (1998). "Competition and cooperation for foreign direct investment: an ASEAN perspective", *Asia-Pacific Development Journal*, 5 (1), pp. 9-36.

## Appendix. Correlation matrix

| | FDI | CPIPC | CABAL | CALI | RER | GDP | PRISK | PRIV | YEAR |
|---|---|---|---|---|---|---|---|---|---|
| FDI | 1.00 | | | | | | | | |
| CPIPC | -0.08 | 1.00 | | | | | | | |
| CABAL | -0.05 | -0.02 | 1.00 | | | | | | |
| CALI | -0.18 | -0.07 | -0.01 | 1.00 | | | | | |
| RER | 0.21 | -0.22 | -0.46 | -0.02 | 1.00 | | | | |
| GDP | 0.58 | 0.15 | -0.15 | -0.18 | -0.00 | 1.00 | | | |
| PRISK | 0.23 | -0.03 | 0.99 | -0.02 | -0.13 | -0.09 | 1.00 | | |
| PRIV | 0.53 | -0.08 | -0.18 | 0.28 | 0.05 | 0.37 | -0.12 | 1.00 | |
| YEAR | 0.31 | 0.14 | -0.22 | -0.39 | 0.15 | 0.44 | -0.19 | -0.11 | 1.00 |

# Attempting to resolve the attraction-aversion dilemma: a study of FDI policy in the Republic of Korea

William A. Stoever *

The Republic of Korea is an almost textbook example of a developing-country pattern of alternately courting and restricting foreign direct investment (FDI).[1] It has sought the capital, technology, management skills and organizational capabilities that transnational corporations (TNCs) can bring, even as it tried to preserve large segments of its domestic market for home-grown companies. But there has been a striking divergence between official pronouncements of opening wider to FDI and the practical experiences of many prospective investors, especially in the 1980s and 1990s. This article sets out a framework for analyzing the degree of liberalization of a country's FDI policy. Then it briefly describes the FDI policies of the Republic of Korea from 1960 to 2000 and evaluates and charts their degree of openness. Finally it draws conclusions and policy implications. The policy swings have been more pronounced (or at least more public) in the Republic of Korea than in many other developing countries, but similar attraction-aversion patterns are seen in many such countries. Thus, policy makers and scholars from many countries should find the analysis useful. It should also be helpful to foreign business executives who need to understand the internal debate underlying the apparently unpredictable swings in FDI policy in the Republic of Korea and similar countries.

## Introduction: reflections on "openness"

A developing country that desires to attract FDI, especially in manufacturing, will most likely have to allow transnational corporations (TNCs) a high degree of independence in managing their investments, which means it will have to reduce the requirements

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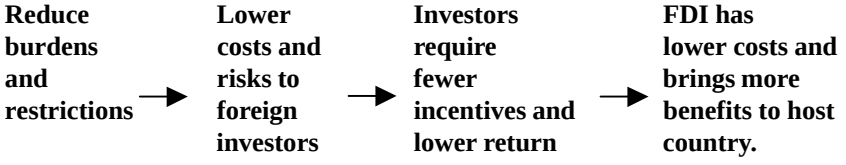
[1] The Republic of Korea would have been classified clearly as a developing country when it first began seeking FDI in the early 1960s. Most researchers were labeling it a newly-industrializing (or newly-industrialized) economy by the 1980s (when it was included as one of the four East Asian "tigers" or "dragons").

and restrictions it imposes on such investments. Robert E. Lipsey (2000, p. 67) found that:

> "The strongest influence on foreign direct investment inflows ... was the openness of an economy, crudely represented by the ratio of trade to output. ... [T]he ratio of foreign direct investment inflow to GDP [was] the most consistent positive influence on subsequent growth rates."

The ultimate case would be where a country abolished all controls and relied on market forces and competition to shape investment and prevent abuses, but this scenario is neither possible nor desirable. A developing country government may, however, reduce the regulations and administrative burdens it imposes on TNCs, in which case such corporations are likely to perceive that the costs, delays, risks and hassles of investing there are decreased (Bergsman and Shen, 1995). Hence, they may require lower rates of return and fewer guarantees, subsidies, etc. from the host government, which in turn means greater value added to the host economy. This argument is summarized in the following flowchart:




Aradhna Aggarwal (1997) makes a similar argument, although in different terminology. Somewhat analogously, Kirt C. Butler and Domingo Castelo Joaquin (1998) found that the cost of capital to a foreign investor is higher when the prospect of adverse political changes is greater.

Table 1 lists some steps governments can take to reduce the burdens, restrictions, costs and risks of investing in their country. Many of these actions, however, may also reduce a government's ability to control the domestic economy and guide the country's development. Governments may perceive the actions as opening their countries to rent-seeking and other abuses by TNCs (Buckley, 1996). David Conklin and Donald Lecraw (1997) examine other reasons for which a government may impose restrictions on foreign ownership and be reluctant to give them up. More broadly, many developing countries are not confident that FDI contributes to their development goals if the requirements and restrictions on foreign investors are reduced

and TNCs are given too free a rein. Policy makers may believe their countries have not achieved an adequate degree of economic stability, or their markets do not function well enough to allow competitive forces to control foreign (as well as domestic) business operations (the market-failure argument – see Stiglitz, 1989). They may also be concerned about the appearance of losing national control of foreign entities in their midst. Hence, they may be averse to implementing a policy that liberalizes FDI entry.

**Table 1. Some elements of opening a country's FDI regime**

Reduce market distortions
- Relax currency controls and increase convertibility of currency
- Reduce tariffs, quotas and other restrictions on imports
- Eliminate price controls on most goods and services
- Allow market conditions to determine interest rates
- Reduce burdensome and counterproductive labour regulations

Improve competitive conditions
- End favored treatment of state-owned enterprises, or privatize them
- Ease government buy-local policies

Improve legal framework
- Adopt laws and regulations to clarify foreign investors' rights and obligations
- Improve fairness and efficiency of judicial system

Improve regulatory procedures
- Make screening of investment proposals more efficient and less costly and delay-prone
- Reduce number of ministries and government agencies that review proposals
- Create true "one-stop" application office
- Eliminate approval requirement: grant national treatment to foreign investors
- Base screening on economic merits, not political concerns
- Reduce and rationalize government regulation of FDI in place

Improve substantive rules
- Fewer restrictions:
  - Increase industries open to FDI and reduce number of industries closed to FDI
  - Ease limits on dividend remittances
  - Ease restrictions on land ownership
- Reduce requirements regarding:
  - local majority/minority ownership
  - level of technology
  - diffusion of technology
  - local research and development
  - local procurement quotas
  - employment creation
  - export requirements

*Source*: Stoever (2001).

A country's degree of openness is clearly a matter of degree; it is not an all-or-nothing proposition. The true test of openness is not in a government's pronouncements, but in the practical effects. For example, a government may announce that it has streamlined its process for approving FDI proposals, but officials from various ministries may continue to interfere in the approval process (Wells and Wint, 1993). The practical effect may be to create delays, uncertainties and bureaucratic obstacles that discourage investors.

The extent of its welcome to FDI cannot be judged solely from statistics on the number or value of foreign investment applications or arrivals. Many factors influence companies' investment decisions, including economic conditions in the investors' home countries and in the world in general, competition from other developing (and developed) countries seeking similar investment, the anticipated growth or stagnation of the market for the company's products, the internal strategy and politics of investing companies, a host country's political stability and so on.[2] While these factors may influence the amount and kind of investment made in a host country, the focus of this article is on the influence of policy factors, specifically, the effect of a host government's policies (its openness) towards FDI.[3]

## Methodology

There are immense problems in trying to assess the degree of a country's openness to FDI. Some aspects may be quantifiable – for example, the percentage of industries open to FDI or the monetary value of investment incentives (in countries that compile such statistics). Another possibility would be to examine figures on investment approvals or inflows, and indeed table 2 gives the number and total value of FDI approvals in the Republic of Korea from 1962 to 2000. These figures give a broad outline of the country's degree of receptivity to FDI, but they are far from a perfect indicator because (as noted above) the number and value of investment applications is influenced by many factors. The country also publishes statistics on investment inflows ("arrivals"), but these are even less reliable as indicators of openness, partly because of problems of definition and timing, as well as numerous externalities. Hence, an assessment of a country's degree of openness must necessarily be based largely on qualitative judgment (Stoever, 1989).

[2] Jun and Singh (1996) is one of many articles examining the factors affecting the flow of FDI.

[3] UNCTAD (1999) discusses at length the importance of host-government policies.

**Table 2. FDI approvals, 1962-2000**

| Years | Projects (number) | Amount (millions of dollars) |
|---|---|---|
| 1962 | 1 | 0.58 |
| 1963 | 1 | 0.30 |
| 1964 | 2 | 0.33 |
| 1965 | 5 | 20.7 |
| 1966 | 6 | 1.1 |
| 1967 | 12 | 6.3 |
| 1968 | 20 | 8.4 |
| 1969 | 25 | 15.6 |
| 1970 | 50 | 13.6 |
| 1971 | 57 | 25.8 |
| 1972 | 107 | 93.1 |
| 1973 | 194 | 156.6 |
| 1974 | 85 | 74.0 |
| 1975 | 29 | 169.4 |
| 1976 | 35 | 72.2 |
| 1977 | 37 | 65.9 |
| 1978 | 41 | 128.4 |
| 1979 | 50 | 107.3 |
| 1980 | 36 | 140.8 |
| 1981 | 41 | 145.3 |
| 1982 | 55 | 187.8 |
| 1983 | 75 | 267.8 |
| 1984 | 103 | 419.0 |
| 1985 | .. | 531.7 |
| 1986 | 203/205 | 345.0 |
| 1987 | 317/373 | 1 060.0 |
| 1988 | 352 | 1 282.0 |
| 1989 | 336/349 | 1 090.0 |
| 1990 | 482 | 803.0 |
| 1991 | 482 | 1 390.0 |
| 1992 | 444 | 894.6 |
| 1993 | 458 | 1 044.3 |
| 1994 | 646 | 1 316.5 |
| 1995 | 872 | 1 941.4 |
| 1996 | 968 | 3 202.6 |
| 1997 | 920 | 5 899.9 |
| 1998 | .. | 5 540.0 |
| 1999 | .. | 15 541.0 |
| 2000 | .. | 15 690.0 |
| **Total through 1997** | **7 352 / 7 423** | |
| **Total through 2000** | | **59 692.0** |

*Sources*: *Korea Annual,* various issues; *Korea Times*, 18 January 2001.
*Note*: Two dots (..) indicate that data are not available.

The core methodology of this article is the examination and evaluation of relevant historical documents (Dunning, 1994, uses a somewhat-similar methodology). Year-by-year evaluations of the FDI policies of the Republic of Korea were made, based on articles from the business press and scholarly journals. Some of the articles came from Korean sources, but the majority were from the United States and British sources, because these latter would have the greatest influence on the perceptions of English-speaking businesspersons of the country's welcome to FDI. Pronouncements of the Government were included in the evaluations, but were weighted less heavily because the study was concerned not with the official line, but with how the policies actually worked in practice; unofficial sources were considered more reliable for assessing investors' actual experiences. The policies and yearly policy changes are briefly summarized in table 3. (Caves, 1998, discusses the problem of isolating the effects of policy choices, along with many other problems of research on FDI.)

Based on these sources, the country's degree of openness to FDI each year was assessed on a scale of 0 to 10, with 0 being the least open. The ratings are largely subjective, which is consistent with the fact that the perceptions of TNCs on the country's openness to FDI would also be relatively subjective. Also, investors' characterizations of how the regulations and procedures actually work in practice would be based largely on their own company's experiences and on reports of other companies' experiences, which would also be mostly subjective. Furthermore, even if the reader might question the exact numerical assessments of openness in specific years, the general trend concerning a greater and lesser desire to attract FDI is still captured by the swings in the numbers.

The degree of openness of a country's policy at any given time varies from industry to industry, so the evaluations must be taken as averages or generalizations, and are not necessarily equally applicable in every industry. In a few cases, there may have been significant variations in the Republic of Korea's approach within a given year, but the changes were usually gradual and incremental rather than abrupt and revolutionary. Hence, yearly evaluations were considered frequent enough to portray the investment environment accurately. Indeed, in some cases the same numerical rating was carried over from one year to the next when no information was available to indicate that the Government's policies had changed significantly.

The ratings are similar to the evaluations of political risk made by a number of investment and financial companies, such as the Business Environment Risk Index (BERI),[4] Business International,[5] and the international accounting-consulting firms of PriceWaterhouseCoopers and The PRS [Political Risk Services] Group.[6] However, these firms' evaluations cover a greater variety of political risks, whereas the present article focuses specifically on the country's degree of openness to FDI. (While there is a lot of overlap between political risk and openness, the two are not exactly the same.)

## Observations and comments

Table 3 summarizes the major developments in the FDI policies of the Republic of Korea and evaluates the country's degree of openness to FDI from 1953 to 2000. Figure 1 shows the yearly ratings (starting in 1960) in graphical form; it vividly illustrates the country's alternating periods of attraction and aversion to FDI. Along with table 3, it yields some useful generalizations:

**Table 3. Openness of the Republic of Korea to FDI 1953-2000: brief summary of developments in FDI policy**

| Year | Development in FDI policy | Openness rating |
|---|---|---|
| 1953-1960 | Recovery from 1950-1953 Korean War; political chaos and corruption; essentially no FDI. | 0 |
| 1960 | Some political and economic stability; passed Foreign Capital Inducement Act (FCIA) → allowed 75 per cent foreign equity. | 2.0 |
| 1961 | Military revolution; first five-year plan; start of export drive. | 2.2 |
| 1962 | FCIA amended → allowed foreign firms tax holidays, equal treatment with national firms; Economic Planning Board (EPB) created. | 3.0 |
| 1963 | Limited foreign capital inflow, mostly loans at concessionary rates. | 3.1 |
| 1964 | Monetary reform stabilized currency → allowed firms to repatriate up to 20 per cent of invested capital (Frank, Kim and Westphal, 1975). | 3.5 |
| 1965 | Normalized relations with Japan → allowed Japanese investment. | 3.7 |

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[4] Business Environment Risk Index, Ltd., P.O. Box 4697, Newark, Delaware 19711, United States.

[5] Formerly an independent corporation, now affiliated with the Economist Intelligence Unit of *The Economist* newsmagazine (United Kingdom).

[6] http://www.prsgroup.com.

**(Table 3, continued)**

| Year | Development in FDI policy | Openness rating |
|---|---|---|
| 1966 | FCIA modified to allow 100 per cent foreign ownership and more generous tax concessions. | 5.0 |
| 1967-68 | Joined International Centre for the Settlement of Investment Disputes (ICSID); expanded role of FDI in second five-year plan; created Office of Investment Promotion (OIP). | 5.2 |
| 1970 | Entered treaty with Japan to eliminate double taxation; further sweetened incentives; passed labor law forbidding strikes in foreign-managed firms. | 6.0 |
| Early 1970s | Vast increase in FDI, especially Japanese companies seeking cheap labour for simple manufactures. | |
| 1972 | "One-stop service office" set up à reduced time and red tape to get investment approval (Republic of Korea, EPB, 1972). | 7.0 |
| 1973 | In response to Japanese low-technology cottage industries, EPB began rethinking liberalization policies; devised new regulations that encouraged joint ventures (Republic of Korea, EPB, 1973). | 5.5 |
| 1974 | Changing priorities favoured large or high-technology projects; list distinguished "favourable" versus "unfavourable" industries for FDI; set different percentage foreign equity in different industries (Republic of Korea, EPB, 1978). | 3.5 |
| 1977 | Ministries disagreed on revisions to FCIA; EPB set two categories of manufacturing FDI: "top level" = essential to development → got full incentives; and "second level" = no special incentives, but allowed to compete in domestic consumer market; $500,000 minimum set for all new investment (Pearlstine, 1979; Business International Corporation, 1981, p. 9). | 2.5 |
| 1978 | Corruption and delays in approval process discouraged many investors; country sought to diversify by attracting more European investment (Business International Corporation, 1981, pp. 3-5) | 2.0 |
| 1979 | President Park assassinated → political instability; inflation → Government restricted economic growth; more industries opened to FDI, but high-tech and skill-intensive industries favoured (Business International Corporation, 1981, p. 5). | 2.1 |
| 1980-1981 | Government made new FDI a priority again: took steps to reduce red tape; relaxed local-ownership requirements for high-technology, export-oriented, diversifying or non-tax-privileged investment; reduced minimum size to $100,000; announced a relaxation in the Alien Land Law to allow foreign ownership (Korea Exchange Bank, 1982). | 4.0 |

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(**Table 3, continued**)

| Year | Development in FDI policy | Openness rating |
|---|---|---|
| 1982 | FDI fell off drastically, due partly to world recession and partly to ongoing problems of inefficiency, corruption and paperwork (*Christian Science Monitor*, 1982). | 3.9 |
| 1983 | Significant efforts to simplify administrative procedures and enlarge businesses open to FDI, but FDI applications fell another 60 per cent (United States, Department of Commerce, 1984a, p. 9; Jeong, 1983, p. 9). | 4.3 |
| 1984 | Approval procedures and remittance restrictions relaxed further; more foreign majority ownership allowed; approval responsibility transferred from EPB to Ministry of Finance; foreign-owned businesses treated less differently from domestically owned; consumers began pressing for greater openness to foreign products (United States, Department of Commerce, 1984b, p. 10). | 5.0 |
| 1985 | "Positive list" (allowing FDI in specific sectors) replaced by "negative list" (allowing FDI in all sectors except where specifically prohibited) → substantially increased number of industries open to FDI; move towards "national treatment" in tax regime for FDI (*Euromoney*, 1985; United States, Department of Commerce, 1986, p. 8). | 6.0 |
| 1987 | New laws to combat piracy of intellectual property adopted, partly to further efforts to join OECD; more industries opened to FDI (97 per cent of manufacturing sectors claimed open) (Davis, 1989, p. 5). | 6.2 |
| 1988 | Insurance opened to FDI; advertising and maritime opened partly (United States, Department of Commerce, 1988, p. 6). | 6.3 |
| 1989 | Approval procedures claimed further facilitated, although foreign companies complained about delays and favouritism of the "case-by-case" approval process (Davis, 1989, p. 9). | 6.4 |
| 1990 | Government announced programmes to liberalize foreign exchange and open advertising, pharmaceuticals, travel agencies etc. to FDI over 2-3 years; allowed automatic approval of foreign minority investment up to $100 million; however, some capital controls remained (Davis, 1989, p. 9; United States, Department of Commerce, 1990, p. 6). | 6.5 |
| 1991 | High inflation and interest rates, rapidly climbing wages → Government announced it would open retail and financial industries to FDI; re-stated intention to ease restrictions on land ownership by foreigners (Nakarmi, 1991; United States, Department of Commerce, 1991, p. 6). | 6.7 |

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(**Table 3, continued**)

| Year | Development in FDI policy | Openness rating |
|---|---|---|
| 1992 | Worldwide economic slowdown plus ongoing protectionism and investment barriers in the Republic of Korea → FDI fell off; first truly democratic election → Kim Young Sam elected as President (Paisley, 1992, p. 31). | 6.7 |
| 1993 | Government announced plans to liberalize financial industry; revised FCIA to allow simple notification (versus approval) of many investments; pushed plans to further reduce red tape → FDI in services soared; but much regulation, bureaucracy and harassment of FDI remained, especially among lower-level bureaucrats; foreign-minority joint ventures still favoured over foreign-majority (Paisley, 1993, p. 40; Cheesman, 1993; Economic Intelligence Unit, 1993; *Economist*, 1993). | 6.9 |
| 1994 | Government eased policies on approvals, technology regulation, land ownership by foreigners etc., but foreign companies still complained of high costs and of bureaucratic procedures and controls (*Business Korea*, 1994; *East Asian Executive Reports*, 1994). | 7.2 |
| 1995 | Government created incentives in tax, capital access, land ownership, subsidized factory sites etc., especially for high-tech investments; pledged to "raise transparency" in approvals and economic regulation; but foreign observers noted unfavourable labour conditions and the bureaucracy's tendency not to carry out official liberalizations (*East Asian Executive Reports*, 1995; *Business Korea*, 1995; Kim and Crick, 1996). | 7.4 |
| 1996 | Foreign Direct Investment Promotion Act adopted: set timetable for liberalization, notification rather than approval for most investments; but theft of confidential information continued, domestic companies (*chaebol*) resisted foreign competition, and bureaucrats continued to delay and encumber investment applications (Economic Intelligence Unit, 1996). | 7.7 |
| 1997 | Government tried another one-stop service centre, added further incentives and guarantees for FDI, allowed friendly foreign mergers and acquisitions of Korean companies, claimed more industries opened; however, the Asian financial crisis caused some foreign companies to cancel or postpone investment; Kim Dae Jung elected as President in November (Joo, 1998; Ryou, 1998). | 8.0 |

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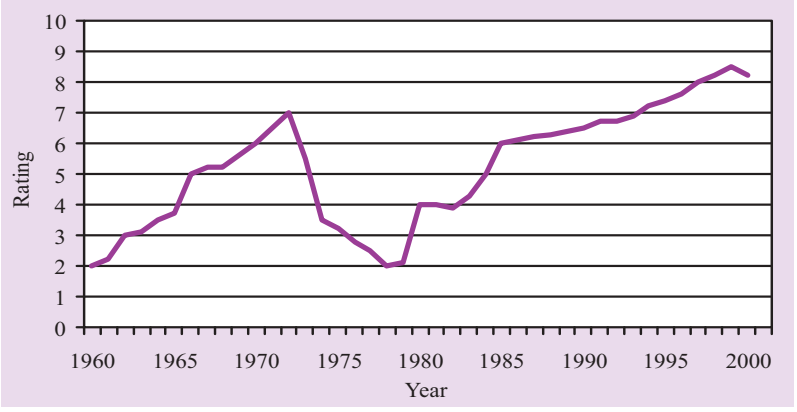
**(Table 3, concluded)**

| Year | Development in FDI policy | Openness rating |
|---|---|---|
| 1998 | Financial crisis → Government announced programme to restructure economy, especially debt-ridden banks and money-losing *chaebol*; introduced new tax incentives and reduced land prices offered to new FDI, especially in high technology; opened financial industry wider to foreign investment and takeovers; foreign interests purchased domestic companies at distress prices, raising fears of nationalistic reaction (*Business Asia*, 1999; *Business Korea*, 1999a; Jeon and Ahn , 2001). | 8.2 |
| 1999 | Government announced shift from "control and regulation" philosophy to "promotion and support" of FDI; relaxed rules on hostile takeovers of Korean companies; allowed local governments to compete for and approve FDI projects; largest FDI inflow ever in "corporate fire sale", although foreign observers still noted hesitancy in implementing reforms (*Business Korea*, 1999b; *Industry* Week, 2000). | 8.5 |
| 2000 | Government drew back from restructuring programme, hesitating to reform *chaebol* or let banks fail (*Korea Times*, 2000; Larkin, 2000; Lee, 2000; Choi, 2001; *Business Asia*, 2000). | 8.2 |

*Sources*: Stoever (1986); author's calculations.

**Figure 1. Openness of Korean foreign investment policies**




*Source*: author's calculations.

- Many people within the country clearly wanted FDI, but they wanted it on their own terms. They wanted the specific benefits, especially capital (in the early years), technology and managerial skills, that TNCs could bring, but without paying the price in terms of allowing foreign competition in the domestic market (at least until the mid-1990s).
- In bargaining terms, the country was evidently trying to push its partners to the outer limits of their zones of acceptance; the spirit appears to have been somewhat different from the Western idea of striking a balance that both sides could be happy with.
- The Government evidently felt that it could obtain the desired benefits from FDI better than individual Korean companies could (Costello, 1996). It adopted a market-supplementing approach to determining the characteristics of FDI, attempting to use screening, approvals, incentives, regulations and administrative guidance to steer investment into desired industries or to make it take on desired characteristics. This attitude indicates a lack of confidence in the efficacy of the domestic market to control foreign capital. Alice H. Amsden (1989) noted that FDI played a relatively small role in the emergence of the Republic of Korea as an economic power, but its role was crucial in providing technology and industrial know-how. Her central thesis was that the Government achieved a more efficient allocation of investment (including FDI) than would have been obtained through the market alone. Yeomin Yoon (1993) is among the commentators who respond that the Government's approach may have been justified in the early years, but it became increasingly counterproductive as the economy became more developed. Those very approval and regulating processes created costs, delays, corruption, uncertainties and risks for foreign investors, which the Government tried to overcome with incentives such as tax holidays and subsidies. Thus, ironically, the Government had to create incentives to overcome the costs and disincentives of its own policies and regulatory mechanisms. In a sense, the Government created a monster that it later had difficulty reining in (Cho and Kim, 2000).
- The Republic of Korea appears to have gone through a distinct attraction-aversion-attraction cycle in the first 20

years or so after it began consciously formulating an FDI policy. Thereafter its reaction to FDI appears to have been less cyclical and more of a slowly rising (secular) trend (although it may be too soon as of 2001 to make this judgment). This observation obviously cannot be generalized to other developing countries, but it does suggest that any initial cycle may tend to be measured in decades rather than years.[7] It may also suggest that a developing country's first attraction-aversion-attraction cycle may be its most pronounced and obvious; later, as the country grows more economically complex and politically diversified, the effects of the attraction-aversion dilemma may be more diffuse and harder to identify.

*Machiavellian motives?*

A foreign observer should be cautious about ascribing Machiavellian motives to the swings in the Government's policies; but one could become skeptical about the Government's repeated pronouncements of reforms, easing, liberalizing, and opening wider to FDI, followed by very small changes in actual practices. The question arises whether the country's apparent swings might have been a deliberate tactic, an unspoken agreement, or an opportunistic reaction to changing circumstances. If it was deliberate, there is also a question exactly when the Government started consciously employing such a tactic. Thus:

- Government leaders may have wanted to stimulate the desire of TNCs to invest in the country in order to increase their own bargaining power. Any attempt to use this tactic could well have stemmed from an attitude seen in many other developing countries during the 1960s and 1970s, that TNCs were clamoring to get into the country and that the Government could get better terms by playing them off against each other.[8]
- Starting in the 1980s, the country seemed to want foreign governments and companies to *think* the country had opened up its FDI regime more than it actually had. An outsider might see this as being intended to forestall foreign pressures to open still wider.

[7] Stoever (1995) found a similar pattern in China, for example.

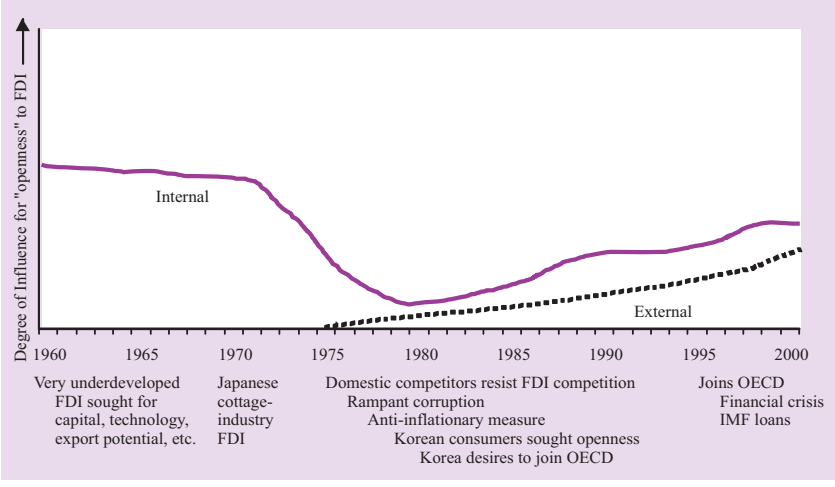
[8] By the late 1980s most developing countries recognized that the balance of bargaining power more often was with TNCs.

- As the 1980s unfolded, some policy makers may have seen opening more rapidly to *FDI* as a way of heading off outsiders' demands to reduce barriers to *trade*.[9]

*Internal pressures for and against opening to FDI*

The attraction-aversion dilemma of the Republic of Korea is vividly illustrated when one examines how the internal pressures for and against opening wider to FDI varied over time. Figure 2 provides a graphical representation of the strength of various internal pressures, as judged from the above narrative, plus a line representing external pressures on the country. The vertical axis represents the degree of influence for openness; thus an upward-sloping line would indicate increasing pressures to allow more FDI in, while a downward-sloping one would indicate increasing pressures to keep FDI out.[10] The horizontal (time) axis shows some especially significant developments in the country's modern experience with foreign investment; the discussion below is organized according to these periods.

**Figure 2. Internal (and external) pressures driving FDI policies of the Republic of Korea, 1960-2000**




*Source*: author's calculations.

[9] Rogowsky (1996) hints at such a tactic.

[10] Note that the line would say nothing about how attractive TNCs found the country to invest in or how open it actually was to FDI.

*Very underdeveloped; beginning of the export drive (1960s)*

It was relatively easy for Korea to open to FDI in the 1960s, when the country was definitely "less-developed", for several reasons:

- Domestic pressures favoured opening to FDI when the country was still poor and non-industrialized (although there was significant pressure against opening to *imports*, partly to conserve foreign exchange and partly to protect infant industries from foreign competition). The country did not differentiate among various kinds of capital inflows, simply viewing "foreign capital" in a generic sense; such capital was seen as a way to obtain needed resources and expertise, including technology and management skills.
- The United States was seen as a friend and protector because of its leadership and dominant role in the Korean War; so there was little anti-foreign sentiment when the total amount of investment was small and the United States was the major source of FDI.
- External forces brought very little pressure on the country at this time.

*Market-seeking FDI; Japanese cottage-industry investment (1970s)*

Internal political and economic pressures began to build for more rigorously screening and regulating FDI proposals in the late 1960s and 1970s, for several reasons:

- Some popular reaction against FDI by United States companies began to emerge as the United States came to be seen as exerting too great an influence on domestic business and politics (Costello, 1996).
- Popular aversion to investment by Japanese companies emerged quite strongly, largely attributable to the long history of rivalry between Korea and Japan, its experiences as a Japanese colony for 40 years, and its feelings of having been exploited and mistreated by Japan during World War II. These feelings were intensified because of the low-technology, cottage-industry nature of most Japanese investment in the 1970s; Koreans felt they could run these labour-intensive production facilities themselves.

- The Government came to realize that many TNCs wanted to put in plants to produce products primarily for the domestic market (import-substituting investment) rather than to support the country's export drive. Thus, it began to tighten its restrictions on market-seeking FDI even while expanding export incentives to domestic producers, both foreign- and locally-owned.

External forces began to exert some pressure on the country to open wider to imports, but there was still relatively little pressure to allow in more FDI.

*Competitive pressures and reform efforts (late 1970s-1980s)*

Internal pressures in favour of opening more rapidly became stronger as the country became more developed and prosperous:

- Some domestic manufacturers found themselves in need of foreign resources in order to enhance their own competitiveness. They sought freer access both to imported technology and components and to local production of critical inputs by foreign suppliers.
- Some policy makers also became more vocal in support of the desirability of introducing more competition into domestic markets, both as a way to obtain the benefits of increased openness predicted by economic theory and as a way to respond to external pressures to open wider to FDI.
- The Government realized that competition for desirable FDI - particularly FDI that produced products for export - was becoming more intense as more developing countries (as well as industrialized ones) created incentives, built subsidized industrial parks, granted longer and longer tax holidays, advertised their attractions to investors, and made other efforts to attract TNCs. The competitive environment created pressures on the Government to relax and streamline its review and regulatory processes.

External pressures to open more rapidly to FDI also began to emerge during this period. Foreign governments and business spokespersons began to view the country's efforts to attract export-oriented FDI while restricting import-substituting FDI as an effort to

have its cake and eat it too: to shield domestic producers from foreign competition at home, while promoting their ability to compete in foreign markets.[11] The Republic of Korea could get away with this when it was a small player — an insignificant competitor with a small market - but as it became stronger and wealthier, foreign governments and companies began demanding greater reciprocity.

However, internal pressures to resist further opening were also growing more intense:

- Korean companies developed vested interests in maintaining the privileged positions that the Government had provided in earlier years. In particular, 20-30 large family-run conglomerates (*chaebol)* that the Government was supporting as major domestic manufacturers and export engines wanted to continue the protection they had been given as infant industries. Thus, they fought to keep out foreign businesses that could have provided strong competition in their home market.
- One response by the Government was to try to persuade potential investors to sell or license their technology to Korean companies, rather than putting in a complete investment "package". In view of Korean firms' reputation for intellectual piracy, however, many foreign companies were leery of entrusting their cutting-edge technology to Korean companies without the protection of an equity share.
- The Government's early successes in directing the economy, particularly in selecting industries for Korean companies to compete in, seemed to have made it reluctant to give up its role in guiding investment by foreign as well as domestic companies.
- The very success of the country's export drive apparently made the government reluctant to shift its emphasis towards raising domestic living standards, even though the economy was maturing and the need for export-led development decreasing.
- Some government agencies were reluctant to give up powers and prerogatives they had exercised during the country's emerging years. Some ministries obviously did not want to yield powers to other agencies such as the

[11] Many other developing countries were trying to do the same in the late 1970s and 1980s.

one-stop approval agency the Government tried to set up.

- The growing red tape, delays and corruption in the Government's approval and regulatory agencies also in effect created inertia against change and greater openness.
- Ideology doubtless played a part: civil servants who had been educated to believe that the Government could most effectively plan the country's economy found it difficult to yield their regulatory role to less controllable market forces.

*Emergence as economic power (mid 1980s-mid 1990s)*

As the country's economy grew and diversified, both external and internal pressures to ease its restrictions on FDI intensified:

- The OECD members demanded that the Republic of Korea substantially reduce its barriers to FDI and foreign imports as a condition for being invited to join.
- As Korean consumers began to learn about world markets and prices, they began to exert a little internal pressure to open wider to foreign companies seeking access to the domestic market.

*Financial crisis and recovery (1997-2000)*

The financial crisis that hit the country and several other East Asian countries in the latter part of 1997 caused some policy-makers to look to FDI as a possible aid to recovery. For a period of one to two years, there was considerable pressure from the top to accelerate the process of opening up, but as the country began to pull out of the crisis, the old fears of foreign competition and intrusion once again generated a backlash against such opening.

## Conclusions and recommendations

Numerous articles contain prescriptions as to how developing countries can attract FDI on terms that are beneficial to both the investor and the host society (e.g. Buckley, 1996; Lall, 1995; Nunnenkamp, 1997; Ramamurti, 2001; Wells, 1998; UNCTAD, 1999). There is no point in repeating these pronouncements; rather,

the intention here is to see what new insights can be gained from the experience of the Republic of Korea. Here are some suggestions:

*Be aware of the attraction-aversion syndrome*

The Republic of Korea never really succeeded in resolving the dilemma of desiring the benefits that foreign investors could bring while wanting to limit the intrusion of foreign entities. One reason for this may have been that Korean policy makers were unaware of how much their policies fluctuated over the years, particularly as seen through the eyes of foreign observers. A variation could be that they did not perceive the swings in policy to be as pronounced as outside observers saw them. They may have been too close to the daily workings of the governmental machinery to see the effects on outsiders. Colloquially, they did not see the forest for the trees. This phenomenon has been observed in many aspects of international economic relations, where policy makers are so involved in domestic political maneuverings that they lose sight of the bigger picture as it presents itself to the outside world (Blake and Walters, 1983). Thus, one of the first steps a developing country government can take to rationalize its FDI policy is simply to be aware of the mixed messages caused by the swings in its treatment of TNCs. If government leaders can make conscious efforts to step back from the daily minutiae of their functions, they may be able to get a broader perspective on the effects of their actions. Specifically, in the context of FDI policy, they may be able to dampen the extreme swings in their own governments' policies.

*Develop a clear set of priorities for FDI*

The experience of the Republic of Korea suggests that, if the Government could have decided on a clear set of priorities, it might have been better able to formulate policies designed to obtain a specific, limited set of benefits from FDI. Few governments are able to spell out their objectives so clearly, however, and so they end up trying to achieve multiple, often competing, objectives related to FDI. One reason is that policy makers may have different unstated assumptions as to what the country should be seeking from FDI and thus may give inconsistent directives to lower-level personnel who are charged with actually carrying out a policy. This phenomenon may have been one of the underlying causes of the fluctuations in the degree of openness of the Republic of Korea. In such a case, just

making the effort to discuss their goals and set them out on paper can be a useful exercise: it can prompt policy makers to recognize and hopefully reconcile hidden differences.

A related problem is the phenomenon of sequential attention to goals, that is, the tendency to emphasize one set of goals for a period of time, and then to emphasize a different, sometimes contradictory, set at a later time. The Government of the Republic of Korea apparently went though such a sequence with respect to its FDI policies. In the 1960s and early 1970s, it sought capital and exports as its primary goals from foreign affiliates, and then it gradually switched emphasis to management know-how and technology. Preserving a significant degree of local control (or at least the appearance of local control) through joint ventures also became an important goal in the 1980s, concomitantly with increasing the inflow of FDI. However, these various goals proved to be somewhat incompatible: TNCs were reluctant to bring in large amounts of capital and technology while concentrating on production for export, and while limiting their ownership to minority positions in joint ventures.

*Keep policies current*

As a corollary to the above, a country's needs for FDI change over time as its economy evolves and grows. What is appropriate when a country is least developed might be quite different from what is most useful as its economy strengthens and diversifies. In the Republic of Korea, however, there was a noticeable tendency for policies to lag behind economic changes. Hence, one suggestion would be for a host government to make a conscious effort to review its objectives for FDI periodically and revise and update them so as to keep them consonant with its changing needs.

*Set an appropriate pace of deregulation*

Some regulation of FDI is clearly necessary and desirable, but the crucial question then becomes when, how and how much to regulate — all complex questions. Policy makers must tread carefully as they begin to change and dismantle their countries' laws and policies regulating FDI.[12] Deregulation that is too rapid or poorly

[12] And most other regulatory activities too, for that matter.

planned can have serious, often unintended consequences. On the other hand, policy makers cannot allow bureaucratic inertia to keep them from making changes long after the need becomes apparent. Thus, a government has to find an appropriate pace for deregulation and liberalization.

The Republic of Korea appears to have erred on the side of caution by failing to phase down and simplify its FDI regulation as its economy strengthened and diversified. Starting in the mid-1980s, it could have allowed market forces a much greater role in determining the amount, industries and other characteristics of incoming FDI. To an outside observer, it would appear that time is long overdue for the Government to bite the bullet and drastically reduce its administrative guidance of foreign investment. The burden of paperwork, delays, seeming arbitrariness, opportunities for corruption, and general hassles of the application and regulatory processes are imposing substantial costs on the country in the form of lagging technology, lost opportunities for new markets and products and lack of domestic competition — all elements for which FDI could make a real contribution.

*Bridge the gap between rhetoric and reality*

One of the ways the Government of the Republic of Korea damaged the country's reputation as an investment site was by its repeated announcements of opening wider, easing restrictions, facilitating procedures and so on, and then failing to carry through on its pronouncements in meaningful ways. This pattern, after numerous repetitions, in effect advertised the country's ambivalence towards FDI and thus created conditions in which TNCs were likely to demand more incentives or higher returns on their investment. It also doubtlessly damaged the Government's bargaining power with prospective investors. Regardless of the domestic factors that may have driven this behaviour, it was a poor face to present to outsiders, and it raised the question whether the on-again, off-again actions were a deliberate attempt to mislead foreigners. Hence one lesson to be learned from the country's experience is to avoid the appearance of duplicity or manipulatory tactics. A corollary would be not to neglect the importance of building a reputation of trustworthiness in the investing community.

*Make genuine reforms in regulatory procedures*

Reforming the bureaucratic processes proved to be one of the most difficult obstacles to easing the roadblocks to FDI in the Republic of Korea. Its efforts were more than lip service but less than an all-out commitment to remove unnecessary and cumbersome requirements and procedures to FDI approvals and implementation. One major problem was to get lower-level bureaucrats to implement reforms promulgated by top-level ministers and deputies. A particularly notable example was the Government's repeated attempts to implement a one-stop service office for FDI approvals, which lower-level bureaucrats rendered largely ineffective. Here again the question arises whether one could ascribe Machiavellian motives to the Government, i.e. whether the top-level might have anticipated and tacitly approved the lower-level bureaucrats' actions.

*Do not overbalance domestic political considerations*

The experience of the Republic of Korea suggests that internal factors may have fairly strong influences towards opening wider to FDI when a country is quite poor and underdeveloped, at least to the extent that the country's balance-of-payments position can tolerate import-substituting investment. However, as domestic enterprises begin to produce manufactured goods, they typically seek to protect their local market shares, with the result that internal pressures begin to shift against foreign investors (as well as foreign imports). Conversely, external factors tend to be unimportant when a country is insignificant either as a producer or consumer of manufactures, but they can become important sources of pressure to open wider as the country emerges as both a market and a competitor. The problem arises when a government allows domestic political pressures to continue to weigh too heavily on its decisions long after the country's enterprises have reached a level at which they should be able to compete without special protection.

It is easy for an outside commentator to recommend that a developing country government be prepared to resist domestic political pressures for limitation of, or protection from, foreign competition; the outsider must first attempt to understand the dimensions of the internal struggle. Nonetheless, the Government of the Republic of Korea must recognize that their restrictive policies

impose increasingly heavy burdens on the domestic economy in the form of lower welfare, lost efficiency, and bloated, uncompetitive domestic enterprises. Opening an economy wider is a complex process that requires political determination and economic rationality. Fortunately, there are elements in the country that are pushing to open up the economy at a more determined pace. The country has a fairly good record of recognizing when problems exist and of moving to alleviate them in due course. Thus, it is reasonable to hope that the Government will succeed in making its FDI regime more truly effective in the not-too-distant future. ■

## References


Aggarwal, Aradhna (1997). "Liberalization, internalization advantages and foreign direct investment: the Indian experience in the 1980s", *Transnational Corporations*, 6 (3), pp. 33-55.

Amsden, Alice H. (1989) *Asia's Next Giant: South Korea and Late Industrialization* (Oxford and New York: Oxford University Press); revised and reissued (paperback) in 1992.

Bergsman, Joel and Xiaofang Shen (1995). "Foreign direct investment in developing countries: progress and problems", *Finance and Development*, 32 (4), pp. 6-8.

Blake, David H. and Robert S. Walters (1983). *The Politics of Global Economic Relations* (Englewood Cliffs, NJ: Prentice-Hall).

Buckley, Peter J. (1996). "Government policy responses to rent-seeking transnational corporations", *Transnational Corporations*, 5 (2), pp. 1-17.

*Business Asia* (1999). "Economic outlook: South Korea", 29 November, p. 8.

_____ (2000). "Foreigner-friendly?", 16 October, pp. 1-3.

Business International Corporation (1981). *Investing, Licensing and Trading Conditions Abroad: Korea* (June) (New York: Business International Corporation).

*Business Korea* (1994). "Luring foreign investment", February, p. 41.

_____ (1995). "Trade and industrial policies for the new economy", October, pp. 13-15
.

_____ (1999a). "Corporate fire sale peaks in 1999", October, pp. 39-41.

_____(1999b). "Foreign direct investment in Korea sets new record", December, p. 87.

Butler, Kirt C. and Domingo Castelo Joaquin (1998). "A note on political risk and the required return on foreign direct investment", *Journal of International Business Studies*, 29 (3), pp. 599-607.

Caves, Richard E. (1998). "Research on international business: problems and prospects", *Journal of International Business Studies*, 29 (1), pp. 5-19.

Cheesman, Bruce (1993). "South Korea: investors' land carrot", *Asian Business*, 29 (7), p. 12.

Cho, Yong Hyo and Shin Kim (2000). "Administrative and regulatory reform of Korea in a time of national crisis", *International Journal of Public Administration*, 23 (11), pp. 1197-2016.

Choi, Hae Won (2001). "Facing slump, South Korea eases pressure for reform – in policy it calls temporary, Seoul will help firms refinance maturing debt", *Wall Street Journal*, 16 January, p. A19.

*Christian Science Monitor* (1982). "Firms hesitate to invest in Korea" and "South Korea: back to bootstraps after tripping over its own laces", 11 May, p. B1.

Conklin, David and Donald Lecraw (1997). "Restrictions on foreign ownership during 1984-1994: developments and alternative policies", *Transnational Corporations*, 6 (1), pp. 1-30.

Costello, Matthew J. (1996). "The Politics of foreign direct investment in South Korea" in Yeomin Yoon and Robert W. McGee (eds.), *Korea's Turn to Globalization and Korea-U.S. Economic Cooperation* (South Orange, NJ: Seton Hall University Press), pp. 139-153.

Davis, Ian (1989). "Korea opens its doors to U.S. firms," *Business America*, 13 March, pp. 2-9.

Dunning, John H. (1994). "Re-evaluating the benefits of foreign direct investment", *Transnational Corporations*, 3 (1), pp. 23-51.

*East Asian Executive Reports* (1994). "Executive briefing", February, pp. 4-5.

_____ (1995). "Executive briefing", January, p. 15.

Economic Intelligence Unit (1993). *Investing, Licensing and Trading Conditions Abroad: South Korea* (September) (London: EIU).

_____ (1996). *Investing, Licensing and Trading Conditions Abroad: South Korea* (August) (London: EIU).

*Economist* (1993). "South Korea: reaching out", 25 December, p. 46.

*Euromoney* (1985). "Korea seeks to spur foreign investment after record year", Supplement No. 6, October, p. 50.

Frank, Charles R., Kwang Suk Kim and Larry E. Westphal (1975). *Foreign Trade Regimes and Economic Development: South Korea* (New York: National Bureau of Economic Research, distributed by Columbia University Press).

*Industry Week* (2000). "Valuing Asia's bargains", 10 January, pp. 49-50.

Jeon, Bang Nam and Se Young Ahn (2001). "The changing receptivity towards TNCs in the Republic of Korea: survey results and policy implications", *Transnational Corporations*, 10 (1), pp. 119-137.

Jeong, Gil-Sik (1983). "Direct foreign investment in Korea", *Korea Exchange Bank Monthly Review*, 17 (10), p. 1-12.

Joo, Sangyong (1998). "Opening capital markets", *Korea's Economy 1998* (Washington, D.C.: Korea Economic Institute of America), pp. 33-37.

Jun, Kwang J. and Harinder Singh (1996). "The determinants of foreign direct investment in developing countries", *Transnational Corporations*, 5 (2), pp. 67-105.

Kim, Seung H. and Trevor Crick (1996). "U.S. investment in Korea and Korean investment in the U.S.", in Yoon, Yeomin and Robert W. McGee (eds.), *Korea's Turn to Globalization* (South Orange, NJ: Seton Hall University Press), pp. 129-138.

Korea Exchange Bank (1982). "Administrative procedures concerning foreign investment simplified", *Monthly Review*, 15 (January), p. 57.

*Korea Times* (2000). "Foreign investment key to Korea's success: Toffler", 31 March, www.law.columbia.edu/course_00S_L9436_001/.

Lall, Sanjaya (1995). "Industrial strategy and policies on foreign direct investment in East Asia", *Transnational Corporations*, 4 (3), pp. 1-26.

Larkin, John (2000). "Lessons unlearned", *Far Eastern Economic Review*, 21 September, pp. 64-66.

Lee, Charles S. (2000). "Work in progress", *Far Eastern Economic Review*, 8 June, pp. 70-71.

Lipsey, Robert E. (2000). "Inward FDI and economic growth in developing countries", *Transnational Corporations*, 9 (1), pp. 67-95.

Nakarmi, Laxmi (1991). "Korea throws open its doors", *Business Week*, 29 July, p. 46.

Nunnenkamp, Peter (1997). "Foreign direct investment in Latin America in the era of globalized production", *Transnational Corporations*, 6 (1), pp. 51-81.

Paisley, Ed (1992). "South Korea trade and investment: time for a new start", *Far Eastern Economic Review*, 13 August, pp. 29-34.

_____ (1993). "South Korea trade and investment: cleaning up the act", *Far Eastern Economic Review*, 27 May, p. 40-44.

Pearlstine, Nathan (1979). "How South Korea surprised the world", *Forbes*, 30 April, pp. 53-54, 60-61.

Ramamurthi, Ravi (2001). "The obsolescing 'bargaining model'? MNC-host country relations revisited", *Journal of International Business Studies*, 32 (1), pp. 23-39.

Republic of Korea, Economic Planning Board (EPB) (1972). *Guide to investment in Korea* (Seoul: Government of the Republic of Korea).

_____ (1973). *Foreign Capital Investment Administrative Procedures: Emphasis on Foreign Investment* (Seoul: Government of the Republic of Korea).

_____ (1978). *Guide to Investment in Korea* (restated from 1974 version) (Seoul: Government of the Republic of Korea).

Rogowsky, Robert A. (1996). "Trade liberalization and economic reform in Korea: some general equilibrium estimates", in Yeomin Yoon and Robert W. McGee, eds., *Korea's Turn to Globalization and Korea-U.S. Economic Cooperation* (South Orange, NJ: Seton Hall University Press), pp. 111-119.

Ryou, Jai-won (1998). "Foreign direct investment in Korea: trends and prospects", *Korea's Economy 1998*, vol. 14 (Washington, D.C.: Korea Economic Institute of America), pp. 47-52.

Stiglitz, Joseph E. (1989). "Markets, market failures and development", *American Economic Review Papers and Proceedings*, 79 (2), pp. 197-202.

Stoever, William A. (1986). "Foreign investment as an aid in moving from least-developed to newly industrializing: a study in Korea", *The Journal of Developing Areas*, 20 (2), pp. 223-248.

_____ (1989). "Research note: methodological problems in assessing developing country policy toward foreign manufacturing investment", *Management International Review*, 29 (4), pp. 68-77.

_____ (1995). "The gold rush-disillusionment investment cycle in China", *Proceedings of the Fifth Asian Business and Economics Conference* (New York: St. John's University), pp. 16-21.

_____ (2001). "Liberalizing developing country policy toward foreign investment: a framework for analysis", *American Asian Review*, 19 (3), pp. 121-153.

United Nations Conference on Trade and Development (UNCTAD) (1999). "World Investment Report, 1999: foreign direct investment and the challenge of development", *Transnational Corporations*, 8 (3), pp. 55-100.

United States, Department of Commerce (1984a) "Foreign economic trends and their implications for the United States: Korea", March (Seoul: United States Embassy), mimeo.

_____ (1984b). "Foreign economic trends and their implications for the United States: Korea", November (Seoul: United States Embassy), mimeo.

_____ (1986). "Foreign economic trends and their implications for the United States: Korea", January (Seoul: United States Embassy), mimeo.

_____ (1988). "Foreign economic trends and their implications for the United States: Korea", October (Seoul: United States Embassy), mimeo.

_____ (1990). "Foreign economic trends and their implications for the United States: Korea", April (Seoul: United States Embassy), mimeo.

_____ (1991). "Foreign economic trends and their implications for the United States: Korea", February (Seoul: United States Embassy), mimeo.

Wells, L.T., Jr. (1998). "Multinationals and the developing countries", *Journal of International Business Studies,* 29 (1), pp. 101-114.

_____ and Allen G. Wint (1993). "Don't stop with the one-stop shop: foreign investment in a liberalizing third world", *The International Executive*, 35 (5), pp. 367-383.

Yoon, Yeomin (1993). Book review on Alice H. Amsden (1989/1992), *Asia's Next Giant: South Korea and Late Industrialization*, in *American Asian Review*, 11 (1), pp. 196-201.

# RESEARCH NOTE

# *World Investment Report 2001: Promoting Linkages*
## *Overview*

United Nations Conference on Trade and Development*

## THE GEOGRAPHY OF INTERNATIONAL PRODUCTION

### *FDI flows reached record levels in 2000...*

Foreign direct investment (FDI) continues to expand rapidly, enlarging the role of international production in the world economy. FDI grew by 18 per cent in 2000, faster than other economic aggregates like world production, capital formation and trade, reaching a record $1.3 trillion (table 1). FDI flows are, however, expected to decline in 2001.

The global expansion of investment flows is driven by more than 60,000 transnational corporations (TNCs) with over 800,000 affiliates abroad. *Developed countries* remain the prime destination of FDI, accounting for more than three-quarters of global inflows. Cross-border mergers and acquisitions (M&As) remain the main stimulus behind FDI, and these are still concentrated in the developed countries. As a result, inflows to developed countries increased by 21 per cent and amounted to a little over $1 trillion. FDI inflows to *developing countries* also rose, reaching $240 billion. However, their share in world FDI flows declined for the second year in a row, to 19

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**Table 1. Selected indicators of FDI and international production, 1982-2000**

(Billions of dollars and percentage)

| Item | Value at current prices (Billions of dollars) | | | Annual growth rate (Per cent) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1982 | 1990 | 2000 | 1986-1990 | 1991-1995 | 1996-1999 | 1998 | 1999 | 2000 |
| FDI inflows | 57 | 202 | 1 271 | 23.0 | 20.8 | 40.8 | 44.9 | 55.2 | 18.2 |
| FDI outflows | 37 | 235 | 1 150 | 26.2 | 16.3 | 37.0 | 52.8 | 41.3 | 14.3 |
| FDI inward stock | 719 | 1 889 | 6 314 | 16.2 | 9.3 | 18.4 | 19.8 | 22.3 | 21.5 |
| FDI outward stock | 568 | 1 717 | 5 976 | 20.5 | 10.8 | 16.4 | 20.9 | 19.5 | 19.4 |
| Cross border M&As [a] | .. | 151 | 1 144 | 26.4 [b] | 23.3 | 50.0 | 74.4 | 44.1 | 49.3 |
| Sales of foreign affiliates | 2 465 | 5 467 | 15 680 [c] | 15.6 | 10.5 | 10.4 | 18.2 | 17.2 [c] | 18.0 [c] |
| Gross product of foreign affiliates | 565 | 1 420 | 3 167 [d] | 16.4 | 7.2 | 11.0 | 3.2 | 27.2 [d] | 16.5 [d] |
| Total assets of foreign affiliates | 1 888 | 5 744 | 21 102 [e] | 18.2 | 13.9 | 15.9 | 23.4 | 14.8 [e] | 19.8 [e] |
| Export of foreign affiliates | 637 | 1 166 | 3 572 [f] | 13.2 | 14.0 | 11.0 | 11.8 | 16.1 [f] | 17.9 [f] |
| Employment of foreign affiliates (thousands) | 17 454 | 23 721 | 45 587 [g] | 5.7 | 5.3 | 7.8 | 16.8 | 5.3 [g] | 12.7 [g] |
| GDP at factor cost | 10 612 | 21 475 | 31 895 | 11.7 | 6.3 | 0.7 | -0.9 | 3.4 | 6.1 |
| Gross fixed capital formation | 2 236 | 4 501 | 6 466 [h] | 12.2 | 6.6 | 0.6 | -0.6 | 4.3 | .. |
| Royalties and Licence fees receipts | 9 | 27 | 66 [h] | 22.1 | 14.1 | 4.0 | 6.1 | 1.1 | .. |
| Export of goods and non-factor services | 2 124 | 4 381 | 7 036 [h] | 15.4 | 8.6 | 1.9 | -1.5 | 3.9 | .. |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, table I.1, p. 10.

[a] Data are only available from 1987 onward.
[b] 1987-1990 only
[c] Based on the following regression result of sales against FDI inward stock for the period 1982-1998: Sales=967+2.462*FDI inward stock.
[d] Based on the following regression result of gross product against FDI inward stock for the period 1982-1998: Gross product=412+0.461*FDI inward stock.
[e] Based on the following regression result of assets against FDI inward stock for the period 1982-1998: Assets= -376+3.594*FDI inward stock.
[f] Based on the following regression result of exports against FDI inward stock for the period 1982-1998: Exports=231+0.559*FDI inward stock.
[g] Based on the following regression result of employment against FDI inward stock for the period 1982-1998: Employment=13 925+5.298*FDI inward stock.
[h] Data are for 1999.

*Note:* Not included in this table are the value of worldwide sales by foreign affiliates associated with their parent firms through non-equity relationships and the sales of the parent firms themselves. Worldwide sales, gross product, total assets, exports and employment of foreign affiliates are estimated by extrapolating the worldwide data of foreign affiliates of TNCs from France, Germany, Italy, Japan and the United States (for sales and employment) and those from Japan and the United States (for exports), those from the United States (for gross product), and those from Germany and the United States (for assets) on the basis of the shares of those countries in the worldwide outward FDI stock.

per cent, compared to the peak of 41 per cent in 1994. The countries in *Central and Eastern Europe*, with inflows of $27 billion, maintained their share of 2 per cent. The 49 least developed countries (LDCs) remained marginal in terms of attracting FDI, with 0.3 per cent of world inflows in 2000.

Within the developed world, the *Triad* — the European Union (EU), the United States and Japan — accounted for 71 per cent of world inflows and 82 per cent of outflows in 2000 (table 2). Within the Triad, the *EU* has gained both as a recipient and source of FDI. Record inflows ($617 billion) were stimulated by further progress in regional integration, while the United States and other Western European countries remain its main partners outside the region. Due to the take-over of Mannesmann by VodafoneAirTouch — the largest cross-border merger deal so far — Germany became, for the first time, the largest recipient of FDI in Europe. The United Kingdom maintained its position as the top source country worldwide for a second year. The *United States* remained the world's largest FDI recipient country as inflows reached $281 billion. Outflows with $139 billion decreased by 2 per cent. *Japan* saw its inflows in 2000 drop by 36 per cent from the previous year to $8 billion, partly due to the prolonged slow-down of the country's economic growth, but also perhaps indicative of the fact that, in spite of its welcoming FDI policies, other factors deter investment inflows. In contrast, outflows from Japan rebounded to $33 billion, the highest level in ten years. Among *other developed countries*, the most conspicuous events were the unprecedented levels of FDI into and from Canada, reflecting several major M&A deals, in particular with partners in Europe and the United States.

There were major differences in FDI trends among developing countries. In contrast to the experience in most other parts of the world, inflows to *Africa* (including South Africa) declined in 2000 (for the first time since the mid-1990s), from $10.5 billion to $9.1 billion. As a result, the share of Africa in total FDI flows fell below 1 per cent. The decline was mainly related to two countries: South Africa and Angola. In the former country, fewer privatization and M&A deals caused the slow-down, while in the latter, inflows in the petroleum sector declined. The Southern African Development Community maintained its position as the most important subregion for FDI inflows in Africa. Its share in total FDI inflows into Africa was 44 per cent, compared to 21 per cent in the first half of the 1990s. The Community's improved attractiveness to FDI may have been

**Table 2. Regional distribution of FDI inflows and outflows, 1989-2000**

(Billions of dollars)

| Region/country | FDI inflows | | | | | | | FDI outflows | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1989-1994 (Annual average) | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 1989-1994 (Annual average) | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| **Developed countries** | **137.1** | **203.5** | **219.7** | **271.4** | **483.2** | **829.8** | **1 005.2** | **203.2** | **305.8** | **332.9** | **396.9** | **672.0** | **945.7** | **1 046.3** |
| Western Europe | 79.8 | 117.2 | 114.9 | 137.5 | 273.4 | 485.3 | 633.2 | 114.2 | 173.6 | 204.3 | 242.4 | 475.2 | 761.1 | 820.3 |
| European Union | 76.6 | 113.5 | 109.6 | 127.6 | 261.1 | 467.2 | 617.3 | 105.2 | 159.0 | 183.2 | 220.4 | 454.3 | 720.1 | 772.9 |
| Other Western Europe | 3.1 | 3.7 | 5.2 | 9.9 | 12.3 | 18.2 | 15.8 | 9.0 | 14.6 | 21.1 | 22.0 | 21.0 | 41.1 | 47.4 |
| Japan | 1.0 | - | 0.2 | 3.2 | 3.3 | 12.7 | 8.2 | 29.6 | 22.5 | 23.4 | 26.1 | 24.2 | 22.7 | 32.9 |
| United States | 42.5 | 58.8 | 84.5 | 103.4 | 174.4 | 295.0 | 281.1 | 49.0 | 92.1 | 84.4 | 95.8 | 131.0 | 142.6 | 139.3 |
| **Developing countries and economies** | **59.6** | **113.3** | **152.5** | **187.4** | **188.4** | **222.0** | **240.2** | **24.9** | **49.0** | **57.6** | **65.7** | **37.7** | **58.0** | **99.5** |
| Africa | 4.0 | 4.7 | 5.6 | 7.2 | 7.7 | 9.0 | 8.2 | 0.9 | 0.5 | 0.0 | 1.7 | 0.9 | 0.6 | 0.7 |
| Latin America and the Caribbean | 17.5 | 32.3 | 51.3 | 71.2 | 83.2 | 110.3 | 86.2 | 3.7 | 7.3 | 5.5 | 14.4 | 8.0 | 21.8 | 13.4 |
| Asia and the Pacific | 37.9 | 75.9 | 94.5 | 107.3 | 95.9 | 100.0 | 143.8 | 20.3 | 41.1 | 51.9 | 49.4 | 28.7 | 35.5 | 85.3 |
| Asia | 37.7 | 75.3 | 94.4 | 107.2 | 95.6 | 99.7 | 143.5 | 20.3 | 41.1 | 51.9 | 49.4 | 28.6 | 35.4 | 85.2 |
| West Asia | 2.2 | - | 2.9 | 5.5 | 6.6 | 0.9 | 3.4 | 0.3 | - 1.0 | 2.3 | - 0.3 | - 1.7 | 0.7 | 1.3 |
| Central Asia | 0.4 | 1.7 | 2.1 | 3.2 | 3.0 | 2.6 | 2.7 | - | 0.3 | - 0.0 | 0.2 | 0.3 | 0.3 | 0.3 |
| South, East and South-East Asia | 35.1 | 73.6 | 89.4 | 98.5 | 86.0 | 96.2 | 137.3 | 20.0 | 41.8 | 49.7 | 49.5 | 30.0 | 34.4 | 83.6 |
| South Asia | 0.8 | 2.9 | 3.7 | 4.9 | 3.5 | 3.1 | 3.0 | - | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.3 |
| The Pacific | 0.2 | 0.6 | 0.2 | 0.1 | 0.3 | 0.3 | 0.3 | - | - | - | - | 0.1 | 0.1 | 0.0 |
| Developing Europe | 0.2 | 0.5 | 1.1 | 1.7 | 1.6 | 2.7 | 2.0 | - | - | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| **Central and Eastern Europe** | **3.4** | **14.3** | **12.7** | **19.2** | **21.0** | **23.2** | **25.4** | **0.1** | **0.5** | **1.0** | **3.4** | **2.1** | **2.1** | **4.0** |
| **World** | **200.1** | **331.1** | **384.9** | **477.9** | **692.5** | **1 075.0** | **1 270.8** | **228.3** | **355.3** | **391.6** | **466.0** | **711.9** | **1 005.8** | **1 149.9** |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, annex tables B.1 and B.2, pp. 291 and 296.

principally driven by country-specific factors, but at least some FDI inflows were also motivated by the economic integration of the region.

After tripling during the second half of the 1990s, FDI flows into *Latin America and the Caribbean* also fell in 2000, by 22 per cent, to $86 billion. This was mainly a correction from 1999 — when FDI inflows into the region were greatly affected by three major cross-border acquisitions of Latin American firms — rather than a shift in the underlying trend. Privatization slowed down in 2000, but continues to be important as a factor driving inward FDI. In terms of sectors, FDI into South America was mainly in services and natural resources, while Mexico continued to receive the largest share of inflows in manufacturing as well as in banking.

*In developing Asia*, FDI inflows reached a record level of $143 billion in 2000. The greatest increase took place in East Asia; Hong Kong (China), in particular, experienced an unprecedented FDI boom, with inflows amounting to $64 billion, making it the top FDI recipient in Asia as well as in developing countries. This upsurge in inflows has several explanations. First, it reflects a recovery from the economic turmoil of the recent past. Second, TNCs planning to invest in mainland China have been "parking" funds in Hong Kong (China), in anticipation of China's expected entry into the WTO. Third, the increase reflects a major cross-border M&A in telecommunications, which alone accounted for nearly one-third of the territory's total FDI inflows. Fourth, there is an element of increased "round-tripping" of capital flows into, and out of Hong Kong (China).

FDI flows to China, at $41 billion, remained fairly stable. In the course of its negotiations for membership in the WTO, China has amended some of its FDI policies. TNCs play an increasingly important role in the Chinese economy; for example, tax contributions by foreign affiliates accounted for 18 per cent ($27 billion) of the country's total corporate tax revenues in 2000. Inflows to South-East Asia (ASEAN-10) remained below the pre-crisis level. The subregion's share in total FDI flows to developing Asia continued to shrink, and stood in 2000 at 10 per cent, as compared with over 30 per cent in the mid-1990s. This was largely due to rising inflows into other countries in the region and significant divestments in Indonesia since the onset of the financial crisis. South Asia witnessed a drop in FDI inflows by 1 per cent over the previous year. India, the largest recipient in the subcontinent, received $2 billion. Notwithstanding these mixed trends, the longer-term investment prospects for developing Asia remain bright. In

addition to the quality of the underlying determinants for FDI, greater economic integration is likely to boost FDI in the region.

Outward FDI from developing Asia doubled in 2000, to $85 billion. Hong Kong (China) was the most important source ($63 billion); more than half of its outward FDI went to China. Outward FDI from China and India also picked up.

FDI inflows into *Central and Eastern Europe* also rose, to an unprecedented $27 billion. Privatization-related transactions were a key determinant of FDI inflows throughout the region, with the exception of Hungary, where the privatization process has by and large run its course, and the Commonwealth of Independent States, where large-scale privatizations involving foreign investors have yet to begin. Outflows from the region expanded even faster than inflows, in spite of the fact that official data on outward FDI are likely to underestimate the actual outflows. (Some FDI by firms in the Russian Federation go unreported, or are reported under other elements of the balance of payments.)

### *...but a mapping of the geography of FDI patterns shows that international production is highly concentrated...*

A mapping of FDI *inflows* indicates the extent to which host countries are integrating into the globalizing world economy. It also indicates indirectly the distribution of benefits from FDI. The mapping of *outward* FDI shows which countries control the global distribution of this investment. Understanding the pattern of FDI flows and stocks and its driving forces is important for the formulation and implementation of economic strategies and policies.

A comparison of the world maps of inward and outward FDI in 2000 and 1985 reveals that FDI reaches many more countries in a substantial manner than in the past. More than 50 countries (24 of which are developing countries) have an inward stock of more than $10 billion, compared with only 17 countries 15 years ago (7 of them developing countries). The picture for outward FDI is similar: the number of countries with stocks exceeding $10 billion rose from 10 to 33 (now including 12 developing countries, compared to 8 in 1985) over the same period. In terms of flows, the number of countries receiving an annual average of more than $1 billion rose from 17 (6 of which were developing countries) in the mid-1980s to 51 (23 of which were developing countries) at the end of the 1990s. In the

case of outflows, 33 countries (11 developing countries) invested more than $1 billion at the end of the 1990s, compared to 13 countries (only one developing country) in the mid-1980s.

Despite its reach, however, FDI is unevenly distributed. The world's top 30 host countries account for 95 per cent of total world FDI inflows and 90 per cent of stocks. The top 30 home countries account for around 99 per cent of outward FDI flows and stocks, mainly industrialized economies. About 90 of the world's largest 100 non-financial TNCs in terms of foreign assets are headquartered in the Triad (see table 3 for the largest 25 of those firms). More than half of these companies are in the electrical and electronic equipment, motor vehicle, and petroleum exploration and distribution industries. These TNCs play an important role in international production: they accounted (in 1999) for approximately 12 per cent, 16 per cent and 15 per cent of the foreign assets, sales and employment, respectively, of the world's 60,000 plus TNCs. General Electric maintained in 1999 its position as the largest TNC in the world. For the first time, three companies from developing countries (Hutchison Whampoa, Petróleos de Venezuela and Cemex) are among the world's 100 largest TNCs. The transnationalization of companies is a phenomenon increasingly observed not only in developed countries but also in the developing world. The top 50 TNCs from developing countries — the largest of which are comparable in size to the smallest of the top 100 worldwide — originate in some 13 newly industrializing economies of Asia and Latin America as well as in South Africa (see table 4 for the largest 10 of those firms). They congregate in construction, food and beverages, and diversified industries. The largest 25 TNCs from Central and Eastern Europe are somewhat more evenly distributed among nine home countries (see table 5 for the largest 10 of those firms). Transport, mining, petroleum and gas and chemicals and pharmaceuticals are the most frequently represented industries among these TNCs. The transnationality index for the three groups of TNCs shows some divergent patterns. The degree of transnationalization increased for both the top 50 TNCs and the top 25: from 37 per cent in 1998 to 39 per cent in 1999 in the case of the former; and from 26 per cent to 32 per cent in the case of the latter. The transnationality of the top 100 TNCs remained fairly stable at a high level (53 per cent).

The locational patterns of international production differ by country and industry, and they change over time, partly in response to the shifting industrial composition of FDI. During the past ten years, services have become more important in international production

**Table 3. The world's 25 largest TNCs, ranked by foreign assets, 1999**

(Billions of dollars and number of employees)

| Ranking 1999 by: | | Ranked in 1998 by: | | | | | Assets | | Sales | | Employment | | TNI[a] (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Foreign assets | TNI[a] | Foreign assets | TNI[a] | Corporation | Country | Industry [b] | Foreign | Total | Foreign | Total | Foreign | Total | |
| 1 | 75 | 1 | 75 | General Electric | United States | Electronics | 141.1 | 405.2 | 32.7 | 111.6 | 143 000 | 310 000 | 36.7 |
| 2 | 22 | 5 | 19 | ExxonMobil Corporation | United States | Petroleum expl./ref./distr. | 99.4 | 144.5 | 115.5 | 160.9 | 68 000 | 107 000 | 68.0 |
| 3 | 43 | 3 | 45 | Royal Dutch/Shell Group[c] | The Netherlands/ United Kingdom | Petroleum expl./ref./distr. | 68.7 | 113.9 | 53.5 | 105.4 | 57 367 | 99 310 | 56.3 |
| 4 | 83 | 2 | 85 | General Motors | United States | Motor vehicles | 68.5 | 274.7 | 46.5 | 176.6 | 162 300 | 398 000 | 30.7 |
| 5 | 77 | 4 | 76 | Ford Motor Company | United States | Motor vehicles | .. | 273.4 | 50.1 | 162.6 | 191 486 | 364 550 | 36.1 |
| 6 | 82 | 6 | 60 | Toyota Motor Corporation | Japan | Motor vehicles | 56.3 | 154.9 | 60.0 | 119.7 | 13 500 | 214 631 | 30.9 |
| 7 | 51 | 9 | 59 | DaimlerChrysler AG | Germany | Motor vehicles | 55.7 | 175.9 | 122.4 | 151.0 | 225 705 | 466 938 | 53.7 |
| 8 | 21 | 32 | 27 | TotalFina SA | France | Petroleum expl./ref./distr. | .. | 77.6 | 31.6 | 39.6 | 50 538 | 74 437 | 70.3 |
| 9 | 50 | 7 | 54 | IBM | United States | Computers | 44.7 | 87.5 | 50.4 | 87.6 | 161 612 | 307 401 | 53.7 |
| 10 | 18 | 8 | 21 | BP | United Kingdom | Petroleum expl./ref./distr. | 39.3 | 52.6 | 57.7 | 83.5 | 62 150 | 80 400 | 73.7 |
| 11 | 2 | 10 | 3 | Nestlé SA | Switzerland | Food/beverages | 33.1 | 36.8 | 45.9 | 46.7 | 224 554 | 230 929 | 95.2 |
| 12 | 45 | 11 | 51 | Volkswagen Group | Germany | Motor vehicles | .. | 64.3 | 47.8 | 70.6 | 147 959 | 306 275 | 55.7 |
| 13 | 11 | - | - | Nippon Mitsubishi Oil Corp. (Nippon Oil Co. Ltd.) | Japan | Petroleum expl./ref./distr. | 31.5 | 35.5 | 28.4 | 33.9 | 11 900 | 15 964 | 82.4 |
| 14 | 41 | 19 | 52 | Siemens AG | Germany | Electronics | .. | 76.6 | 53.2 | 72.2 | 251 000 | 443 000 | 56.8 |
| 15 | 90 | 14 | 73 | Wal-Mart Stores | United States | Retailing | 30.2 | 50.0 | 19.4 | 137.6 | .. | 1 140 000 | 25.8 |
| 16 | 55 | - | - | Repsol-YPF SA | Spain | Petroleum expl./ref./distr. | 29.6 | 42.1 | 9.1 | 26.3 | .. | 29 262 | 51.6 |
| 17 | 13 | 17 | 17 | Diageo Plc | United Kingdom | Beverages | 28.0 | 40.4 | 16.4 | 19.0 | 59 852 | 72 479 | 79.4 |
| 18 | 59 | 87 | 84 | Mannesmann AG | Germany | Telecom./engineering | .. | 57.7 | 11.8 | 21.8 | 58 694 | 130 860 | 48.9 |
| 19 | 58 | 13 | 63 | Suez Lyonnaise des Eaux | France | Diversified/utility | .. | 71.6 | 9.7 | 23.5 | 150 000 | 220 000 | 49.1 |
| 20 | 32 | 23 | 40 | BMW AG | Germany | Motor vehicles | 27.1 | 39.2 | 26.8 | 36.7 | 46 104 | 114 952 | 60.9 |
| 21 | 3 | 15 | 8 | ABB | Switzerland | Electrical equipment | 27.0 | 30.6 | 23.8 | 24.4 | 155 427 | 161 430 | 94.1 |
| 22 | 42 | 20 | 41 | Sony Corporation | Japan | Electronics | .. | 64.2 | 43.1 | 63.1 | 115 717 | 189 700 | 56.7 |
| 23 | 9 | 34 | 1 | Seagram Company | Canada | Beverages/media | 25.6 | 35.0 | 12.3 | 11.8 | .. | .. | 88.6 |
| 24 | 8 | 12 | 7 | Unilever | United Kingdom/ The Netherlands | Food/beverages | 25.3 | 28.0 | 38.4 | 44.0 | 222 614 | 246 033 | 89.3 |
| 25 | 49 | - | - | Aventis | France | Pharmaceuticals/chemicals | .. | 39.0 | 4.7 | 19.2 | .. | 92 446 | 54.0 |

*Source:* UNCTAD, *World Investment Report 2001: Promoting Linkages*, table III.1, p. 90.

[a] TNI is the abbreviation for 'transnationality index'. The transnationality index is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

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

[c] Foreign assets, sales and employment are outside Europe.

.. Data on foreign assets, foreign sales and foreign employment were not made available for the purpose of this study. In case of non-availability, they are estimated using secondary sources of information or on the basis of the ratios of foreign to total assets, foreign to total sales and foreign 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.

**Table 4. The largest 10 TNCs from developing economies, ranked by foreign assets, 1999**

(Millions of dollars, number of employees)

| Ranking by Foreign assets | TNI [a] | Corporation | Economy | Industry [b] | Assets | | Sales | | Employment | | TNI [a] (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Foreign | Total | Foreign | Total | Foreign | Total | |
| 1 | 24 | Hutchison Whampoa Ltd. | Hong Kong, China | Diversified | .. | 48 157 | 2 096 | 7 108 | .. | 42 510 | 38.0 |
| 2 | 30 | Petróleos de Venezuela | Venezuela | Petroleum expl./ref./distr. | 8 009 | 47 250 | 13 332 | 32 600 | 15 000 | 47 760 | 29.8 |
| 3 | 10 | Cemex SA | Mexico | Construction | 6 973 | 11 896 | 2 504 | 4 841 | .. | 20 902 | 54.6 |
| 4 | 39 | Petronas - Petroliam Nasional Berhad | Malaysia | Petroleum expl./ref./distr. | .. | 31 992 | .. | 15 957 | .. | 18 578 | 19.8 |
| 5 | 34 | Samsung Corporation | Korea, Republic of | Diversified/Trade | 5 127 | 21 581 | 6 339 | 37 180 | 1 911 | 4 600 | 27.4 |
| 6 | 13 | Daewoo Corporation | Korea, Republic of | Diversified/Trade | .. | 16 460 | .. | 18 618 | .. | 12 021 | 49.4 |
| 7 | 22 | LG Electronics Inc. | Korea, Republic of | Electronics and electrical equipment | 4 215 | 17 273 | 6 383 | 15 590 | 27 000 | 50 000 | 39.8 |
| 8 | 45 | Sunkyong Group | Korea, Republic of | Energy/Trading/Chemicals | 4 214 | 34 542 | 10 762 | 43 457 | 2 273 | 26 296 | 15.2 |
| 9 | 43 | New World Development Co., Ltd. | Hong Kong, China | Construction | 4 097 | 14 789 | 368 | 2 259 | 788 | 22 945 | 15.8 |
| 10 | 42 | Samsung Electronics Co., Ltd. | Korea, Republic of | Electronics and electrical equipment | 3 907 | 25 487 | 5 214 | 28 024 | 6 039 | 39 350 | 16.4 |

*Source:* UNCTAD, *World Investment Report 2001: Promoting Linkages*, table III.9, p. 105.

[a] TNI is the abbreviation for "transnationality index", which is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

[b] Industry classification for companies follows the United States Standard Industrial Classification which is used by the United States Securities and Exchange Commission (SEC).

.. Data on foreign assets, foreign sales or foreign employment were not made available for the purpose of this study. In case of non availability, they are estimated using secondary sources of information or on the basis of the ratios of foreign to total assets, foreign to total sales and foreign to total employment.

**Table 5. The largest 10 non-financial TNCs based in Central and Eastern Europe, [a] ranked by foreign assets, 1999**

(Millions of dollars and number of employees)

| Ranking by | | | | | Assets | | Sales | | Employment | | Transnationality |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Foreign assets | Transnationality index [b] | Corporation | Country | Industry | Foreign | Total | Foreign | Total | Foreign | Total | index [b] (Per cent) |
| 1 | 15 | Lukoil Oil Co. | Russian Federation | Petroleum & natural gas | 3 236.0 | 8 422.0 | 4 642.0 [d] | 10 903.0 | 10 000 | 120 000 | 29.8 |
| 2 | 1 | Latvian Shipping Co. | Latvia | Transportation | 459.0 | 470.0 | 191.0 | 191.0 | 1 124 | 1 748 | 87.3 |
| 3 | 23 | Hrvatska Elektro privreda d.d. | Croatia | Energy | 296.0 | 2 524.0 | 10.0 | 780.0 | .. | 15 877 | 4.3 |
| 4 | 12 | Podravka Group [c] | Croatia | Food & beverages/ pharmaceuticals | 285.9 | 477.1 | 119.4 | 390.2 | 501 | 6 898 | 32.6 |
| 5 | 6 | Primorsk Shipping Co. | Russian Federation | Transportation | 256.4 | 444.1 | 85.3 | 116.5 | 1 308 | 2 777 | 59.4 |
| 6 | 11 | Gorenje Group | Slovenia | Domestic appliances | 236.3 | 618.1 | 593.3 | 1 120.6 | 590 | 6 691 | 33.3 |
| 7 | 8 | Far Eastern Shipping Co. | Russian Federation | Transportation | 236.0 | 585.0 | 134.0 | 183.0 | 263 | 8 873 | 38.8 |
| 8 | 7 | Pliva Group | Croatia | Pharmaceuticals | 181.8 | 915.9 | 384.7 | 587.6 | 2 645 | 7 857 | 39.7 |
| 9 | 10 | TVK Ltd. | Hungary | Chemicals | 175.4 | 553.2 | 248.9 | 394.3 | 927 | 5 225 | 37.5 |
| 10 | 2 | Motokov a.s. [c] | Czech Republic | Trade | 163.6 | 262.5 | 260.2 | 349.1 | 576 | 1 000 | 64.8 |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, table III.16, p. 115.

[a] Based on survey responses.

[b] The index of transnationality is calculated as the average of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

[c] 1998 data.

because this sector has been liberalized for FDI relatively recently. In 1999, they accounted for more than half of the total stock of inward FDI in developed countries and some one-third of that in developing countries. In many service industries, FDI tends to be spread relatively widely, reflecting the importance of proximity to customers. The same applies to some manufacturing industries, in which access to the domestic market is the predominant reason for investing abroad. However, the more advanced the level of technology in an industry, the higher the level of concentration tends to be. For example, if one takes six industries representing different technological levels (semiconductors, biotechnology, automobiles, TV and radio receivers, food and beverages, and textiles and clothing), an industrial mapping shows FDI in biotechnology as highly concentrated, followed by semiconductors and televisions and radio receivers. In comparison, the food and beverages industry is more evenly spread among host countries. Foreign affiliates in high-technology industries tend to agglomerate in selected locations in the world. This reflects differences in the industrial distribution of FDI in the manufacturing sector between developed and developing countries. In the developed countries, chemicals is the largest recipient industry, while in developing countries FDI is concentrated in low-technology industries.

At the functional level, geographical patterns of FDI reflect efficiency considerations of TNCs in the light of increasing competitive pressures, coupled with technological advances that enable real-time links across long distances and the liberalization of trade and FDI policies. This encourages a greater spread of all corporate functions. Even such critical corporate functions as design, R&D and financial management are today becoming increasingly internationalized to optimize cost, efficiency and flexibility. Take, for example, the location of regional headquarters. Singapore and Hong Kong (China) have attracted a number of regional headquarters to serve the Asian region, with the first location hosting some 200 regional headquarters, and the second 855 in 2000. In some industries, TNCs have set up integrated international production systems with an intra-firm international division of labour spanning regions (as in automobiles) or continents (as in semiconductors). Within such complex systems, the functions transferred to different locations vary greatly. Less industrialized locations are assigned simpler tasks like assembly and packaging, while more skill- and technology-intensive functions are allocated to industrially more advanced locations.

***…with countries varying greatly in terms of their success in attracting FDI, as revealed in the new Inward FDI Index.***

The concentration of FDI reflects the concentration of economic activity more generally. Thus, exports, domestic investment and technology payments are also highly concentrated. Richer and more competitive economies naturally receive and send more international direct investment than other economies.

To gauge the underlying attractiveness of a country for international investors, it is useful to take its relative economic size and strength into account. The *Inward FDI Index* captures the ability of countries to attract FDI after taking into account their size and competitiveness. The Index is the average of three ratios, showing each country's share in world FDI relative to its shares in GDP, employment and exports. An index value of "one" would therefore mean that a country's share in world FDI matches its economic position in terms of these three indicators.

The ranking of 112 countries in 1988-1990 and 137 in 1998-2000 shows a large dispersion of index values. For 1998-2000, the value of the Index ranges from 17.3 for the leading economy, Belgium and Luxembourg, to -0.8 for Yemen. Moreover, the rankings have changed significantly over time. Singapore has slipped from first position at the end of the 1980s to thirteenth position a decade later. The fall in its index value reflects a slower growth of FDI (by about a half) than in its GDP and exports which more than doubled between the two periods. The position of Sweden has improved considerably (moving from the twenty-ninth spot to the fourth), partly reflecting a deliberate change in policy during the 1990s in favour of greater openness towards inward FDI.

In 1998-2000, there were five countries with an Inward FDI Index value of one: Costa Rica, El Salvador, Hungary, Malaysia and Slovakia. There were 53 countries with a value higher than one, and 79 with values lower than one. The last group, which "under-performs" in terms of attracting FDI, includes advanced economies like Japan, Italy and Greece, newly industrializing economies like the Republic of Korea, Taiwan Province of China and Turkey, oil rich economies like Saudi Arabia and a number of low income countries. FDI recipients with high values of the Index include the majority of

the developed countries, Hong Kong (China), Singapore and some Central and Eastern European countries.

In both periods, the Index value for developed countries is about twice the world average, while those for developing countries and economies in transition are below the world average (table 6). The differences between the three groups of countries reflect mainly the influence of the employment variable: the developed and developing country groups have FDI shares roughly in proportion to their GDP shares, but the former receive far larger shares of world FDI than their shares in world employment, while developing countries and economies in transition receive less. Within the developing world, the Inward FDI Index values for South America and Central Asia exceeded unity in 1998-2000. In the other regions (and for these two regions in the earlier period), the Index value was below one. South Asia, West Asia and North Africa show the lowest values; the reasons for this may have more to do with political factors than economic ones. Sub-Saharan Africa receives FDI in line with its GDP share, but very little in relation to its share in employment; over time its FDI Index value has declined slightly. For the LDC group, the value of the FDI Index doubled between the two periods, mostly due to increases in the FDI to exports and FDI to GDP ratios. In fact, in the second period, the Index value for African LDCs exceeded one; it is now almost twice as high as that for sub-Saharan Africa as a whole. The index value for other LDCs has declined over the decade.

The Index suggests that Africa receives less FDI flows in comparison with the region's relative economic size. The underlying economic reality is that sub-Saharan Africa has lost share in *both* world FDI inflows and other economic aggregates; African LDCs, however, have maintained their share of FDI but have fallen further behind in other economic aggregates.

Interpreting the Inward FDI Index calls for care and the use of evidence on other economic and policy variables. Nonetheless, it can provide a starting point for benchmarking how countries succeed in attracting FDI. Many of the countries at the top of the ranking (with an index value far exceeding unity) are strong economies that are leveraging their economic strength through policies to attract more than their "normal" share of FDI. There are also, however, a few countries with weak economies but strong natural resource endowments that occupy places at the top. A number of countries at the bottom are weak economies in which the influence of other economic factors and policies apparently pulls inward FDI below levels

**Table 6. The Inward FDI Index, by region, 1988-1990 and 1998-2000**

| Region | 1988-1990 FDI share/ GDP share [a] | 1988-1990 FDI share/ employment share [b] | 1988-1990 FDI share/ export share [c] | 1988-1990 FDI inward index | 1998-2000 FDI share/ GDP share [a] | 1998-2000 FDI share/ employment share [b] | 1998-2000 FDI share/ export share [c] | 1998-2000 FDI inward index |
|---|---|---|---|---|---|---|---|---|
| **World** [a] | **1.0** | **1.0** | **1.0** | **1.0** | **1.0** | **1.0** | **1.0** | **1.0** |
| **Developed economies** | **1.0** | **4.0** | **1.1** | **2.0** | **1.0** | **4.4** | **1.1** | **2.2** |
| Western Europe | 1.3 | 4.9 | 0.9 | 2.4 | 1.6 | 6.3 | 1.1 | 3.0 |
| European Union | 1.3 | 4.8 | 1.0 | 2.4 | 1.6 | 6.4 | 1.1 | 3.0 |
| Other Western Europe | 1.1 | 5.7 | 0.6 | 2.5 | 1.1 | 5.5 | 0.6 | 2.4 |
| North America | 1.1 | 4.7 | 2.0 | 2.6 | 0.9 | 4.4 | 1.6 | 2.3 |
| Other developed economies | 0.3 | 1.1 | 0.5 | 0.6 | 0.1 | 0.5 | 0.2 | 0.3 |
| **Developing economies** | **1.0** | **0.2** | **0.7** | **0.6** | **1.0** | **0.3** | **0.7** | **0.7** |
| Africa | 1.0 | 0.2 | 0.7 | 0.6 | 0.7 | 0.1 | 0.6 | 0.4 |
| North Africa | 0.8 | 0.4 | 0.7 | 0.6 | 0.4 | 0.2 | 0.4 | 0.3 |
| Other Africa | 1.2 | 0.2 | 0.8 | 0.7 | 1.0 | 0.1 | 0.7 | 0.6 |
| Latin America and the Caribbean | 0.8 | 0.6 | 1.0 | 0.8 | 1.1 | 1.0 | 1.6 | 1.2 |
| South America | 0.7 | 0.5 | 1.0 | 0.7 | 1.2 | 1.1 | 2.6 | 1.6 |
| Other Latin America and the Caribbean | 1.2 | 0.8 | 1.1 | 1.0 | 0.9 | 0.7 | 0.6 | 0.7 |
| Asia and the Pacific | 1.1 | 0.2 | 0.6 | 0.6 | 0.9 | 0.2 | 0.6 | 0.6 |
| Asia | 1.1 | 0.2 | 0.6 | 0.6 | 0.9 | 0.2 | 0.6 | 0.6 |
| West Asia | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 |
| Central Asia | .. | .. | .. | .. | 1.7 | 0.3 | 1.3 | 1.1 |
| South, East and South-East Asia | 1.3 | 0.2 | 0.7 | 0.7 | 1.1 | 0.2 | 0.6 | 0.6 |
| South Asia | 0.1 | - | 0.3 | 0.1 | 0.2 | - | 0.3 | 0.2 |
| Pacific | 4.5 | 1.6 | 1.9 | 2.7 | 1.2 | 0.3 | 0.5 | 0.7 |
| Developing Europe | 2.2 | 3.4 | 0.5 | 2.1 | 1.2 | 1.5 | 0.6 | 1.1 |
| **Central and Eastern Europe** | **0.2** | **0.1** | **0.2** | **0.1** | **0.9** | **0.4** | **0.6** | **0.6** |
| *Memorandum: least developed countries* [d] | | | | | | | | |
| LDCs: total | 0.3 | - | 0.6 | 0.3 | 0.6 | 0.1 | 1.0 | 0.6 |
| African LDCs | 0.5 | 0.1 | 0.6 | 0.4 | 1.6 | 0.1 | 1.7 | 1.1 |
| Latin America and the Caribbean LDCs | 0.3 | - | 0.4 | 0.3 | 0.1 | - | 0.2 | 0.1 |
| Asian and Pacific LDCs | 0.1 | - | 0.5 | 0.2 | 0.1 | - | 0.2 | 0.1 |
| Asian LDCs | 0.1 | - | 0.5 | 0.2 | 0.1 | - | 0.2 | 0.1 |
| West Asian LDCs | .. | .. | .. | .. | -1.3 | -0.2 | -0.9 | -0.8 |
| South and South-East Asian LDCs | 0.1 | - | 0.5 | 0.2 | 0.2 | - | 0.5 | 0.2 |
| Pacific LDCs | .. | .. | .. | .. | .. | .. | .. | .. |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, table I.5, p. 43.

[a] The ratio of the region's share of world FDI inflows to the region's share of world GDP.

[b] The ratio of the region's share of world FDI inflows to the region's share of world employment. The data are from the ILO's LABSTA database and the World Bank's *World Development Indicators*, 2001.

[c] The ratio of the region's share of world FDI inflows to the region's share of world exports of foods and non-factor services.

[d] LDCs as defined by the United Nations.

*Note*: The Indexes for some regions are based on incomplete coverage of countries in the region, due to lack of data on one or more variables. Also, the Indexes for Central Asia, Developing Europe and Central and Eastern Europe are not strictly comparable between the two periods because the number of countries included in each differed substantially between the two periods. The increase in the number of countries covered by the Index for developing economies in the second period (from 86 to 100) can cause a moderate upward bias in that grouping's Index in the second period.

that could be expected on the basis of the elements of economic strength covered by the Index. There are others at the bottom, (such as Japan and the Republic of Korea), however, that have strong economic positions overall but have chosen to restrict FDI (at least until fairly recently).

### *The expansion of international production is taking place in a new international setting...*

The rapidly changing international setting is changing the drivers of FDI. While the main traditional factors driving FDI location — large markets, the possession of natural resources and access to low-cost unskilled or semi-skilled labour — remain relevant, they are diminishing in importance, particularly for the most dynamic industries and functions. As trade barriers come down and regional links grow, the significance of many *national* markets also diminishes. Primary industries account for a shrinking share of industrial activity, and natural resources per se play a smaller role in attracting FDI for many countries. The role of cheap "raw" labour is similar: even labour-intensive activities often need to be combined with new technologies and advanced skills. The location of TNC activity instead increasingly reflects three developments: policy liberalization, technical progress and evolving corporate strategies.

Changes in the international *policy environment* have a strong impact on locational decisions. Trade and investment liberalization allows TNCs to specialize more and to search for competitive locations. TNCs have greater freedom to choose locations and the functions they transfer. Between 1991 and 2000, a total of 1,185 regulatory changes were introduced in national FDI regimes, of which 1,121 (95 per cent) were in the direction of creating a more favourable environment for FDI (table 7). During 2000 alone, 69 countries made 150 regulatory changes, of which 147 (98 per cent) were more favourable to foreign investors.

*Technical progress* affects the geography of FDI in many ways. Rapid innovation provides the advantages that propel firms into international production. Thus, innovation-intensive industries tend to be increasingly transnational, and TNCs have to be more innovative to maintain their competitiveness. Innovation also leads to changes in the structure of trade and production, with R&D-intensive activities growing faster than less technology-intensive activities. The increased technology intensity of products reduces the importance of primary

**Table 7. National regulatory changes, 1991-2000**

| Item | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of countries that introduced changes in their investment regimes | 35 | 43 | 57 | 49 | 64 | 65 | 76 | 60 | 63 | 69 |
| Number of regulatory changes of which: | 82 | 79 | 102 | 110 | 112 | 114 | 151 | 145 | 140 | 150 |
| More favourable to FDI [a] | 80 | 79 | 101 | 108 | 106 | 98 | 135 | 136 | 131 | 147 |
| Less favourable to FDI [b] | 2 | - | 1 | 2 | 6 | 16 | 16 | 9 | 9 | 3 |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, box table I.1.1, p. 6.

[a] Including liberalizing changes or changes aimed at strengthening market functioning, as well as increased incentives.

[b] Including changes aimed at increasing control as well as reducing incentives.

and simple low-technology activities in FDI, while raising that of skill-intensive activities. New information and communication technologies intensify competition while allowing firms to manage widely dispersed international operations more efficiently. High-technology activities previously out of reach of developing countries can now be placed there because labour-intensive processes within those activities can be economically separated and managed over long distances.

Many activities in integrated production systems are technology-intensive and dynamic; their location in developing countries can rapidly transform the FDI and competitive landscape there. Moreover, the pervasiveness of technical change means that *all* TNC activities have to use new technologies effectively. Location decisions have to be based on the ability of host countries to provide the complementary skills, infrastructure, suppliers and institutions to operate technologies efficiently and flexibly. Technical progress, thus, forces firms involved in international production to differentiate increasingly between the "haves" and "have-nots" in new FDI-complementing factors when deciding where to undertake different activities.

*Managerial and organizational factors* strengthen the new locational determinants of FDI. A greater focus on core competencies, with flatter hierarchies and stronger emphasis on networking, steers investments towards locations with advanced factors and institutions, and, where relevant, distinct industrial clusters. New organizational methods (aided by new technologies) allow a more efficient management of global operations, encouraging a greater relocation of functions. Intense competition forces firms to specialize in their core business, inducing TNCs to forge external links at various points

along the value chain (from design and innovation to marketing and servicing) and allow other firms (including TNCs) to undertake different functions.

Hence, the changing geography of international production reflects the dynamic interaction of many economic, organizational and policy factors. While many of these factors have long been relevant, their combination today represents new forces influencing TNC location decisions. To cope successfully with globalization and use FDI to their advantage, developing countries must understand these forces. They set the parameters within which policy makers have to act, to attract FDI and to extract the greatest benefits in terms of technology, skills and market access, striking backward linkages and leveraging foreign assets to reach competitive positions in global markets.

### *...and leads to a concentration at the sub-national level as well...*

The growing spread and mobility of TNCs are making local conditions more, not less, important. The increased freedom for factors and functions to move does not mean that international production spreads equally to all locations. Mobile factors only go and "stick" in places where efficient complementary factors exist. Thus, FDI tends to be fairly concentrated geographically within countries, responding to the agglomeration economies that also influence domestic firms. These economies relate to proximity to markets and factors of production, and the availability of specialized skills, innovatory capabilities, suppliers and institutions. Intensifying competition forces firms to specialize more in their core competencies and rely more heavily on links with external partners (suppliers, buyers or even competitors) than in the past. These networking possibilities often induce TNCs to set up operations in close proximity to (competent) clusters of related firms.

*Industrial clusters* are playing an increasing role in economic activity, particularly in technology intensive activity. "Clusters" are concentrations of firms in one or a few industries, benefiting from synergies created by a dense network of competitors, buyers and suppliers. Clusters comprise demanding buyers, specialized suppliers, sophisticated human resources, finance and well-developed support institutions. Such concentrations of resources and capabilities can attract "efficiency-seeking" FDI (and more and more FDI is of this

type). It also helps to attract "asset-seeking" FDI to the more advanced host countries. In their inexorable search for new competitive advantages, TNCs seek "created assets" such as technology and skilled labour across the globe. Clusters of innovative activity (as in Silicon Valley in California, Silicon Fen in Cambridge (United Kingdom), Wireless Valley in Stockholm or Zhong Guancum, a suburb of Beijing) have a distinct advantage in attracting such (high value) FDI.

These shifts in location factors pose important policy challenges for developing countries. Many countries, in particular the poorer and least industrialized ones, risk becoming even more marginal to the dynamics of international production because they cannot meet the new requirements for attracting high quality FDI. Simply opening an economy is no longer enough. There is a need to develop attractive configurations of locational advantages.

Different configurations of advantages attract different corporate functions and industries. In some high-technology industries like electronics, it may be possible to attract final-stage assembly on the basis of cost-efficient semi-skilled labour and efficient export-processing facilities. In other activities, production facilities may require well-developed local supply chains, a pool of skilled labour, close interaction with other firms and knowledge-producing institutions in close proximity. Some back-office activities may require specialized skills (e.g. in accounting). High value functions like R&D or regional headquarters are particularly demanding of advanced skills and institutions.

Investors — domestic and foreign alike — seek to take advantage of dynamic clusters. In joining a cluster, they often add to its strength and dynamism. This, in turn, tends to attract new skills and capital, adding further to the dynamism of the location. Where agglomeration economies are significant, the rest of the country might be of little relevance to the locational decisions of firms. Hence, attracting FDI in these activities depends increasingly on the ability to provide efficient clusters. An international bank's location choice is not so much a choice between the United Kingdom and Germany as between London and Frankfurt.

Just like competitive firms differentiate themselves from their rivals by developing clearly identifiable products with recognizable brand names, some countries, too, can, over time, identify and develop their distinct "investment products", and market them to foreign investors. For example, Bangalore in India has become a

"brand name" for the development of software, with its pool of highly skilled engineers and competitive software companies. Singapore and Hong Kong (China) enjoy a similar status in the area of financial services and regional headquarters in Asia.

### *…which calls for a new generation of investment promotion policies.*

Using and strengthening clusters to attract FDI calls for new approaches, going beyond the first and second generations of investment promotion policies. In the first generation of investment promotion policies, many countries adopt market friendly policies. They liberalize their FDI regimes by reducing barriers to inward FDI, strengthening standards of treatment for foreign investors and giving a greater role to market forces in resource allocation. Virtually all countries — to varying degrees — have undertaken steps in this direction. Some countries, can go a long way in attracting FDI with these steps, if the basic economic determinants for obtaining FDI are right. In the second generation of investment promotion policies, governments go a step further and actively seek to attract FDI by "marketing" their countries. This approach leads to the setting up of national investment promotion agencies. The World Association of Investment Promotion Agencies, established in 1995, now has over 100 members. Again, of course, the success of proactive efforts depends, in the end, on the quality of the basic economic factors in a host country.

The third generation of investment promotion policies takes the enabling framework for FDI and a proactive approach towards attracting FDI as a starting point. It then proceeds to target foreign investors at the level of industries and firms to meet their specific locational needs at the activity and cluster level, in light of a country's developmental priorities. Such a strategy, in turn, is greatly helped if a country can nurture specific clusters that build on the country's competitive advantages, capitalizing on the natural inclination of firms to agglomerate and that eventually acquire a brand name. A critical element of such investment promotion is to improve — and market — particular locations to potential investors in specific activities. Of course, a country's general economic, political and regulatory features also matter, because they affect the efficiency of the clusters within it. But the key to success of such new investment promotion strategies is that they actually address one of the basic economic FDI determinants while understanding the changing location strategies of TNCs.

However, such a targeted approach, especially the development of locational "brand names", is difficult and takes time. It requires fairly sophisticated institutional capacities. Third generation promotion is, nevertheless, growing in practice, as witnessed by the proliferation of sub-national agencies (of which a minimum of 240 exist today) and even municipal investment promotion agencies.

This gives rise to another challenge: the need to coordinate policies across various administrative levels in a country. If that is not done, there is a risk that competition among regions within a country leads to "fiscal wars" and results in waste as far as the welfare of the country as a whole is concerned. It also raises the risk that promotion agencies, if they are unable to coordinate other policy-making bodies in the country, will be unable to deliver on their promises to investors.

Regardless of the level at which FDI is promoted — and regardless of the precise mix of the three basic investment strategies that is being pursued — the competitiveness of the domestic enterprise sector and a pool of skilled people are the key to the "product". Strong local firms attract FDI; the entry of foreign affiliates, in turn, feeds into the competitiveness and dynamism of the domestic enterprise sector. The strongest channel for diffusing skills, knowledge and technology from foreign affiliates is the linkages they strike with local firms and institutions. Such linkages can contribute to the growth of a vibrant domestic enterprise sector, the bedrock of economic development. For developing countries, the formation of backward linkages with foreign affiliates therefore assumes particular importance. The challenge then is how to promote backward linkages — regardless of the type of investment promotion policy a country pursues. This is the topic of Part Two of *WIR01*.

## PROMOTING BACKWARD LINKAGES

### *Backward linkages from foreign affiliates to domestic firms can enhance the benefits from FDI.*

Part One of *WIR01* mapped the locational pattern of the extent to which countries attract FDI. A key factor determining the benefits host countries can derive from FDI are the linkages that foreign affiliates strike with domestically owned firms. Backward linkages from foreign affiliates to domestic firms are important channels through

which intangible and tangible assets can be passed on from the former to the latter. They can contribute to the upgrading of domestic enterprises and embed foreign affiliates more firmly in host economies. Given the role that backward linkages can play in these respects, *WIR01* analyses how host country governments can best promote efficient backward linkages by foreign affiliates. The approach is pragmatic. It draws on practical experience as to what firms have done to forge linkages, and the measures that governments have adopted to encourage linkages and their deepening. An underlying assumption is that, whatever the current level of backward linkages, linkages can be increased or deepened further, with a view towards strengthening the capabilities and competitiveness of domestic firms.

Linkages offer benefits to foreign affiliates and domestic suppliers, as well as to the economy in which they are forged as a whole. For *foreign affiliates*, local procurement can lower production costs in host economies with lower costs and allow greater specialization and flexibility, with better adaptation of technologies and products to local conditions. The presence of technologically advanced suppliers can provide affiliates with access to external technological and skill resources, feeding into their own innovative efforts. The direct effect of linkages on *domestic suppliers* is generally a rise in their output and employment. Linkages can also transmit knowledge and skills between the linked firms. A dense network of linkages can promote production efficiency, productivity growth, technological and managerial capabilities and market diversification for the firms involved. Finally, for a *host economy* as a whole, linkages can stimulate economic activity and, where local inputs substitute for imported ones, benefit the balance of payments. The strengthening of suppliers can in turn lead to spillovers to the rest of the host economy and contribute to a vibrant enterprise sector.

Where, as in developed countries, both buyers and suppliers are technologically strong and capable, knowledge flows run in both directions with a focus mainly on new technologies, products and organizational methods. Where, as in most developing countries, suppliers are relatively weak, the flows are likely to be more one-sided, from foreign affiliates (buyers) to domestic firms. They can also be expected to contain more basic technological and managerial knowledge, in that suppliers are likely to lag further behind international best practice frontiers; for this reason, they can be particularly important.

Of course, not all linkages are equally beneficial for host economies. For example, in highly protected regimes, foreign affiliates may strike considerable linkages without much incentive to invest in the upgrading of suppliers' technological capabilities. Instead, such linkages may foster a supplier base that is unable to survive international competition. Linkages developed in competitive environments and accompanied by efforts to enhance suppliers' capabilities are likely to be technologically more beneficial and dynamic. The objective is not to promote linkages for their own sake, but to do so where they are beneficial to the host economy.

The extent to which domestic firms benefit from linkages with foreign affiliates also depends on the nature of their relationship. The intensity of the interaction between buyers and suppliers is affected by the bargaining position of the two parties. A supplier of relatively simple, standardized, low-technology products and services is typically in a weak bargaining position vis-à-vis its buyer. Such suppliers may be highly vulnerable to market fluctuations, and their linkages with foreign affiliates are unlikely to involve much exchange of information and knowledge. Foreign affiliates only invest resources in building local capabilities when they expect such an effort to yield a positive return.

### *TNCs have a self-interest in forging links with domestic suppliers,…*

Organizational changes are making supply chain management more critical to the competitiveness of firms, including TNCs. On average, a manufacturing firm spends more than half its revenues on purchased inputs. In some industries, such as electronics and automotive, the proportion is even higher. Some firms are contracting out the entire manufacturing process to independent "contract manufacturers", keeping only such functions as R&D, design and marketing. In these cases, supply chain management obviously becomes even more important.

A foreign affiliate — like any other firm — has three options for obtaining inputs in a host country: import them; produce them locally in-house; or procure them from a local (foreign- or domestically owned) supplier. The extent to which foreign affiliates forge linkages with domestic suppliers is determined by the balance of costs and benefits, as well as differences in firm-level perceptions and strategies.

While the costs and benefits reflect a large number of industry-specific factors, the most important one concerns the local availability of qualified suppliers. Foreign affiliates producing primarily for the domestic market generally procure a larger share of inputs locally than export-oriented ones or those that are part of integrated international production systems. In the latter case, cost and quality considerations are particularly stringent, and affiliates tend to be guided by corporate global sourcing strategies. The lack of efficient domestic suppliers is often the key obstacle to the creation of local linkages. In many demanding activities, TNCs therefore actively encourage foreign suppliers to establish local facilities or prefer to produce in-house.

Many TNCs have supplier development programmes in host developing countries. Efforts can include finding suppliers and ensuring efficient supply through technology transfer, training, information sharing and the provision of finance. The objective is usually to expand the number of efficient suppliers, and/or to help existing suppliers improve their capabilities in one or several areas. However, supplier development efforts are typically not extended to all suppliers. Foreign affiliates tend to focus on a limited number of suppliers providing the strategically most important inputs. Where supplier development is undertaken, however, TNCs often offer considerable support to suppliers by transferring technology, training suppliers' staff, providing business-related information and lending financial support. The intensity of knowledge and information exchange in buyer-supplier relationships tends to increase with the level of economic development of host countries, particularly in complex activities, and where technological and managerial gaps with suppliers are not too wide.

### *…but governments can play an important role in promoting linkages...*

Although foreign affiliates have an interest in creating and strengthening local linkages, their willingness to do so can be influenced by government policies addressing different market failures at different levels in the linkage formation process. For example, TNCs may be unaware of the availability of viable suppliers, or they may find it too costly to use them as sources of inputs. In developing countries, policies may be required to compensate for weak financial markets or weak institutions like vocational schools, training institutes, technology support centres, R&D and testing laboratories and the

like. Well-designed government intervention can raise the benefits and reduce the costs of using domestic suppliers.

The role of policy is most significant where there is an "information gap" on the part of both buyers and suppliers about linkage opportunities, a "capability gap" between the requirements of buyers and the supply capacity of suppliers and where the costs and risks for setting up linkages or deepening them can be reduced. The linkage formation process is obviously affected by a host country's overall policy environment, its economic and institutional framework, the availability of human resources, the quality of infrastructure and political and macroeconomic stability. But the most important host country factor is the availability, costs and quality of domestic suppliers. Indeed, in addition to being a key determinant for the formation of efficient linkages, the technological and managerial capabilities of domestic firms also determine to a large extent the ability of a host economy to absorb and benefit from the knowledge that linkages can transfer. Weak capabilities of domestic firms increase the chances that foreign affiliates source the most sophisticated and complex parts and components either internally or from a preferred (foreign-owned) supplier within or outside a host country. For example, domestic firms in Taiwan Province of China and Singapore supply complex inputs to foreign affiliates, but far fewer do so in Malaysia, Thailand or Mexico.

The international environment is evolving, as a result of globalization and liberalization, as well as changes in the international policy framework, including WTO agreements and other international arrangements. Some policy instruments traditionally used to foster linkages are now considered less relevant or are subject to new multilateral rules, such as the WTO Agreement on Trade-related Investment Measures (TRIMs) or the Agreement on Subsidies and Countervailing Measures. For example, local content requirements have been phased out by most countries. At the same time, FDI and trade liberalization, as well as more intense competition for FDI, have reduced the reliance on other investment performance requirements.

Well-targeted incentives to support the creation and deepening of linkages can have a positive impact on linkages. Thought should be given to render this category of development-related subsidies non-actionable (i.e. not open to challenge) under WTO rules. On the other hand, preferential trade arrangements — with rules of origin based on the level of domestic value added or local content — can have important effects on FDI and linkage creation by TNCs in

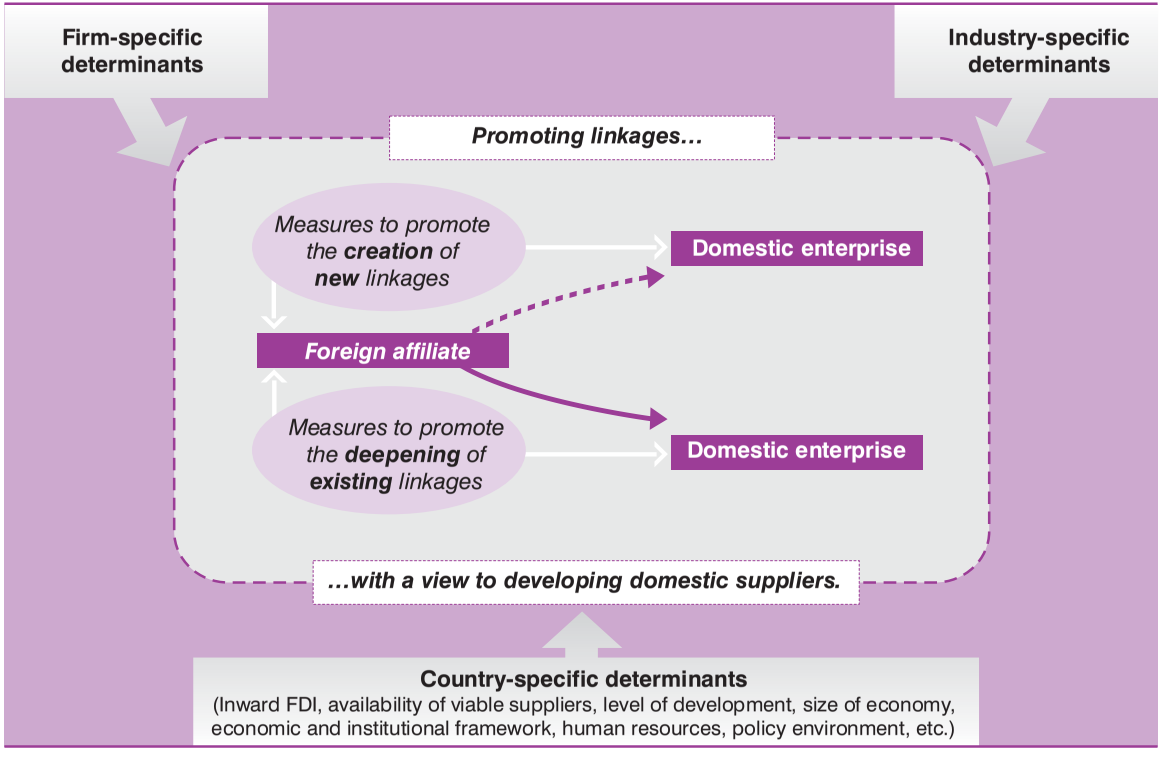
preference-receiving countries. In general, these effects are the more significant, the higher the preferential margin associated with rules of origin and the lower the related administrative costs. Linkage effects of rules of origin, however, also depend on local supply capacity.

This new international setting has, thus, changed the scope for national policy options. There is, however, flexibility within the existing international policy framework, e.g. in the form of extension of transition arrangements and differential treatment of countries at different levels of development. While some agreements are subject to further review, the challenge for policy makers is, therefore, to make use of the options allowed within the current framework, as well as other policy measures that are not subject to multilateral rules to integrate FDI more deeply into their national economies and, in particular, benefit from backward linkages.

In this new policy environment, active policy approaches that work with the market are at a premium. Whereas there is no universally established best practice in linkage promotion policy, important lessons can be drawn from past experience. Linkage promotion policies, like other development policies, are often highly context specific and need to be adapted to the specific circumstances prevailing in each host country (figure 1). They need to be an integral part of broader development strategies, and their success often depends on factors that may not appear in a narrow assessment of linkages policies. Much also depends on how policies are designed, coordinated and implemented in practice.

One approach involves encouraging linkages through various measures to bring domestic suppliers and foreign affiliates together and to strengthen their linkages in the key areas of information, technology, training and finance. This is a broad approach — it basically improves the enabling framework for linkages formation. A review of the experience of host countries yields a long menu of specific measures that can be taken in this respect. Such measures can include, for example, the provision of information and matchmaking to help domestic firms link up with foreign affiliates; encouraging foreign affiliates to participate in programmes aimed at the upgrading of domestic suppliers' technological capabilities; promoting the establishment of supplier associations or clubs; the joint provision of services (especially training); and various schemes to enhance domestic suppliers' access to finance.

Figure 1. Policy focus for the promotion of backward linkages




*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, figure V.1, p. 164.

***…perhaps best in the framework of a special linkage promotion programme.***

Another approach goes further in that it involves the establishment of a specific linkage promotion programme combining a number of the measures just mentioned. This is a proactive approach which is typically focused on a selected number of industries and firms, with a view towards increasing and deepening linkages between foreign affiliates and domestic firms. As with other policies that span a range of productive factors, activities and enterprises, it is advisable for policy makers that choose this approach to "start small" (perhaps with a pilot scheme) and to build policy monitoring, flexibility and learning into the programme. The need for starting small is all the greater when resources are scarce. Moreover, it is essential for any programme to seek close collaboration with the private sector, both foreign affiliates and domestic suppliers, in design and implementation.

Some countries have in fact set up specific linkage programmes involving a combination of different policy measures, and targeting selected industries and firms. Such programmes have been put in place primarily by countries with a large foreign presence and with a (relatively) well-developed base of domestic enterprises. The Czech Republic, Hungary, Ireland, Malaysia, Mexico, Singapore, Thailand and the United Kingdom have all made special efforts of this kind. Some of the programmes are organized at the national level while others have been implemented as regional or local initiatives. Three elements are common to them: the provision of market and business information; matchmaking; and managerial or technical assistance, training and, occasionally, financial support or incentives. Some programmes have also included FDI promotion activities, to attract foreign investors in targeted industries. In each case, sustainable linkages will only be created if both foreign affiliates and domestic firms can benefit from them.

The general features of a special Linkages Promotion Programme are set out below. Such a programme should be seen more as a set of building blocks that countries might "mix and match" according to their specific circumstances, rather than a ready-made prescription that all countries can apply. Clearly, the choice of measures and the way they are combined must reflect the level of development, policy capabilities, resources and objectives of each

country. Even countries at similar levels of development may choose different configurations of policy according to their enterprise and institutional capabilities.

The starting point for an effective linkage programme is a clear vision of how FDI fits into the overall development strategy and, more specifically, a strategy to build production capacity. The vision has to be based on a clear understanding of the strengths and weaknesses of the economy and of the challenges facing it in a globalizing world. A linkage programme should, in particular, address the competitive needs of domestic enterprises and the implications these have for policies, private and public support institutions and support measures (including skills- and technology-upgrading).

## 1. Setting the policy objectives of a linkage programme

Linkage programmes are at the intersection of two subsets of programmes and policies: those geared towards enterprise development (especially SME development) and those related to FDI promotion. The former are desirable in and by themselves, as a vibrant enterprise sector is the bedrock of economic growth and development; in the context of the promotion of linkages, the capabilities of local firms are the single most important determinant of success. FDI promotion, in turn, increasingly focuses not only on the quantity of FDI a country attracts, but also on it quality, including linkage opportunities.

Linkage programmes can have two broad objectives: to increase domestic sourcing by foreign affiliates (i.e. create new backward linkages) and to deepen and upgrade existing linkages — both with the ultimate aim of upgrading the capacities of local suppliers to produce higher value-added goods in a competitive environment. These objectives are interdependent: deepening may spin off new linkages, and spreading linkages may change their quality and depth.

A government's objectives should be shared with all principal stakeholders, as their active participation is needed for the success of any programme. Active dialogue and consultations are advisable right from the very beginning. This requires first and foremost:

- Initiating a public-private sector dialogue (perhaps in a "Linkage Forum") with stakeholders, including foreign affiliates (and especially their procurement officers),

supplier industry associations, chambers of commerce, banks, service providers, trade unions and government agencies (such as investment promotion agencies, development corporations, industrial zone authorities, industry development agencies).

- Disseminating "best practice" experiences based on companies' programmes and actions and experiences of government programmes and measures in other countries.

## 2. Identifying the targets of the programme

Governments, in cooperation with private sector institutions, need to define the targets of a programme in terms of the industries and, within them, the foreign affiliates and domestic suppliers to be involved.

- **Industries** can be selected according to:
  - the sectoral development priorities of a country, taking into account the extent of the presence of foreign affiliates and capable domestic firms;
  - the degree of match between local capabilities and the input requirements of foreign affiliates;
  - the nature of international production systems within the industry selected, which partly determines the degree of autonomy of foreign affiliates with respect to local sourcing (foreign affiliates that are part of integrated international production systems are likely to be more dependent on global corporate sourcing policies);
  - the technology content of the activity and the scope for moving up the value-added chain.

Such an analysis is essential for any linkage strategy — without it, a government cannot decide how to allocate scarce resources. It also has to take into account trends in the growth and spread of international production networks and their implications for domestic producers, drawing, among others, on continuous dialogue with key stakeholders.

- **Foreign affiliates** can be selected according to their willingness and potential to establish beneficial linkages. Beyond that — and as part of their FDI promotion — governments can target

TNCs that are particularly interested in developing strong supply links with domestic enterprises. The linkage programme may even support local managers of foreign affiliates in lobbying their head offices to allow greater autonomy in sourcing. In-depth consultations with foreign affiliates can then identify their specific linkage needs.

- **Suppliers** can be selected on the basis of their commitment and capabilities (or potential capabilities) to meet the needs of foreign affiliates. "Commitment" can be tested through certain self-improvement requirements, with some external guidance and minimal support during the initial stage of selection. Other criteria that can be used involve technological benchmarking and skills audits. Specific criteria that have been used include the size of the firm, production capabilities, ISO certification and age. However, one of the most important elements to take into account is the commitment of key managers (and especially the chief executive officer) to the idea of continuous improvement and their willingness to upgrade their operations to meet international standards required for successful linkages. The active cooperation of chambers of commerce, business associations, support centres, service providers and other private sector institutions is very important here, as is the cooperation of SME development programmes, be they local or international. (UNCTAD's EMPRETEC programme is an example of the latter.) "Linkage Workshops" for representatives of foreign affiliates and local enterprises could provide the mechanism through which eventual programme participants can be narrowed down. Subsequent "Business Clinics" for Linkage Workshop participants could then allow for one-to-one consultations for pairs of linkage partners. Firms prepared to go further could thus undertake operational and management audits to determine the strengths and weaknesses of domestic partners.

## 3. Identifying specific measures to be adopted

Governments need to be aware of actions already taken by foreign affiliates and domestic firms (table 8). Some of these may need to be encouraged and supported. Governments can also act as facilitators and catalysts and ensure that private institutions have the incentives and resources needed. They can be particularly proactive in the following key areas of linkage formation: information and matchmaking; technology upgrading; training; access to finance (table 9).

**Table 8. Measures by foreign affiliates to create and deepen linkages**

| Finding new local suppliers | Transferring technology | Providing training | Sharing information | Giving financial support |
|---|---|---|---|---|
| • Making public announcements about the need for suppliers and the requirements that firms must meet on cost and quality.<br>• Supplier visits and quality audits. | Product technology:<br>• Provision of proprietary product know-how.<br>• Transfer of product designs and technical specifications.<br>• Technical consultations with suppliers to help them master new technologies.<br>• Feedback on product performance to help suppliers improve performance.<br>• Collaboration in R&D.<br><br>Process technology:<br>• Provision of machinery and equipment to suppliers.<br>• Technical support on production planning, quality management, inspection and testing.<br>• Visits to supplier facilities to advise on lay-out, operations and quality.<br>• Formation of "cooperation clubs" to interact with suppliers on technical issues.<br>• Assistance to employees to set up their own firms.<br><br>Organization and managerial know-how assistance:<br>• Assistance with inventory management (and the use of just-in-time and other systems).<br>• Assistance in implementing quality assurance systems.<br>• Introduction to new practices such as network management or financial, purchase and marketing techniques. | • Training courses in affiliates for suppliers' personnel.<br>• Offering access to internal training programmes in affiliates or abroad.<br>• Sending teams of experts to suppliers to provide in-plant training.<br>• Promotion of cooperative learning among suppliers. | • Informal exchanges of information on business plans and future requirements.<br>• Provision of annual purchase orders.<br>• Provision of market information.<br>• Encouraging suppliers to join business associations. | • Providing special or avourable pricing for suppliers' products.<br>• Helping suppliers' cash flow through advance purchases and payments, prompt settlements and provision of foreign exchange.<br>• Long-term financial assistance through the provision of capital; guarantees for bank loans; the establishment of funds for working capital or other suppliers needs; financing; infrastructure sharing of the costs of specific projects with suppliers; and leasing. |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, table V.1.2, p. 214.

**Table 9. Specific government measures to create and deepen linkages**

| Information and Matchmaking | Technology upgrading | Training | Finance |
|---|---|---|---|
| *Provision of information:*<br>• Handouts and brochures.<br>• Constantly updated electronic databases.<br>• Linkage information seminars, exhibitions and missions.<br><br>*Matchmaking*:<br>• Acting as honest broker in negotiations.<br>• Supporting supplier audits.<br>• Providing advice on subcontracting deals<br>• Sponsoring fairs, exhibitions, missions and conferences.<br>• Organizing meetings, visits to plants. | • Technology transfer as a performance requirement.<br>• Partnership with foreign affiliates.<br>• Incentives for R&D cooperation.<br>• Home-country incentives. | • Promoting supplier associations.<br>• Collaboration with the private sector for one-stop service, including training.<br>• Support for private sector training programmes.<br>• Collaboration with international agencies. | • Legal protection against unfair contractual arrangements and other unfair business practices.<br>• Encouraging a shortening of payment delays through tax measures.<br>• Limiting payment delays through legislation.<br>• Guaranteeing the recovery of delayed payments.<br>• Indirect financing to suppliers channeled through their buyers.<br>• Tax credits or tax reductions and other fiscal benefits to firms providing long-term funds to suppliers.<br>• Co-financing development programmes with the private sector.<br>• Direct role in providing finance to local firms.<br>• Mandatory transfer of funds from foreign affiliates to local suppliers.<br>Home country measures<br>• Two-step loans.<br>• Using ODA. |

*Source*: UNCTAD, *World Investment Report 2001: Promoting Linkages*, table VI.1, p. 210.

The range of measures that can be taken in each of these areas is wide. Their principal purpose is to encourage and support foreign affiliates and domestic firms to forge and deepen linkages. They are outlined — individually and as contained in programmes — in the main body of *WIR01*. They constitute a menu from which governments can mix and match. Specific choices depend on the results of earlier consultations with existing support institutions and relevant programmes in the public and private sectors, as well as with key stakeholders on the specific needs of an industry or set of firms. The results of the Linkage Forums, Linkage Workshops and Business Clinics mentioned earlier and the identification of promising domestic firms are also of help here. Governments could also encourage participating foreign affiliates to agree to a coaching and mentoring arrangement with promising local firms.

These measures can be underpinned by efforts to strengthen the negotiating position of local firms vis-à-vis foreign affiliates; for instance, by guidelines or making model contracts available. Special informal mechanisms can also help resolve problems and disputes and contribute to more lasting linkage relationships.

The result should be a clear and feasible programme of action. Naturally, at each step of the implementation of a programme, the government needs to have a clear idea about the costs involved and the resources available.

### 4. Setting up an appropriate institutional and administrative framework to implement and monitor the programme

Governments can choose from a number of options in designing the institutional framework for a linkage programme:

- Make the programme a distinct part of an existing body or even set up a special national-level linkage programme under an independent body to act as the focal point for all relevant activities by different departments and institutions.

- Leave the design and implementation of the linkage programme to local authorities, with central advice, encouragement and support from the central government. This approach might be preferable in large countries or where resources for linkage programmes are limited, or where regions have distinct combinations of locational advantages to offer.

- Involve the private sector as the main executing agency for the linkage programme. Suppliers, affiliates or their associations may set up such a body. The role of the government would be to act as catalyst and fulfil regulatory and information functions.

The size of a programme depends on the objectives sought and the resources available. Some programmes benefit from external funding through financial assistance provided by donor countries. In the longer term, however, the financial sustainability of linkage programmes if directly run by governments, requires sufficient government funding support. Moreover, cost sharing by participating firms (both buyers and suppliers) is desirable, not only for funding purposes but also for assuring self-commitments of the participants. This is feasible, especially when a programme has demonstrated its usefulness and is recognized for its services. Needless to say, to create trust and credibility among enterprises, a programme must be staffed by professionals with the appropriate private sector-related skills and background.

Linkage programmes can only work if they are networking effectively with efficient intermediate institutions providing support in skill building, technology development, logistics and finance. These include standards and metrology institutes, testing laboratories, R&D centres and other technical extension services, productivity and manager training centres and financial institutions. These can be public or private. It is also important that linkage programmes work closely with relevant private associations — chambers of commerce and industry, manufacturers' associations, investor associations and so on. Trade unions and various interest groups are other important stakeholders.

Finally, it is important to have a monitoring system in place to evaluate the success of a programme. Often, in a learning-by-doing process, a programme needs to be adjusted and refined as experiences accumulate and situations change. The system could include benchmarks and surveys of users. Criteria could include the following:

- Outreach: the number of companies included in the programme over time.

- Impact: the impact of the programme can be judged by such indicators as the number of suppliers, linked up with foreign affiliates over time; the value of deals and changes in these

over time; the share of domestic suppliers in the procurement by foreign affiliates; the extent to which R&D activities are being undertaken by domestic suppliers over time (including those resulting in patents); changes in export volumes; the improvements in productivity or the value added at the firm or industry level; and whether a local supplier establishes itself abroad.

- Cost effectiveness: the cost of the programme in light of the results achieved and the benefits obtained as defined by the objectives laid out at the beginning of the programme.

* * * * *

It is worth repeating that linkage programmes build on the mutual self-interests of foreign affiliates and domestic firms. Linkages are a stepping stone towards strengthening the competitiveness of domestic firms, giving them a foothold in international production networks and embedding foreign affiliates fully in host economies. At the same time, linkage programmes should be seen as part of a broader set of FDI and SME policies. As networks of viable suppliers often prosper in clusters of firms, attention needs to be given to the development of such clusters, particularly for knowledge-intensive industries and activities. The third generation of FDI promotion policy — targeting foreign investors at the level of industries and firms and using clusters to attract FDI (and, in turn, strengthening clusters through it) — has a role to play here. In fact, the more linkage promotion policies that go hand-in-hand with SME development and targeted FDI promotion policies, the more they are likely to be successful.

# BOOK REVIEWS

## *Global Capitalism at Bay?*

John H. Dunning

(London and New York: Routledge, 2001), 379 pages

John H. Dunning is the greatest living scholar in the field of international business. Each year fellow scholars quote his research in their new publications, to the tune of over 100 citations a year, far ahead of all other scholars in the field. In addition to the widespread influence of his scholarship, Dunning has helped advance the field of international business by serving as the leading academic advisor to the United Nations Centre on Transnational Corporations (later on transferred to UNCTAD) for the past quarter century. His latest book lives up to the high standards that he sets for himself and others in the international business field.

Over the past 40 years, another leading academic in the field was Raymond Vernon. His most widely read book was *Sovereignty at Bay* (Vernon, 1971). Dunning pays tribute to Vernon by paraphrasing the title of his book. For Dunning,"*it is nothing less than our contemporary capitalist system – characterized by the ever closer economic interdependence between sovereign nation states, fuelled by a series of dramatic innovations, and by a variety of market friendly government policies – which is 'at bay'*"(p. xi). This is a good title, and Dunning can pay no higher compliment to Vernon than to continue to set high analytical standards for research in international business, as all the essays in this book demonstrate.

The book offers a set of 11 essays, the majority published in academic journals and books over the 1997-2000 period. They are right up to date. In particular, the first seven papers were all published in the past three years and reflect Dunning's latest thinking. Two chapters contain rich empirical tables (chapters 7 and 8), while the remainder is theoretical and/or public policy oriented. Several of the early theoretical chapters are masterpieces of synthesis and insight. They deserve to be read and used as professional building blocks for future theoretical and empirical research by all serious scholars in the field of international business.

By far the best is chapter 3 on "The eclectic paradigm as an envelope for economic and business theories of MNE activity". Somewhat unfortunately this was published in *International Business Review* (Dunning, 2000), a well meaning and high quality journal, but one with a rather limited circulation. This brilliant paper was in some danger of being neglected until being reproduced in this book. Basically, this is the best synthesis of theories of foreign direct investment (FDI) ever written. It even surpasses his excellent synthetic work on the eclectic paradigm in his earlier books. If busy students read nothing else of Dunning, they should read this chapter.

As is well known, Dunning first developed the eclectic paradigm in 1977 as an overarching explanation of FDI or the equivalent term, international production (i.e. production financed by FDI). Over the intervening period, he has refined and extended the eclectic paradigm to make it include asset-seeking FDI (in addition to the market–seeking, resource–seeking and efficiency seeking types) and to incorporate fully dynamic elements. The eclectic paradigm also incorporates the resource-based view, the knowledge enhancing theories of e.g. Bruce Kogut and Ivo Zander and the public policy literature on FDI.

Dunning's singular contribution and key theoretical insight is to group all FDI literature into three sub-paradigms. These are the well-known (i) ownership-specific advantages — the O of the triumvirate (ii) location-specific factors — the L variable and (iii) internalization theory – the I variable.

Dunning makes a convincing case in demonstrating that the eclectic paradigm is an envelope of explanation of "*a number of different economic and business theories*" (p. 85). Indeed, all published papers on FDI theory and performance are beautifully encompassed by the eclectic paradigm. The three tables summarizing all important contributions to the FDI literature over the last 35 years need to be fully understood by all researchers and students of international business. These are theories explaining the O advantage (pp. 90-92); theories explaining the L advantage (pp. 95-97); and theories explaining the I advantage (pp. 102-103). Taken together, these three tables, along with the accompanying text, offer the best synthesis of international business literature ever written.

Within the OLI paradigm, I have always found it useful to link together O and I as firm-specific advantage and the keep the L as

a country-specific advantages. This leads to my matrix of firm-specific and country-specific (FSA/CSA) advantages. However, in doing so, it is very important for other researchers to recognize that the FSA/CSA approach is fully compatible — indeed identical — with Dunning's eclectic paradigm. This reviewer agrees 100 per cent with Dunning, in that he endorses the views of Peter J. Buckley and Mark C. Casson that these "*paradigmatic and model building theoretic structures to understanding international business activity are complementary rather than alternative scientific methodologies*" (footnote 9, p. 106). It is also fully acceptable that the "*eclectic paradigm is a systemic framework which provides a set of general assumptions and boundary criteria in which operationally testable theories, germane to FDI and MNE theory, can be comfortably accommodated*" (*idem*).

Another strength of this particular book is its focus on geography — the L factor in the OLI eclectic paradigm. Of particular interest are chapters 4 on "Location and the MNE: a neglected factor?" (previously published in the *Journal of International Business Studies* (Dunning, 1998)), and the five chapters in part III on "Regions and globalization". Within part III, chapter 8 deals with FDI in Asia and chapter 9 with FDI in the European Union. What is of the highest quality here is Dunning's ability, again, to synthesize, tying relevant literature from geography, economics and management into the core FDI literature itself. For example, he uses the "knowledge as a resource asset" literature from strategic management to explain clusters and "sticky" places. Dunning states that: "*Clustering is … likely to be strongly activity specific; and to be most marked where the critical decision takers in firms need to be in close physical proximity to exchange, or share, tacit knowledge*" (p. 195).

It always amazes the reader how Dunning could manage to produce his masterly syntheses; no other single scholar has ever been able to do similar justice to the huge literature on FDI. This reviewer discovered the reason when he visited Dunning's house. In his study, there were copies of hundreds of international business books and virtually every article on FDI theory ever written. The authors send their manuscripts and offprints to Dunning; he reads the *Journal of International Business Studies* and other key international business journals, as well as books from the "cognate" disciplines of economics, management, history and politics; he referees papers and book proposals. All this work is summarized, placed and synthesized within the literature of international business. For 40 years, Dunning has read and reinterpreted every single significant publication in the field

— and this book, like his others, provides a state-of-the-art review and integration of the literature. If you are not cited by Dunning, you are not a relevant player in the field. And yet, Dunning has often been the first to recognize and integrate the work of younger scholars, leading to development and intellectual renewal of the field of international business. For a senior scholar, Dunning is young at heart.

He is also a gentleman. How else to explain chapter 2, which is called "The Christian response to global capitalism"? This was prepared for a special session of the 1998 Annual Meeting of the European Academy of International Business in Jerusalem, at which "*Similar talks were given by Jewish and Moslem scholars*" (p. 75). This paper is a model of respect and attention to the viewpoints of others, complete with a deep belief that global market-based capitalism is a moral imperative for economic development, social justice and personal freedom. The "kernel" of Dunning's argument is that democratic capitalism is "*dependent on its being grounded in a strong and generally acceptable moral foundation*" (p. 58). Dunning has done more than any other scholar to build the field of international business on similarly strong moral and theoretical foundations.

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## References

Dunning, John H. (1998). "Location and the multinational enterprise: a neglected factor?", *Journal of International Business Studies*, 29 (1), pp. 45-66.

Dunning, John H. (2000). "The eclectic paradigm as an envelope for economic and business theories of MNE activity", *International Business Review*, 9 (2), pp. 163-190.

Vernon, Raymond (1971). *Sovereignty at Bay: The Multinational Spread of U.S. Enterprises* (New York: Basic Books).

## *Global Economic Involvement: A Synthesis of Modern International Economics*

H. Peter Gray

(Copenhagen: Copenhagen Business School Press, 1999), 225 pages

In *Global Economic Involvement*, H. Peter Gray sums up what he has developed over 35 years of fruitful and prolific research on major issues in modern international economics. As he states already in the preface, it is the inadequacy of formal models and the lack of dynamic analysis that chagrined him most in economic theory. In contrast to the standard trade theory, Gray develops in his book a paradigm of *International Economic Involvement* (IEI). IEI covers all key aspects of international economic activities: the role of knowledge capital, foreign direct investment (FDI) and intra-firm trade; the important and growing role of knowledge services; the role of financial factors (exchange rates); and the role of the government as a competitiveness-enhancing institution through providing infrastructure.

The book is organized into three parts. In the first part, the author develops the principal features of the IEI paradigm: the characteristics of Schumpeterian goods (S-goods) and services (S-services), the dynamic aspects of international involvement and the role of transnational corporations (TNCs) and their intra-firm trade. The second part focuses on the role of the government, whilst the third part explores some specific issues in the IEI paradigm and sums up the main findings.

Central to the IEI paradigm are the S-goods and S-services.[1] Gray argues that:

> "For a study of international economic involvement, competitiveness needs to be defined at the level of S-good industries" (p. 71).

The main feature of S-goods is the importance of private, proprietary technologies and created assets. Gray maintains that S-goods are

[1] The idea of S-goods traces back to Hirsch (1976).

becoming the most important determinant of competitiveness at the micro- as well as at the meso- and macro-levels.

The categorization of the distinctiveness of S-goods is referred to as the CARP-model. CARP is the abbreviation for the variables *capacity* of the firm, its consumer- or user-appealing *accoutrements*, the *reliability* of goods and the variability of *prices* to changes in the mark-up. Schumpeterian entrepreneurs drive the production and development of S-goods. At this stage, Gray introduces the dynamic element of production. Since the development of S-goods depends to a large degree on the firm's former and recent experience, the development of S-goods involves the possibility of cumulative causality in both directions. If a vicious cycle ensues, firms are forced out of competition. Conversely, a virtuous cycle will stimulate a firm's growth and increase its market shares. S-goods are by definition linked to the existence of TNCs, which are the main creators of knowledge capital and knowledge-intensive goods. The linkages between S-goods and TNCs are crucial for the development of the IEI paradigm since it is the TNCs that determine the speed of dynamic development at a global level. TNCs themselves are also the main drivers of intra-firm trade.

The relationship between trade and FDI became one of the predominant features of g*lobalization* (see also Gray 1992, 1996). A large body of literature has explored this issue (for an overview, see Markusen, 1995). In addition to S-goods, Gray analyzes S-services in his book. The latter are professional services that are transferable through communications equipment or are temporarily embodied in a tangible good. The trade of S-goods and S-services is characterized by major marketing and distribution efforts. This dimension brings TNCs to the forefront of the analysis. The international mobility of factors of production will improve export efficiency within and among countries. John H. Dunning (1993) calls this particular feature of TNCs the "advantage of common governance", which provides them lower average costs thanks to economies of scale at the firm level.

In the second part of the book, Gray analyzes the role of governments. In this part he emphasizes:

> "*the crucial clash of interests in a democracy between the short-run interests of the electorate and the long-term needs of good economic policy (both domestic and international)*" (p. 154).

Gray develops the concept of "net tax burden", which is defined as the ratio of the net costs of government to value added. The numerator consists of a large number of important costs (ecological and safety restrictions) while the denominator includes a wide range of benefits (revenues, educated labour force, infrastructure, benefits of social programs, efficiency through the creation of certain institutions etc.).

The final part of the book relates three empirical studies to the IEI paradigm. Two of these studies (Fagerberg, 1988; Amendola, Dosi and Papagni, 1993) are used to support the importance of S-goods whilst the third one addresses the implications of social structures for competitiveness (Milberg 1998).

To conclude, Gray provides a paradigm that has been developed over a long period of his academic life. As Gray quotes Luigi Pasinetti (1994), the flavour of paradigmatic analysis is "*to look for fundamentals*" and "*to single out for consideration the variables to be the most important*" (p. 36). That is exactly what Gray is doing convincingly throughout the book. The book offers a comprehensive summary of Gray's enormous and prolific research, which includes many exciting and important topics of globalization. Therefore, it is an interesting and stimulating book for everyone who is interested into the complexity of economics in a non-technical way. One main advantage of this stimulating book is that it is written not only for economists but also for both practitioners and policy makers. The book certainly contributes largely to further discussions.

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## References

Amendola, Giovanni, Giovanni Dosi and Erasmo Papagni (1993). "The dynamics of international competitiveness", *Weltwirtschaftliches Archiv*, 129 (4), pp. 451-470.

Dunning, John (1993). *Multinational Enterprises and the Global Economy* (Wokingham: Addison-Wesley).

Fagerberg, Jan (1988). "International competitiveness", *The Economic Journal*, 98, pp. 355-374.

Gray, H. Peter (1992). "The interface between the theories of international trade and international production", in Peter J. Buckley and Mark C. Casson, eds., *Multinational Enterprise and International Direct Investment: Essays in Honour of John H. Dunning* (Cheltenham: Edward Elgar), pp. 41-53.

Gray, H. Peter (1996). "The eclectic paradigm: the next generation", *Transnational Corporations*, 5 (2), pp. 51-66.

Hirsch, Seev (1976). "An international trade and investment theory of the firm", *Oxford Economic Papers*, 28, pp. 258-270.

Markusen, James R. (1995). "The boundaries of multinational enterprises and the theory of international trade", *The Journal of Economic Perspectives*, 9 (2), pp. 169-189.

Milberg, William S. (1998). "Technological change, social policy and international competitiveness", CEPA Working Papers No.7 (New York: New York School for Social Research), mimeo.

Pasinetti, Luigi L. (1974). *Growth and Income Distribution: Essays in Economic Theory* (London: Cambridge University Press).

## *Investimentos Externos no Mercosul*

Daniel Chudnovsky, editor

(Campinas, São Paulo: Papirus Editora, 1999), 352 pages

Foreign enterprises have had a strong presence in Latin America and the region has historically had a high degree of integration into the world economy. From the mid-1970s to 1981, the region witnessed a strong inflow of foreign direct investment (FDI). During the 1980s, when Latin American economies suffered the debt crisis, FDI stayed at low levels and showed no clear trend. After 1991, in an era of increasing globalization, net flows of FDI increased fast again (from an annual average of $11 billion in 1991-1993 to $70 billion in 1998-1999). The downturn of the world economy and the serious domestic problems in many Latin American countries in 2000-2001 have resulted in a reduction of FDI in Latin America. Preliminary data for 2000 show a net flow of $57 billion, that is, $20 billion less than in the previous year. Brazil, Mexico and Argentina account for approximately three-fourths of FDI in the region.

The book deals with FDI in the countries that are members of the Common Market of the South (Mercosur). The book is a useful set of three country studies, besides the introductory chapter that presents an overview of the key issues and a summary of the main results. Most specifically, the chapters analyze the strategies of transnational corporations (TNCs) and the determinants of FDI in Brazil, Argentina and Uruguay during the 1990s. Most of the empirical data do not go beyond 1996 or 1997.

According to the data published in the *World Investment Report 2000*, the share of the member countries of Mercosur in world FDI flows increased from 2 per cent in 1988-1993 to 6 per cent in 1997-1999. Several factors explain this increase. Market-seeking strategies have been predominant in Argentina and Brazil. With respect to Uruguay, market-seeking strategies have only had a major influence on FDI in services. It is worth noting that privatization processes played a key role in attracting FDI in Argentina and Brazil. The acquisition of formerly State-owned enterprises (at very low prices, in several cases) has offered excellent business opportunities for foreign investors. Additionally, during the 1990s, changes in global competition, as well as market openness in the context of liberalization policies brought about efficiency-seeking firms, too, to Mercosur countries.

The chapter by Mariano F. Laplane and Fernando Sarti on Brazil analyzes FDI inflows in the 1990, including their sectoral distribution and countries of origin. Brazil is a remarkable case of an economy that witnessed an extraordinary increase of foreign presence in a very short time period. The high and increasing ratios of FDI to total domestic investment and FDI to current account deficit, especially after 1994, are witnesses of the growing importance of FDI in the Brazilian economy. The share of TNCs in the value of production in the Brazilian economy was estimated to increase from 13 per cent in 1995 to 25 per cent in 1999, mostly due to privatization and mergers and acquisitions in services. Greenfield manufacturing investments have played a less prominent role.

Laplane and Sarti focus their analysis on FDI in the manufacturing sector. The research confirms a well-known fact: the main determinants of FDI in Brazilian manufacturing are the size and the potential growth of the domestic market. Of course, market-seeking firms tend to be followed by efficiency-seeking ones in countries like Brazil, where TNCs have had a historically strong presence and the Government has recently implemented trade liberalization policies. The relative importance of each strategy of investment varies according to industries and enterprises. The creation of Mercosur in 1991 and its further development played a major role as a determinant of FDI only in the motor vehicles and parts and components industries.

With respect to the impact of TNCs in Brazil, the authors are skeptical. The balance-of-payments effect of foreign firms in manufacturing is, to a large extent, influenced by efficiency-seeking strategies that stem from the recent liberalization of the Brazilian economy. TNCs have also showed a revealed preference for mergers and acquisitions. Greenfield investments have accounted for a small share of total FDI. With respect to the high ratio of FDI to total domestic investment, it is worth noting that the rate of investment in the Brazilian economy was very low during the 1990s. In the context of high interest rates (real average interest rates of approximately 20 per cent) and unstable demand, the rate of gross fixed investment remained at low levels during the 1990s (around 19 per cent since 1995). The technological and spillover effects, too, seem to have been small. With the exception of some domestic economic groups directly participating in the privatization process, the size of Brazilian private firms and groups has been generally shrinking.

The external vulnerability of the Brazilian economy has resulted in instability and crisis. On the one hand, the privatization

process has been driven by the structural problem of the balance of payments, and hence has created good opportunities for foreign investors (privatization, mergers and acquisitions of local private firms at low prices). On the other hand, the external vulnerability has reduced the marginal efficiency of capital. No wonder the Brazilian economy has performed poorly since 1995. (The average annual real GDP growth rate was 2.5 per cent in 1995-2001, i.e. an annual GDP per capita growth rate of 0.9 per cent.) Economic, social, political and institutional problems have been accumulated since 1995, resulting in an increasing risk of a serious institutional crisis, especially after the external shocks of 1997-1998.

Increasing external vulnerability is also a key feature of Argentina. In this regard, FDI inflows have helped to finance the balance-of-payments deficits of the Argentina economy. FDI also played a key role in the privatization process in Argentina. The data show that privatization accounted for 40 per cent of FDI in 1990-1998. This chapter by Fernando Porta also shows that domestic market has been a key determinant of FDI. Market-seeking strategies have been predominant to foreign firms both already established in Argentina and newcomers. Given the favourable supply of external financing from 1991 to 1997, the Argentine economy was able to have relatively high rates of GDP growth, together with an extraordinary increase in imports.

Efficiency-seeking strategies have also contributed to the increase of FDI in the country, so that affiliates of TNCs could face increasing competition in the Argentinean market. The research by Porta comes to the conclusion that FDI contributed to upgrade goods and services in Argentina through better quality, greater variety, new processes, new marketing, organizational and managerial methods, and lower prices. However, foreign firms do not seem to have had a significant contribution to upgrading the trade pattern of Argentina. Moreover, as far as technology transfer is concerned, the evidence shows rather weak spillover effects. There are also important differences across industries. The impact of FDI is the strongest in the automotive industry that, in the context of the creation of Mercosur, has been regulated through a special agreement among the member countries of this regional bloc.

Porta also calls attention to the high social cost of the industrial restructuring process in Argentina, in which foreign firms played a major role. The destruction and disappearance of local firms have inhibited externalities. Besides, the lack of industrial and technology policies has resulted in a lower benefit/cost ratio. In sum, Porta

concludes that not only the contribution of FDI to capital accumulation, technological innovation and the upgrading of trade patterns have been rather small but also FDI inflows have been associated with an increasing concentration and centralization of capital in Argentina. Moreover, the increasing external liabilities of Argentina have given rise to greater external vulnerability. In this regard, the servicing of the external debt and the stock of foreign capital has become a mounting impediment to Argentina's development. There is no doubt that the balance-of-payments constraint increased after the latest wave of FDI in Argentina in the 1990s.

The analysis of FDI in Uruguay carried out by Rosario Domingo and Tabaré Vera shows a weak link between FDI inflows and the creation of Mercosur. Moreover, FDI in manufacturing has been concentrated in a small number of products. Trade liberalization and the creation of Mercosur have attracted efficiency-seeking FDI in Uruguay. TNCs, servicing foreign markets, regional and global alike, mostly in agribusiness, have achieved increasing efficiency. These developments prove that resource-seeking strategies have played a greater role in Uruguay than in Argentina and Brazil. Differences in domestic market size explain the relative importance of strategies of TNCs in Mercosur countries. The absence of a privatization process in Uruguay is also an important factor in explaining the less extraordinary FDI inflows in this country in comparison with Argentina and Brazil.

The most important contribution of the book is showing that the significant FDI inflows in Mercosur countries, mostly Argentina and Brazil, have aggravated external vulnerability. Balance-of-payments constraints have become greater as a result of growing external liabilities. These adverse developments are due not only to the lack of industrial and technological policies, but also to the absence of policies and performance criteria to be applied to foreign firms.

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## *Industrial Technology Development in Malaysia: Industry and Firm Studies*

Jomo K. S., Greg Felker and Rajah Rasiah, editors

(London and New York: Routledge, 1999), xiii+399 pages

The development of Malaysia's technological-industrial base since the early 1970s has been no less phenomenal than the industrial transformation and technological catch-up achieved by the Republic of Korea, Taiwan Province of China, Hong Kong (China) and Singapore. Yet, its experience has been less well documented, probably due to the fact that the process started somewhat later than in those first-tier newly industrializing economies (NIEs). The book is one of a set of two companion volumes designed to fill this gap. The focus of the volume reviewed here is on the role played by industry, the critical agent for the absorption, implementation and creation of innovations. In the companion volume, *Technology, Competitiveness and the State*, the institutional setting and its role in shaping industrial-technological upgrading take centre stage.

The book's analytical point of departure is an evolutionary approach to technical change, in which technological progress is viewed as an incremental and cumulative capacity-building process that occurs through sustained investment in the absorption and application of new knowledge and skills. Different aspects of that process are unbundled in 13 industry- and firm-level studies based on fieldwork conducted in the early 1990s. Some chapters focus on unravelling the technological dynamics, bottlenecks and competitiveness of a specific industry. Others combine an industry-focus with one or more thematic themes, including the role played by transnational corporations (TNCs) in technology transfer and local technological upgrading through training, investment in technological deepening and linkage formation with local firms; firm-level managerial strategies and their effect on technological learning; the technological positioning of Malaysian affiliates in global TNC networks; technology choice; government-business relations and rent-seeking; the role of trust in joint-venture collaborations; and effects of government policies. The main focus of the book is on electronics and automotive production, two industries that exhibit contrasting

development patterns. Electronics constitutes Malaysia's leading industry. It comprises 60 per cent of the country's exports and 42 per cent of its GDP. From its early years, its development has been dominated by leading TNCs from the United States, Europe and Japan. In contrast, automobile manufacturing is a typical result of an import-substitution strategy built around the nurturing of a home-grown firm.

It is hard to distil clear overall findings from this book relating to the extent and depth of technological progress achieved so far, since the chapters differ substantially in their assessment. One problem is that individual writers differ so much in terms of their sampling and technology-assessment methodologies that the results of their work are not readily comparable except in a very broad manner. Some of the studies also suffer from small and/or heterogeneous samples, and many are highly qualitative. All these factors make it difficult to judge the validity of the conclusions drawn.

The tentative picture about the electronics industry that emerges is one in which long-term basic research and development (R&D) is still a small proportion of total domestic technological activity, with the exception of a few highly advanced foreign companies. Still, as Mohd Nazari Ismail shows in his chapter about the role of TNCs, many foreign affiliates have acquired a considerable technological capability base for efficient manufacturing and for short-term applied development work, especially relating to process improvements and organizational innovations that are important for achieving enhanced manufacturing competitiveness. There are some examples of these activities also leading to new product designs, prototyping and modifications to capital goods. In some cases, reverse technology flows from affiliates to their TNC network have begun to occur. There are also a few examples of backward linkage development leading to spectacular technological upgrading of small/medium-sized companies run by local entrepreneurs. There is also evidence of substantial skill formation in affiliates through extensive training of Malaysians, both locally and abroad.

It is sufficiently clear that the leading segments of Malaysia's electronics industry have progressed well beyond the stage of screwdriver operations. At the same time, Michael Hobday points out that the performance of different segments of the industry is highly diverse. World-class TNC operations and progressive medium-sized component suppliers co-exist alongside many small-scale parts makers

with rudimentary capabilities. Hobday also identifies clouds on the horizon. Rising wages are eroding the country's competitive advantage in labour-intensive manufacturing in the face of emerging low-cost competition from countries like Viet Nam and China, but its education system is not well prepared to meet the industry's needs for technicians and engineers in sufficient numbers. Several other chapters in the book also point towards the lack of adequate absorptive capacity, which is in danger of jeopardizing the transfer of more complex foreign technology and continued foreign direct investment.

Another problem Hobday points out relates to inadequate backward linkage formation. In particular, the absence of local application-specific integrated circuit design firms, as exist in Taiwan Province of China and Hong Kong (China), is a drawback to further technical progress. Goh Pek Chen, who compares the evolution of Malaysia's semiconductor industry with that in the first tier-NIEs, emphasizes that the backward integration achieved by the latter came about as a result of extensive financial, technological, infrastructural and administrative government support, especially for the promotion of R&D infrastructure and human resources development. This has not happened in Malaysia, where lagging investments in education facilities for technicians and engineers have contributed to an acute scarcity of skilled technical staff. Moreover, Malaysia's ethnic mix has precluded effective business promotion by the Government. The most promising entrepreneurs are ethnic-Chinese, and supporting them would have entailed the risk of antagonizing ethnic Malays.

The evolution of the automotive industry is dominated by the Government's strategy to promote indigenization through its national car project. Karamuding Abdulsomad's account of the industry suggests that this strategy resulted in reasonably strong local production capabilities and substantial localization of parts and components production, in contrast with Thailand's automotive industry, which is dominated by foreign TNCs both in assembly and in the manufacturing of major components. However, whereas Thailand's producers are internationally competitive, the Malaysian automotive industry is still heavily protected. Production levels are small by international standards. Hans Georg Leutert and Ralf Südhoff draw attention to the lack of "systemic competitiveness" in the industry. There is no substantial dynamic cluster of effectively interacting agents. It is questionable, therefore, whether the industry could be competitive in a more liberal economic regime in the future.

The most interesting chapters in the book are those that are tightly focused on a particular technology, employ a rigorous method of analysis, and whose writers are knowledgeable about the technologies in use. These are Goh Pek Chen's account of the historical development of the semiconductor industry, and Jaya Gopal's analysis of the evolution of competitiveness and its determinants in the palm oil refining industry. Although Malaysia is better known for its electronics and automotive industries, palm oil refining is actually a more striking industrial policy success aimed at infant industry maturation, especially through the use of tax incentives. The industry now accounts for 60 per cent of the world's refined palm oil products, an achievement that was reached despite the absence of foreign investors.

The book contains a number of rich contributions, which will be of value to readers interested in the nuts and bolts of Asian industrial development. However, the editors could have done more to bring the chapters together into a coherent whole and improve the book's readability. There is no scene-setting introduction about the history of Malaysia's industrialization strategy and policies. The reader has to piece together this background from information dispersed throughout the different chapters. There is also little reflection on the desirability and limitations of the strategies that have been followed. The editors merely note that the relationship between technological development and economic growth is complex and difficult to measure. Yet, the book does raise important issues that bear on this relationship. One of these has recently manifested itself in the face of the economic slowdown in the United States, which has exposed the weakness of obsessive strategies aimed at extending the country's chip-making capacity. It is now becoming evident that these efforts have contributed dramatically to global overcapacity. Due to Malaysia's high export-dependence on the industry, it is in danger of losing three percentage points of GDP growth as a result of a 20 per cent drop in electronics exports. It looks like Malaysia is returning to old ills, by replacing one vicious commodity cycle (palm oil) with another.[1]

Removing overlap and cutting down on descriptive detail could also have shortened several chapters. Although the book has

[1] "Semiconductor manufacturers: the great chip glut", *The Economist*, 11 August 2001, pp. 49-50.

succeeded in terms of its stated aim, to document the extent and depth of industrial technology development in selected industries in Malaysia, the whole is no more than the sum of the parts.

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## *National Image and Competitive Advantage: The Theory and Practice of Country-of-Origin Effect*

Eugen D. Jaffe and Israel D. Nebenzahl

(Copenhagen: Copenhagen Business School Press, 2001), 186 pages

The authors of this book summarize the results of 20 years of research, feeling that the time was ripe for a strategic synthesis. A book edited in 1993 by Nicolas Papadopoulos and Louise Heslop was the first in the specialized literature to examine the question of national and product image from the point of view of international marketing. In that book, which contained 18 chapters by 29 authors, two chapters were written by the Eugen D. Jaffe-Israel D. Nebenzahl pair of authors, indicating that their research placed them in the international vanguard. Many other articles, conference lectures and research studies served as the basis for their own book on national image. As the title indicates, their approach is based on the concept of competitive advantage, which plays a major role in the strategic management literature (Porter, 1998), and which stresses a close combination of theory with practice.

Right from the preface, the authors point out how significantly a positive product and company image contributes to the success of firms, and the same is true for the image of a nation or country. This sets the tone of the whole book. Branding can be applied to a country or nation, too, and independently of the will of decision makers, the designations of countries convey a positive or negative image for consumers. Simple words like American, Japanese, Korean, German, Greek, European or Asian, depending on the context in which they are used, have different connotations for different people. And this is what makes image research both exciting and difficult. "*While a nation's 'brand' or image is certainly of concern to its leaders, it is equally important to private and public organizations that are trying to stimulate both incoming investment and tourism and encourage cooperative alliances between business firms*" (p.7).

The authors seek to blend theory and practice by relying not just on academic research but to a large extent on qualitative research carried out by consultancy firms at the request of various sectoral groups, government organizations and commercial enterprises.

Consequently, the book can be commended to a wide readership. As a supplementary textbook for any course dealing with international marketing or international business, it will be very useful for students. Since more and more firms are directly involved in international trade, it can be heartily recommended to managers working in every area of business (and not just in marketing). A third important target group of readers are those employed in public administration who have direct means of influencing a country image.

This very readable book, which focuses on essentials and handles complex theoretical constructs simply but not superficially, is divided into seven chapters. The first four chapters review questions that generally have to be raised or answered in connection with image. The first, introductory chapter presents the everyday concept of image in the context of the psychological theory of category formation. The second chapter, the shortest, deals with the measurement of national image. In the third chapter the focus is on national, brand and product image theory. In chapter four what has been discussed so far is reviewed from the point of view of the consumer: how consumers see a national image, and how their attitudes influence their behaviour. The following two chapters are about the people who are in a position to do something about the national image. Chapter five analyzes the possibilities that firms have, from the point of view of how they can "manage" the effect of the country of origin. The sixth chapter surveys the tasks of sectoral and governmental organizations, using examples of concrete national campaigns. Chapter seven deals with the legal aspects of national image. They analyze labelling requirements, the judicial system of the leading countries, the regulation of World Trade Organization and documents useful for these purposes. The book concludes with a 14-page reference bibliography, which indicates the wealth of literature on this theme. In what follows, we shall select a few of the main points made in individual chapters and refer to one or two excellent publications on the wider theme.

"*Complete the following sentences*", *is the instruction that sets the tone in the introductory chapter:*

"*A luxury car made in Greece is* "

"*A person who buys a luxury car made in Greece ...*" (p. 11).

In answering the authors' startling but typical market research questions about national image, the typical consumers questioned do not hesitate and say something. Of course they wonder whether

anyone really makes cars in Greece, especially luxury cars, but how are they to know where a specific product is manufactured among the world's 200 countries? The authors' choice of the car example was not accidental, since cars are consumer articles in which brands are very powerful and the characteristics of national image can be most clearly demonstrated. In retrospect, it can not be seen accidental that 32 years ago Akira Nagashima (1970) compared the Japanese and the United States people from the point of view of their attitude in judging foreign products. Within three decades the Japanese, whose products were formerly characterized by poor technical parameters, have become producers of goods that embody the world's top quality, and this is the image they now possess. An image expresses individuals' subjective perceptions of a given thing, and is thus determined not merely by its objective characteristics. These may be better or worse than in the minds of the consumers. This is why the authors devote particular attention to the learning process, and within it to the processes of categorization, abstraction and generalization.

"*Measure what is measurable, and make measurable what is not so.*" In the spirit of this quotation from Galileo Galilei, the second chapter presents a taxonomic list, arguing that in the changed, global business world, in addition to the "made-in-country" image referring to the country of manufacture, at least four other categories have to be distinguished. Apart from the "designed-in-country" (DC), "parts-in country" (PC), "assembled-in-country" (AC) and "country-of-origin" (OC), it is also necessary to examine which country's people's opinion we are investigating, or what is the home country (HC). The authors demonstrate how, on the basis of the semantic differential scale used by Nagashima (1970) and the Papadopoulos-Heslop (1993) duo of authors, they developed and tested their multi-item image dimensions.

For this reviewer, chapter three is enthralling; it deals with the theoretical formulation of national, brand and product image, but it is impossible to convey its essence in a single paragraph. It has to be read. It should be read by all those who frequently suffer because the enormous amount of data accessible in the literature on international business and economics does not cohere as part of a theoretical structure. Jaffe and Nebenzahl's integrated, dynamic model, including the so-called "halo" and summary elements as well, truly deserves to be further explored and built on by other researchers.

Superb quality, reliability, durability, attractive price, excellent service, high technical standard, refined taste, design – we could go

on listing characteristics that come into consumers' minds when we ask them about the picture they have of a particular country and its products. In the fourth chapter, the authors present a host of research results that reflect the existence or absence of consumer ethnocentrism in various developing countries. They discuss the extent to which the image that has evolved of a country or of individuals in it affects purchases of its products. They examine the existing stereotypes, which are especially provocative in today's turbulent world. In his book entitled *We Europeans*, Richard Hill (1997) describes 16 nations or ethnic groups (e.g. Slavs), detailing what, on the basis of their characteristics observable in everyday life, others think of them, and what they think about themselves. The empirical investigations presented in the book frequently support stereotypes based on literature readings: for example, that the buying of luxury goods is most worthwhile in France, or that the Japanese think more favourably of the European Union than of Asia.

What can a manager do, who has to export from a country that has a negative or bad image? What should be done by those transnational corporations that, prompted by the need for cheap labour, locate their manufacturing in a developing country, but intend most of their output to be exported abroad? How do the wage savings made possible by cheaper labour compare with income lost because of lower prices due to image deterioration? Practical questions like these are answered in chapter five. Using the examples of leading Japanese, United States, United Kingdom and Korean firms, the authors show how, in conformity with the product life curve, it is useful to link national symbols with company products, or to choose a name that bears national connotations. The choice of names like Canon, Sharp and Goldstar was clearly intended, when these products were launched on the United States market, to save the companies from having to face the unfavourable effects of the negative image Japan and the Republic of Korea had at that time.

In recent decades, company strategy literature has been increasingly concerned with interpreting the category of competitiveness not just on company level but at the level of various industries or even of whole countries. As the book's sub-title indicates, the authors seek to present national image as a competitive advantage; therefore, it is worth reading with particular care chapter six, in which the focus is on the role of government agencies. English, Scottish, German and New Zealand local campaigns are described; these were designed to convey a more favourable picture of the country or region

to outsiders. Consumer ethnocentrism is fostered by the "buy local products" campaigns which, interestingly, first caught on in the developed countries. In addition to Australian, Canadian and United States campaigns to encourage the purchase of domestic products, a "buy Russian goods" campaign is also described. From the example of Israel and Japan, it can be learned how systematic firm and government efforts can positively influence a national image. But this is no substitute for the provision of really good products and services. As the application of Michael E. Porter's well-known diamond model (1998) to countless countries proves, conditions of demand, and company strategies and structures, of which images and image campaigns form a part, represent very palpable competitive advantages for the countries concerned. For this reason, it is no accident that to demonstrate their concepts, Jaffe and Nebenzahl, like Porter, tend to use the example of Japan and the Republic Korea, as do Philip Kotler, Somkid Jatusripitak and Suvit Maesincee (1997) in their book on *The Marketing of Nations*. Kotler and his co-authors treat a country like a brand and make detailed recommendations to that country's leaders about marketing methods to be employed. However, neither Kotler et al. (1997) nor Porter (1998), whose book was actually written in 1990, discusses the question of national image. This shows that the time has finally come for managers to make use of the national image. For this to happen, however, researchers will have to step outside the exclusively academic sphere: there is a need for more books like the one written by Jaffe and Nebenzahl. In this regard too, their work must be considered a pioneering venture.

In a brief epilogue at the end of the book, by referring to e-commerce, the authors put together a list of further tasks and outline potential research programs to be carried out in the future. Together with the authors, we hope and believe that their book will grip the attention of many people in the wide circle of readers envisaged in the introduction, and that they will be able to take the ideas expressed in it and apply them to everyday practice.

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## References

Hill, Richard (1997). *We Europeans* (Brussels: Europublic).

Kotler, Philip, Somkid Jatusripitak and Suvit Maesincee (1997). *The Marketing of Nations* (New York: The Free Press).

Nagashima, Akira (1970). "A comparison of U.S. and Japanese attitudes toward foreign products", *Journal of Marketing*, 34 (1), pp.68-74.

Papadopoulos, Nicolas and Louise Heslop, eds. (1993). *Product – Country Images:Impact and Role in International Marketing* (Binghamton, New York: Haworth Press).

Porter, Michael E. (1998). *The Competitive Advantage of Nations* (London: Macmillan).

## JUST PUBLISHED

### An Investment Guide to Mozambique: Opportunities and Conditions, June 2001
### Co-published with the International Chamber of Commerce

(UNCTAD/IIA/4)

Mozambique is a good example of a least developed country in which a decisive and reform-minded Government that commands popular support is gradually removing the basic constraints on development. With a mostly poor population of 17 million, the Mozambican market is small in itself; however, its integration into the Southern African Development Community (SADC) offers investors easy access to the main markets in southern Africa (South Africa and the other 12 member countries of SADC). The liberal economic reforms pursued by the Government, the almost complete privatization of formerly State-owned enterprises, and a variety of generous incentive schemes have laid the ground for profitable investment in a number of areas: natural resources (e.g. aluminium), cash crops (e.g. cashews), manufacturing, financial services, etc. *An Investment Guide to Mozambique* is the fifth concrete product of a collaborative venture between UNCTAD and the International Chamber of Commerce (ICC), aimed at bringing together two parties with complementary interests: firms that seek new locations and countries that seek new investors. The executive summary is followed by a brief introductory chapter on "History and government". Then come the three chapters that account for the bulk of the contents. "The investor's environment" describes the general conditions in which investors must operate: macroeconomic conditions, infrastructure, human resources, etc. The chapter on "Areas of opportunity" offers a description of areas of potential interest to foreign investors. "The regulatory framework" focuses on regulations governing investment, in general, and FDI, in particular. The final chapter provides a summary of the feedback received from the private sector during the process of preparing the guide. The electronic version of this publication is available at: http://www.unctad.org/en/pub/investguide.en.htm.

## The World of Investment Promotion at a Glance: A Survey of Investment Promotion Practices

ASIT Advisory Studies No. 17
(UNCTAD/ITE/IPC/3)

A growing attention paid by countries to FDI is reflected in the establishment of investment promotion agencies (IPAs). The number of IPAs worldwide increased substantially in the 1990s. There are presently 164 national IPAs and well over 250 sub-national ones. These agencies operate in a dynamic and competitive environment. This book documents these developments, as well as the work carried out by IPAs. The information in this study is based on 101 replies to a questionnaire survey carried out by UNCTAD in 2000. It highlights that investment promotion covers a wealth of services, ranging from the provision of market information to the undertaking of feasibility studies and environmental impact assessments. The level of ambition partly reflects the resources available to the various IPAs and the presence of other complementing bodies that can provide services to foreign investors. Agencies in developed countries apply the most focussed approach to investment promotion with investor targeting and after care as prime functions. IPAs in developing countries follow suit, while IPAs in economies in transition tend to take up more tasks. Across the board, investor targeting and investment policy advice were the first and second most frequent mentioned core functions. While there are major differences in the focus of IPAs activities, targeting strategies typically mirror the specific locational advantages of host countries and regions. It is also among the major conclusions of the survey that investment promotion is increasingly seen to be client-oriented. A commonly held view among IPAs is that personal contacts with investors are preferable to non-personal methods of promotion. Hence, a considerable share of promotional budgets is devoted to arranging meetings with foreign companies, attending conferences and trade fairs as well as undertaking missions abroad. This Report can be downloaded from: http://www.unctad.org/en/docs/poiteipcd3.en.pdf.

## WAIPA Annual Report 2001-2002

(UNCTAD/ITE/IPC/4)

The 2001-2002 Annual Report of the World Association of Investment Promotion Agencies (WAIPA) served as a background document for the WAIPA VII General Assembly Meeting in Geneva, Switzerland, from 22 to 25 January 2002. It presents basic facts about the Association, an overview of WAIPA's activities in 2001, a description of the Study Tour Programme, the list of participants of the previous Annual Conference, a financial report, a directory of WAIPA members, as well as the Association's Statute. By January 2002, WAIPA had a total membership of 120 agencies. According to its Statute, "membership of WAIPA shall be open to all agencies whose primary function is to promote any country or territory for investment". A limited number of copies of this Report is available free of charge upon request.

## Investment and Innovation Policy Review of Ethiopia

(UNCTAD/ITE/IPC/Misc.4)

While the focus of this report is on investment policy, it gives special attention, at the request of the Government of Ethiopia, to local technological development and the process of innovation and their implications for investment and competitiveness. Chapter I briefly examines the recent policy changes in Ethiopia and the factors that determine its potential as an attractive location for FDI. Chapter II reviews the investment policy of Ethiopia and recent trends in FDI flows, their sectoral and regional distribution and institutional arrangements for attracting foreign investment. Chapter III reviews the country's potential for improving productivity and attracting investment into the agricultural sector through technological changes and innovation. Case studies are used to analyze linkages in manufacturing. Since 1992, the Government of Ethiopia has identified agricultural development-led industrialization (ADLI) as the main focus of its overall national development strategy. In line with this objective, chapter IV evaluates the opportunities for investment and innovation in one of the branches of the agro-business sector in which Ethiopia

has comparative advantage namely, the leather and leather-products industry. The value chains in the production of leather-related goods, the strength and weaknesses of the leather goods production system in Ethiopia and the policies and institutions supporting the sub-sector are analyzed. In chapter V, the potential for enhancing investment and innovation among SMEs in Ethiopia is examined; SMEs make up the largest and the most important segment of the manufacturing in Ethiopia. Finally, chapter VI presents the conclusions and policy recommendations of the report. This Report can be downloaded from: http://www.unctad.org/en/docs/poiteipcm4.en.pdf.

## The Tradability of Consulting Services

(Sales No. E.02.II.D….) ($…)

Thanks to the use of new information and communication technologies, the world in which most services could be delivered to foreign customers only by affiliates in foreign locations, or through the temporary movement of individuals across national borders, is changing. This is likely to have a significant impact on trade and FDI in services. The present study focuses on the tradability of consulting services. It covers three major areas: accounting, management consultancy and engineering consultancy. The study examines the characteristics of each of the principal individual service products in the industries covered, in order to shed light on the factors that limit or strengthen the ability to deliver each product electronically to a foreign customer. Such a detailed technical examination seems appropriate at the present juncture, as it is unclear whether tradability is increasing across the board or just in specific segments. The findings of this study suggest that many service products within each of the three groups are potential candidates for electronic commerce, but a sizeable number are not. The concluding chapter analyses the implications of tradability in consultancy services for developing countries. It suggests that developing countries will need to consider whether the phenomenon of tradability offers them new opportunities and, if so, how best to seize them.

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## Press releases/notes for correspondents on FDI

| Reference | Language | Title |
|---|---|---|
| LDCIII/Press/01<br>10 May 2001 | E | Media Summary: FDI Increases to the World's Poorest Countries |
| LDCIII/Press/05<br>18 May 2001 | E | "Considerable" Investment Potential Seen for Least Developed Countries, but Help Is Needed to Realize it, Says UNCTAD |
| LDCIII/Press/06<br>18 May 2001 | E | Ugandan Investment Guide and Enterprise Programme Launched |
| LDCIII/Press/07<br>18 May 2001 | E | Sweden Supports Investment Promotion Programme for LDCs - UNCTAD's Capacity-Building |
| LDCIII/Press/08/Rev.1<br>18 May 2001 | E | 29 Bilateral Investment Treaties Signed by Least Developed Countries in Brussels |
| Note No.7<br>25 May 2001 | E | Attracting Foreign Investment through the Diplomatic Corps: UNCTAD Launches New Investment Promotion Training Curriculum at Cairo Workshop for Egyptian Diplomats |
| TAD/Inf/Pr/14<br>12 June 2001 | E/F | FDI into Developing Asia Hits Record Level |
| TAD/Inf/Pr/15<br>20 June 2001 | E/F | FDI Again Sets Record in Central and Eastern Europe |
| TAD/INF/PR/16<br>27 June 2001 | E/F | FDI-Linked Cross-Border M&As Grew Unabated in2000 |
| Note No.11<br>27 June 2001 | E/F | Experts Consider Transfer of Technology In International Agreements |
| Note No.13<br>10 July 2001 | E | Challenges, Opportunities and Potential for Asian FDI in Africa |
| TAD/INF/PR/18<br>13 July 2001 | E | FDI Flows to Africa Decline |
| TAD/Inf/Pr/19<br>2 Aug. 2001 | E | Record World FDI Flows in 2000 |
| Note No.17<br>28 Aug. 2001 | E | New UNCTAD Studies: Environment and SocialResponsibility in International Investment Agreements |

| Reference | Language | Title |
|---|---|---|
| Note No.19<br>30 Aug. 2001 | E | Bilateral Investment Treaties at the End Of 2000 |
| TAD/INF/PR/21<br>18 Sep. 2001 | E/FS/A<br>Por/It/T | Foreign Direct Investment Soars, but Will Decline This Year |
| TAD/INF/PR/22<br>18 Sep. 2001 | E/FS/AR<br>It/T | Meeting the Competitive Challenge: Linking TNCs with Local Suppliers |
| TAD/INF/PR/24<br>18 Sep. 2001 | E/F/A/It | Foreign Direct Investment in Africa Shrinks |
| TAD/INF/PR/25<br>18 Sep. 2001 | E/Cr/It/C | FDI to Asia Booms, Fuelled by Hong Kong |
| TAD/INF/PR/26<br>18 Sep. 2001 | E/RIt/Ro | Central, Eastern European Transnationals Set to Become "Prominent Players" in World Investment |
| TAD/INF/PR/27<br>18 Sep. 2001 | E/FS/Por<br>It/Ro | Developed Country FDI Soars by 21% |
| TAD/INF/PR/28<br>18 Sep. 2001 | E/SPorIt | Latin America's FDI Inflows Down in 2000 |
| TAD/INF/PR/29<br>18 Sep. 2001 | E | The World's 100 Largest TNCs Ranked by Foreign Assets 1999. The Largest 50 TNCs from Developing Economies Ranked by Foreign Assets 1999 |
| TAD/INF/PR/30<br>18 Sep. 2001 | E | World FDI Flows to Drop This Year (Latest FDI Data) |
| TAD/INF/NC/21<br>8 Oct. 2001 | E | Negotiations on Bilateral Investment Treaties Conclude in Bonn |
| TAD/INF/NC/23<br>26 Oct. 2001 | E | Access to Finance Crucial for Small Enterprises, Given Global Slowdown; E-Finance Viewed as New Solution, Say Experts |
| TAD/INF/NC/24<br>16 Nov. 2001 | E | Restoring investor confidence: UNCTAD investment policy review of Ecuador highlights investment potential and recommends policyreforms |
| TAD/INF/NC/26<br>4 Dec. 2001 | E | Investor targeting training starts for Brazilian officials |

| Reference | Language | Title |
|---|---|---|
| TAD/INF/NC/27<br>5 Dec. 2001 | E/F | Transnational corporations expected to continue worldwide expansion,but full impact of economic slowdown still unknown |
| TAD/INF/PR/36<br>21 Jan. 2002 | E | FDI downturn in 2001 touches almost all regions |
| TAD/INF/NC31<br>25 Jan. 2002 | E/It | Italian government supports multi-agency technical assistance programme for investment in LDCs |
| TAD/INF/NC32<br>5 Feb. 2002 | E | Investment guide to Mozambique |
| TAD/INF/NC34<br>15 March 2002 | E/F | UNCTAD's role In Monterrey |
| TAD/INF/PR/39<br>20 March 2002 | E | Government and business leaders meet to increase investment in Africa |

## Books received on FDI and TNCs since December 2001

Ariyoshi, Akira, Karl Habermeier, Bernard Laurens, Inci Ötker-Robe, Jorge Iván Canales-Kriljenko and Andrei Kirilenko, *Kontrol za dvizheniem kapitala: opyt stran po yego vvedeniyu i otmene* (Moscow: Ves Mir Publishers, 2001), 134 pages.

Buckley, Peter J., *Multinational Firms, Cooperation and Competition in the World Economy* (Houndmills, Basingstoke: Macmillan, 2000), 319 pages.

El Harras, Mohamed Larbi, *Attraction de l'investissement étranger et dynamique de l'économie marocaine* (Rabat: Imprimerie de Fédala, 2001), 416 pages.

Harrison, Andrew, Ertugrul Dalkiran and Ena Elsey, *International Business: Global Competition from a European Perspective* (Oxford and New York: Oxford University Press, 2000), 491 pages.

Miller, Russell R., *Doing Business in Newly Privatized Markets: Global Opportunities and Challenges* (Westport, Connecticut and London: Quorum Books, 2000), 327 pages.

Mulhearn, Chris, Howard R. Vane and James Eden, *Economics for Business* (Houndmills, Basingstoke: Palgrave, 2001), 417 pages.

Suneja, Vivek, ed., *Policy Issues for Business: A Reader* (London, Thousand Oaks, California and New Delhi: Sage Publications, 2002), 353 pages.

Tung, Rosalie L., ed., *The IEBM Handbook of International Business* (London: International Thomson Business Press, 1999), 893 pages.

Vukmir, Branko, ed., *Legal Framework for Doing Business in Croatia* (Zagreb: Croatian Privatization Fund, 2001), 4th edition, 288 pages.

## Submission statistics

**Figure 1. *Transnational Corporations*: breakdown of manuscripts as of 31 December 2001**

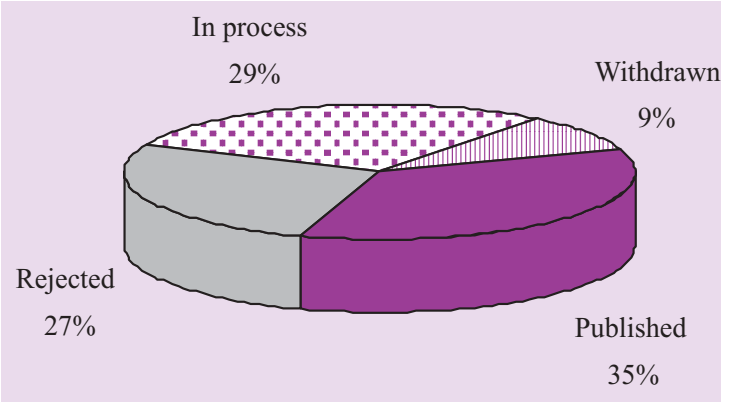
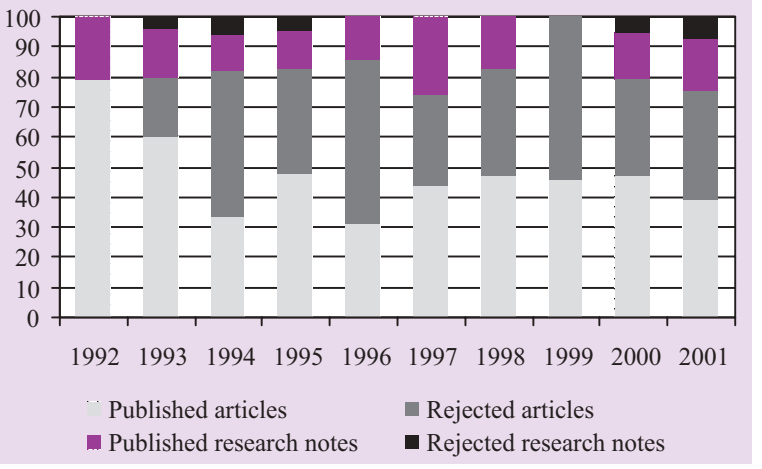



**Figure 2. *Transnational Corporations*: breakdown of manuscripts since inception**



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

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

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

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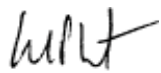

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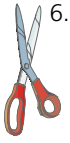

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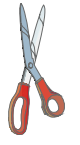

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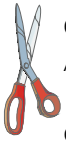

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