

GREENFIELD FOREIGN DIRECT INVESTMENT AND MERGERS AND ACQUISITIONS: FEEDBACK AND MACROECONOMIC EFFECTS*

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Abstract

FDI flows to developing countries surged in the 1990s, to become their leading source of external financing. This rise in FDI volume was accompanied by a marked change in its composition: investment taking the form of acquisition of existing assets (M&A) grew much more rapidly than investment in new assets (“greenfield” FDI), particularly in countries undertaking extensive privatization of public enterprises. This raises two issues. First, is the M&A boom a one-time effect of privatization, or is it likely to be followed by a rise in greenfield investment? Second, do these two types of FDI have different macroeconomic causes and consequences – in relation to aggregate investment and growth? This paper focuses on establishing the stylized facts in terms of time precedence between both types of FDI, investment and growth, using annual data for the period 1987-2001 and a large sample of industrial and developing countries. We find that in all samples higher M&A is typically followed by higher greenfield investment, while the reverse is true only for developing countries. In industrial and developing countries alike, both types of FDI lead domestic investment, but not the reverse. Finally, neither type of FDI appears to precede economic growth in either developing or industrial countries, but FDI does respond positively to increases in the growth rate.

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1. Introduction

The 1990s witnessed a dramatic surge in foreign direct investment (henceforth FDI) to developing countries. Net FDI flows to LDCs rose from 0.5 percent of their overall GDP in the late 1980s to over 2.5 percent in 2000-2001. The FDI increase was particularly marked in Latin America. In the context of a steep decline in other private external flows, FDI became the leading source of external financing to the developing world after 1994.

The causes of the boom have attracted considerable attention, and several authors have attempted to disentangle the role played by “push” and “pull” factors in the process – i.e., declining real interest rates in industrial economies, and the improved investment environment in developing countries following liberalization and reform of their economies, including the decision to privatize state enterprises.¹

Along with their rising volume, FDI inflows also showed a major change in composition. Specifically, foreign investment in LDCs related to the acquisition of existing assets – i.e., mergers and acquisitions, henceforth denoted M&A – saw its share in total FDI inflows rise from virtually nothing in the late 1980s to half of the total in the late 1990s. The rise was again especially significant in Latin America, where in 2001-02 M&A accounted for over 50 percent of total FDI inflows. The other component of FDI, foreign investment primarily related to the acquisition of new assets – commonly referred to as “greenfield” FDI -- rose as well, but its share in total FDI inflows to LDCs experienced a decline. In a number of developing economies, especially Latin American ones, the rise in M&A foreign investment was largely driven by privatization of state-owned enterprises, particularly in the utilities and financial services industries.

However, the FDI boom has also raised two major concerns. The first one involves the uncertain future prospects of FDI to developing countries, following the near completion of the privatization drive in major economies (most notably in Latin America). As just noted, a considerable portion of the FDI inflows received by these economies over the last decade reflected M&A transactions related to the acquisition of public enterprise assets, and hence the end of privatization might be followed by a sharp decline in FDI inflows, which, given the predominant role acquired by investment flows in overall external financing during the late 1990s, could generate major external difficulties in these countries.

Whether this concern is warranted, however, depends to a large extent on the relationship between M&A and greenfield FDI. Specifically, if the former tends to set the stage for the latter, then stagnating M&A need not cause undue worries, because the surge in mergers in the 1990s is likely to be followed by rising greenfield investment, thus ensuring the continuation of external financing in the coming years.

The second concern relates to the growth impact of FDI flows, which has attracted renewed interest in the wake of the FDI boom. While the theoretical literature has pointed out that FDI may boost growth, both by raising aggregate investment and through technological spillovers – i.e., technology transfers that go beyond those firms directly receiving foreign capital -- the empirical literature shows considerable disagreement about the relevance of these impacts. On the one hand, firm-level studies often find no significant productivity effects of FDI.² On the other hand, macroeconomic studies tend to conclude that FDI boosts growth via higher productivity

¹ See for example Calvo and Reinhart (1996), Fernández-Arias and Montiel (1996), Fernández-Arias (2000), and Albuquerque, Loayza, and Servén (2003).

² Aitken and Harrison (1999), Kokko, Tansini and Zejan (1996), and Haddad and Harrison (1993) find no evidence of productivity spillovers; Blömstrom and Sjöholm (1999) find no evidence of technology spillovers but do find some evidence of productivity improvements stemming from greater competitive pressure in local markets.

and/or physical investment,³ although some papers argue that this requires the destination economy to satisfy certain conditions,⁴ and yet others find no significant impact of FDI on investment or growth.⁵

There are two major difficulties with the interpretation of many of these results, however. First, both micro and macro studies face problems of bi-directional causality: high-productivity and high-growth firms and countries are more likely to attract FDI than the rest, so that the empirical association between growth and FDI could well reflect reverse causation from the former to the latter. To the extent that high investment itself also reflects high anticipated returns, the same argument would apply to its close association with FDI often found in empirical studies (e.g., Bosworth and Collins 1999).⁶

The other difficulty concerns the lack of distinction between greenfield FDI and M&A. Since the former involves mainly (although not only) new capital assets, while the latter is just a transfer of existing ones, greenfield FDI would seem more likely to affect growth -- if at all -- via increased physical investment, while M&A FDI would be more likely to do so via enhanced productivity growth. In fact, the increased importance of M&A in total FDI flows in recent years has been singled out as the likely cause of an observed weakening in the empirical FDI-investment link in the 1990s (World Bank 2001). Thus, failure to distinguish between the two

³ See World Bank (2001) and the references listed therein.

⁴ For example, Borensztein, de Gregorio, and Lee (1998) find that the investment and growth impact of FDI is significant only when the recipient economy possesses high levels of human capital. A similar argument in relation to the importance of financial development is made by Alfaro *et al.* (2002). In turn, Blomstrom, Lipsey and Zejan (1996) conclude that FDI has a stronger positive impact on growth in high-income destination economies, while Nair-Reichert and Weinhold (2001) find that this positive effect takes place only in open economies.

⁵ See for example Carkovic and Levine (2002).

⁶ Some micro and macro studies do control for simultaneity; see, e.g., Aitken and Harrison (1999) and Carkovic and Levine (2002). Both studies find no significant growth effects of FDI, so that the association between the two variables would mainly reflect causation from growth to FDI. Indeed, as shown by Rangvid (2001) using a sample of industrial and developing countries, growth and investment returns are very closely associated. Thus anticipations of higher growth should attract increased domestic and foreign investment. This line of argument is empirically pursued by Calderón, Loayza and Servén (2001) to explain international capital flows.

types of FDI flows in the face of large changes in their relative magnitude – such as those witnessed over the last decade – could bias the inferences on the relationship of total FDI with investment and growth.

The purpose of this paper is to address these concerns⁷ by examining the link between the two components of FDI flows – greenfield and M&A -- and their respective relationship with aggregate investment and growth in a large cross-country time-series data set. The main objective of the analysis is to identify the facts present in the data, rather than exploring the ability of a particular model to explain the empirical regularities. Specifically, the paper focuses on establishing the patterns of time precedence between FDI, investment and growth. Thus, it follows an approach similar to those adopted by recent influential studies that have attempted to determine the patterns of causation between saving, investment and growth (Carroll and Weil 1995; Blomstrom, Lipsey, and Zejan 1996; Attanasio, Picci and Scorcu 2000).

The paper extends the existing literature along two dimensions. First, it provides what to the best of our knowledge is the first exploration of the dynamic relation between greenfield and M&A foreign investment.⁸ Second, it uncovers systematic differences between these two components of FDI flows regarding their respective relationship with investment and growth in the destination economies.⁹ The paper performs extensive robustness checks by employing a variety of econometric specifications and working with various country samples in order to allow

⁷ Although we will not pursue it here, we should also mention a third concern recently raised by Fernández-Arias and Hausmann (2000), according to which the boom in FDI to developing countries would reflect the sorry state of their markets and institutions which forces domestic investors to sell off their local assets, rather than providing proof of sound economic management, as had been argued in the past.

⁸ There are strands of the FDI literature that focus on other aspects of the separation between greenfield and M&A FDI. Some of them investigate the determinants of the mode of entry by foreign firms --that is, greenfield vs. M&As-- (e.g. Blomstrom, Kokko, and Zejan 2000 and Görg 2000), while others analyze the welfare implications of various modes of entry on the host economy from a theoretical perspective (e.g. Mattoo, Olarreaga, and Saggi 2001 and Ferrett 2003).

for possible heterogeneity across country groups – industrial economies, where FDI is characterized by large inflows and outflows and a large share of M&A in total investment flows; developing countries, where the M&A share of total FDI is much lower, and outflows are dwarfed by inflows; and Latin America, where the FDI boom of the 1990s has been most closely associated with privatization of public enterprises.

The paper is organized as follows. Section 2 introduces the main concepts and data regarding the composition of FDI, and offers a brief overview of recent trends in the volume and structure of FDI across a large number of industrial and developing countries. Section 3 reports the results of causality tests between the M&A and greenfield components of FDI, and between each of them, domestic investment and GDP growth. Section 4 concludes.

2. FDI: Concepts, data and trends

Direct investment undertaken by foreign firms in a host country (i.e., the country of the target firm whose assets are being acquired) can take the form of either *greenfield investment* or *mergers and acquisitions* (M&As), depending on whether the transaction involves mainly newly-created assets coming under control of the foreign firms, or just a transfer of existing assets from local firms, respectively.

The fact that FDI represents just a financing flow, and not necessarily investment, is often overlooked. The same applies to greenfield investment, which does not necessarily reflect the acquisition of new fixed assets. Like FDI, greenfield investment includes all financial transfers from a multinational's headquarters to its subsidiary (and back, in the case of outflows). These could take the form of equity or loan financing. While most financial transfers presumably

⁹ The received literature that investigates the relationship between FDI, domestic investment, and growth has focused on total FDI. Studies of this type include Choe (2003), Basu, Chakraborty, and Reagle (2003), de Mello (1999), Ericsson and Irandoust (2001), Agosin and Mayer (2000), and Razin (2002).

reflect the purchase (or liquidation) of assets, at the macroeconomic level there is no simple way to ascertain the extent to which they actually finance capital, rather than current, expenditures.

In the case of M&A, one can draw a further distinction between *cross-border mergers*, which occur when the assets and operation of firms from different countries are combined to establish a new legal identity, and *cross-border acquisitions*, which occur when the control of assets and operations is transferred from a local to a foreign company (with the former becoming an affiliate of the latter).

In practice, world M&As have been predominantly driven by acquisitions. Cross-border mergers represented only 3 percent of cross-border M&As in 1999.¹⁰ Also, over 50 percent of cross-border M&As in 1999 took the form of full (or outright) acquisitions. Minority acquisitions by foreign firms (that is, purchases of 10-49 percent participation in total capital) represented one-third of acquisitions in developing countries and less than 20 percent in developed countries (see UNCTAD 2000).

Data on FDI inflows and outflows, as well as worldwide cross-border M&As, are collected by UNCTAD's World Investment Report (various years). We construct greenfield FDI by subtracting cross-border M&As from FDI inflows. Our sample is dictated by the availability of data on cross-border M&A transactions, which is quite limited prior to 1987. Thus, the analysis focuses on the period 1987-2001. It includes 72 countries, with a combined total of 848 country-year observations.

Tables 1 and 2 provide an overview of the major trends in the volume and composition of FDI. Table 1 documents the changing patterns of external financing to industrial and developing

¹⁰ In reality, even when mergers are supposedly between relatively equal partners, most are in fact acquisitions with one company controlling the other.

countries since the mid-1980s.¹¹ Between 1987-89 and 2000-01, net financing to developing countries rose from a negative 0.3% to 2% of the recipient economies' GDP. This increase reflected a parallel rise in net FDI flows by a similar magnitude. Over the same period, net FDI flows went up from 0.5% to 2.5% of GDP. Net portfolio equity flows also rose, although by a very modest amount, from virtually zero in the late 1980s to some 0.1 percent of GDP in 2000-2001. In turn, net debt flows to developing countries rose in the early 1990s but then collapsed following the East Asia and Russia crises, becoming sharply negative by 2000-01. As a result of these trends, in the latter years net FDI exceeded total net financing flows to LDCs (see World Bank 2001).

Table 1 also shows the figures for Latin American countries, which were the primary destination of the FDI boom of the 1990s. For these countries, total net flows rose from -2.2% to 3.1% of GDP between the late 1980s and the early 2000s. Over half of this increase took the form of higher net FDI. In fact, increasing FDI between the first half of the 1990s and the early 2000s more than made up for the collapse in all other flows over the same period.

Unlike with developing countries, net FDI flows to industrial economies showed little change over the period under consideration. Closer inspection reveals that both inflows and outflows rose markedly, leaving the net difference virtually unchanged.

Table 2 offers a detailed breakdown of FDI flows over the same time period. In industrial economies, almost all of the increase in inflows took the form of higher cross-border M&A, of which a very small portion was due to privatization of public enterprises. As a result, in industrial countries M&A transactions were about 7 times larger than greenfield FDI in 2000-01.

¹¹ Table 1 reveals that in our sample net flows to both industrial and developing countries do not add up to zero. This is primarily due to the fact that our sample of countries is incomplete (especially concerning a few developing economies that are international financial centers where large FDI outflows originate).

As for developing countries, three stylized facts emerge. First, compared with the sharp rise in inflows, FDI outflows remain relatively modest. Although they have risen over the last decade, in 2000-01 outflows amounted to less than a third of inflows in developing countries as a whole, and even less (about 10 percent) in Latin America. Thus, for developing countries FDI inflows and net flows have moved in close tandem, in contrast with industrial economies, where large increases in inflows have translated into little change in net flows.

Second, a considerable portion of the rise in FDI inflows to developing countries over the last decade took the form of increased cross-border M&A. By the early 2000s, these had grown to account for nearly half (and even more in the case of Latin America) of FDI inflows, up from about 10 percent in the late 1980s. Unlike in industrial countries, however, in developing economies greenfield FDI still accounts for a large portion of FDI inflows.

Third, much of this M&A increase was due to privatization of public assets. The latter accounted for roughly one-third of the increase in M&A inflows to developing countries in general, and half for Latin America in particular, over the period during which comprehensive privatization data are available.

3. Econometric analysis

Objective. Our empirical objective is to analyze the dynamic relationship between greenfield FDI, cross-border M&A, domestic investment, and GDP growth. Specifically, we want to examine how the behavior of a given variable is related to the future behavior of the rest. There are two aspects to this analysis: effect and predictability. The first deals with whether changes in a variable have a lasting impact on another. The second examines whether the behavior of a given variable helps predict the behavior of the rest.

Methodology. Our methodology consists of estimating and testing bivariate vector autoregressions (VAR) in a panel setting (that is, combining cross-country and time-series observations). The VAR equations have the following form,

$$y_{i,t} = A(L)y_{i,t} + B(L)x_{i,t} + \eta_t + \mu_i + \varepsilon_{i,t}$$

$$x_{i,t} = C(L)y_{i,t} + D(L)x_{i,t} + \phi_t + \psi_i + \nu_{i,t}$$

where y and x represent the two variables of interest; L is the lag operator; A , B , C , and D are vectors of coefficients; η_t and ϕ_t are unobserved time effects; μ_i and ψ_i are unobserved country effects, and $\varepsilon_{i,t}$ and $\nu_{i,t}$ are regression residuals. The subscripts i and t denote country and time, respectively. As is standard in non-structural VAR analysis, we do not impose any cross-equation parameter restrictions, we allow for a free cross-equation error covariance, and we interpret each equation as a reduced-form regression.

We choose the optimal lag structure for the panel VARs through likelihood ratio tests. This turns out to be 4 or 5 lags, depending on the specific bivariate system. To assess the robustness of our results, we present the estimation without country- and time-specific effects, with only country effects, and with both country and time effects.

As stated above, we have two empirical objectives. First, we are interested in the impact of changes in a variable, say x , on the other, say y . The direct impact of x on y , given the past history of y , is given by the sum of the coefficients on all lagged x . Using the properties of the lag operator, this impact would be equal to $B(I)$. From estimation of the VAR, we can obtain the point estimate of $B(I)$ and, for the purpose of statistical inference, its associated standard deviation. From the estimated coefficients we can also obtain the long-run effect of x on y . The long-run effect takes into account both the direct impact of x on y (given the past history of y) and

the autoregressive properties of y (to account for own and cross feedback effects). Provided that y follows a stable process, the long-run effect of x on y is given by $B(1)/[1-A(1)]$.

Second, we want to examine whether a variable, say x , helps forecast the other variable in the system, say y , beyond what the past history of y predicts. This is a test of Granger-causality, and, in the example above, it amounts to testing if the coefficients of the lag polynomial B are statistically significantly different from zero.

The two issues of interest --namely, impact and Granger-causality-- are related but not identical. There may be cases when a variable has predictive power for another, yet its impact is zero because coefficients on different lags cancel each other. However, in the relationships we consider, it is usually the case that when the impact is statistically zero, there is also no indication of Granger causality.

Sample. Our full sample consists of annual information for 72 countries during the period 1987-2001. The sample is divided into 22 industrial and 50 developing countries. See Appendix Table A for the complete list of countries included in the sample. We do not attempt to pool all 72 countries for estimation of a single set of coefficients because, as we discuss below, industrial and developing countries exhibit different relationships among the variables of interest. Given the increasing importance of Latin America as a recipient of FDI flows, we consider separate estimation for the countries in this region.

Definitions. In the empirical analysis, we use the following definitions for the variables of interest. Economic growth is the log difference of real GDP in consecutive years. Domestic investment is equal to gross fixed capital formation, expressed as a ratio to current GDP. Cross-border mergers & acquisitions and greenfield FDI are expressed as ratios to GDP. Given that our objective is to capture the effect of foreign participation in the domestic economy, we consider

inflows, rather than net flows, for both types of FDI.¹² See Appendix Table B for summary statistics on all variables of interest.

Results. The estimation and inference results are summarized in Tables 3-7. For each vector auto-regression, we report the sum of the coefficients on the lagged terms of each variable, the p-value for the hypothesis that this direct effect is not statistically significant, and the p-value for the corresponding test that there is no Granger causality.

Table 3 examines the relationship between the two types of FDI, that is, greenfield investment and M&A. Tables 4 and 5 examine the link between domestic investment and, respectively, greenfield FDI and M&A FDI. Tables 6 and 7 study the relationship between GDP growth and the two types of FDI, respectively. Finally, Table 8 summarizes the results.

Before discussing the bivariate VAR results table by table, we would like to examine the inertial properties of our variables of interest –that is, their dependence on their own past realizations, given the past of the other variable in the system. Comparing results across tables, the following points arise. First, the autoregression coefficients drop considerably in all cases once we account for country-specific effects. When the correct specification of the dynamic system includes country-specific effects, ignoring them in estimation leads to an upward bias in the autoregression coefficients, in accordance with theoretical predictions (Robertson and Symons 1992). This result reflects the correlation between the unobserved country effects with all (current and lagged) values of the variable of interest. Second, for all variables in all systems, the sum of autoregression coefficients is statistically greater than zero and lower than one. That is, all variables feature smooth positive persistence, not cyclical or explosive. Third, GDP growth

¹²As mentioned before, for developing countries the distinction between inflows and net flows is largely inconsequential. The same does not apply to industrial countries, however.

is the least persistent of all variables considered here. The persistence (or inertia) of GDP growth is lower in the samples of developing countries and Latin America (autoregression coefficients of around 0.15) than in industrial countries (about 0.3).¹³ Fourth, in all samples the most persistent variable is gross domestic investment (0.5 - 0.6), followed by greenfield and M&A FDI. Greenfield FDI appears to be as persistent in industrial as in developing countries (0.30 – 0.55, depending on the bivariate system). However, M&A FDI is somewhat more persistent in industrial countries (0.5) than in developing economies (0.25). Note that greenfield and M&A FDI in developing countries are not memory-less processes, as is usually implied in claims that the booming cross-border investment to emerging countries is only the result of a one-shot privatization process. Apart from the nuances just noted, greenfield and M&A FDI have similar autocorrelation characteristics. As explained below, this is the first of many similarities between the two types of FDI regarding their dynamic properties.

Table 3 indicates that in the samples of industrial, developing, and Latin American countries, higher M&A leads to more greenfield FDI. For developing countries, in addition, an increase in greenfield FDI leads to a rise in M&A FDI.¹⁴ These results are robust to the inclusion of country- and time-specific effects. In order to assess the economic importance of our results, we can examine the size of long-run effects, as explained above. Using the point estimates of the regression that controls for country- and time-specific effects, the long-run effect of a unit change in M&A FDI on greenfield FDI is 0.97 for industrial countries, 1.56 for developing countries, and 0.77 for Latin America. Thus, this effect is similar in industrial and Latin American countries, but significantly larger in the full sample of developing countries. In addition, in the latter group

¹³ In a different context, growth's low persistence was also noted by Easterly, Kremer, Pritchett, and Summers (1993).

¹⁴ As implied from the discussion below, this is the only instance of bi-directional VAR effects in the paper.

there is feedback from greenfield FDI to M&A FDI, with a long-run multiplier of 0.20.¹⁵ The implication of these results, both qualitative and quantitatively, is a strong connection between both types of FDI. In particular, we can conclude that FDI initially driven by the purchase of existing companies results in fresh investment in the following years. In industrial countries this subsequent rise is similar in magnitude to the initial investment. In developing countries, the result is even more optimistic because the gain in greenfield FDI largely surpasses the original capital purchase. This implies that the end of the privatization process in Latin America and other parts of the world need not dry up FDI but may instead give way to rising greenfield investment.

In Table 4, we study the relationship between domestic investment and greenfield FDI. The main qualitative result is the same for industrial, developing, and Latin American countries. That is, in all samples, greenfield FDI appears to precede domestic investment, but not the reverse. The inclusion of time- or country-specific effects does not change the substance of this result. Quantitatively, the long-run effect of greenfield FDI on domestic investment is more than twice larger in developing and Latin American countries (with multipliers of 0.73 and 0.65, respectively) than in industrial countries (0.29).¹⁶

Table 5 presents the results of the link between domestic investment and M&A FDI. The basic result is common to all samples and similar to the case of greenfield FDI. That is, M&A FDI leads to a rise in domestic investment, but the reverse effect is not statistically significant (although there is some evidence of predictability from domestic investment to M&A in industrial countries). Quantitatively, however, there are some differences of degree between the two types

¹⁵ In what follows in the text, we label “long-run multiplier” the magnitude of the long-run effect of a unit change in a given variable on another.

of FDI. First, in general the multipliers of domestic investment with respect to M&A FDI are larger than with respect to greenfield FDI. Second, the multipliers of domestic investment to M&A FDI are higher in industrial (1.05) than in developing and Latin American countries (0.85 and 0.80, respectively); this is just the opposite to what happened with greenfield FDI.

The positive effect of either type of FDI on domestic investment is encouraging. On the other hand, it may appear surprising that domestic investment does not lead to a rise in either type of FDI. On second inspection, however, we can find arguments in opposite directions that, in practice, would cancel each other. For instance, an increase in domestic investment may lead to more FDI if it serves as an indication that there are profitable opportunities to be exploited in the country. On the other hand, if domestic investment decreases -- for instance, because of rising liquidity or solvency problems in local firms -- FDI inflows may increase in the following years to take advantage of idle opportunities and, thus, partially fill the gap left by resident investors.

In Table 6 we examine the relationship between economic growth and greenfield FDI. The main result is qualitatively the same in all samples. Economic growth appears to precede and produce a positive impact on greenfield FDI. However, there appears to be no statistically significant reverse effect from greenfield FDI to economic growth. The impact of growth on greenfield investment is larger for industrial than developing or Latin American countries, with long-run multipliers of 0.40, 0.21, and 0.26, respectively.

Finally, Table 7 presents the results on the links between economic growth and M&A FDI. Again, the basic result is the same for all samples. An increase in economic growth leads to a rise in M&A, but the reverse is not statistically significant. As in the case of greenfield FDI, the

¹⁶ In these and other calculations of long-run effects, we use the point estimates obtained in the regressions that control for country and time specific effects.

response of M&A FDI to changes in economic growth is larger in industrial countries (multiplier of 0.65) than in developing (0.27) or Latin American countries (0.21).

The asymmetric relationship between FDI and economic growth deserves further discussion. The fact that either type of FDI does not lead to larger growth may indicate that FDI simply cannot account for the majority or the most important of the many determinants of economic growth.¹⁷ Furthermore, it is likely that the relationship between FDI and growth depends largely on third factors driving both variables. For instance, in countries where FDI rises as result of higher import tariffs, we should expect a negative relationship between FDI and economic growth. The opposite would occur when FDI rises because of an improvement in public infrastructure and government institutions.¹⁸ On the other hand, GDP growth can capture FDI's most relevant determinants. Given that economic growth is arguably the most important sign of profitable investment opportunities in a country, it can serve as a strong pull factor for FDI.¹⁹

4. Concluding remarks

In the last 15 years, FDI has become the predominant form of external financing in developing countries, far surpassing traditional sovereign borrowing. To be sure, the growth of FDI is part of a more general trend in developing countries consisting of a rapid expansion of private capital flows and contraction of official ones. In industrial countries, FDI has grown more than any other type of capital flow, although it still ranks second to foreign borrowing.

Not only has total FDI grown in importance, but also its composition has experienced a remarkable change over the last 15 years. In developing countries, the share of cross-border mergers and acquisitions in FDI was about 10% in the mid 1980s and increased to more than a

¹⁷ See Carkovic and Levine (2002) for similar results.

third at the beginning of the 2000s. The lion's share of the increase in cross-border M&A is explained by the privatization of state enterprises that took place during the 1990s in many developing countries. The share of cross-border M&A in FDI also increased markedly in industrial countries.

In that context, this paper set out to answer two questions. The first one is about the continuation of the FDI boom to developing countries; specifically, would it continue after the privatization process and the ensuing expansion of cross-border M&A had dried up? Our approach to this question consisted in evaluating to what extent greenfield FDI (that is, investment in new assets) would follow an increase in cross-border M&A (the purchase of existing assets). For this purpose, we estimated bivariate vector autoregressions in a pooled cross-country, time-series setting. We worked with annual data for the period 1987-2001 for samples of 22 industrial and 50 developing countries. Table 8 provides a summary of results. We found that an expansion of M&A is indeed followed by an increase in greenfield FDI. According to our estimates, an increase in M&A by 1 percent of GDP leads to a rise in greenfield FDI by about 1 and 1.5 percentage points of GDP in industrial and developing countries, respectively. That is, the subsequent expansion of greenfield FDI is at least as large as the initial increase in M&A, and substantially more in developing economies. Therefore, if the experience of the 1990s and late 1980s is a good predictor for the future, an expansion of greenfield FDI will ensure that the FDI boom will continue in the future even after the privatization process has stopped.

The second question we wanted to address concerns the causality (in the sense of time precedence) between the two forms of FDI and domestic investment and economic growth.

¹⁸ See Stein and Daude (2001) and Alfaro et al. (2002) for related discussions.

Using the afore-mentioned bivariate VAR methodology on the same panel of countries and time-series observations, we find that both greenfield and M&A FDI lead domestic investment but are led by GDP growth. Therefore, economic growth, as the most important indicator of domestic rates of return, serves as an effective “pull” factor for foreign investment; and in turn, FDI helps increase domestic investment in the future.

In order to close the virtuous circle between FDI, domestic investment, and growth, it would be necessary for investment to lead to economic growth. This important link is not the subject of this paper; however, using a methodology similar to this paper’s VAR systems, we have examined the dynamic relationship between domestic investment and economic growth in our sample.²⁰ We confirm the results obtained by Blomstrom, Lipsey, and Zejan (1996) and Attanasio, Scorcu, and Picci (2000) in the sense that while growth causes investment, investment does not lead to growth. Whether this is a reflection of poor-quality investment (see Pritchett 2000) or the fact that economic growth depends on a multitude of factors that cannot be fully captured by developments in FDI or domestic investment (see Barro and Sala-i-Martin 1995, p. 433) is a subject for further research.

¹⁹ See Calderón, Loayza, and Servén (2001) and Albuquerque, Loayza and Servén (2003).

²⁰ These results are not presented in the paper but are available on request.

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Table 1
FDI and Other Capital Flows
(As a percentage of GDP, weighted averages)

	Foreign Direct Investment		Portfolio Equity		Loan		Total Net FDI	Total Net Inflows
	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows		
INDUSTRIAL COUNTRIES								
1987-89	0.99%	1.27%	0.28%	0.32%	4.88%	3.66%	-0.28%	0.90%
1990-94	0.76%	1.17%	0.50%	0.51%	3.37%	2.52%	-0.41%	0.43%
1995-99	1.74%	2.33%	1.29%	1.27%	5.77%	4.90%	-0.60%	0.30%
2000-01	3.67%	3.86%	2.37%	2.36%	5.27%	4.27%	-0.19%	0.83%
DEVELOPING COUNTRIES								
1987-89	0.86%	0.40%	0.02%	0.04%	-0.51%	0.23%	0.46%	-0.29%
1990-94	1.43%	0.65%	0.49%	0.13%	1.75%	0.79%	0.79%	2.11%
1995-99	2.80%	0.97%	0.64%	0.38%	1.61%	1.63%	1.83%	2.08%
2000-01	3.63%	1.10%	0.76%	0.63%	0.15%	0.84%	2.53%	1.97%
LATIN AMERICAN COUNTRIES								
1987-89	0.74%	0.10%	0.03%	0.00%	-3.14%	-0.28%	0.64%	-2.19%
1990-94	1.15%	0.23%	0.85%	0.05%	2.01%	1.04%	0.93%	2.69%
1995-99	3.21%	0.49%	0.26%	0.13%	1.40%	0.98%	2.72%	3.27%
2000-01	3.78%	0.40%	0.05%	0.19%	0.08%	0.23%	3.38%	3.08%

Source: Authors' elaboration from IMF data on balance of payments flows.

Table 2
FDI, Greenfield Investment and M&As
(As a percentage of GDP, weighted averages)

	Net FDI Flows	FDI Inflows			M&A Privatization	FDI Outflows
		Total	Greenfield	M&A Total		
INDUSTRIAL COUNTRIES						
1987-89	-0.28%	0.99%	0.23%	0.76%	0.01%	1.27%
1990-94	-0.41%	0.76%	0.26%	0.50%	0.02%	1.17%
1995-99	-0.60%	1.74%	0.26%	1.48%	0.06%	2.33%
2000-01	-0.19%	3.67%	0.46%	3.21%	n.a.	3.86%
DEVELOPING COUNTRIES						
1987-89	0.46%	0.86%	0.77%	0.09%	0.01%	0.40%
1990-94	0.79%	1.43%	1.14%	0.30%	0.08%	0.65%
1995-99	1.83%	2.80%	1.87%	0.93%	0.31%	0.97%
2000-01	2.53%	3.63%	2.10%	1.53%	n.a.	1.10%
LATIN AMERICAN COUNTRIES						
1987-89	0.64%	0.74%	0.65%	0.08%	0.01%	0.10%
1990-94	0.93%	1.15%	0.68%	0.47%	0.20%	0.23%
1995-99	2.72%	3.21%	1.58%	1.63%	0.74%	0.49%
2000-01	3.38%	3.78%	1.82%	1.97%	n.a.	0.40%

Source: Authors' elaboration from UNCTAD data on FDI flows and cross-border mergers and acquisitions (M&As).

Table 3
Dynamic Relationship between Greenfield FDI Inflows (GrFDI) and Cross-Border Mergers and Acquisitions (M&As): Causality Tests
72 countries, Annual Data for the 1987-2001 period

		Industrial Countries		Developing Countries		Latin America	
		To: GrFDI	To: M&As	To: GrFDI	To: M&As	To: GrFDI	To: M&As
<i>OLS Estimation</i>							
- From GrFDI:	Sum Coeff.	0.5379	0.0745	0.7430	0.1230	0.6631	0.0824
	[p-value]	(0.024)	(0.506)	(0.000)	(0.002)	(0.000)	(0.388)
	Causality [p-value]	(0.005)	(0.784)	(0.000)	(0.018)	(0.000)	(0.703)
- From M&As:	Sum Coeff.	0.5322	0.9193	0.6679	0.3351	0.4013	0.4732
	[p-value]	(0.026)	(0.000)	(0.000)	(0.000)	(0.030)	(0.002)
	Causality [p-value]	(0.032)	(0.000)	(0.000)	(0.002)	(0.007)	(0.001)
<i>Time Effects</i>							
- From GrFDI:	Sum Coeff.	0.5201	0.1709	0.7645	0.0992	0.6887	0.0654
	[p-value]	(0.029)	(0.111)	(0.000)	(0.011)	(0.000)	(0.769)
	Causality [p-value]	(0.000)	(0.310)	(0.000)	(0.054)	(0.000)	(0.914)
- From M&As:	Sum Coeff.	0.5580	0.8665	0.7692	0.2392	0.4351	0.3980
	[p-value]	(0.037)	(0.000)	(0.000)	(0.002)	(0.000)	(0.001)
	Causality [p-value]	(0.000)	(0.000)	(0.000)	(0.013)	(0.000)	(0.001)
<i>Country Effects</i>							
- From GrFDI:	Sum Coeff.	0.4614	0.0687	0.5591	0.1341	0.4175	0.1325
	[p-value]	(0.095)	(0.624)	(0.000)	(0.022)	(0.000)	(0.174)
	Causality [p-value]	(0.000)	(0.532)	(0.000)	(0.086)	(0.000)	(0.561)
- From M&As:	Sum Coeff.	0.6278	0.5339	0.7181	0.2535	0.5220	0.2616
	[p-value]	(0.054)	(0.001)	(0.000)	(0.005)	(0.000)	(0.029)
	Causality [p-value]	(0.000)	(0.000)	(0.000)	(0.009)	(0.000)	(0.033)
<i>Country & Time Effects</i>							
- From GrFDI:	Sum Coeff.	0.4204	0.1049	0.5585	0.1469	0.3850	0.0735
	[p-value]	(0.047)	(0.412)	(0.000)	(0.010)	(0.000)	(0.756)
	Causality [p-value]	(0.000)	(0.797)	(0.000)	(0.091)	(0.002)	(0.943)
- From M&As:	Sum Coeff.	0.5611	0.4870	0.6894	0.2509	0.4795	0.2537
	[p-value]	(0.005)	(0.007)	(0.003)	(0.006)	(0.000)	(0.018)
	Causality [p-value]	(0.000)	(0.049)	(0.000)	(0.010)	(0.000)	(0.008)
No. Countries		22	22	50	50	18	18
No. Observations		263	263	585	585	216	216

Source: Authors' calculations.

Table 4
Dynamic Relationship between Domestic Investment (GDI) and Greenfield Investment (GrFDI): Causality Tests
72 countries, Annual Data for the 1987-2001 period

		Industrial Countries		Developing Countries		Latin America	
		To: GrFDI	To: GDI	To: GrFDI	To: GDI	To: GrFDI	To: GDI
<i>OLS Estimation</i>							
- From GrFDI:	Sum Coeff.	0.7264	0.0665	0.6253	0.2420	0.5731	0.1025
	[p-value]	(0.035)	(0.052)	(0.000)	(0.017)	(0.000)	(0.036)
	Causality [p-value]	(0.023)	(0.013)	(0.000)	(0.010)	(0.000)	(0.041)
- From GDI:	Sum Coeff.	-0.1391	0.8846	0.0318	0.8824	0.0352	0.9217
	[p-value]	(0.267)	(0.000)	(0.110)	(0.000)	(0.375)	(0.000)
	Causality [p-value]	(0.153)	(0.000)	(0.319)	(0.000)	(0.334)	(0.000)
<i>Time Effects</i>							
- From GrFDI:	Sum Coeff.	0.7365	0.0728	0.6300	0.2683	0.5996	0.1238
	[p-value]	(0.011)	(0.033)	(0.000)	(0.001)	(0.005)	(0.108)
	Causality [p-value]	(0.000)	(0.045)	(0.000)	(0.000)	(0.034)	(0.032)
- From GDI:	Sum Coeff.	-0.1128	0.6347	0.0285	0.8854	0.0144	0.9101
	[p-value]	(0.251)	(0.000)	(0.108)	(0.000)	(0.272)	(0.000)
	Causality [p-value]	(0.711)	(0.000)	(0.394)	(0.000)	(0.631)	(0.000)
<i>Country Effects</i>							
- From GrFDI:	Sum Coeff.	0.3728	0.1293	0.2963	0.3229	0.3321	0.3847
	[p-value]	(0.029)	(0.028)	(0.000)	(0.002)	(0.002)	(0.010)
	Causality [p-value]	(0.000)	(0.037)	(0.000)	(0.000)	(0.005)	(0.012)
- From GDI:	Sum Coeff.	-0.2030	0.5224	0.0461	0.5074	0.0670	0.5290
	[p-value]	(0.271)	(0.000)	(0.244)	(0.000)	(0.220)	(0.000)
	Causality [p-value]	(0.587)	(0.000)	(0.641)	(0.000)	(0.294)	(0.000)
<i>Country & Time Effects</i>							
- From GrFDI:	Sum Coeff.	0.3726	0.1213	0.2961	0.3827	0.3415	0.3070
	[p-value]	(0.024)	(0.041)	(0.000)	(0.000)	(0.000)	(0.009)
	Causality [p-value]	(0.000)	(0.025)	(0.000)	(0.000)	(0.000)	(0.006)
- From GDI:	Sum Coeff.	-0.0248	0.5798	0.0282	0.4786	0.0295	0.5241
	[p-value]	(0.367)	(0.000)	(0.500)	(0.000)	(0.317)	(0.000)
	Causality [p-value]	(0.422)	(0.000)	(0.925)	(0.000)	(0.432)	(0.000)
No. Countries		22	22	50	50	18	18
No. Observations		221	221	578	578	204	204

Source: Authors' calculations.

Table 5
Dynamic Relationship between Domestic Investment (GDI) and Cross-Border Mergers and Acquisitions (M&As): Causality Tests
72 countries, Annual Data for the 1987-2001 period

		Industrial Countries		Developing Countries		Latin America	
		To: M&As	To: GDI	To: M&As	To: GDI	To: M&As	To: GDI
<i>OLS Estimation</i>							
- From M&As:	Sum Coeff.	0.8208	0.1092	0.2996	0.2381	0.4752	0.1490
	[p-value]	(0.000)	(0.009)	(0.005)	(0.022)	(0.000)	(0.017)
	Causality [p-value]	(0.000)	(0.031)	(0.034)	(0.032)	(0.003)	(0.029)
- From GDI:	Sum Coeff.	-0.0942	0.9011	0.0144	0.9101	0.0315	0.9342
	[p-value]	(0.143)	(0.000)	(0.272)	(0.000)	(0.292)	(0.000)
	Causality [p-value]	(0.054)	(0.000)	(0.631)	(0.000)	(0.350)	(0.000)
<i>Time Effects</i>							
- From M&As:	Sum Coeff.	0.7446	0.3607	0.2106	0.2295	0.3937	0.1438
	[p-value]	(0.000)	(0.021)	(0.005)	(0.003)	(0.001)	(0.040)
	Causality [p-value]	(0.000)	(0.009)	(0.024)	(0.000)	(0.000)	(0.047)
- From GDI:	Sum Coeff.	-0.0626	0.9360	0.0111	0.9145	0.0176	0.9550
	[p-value]	(0.387)	(0.000)	(0.330)	(0.000)	(0.472)	(0.000)
	Causality [p-value]	(0.129)	(0.000)	(0.682)	(0.000)	(0.309)	(0.000)
<i>Country Effects</i>							
- From M&As:	Sum Coeff.	0.4372	0.4082	0.2664	0.4360	0.2273	0.3490
	[p-value]	(0.000)	(0.000)	(0.023)	(0.005)	(0.060)	(0.034)
	Causality [p-value]	(0.011)	(0.003)	(0.011)	(0.000)	(0.041)	(0.021)
- From GDI:	Sum Coeff.	-0.1774	0.5656	0.0266	0.5808	0.0807	0.5687
	[p-value]	(0.234)	(0.000)	(0.176)	(0.000)	(0.096)	(0.000)
	Causality [p-value]	(0.040)	(0.000)	(0.290)	(0.000)	(0.161)	(0.000)
<i>Country & Time Effects</i>							
- From M&As:	Sum Coeff.	0.4855	0.4781	0.2743	0.3702	0.2481	0.3536
	[p-value]	(0.017)	(0.007)	(0.002)	(0.002)	(0.038)	(0.004)
	Causality [p-value]	(0.018)	(0.026)	(0.016)	(0.000)	(0.032)	(0.013)
- From GDI:	Sum Coeff.	-0.1333	0.5468	0.0455	0.5641	0.0194	0.5582
	[p-value]	(0.130)	(0.000)	(0.180)	(0.000)	(0.706)	(0.000)
	Causality [p-value]	(0.010)	(0.000)	(0.390)	(0.000)	(0.383)	(0.000)
No. Countries		22	22	50	50	18	18
No. Observations		221	221	578	578	204	204

Source: Authors' calculations.

Table 6
Dynamic Relationship between Economic Growth and Greenfield Investment (GrFDI): Causality Tests
72 countries, Annual Data for the 1987-2001 period

		Industrial Countries		Developing Countries		Latin America	
		To:	To:	To:	To:	To:	To:
		GrFDI	Growth	GrFDI	Growth	GrFDI	Growth
<i>OLS Estimation</i>							
- From GrFDI:	Sum Coeff.	0.5138	-0.0685	0.6483	0.0920	0.6399	0.1112
	[p-value]	(0.052)	(0.386)	(0.000)	(0.726)	(0.000)	(0.256)
	Causality [p-value]	(0.046)	(0.726)	(0.000)	(0.828)	(0.000)	(0.438)
- From Growth:	Sum Coeff.	0.2634	0.5196	0.1744	0.3867	0.1809	0.2864
	[p-value]	(0.029)	(0.000)	(0.016)	(0.000)	(0.025)	(0.030)
	Causality [p-value]	(0.023)	(0.000)	(0.029)	(0.000)	(0.022)	(0.000)
<i>Time Effects</i>							
- From GrFDI:	Sum Coeff.	0.5330	-0.0972	0.6512	0.0925	0.6029	0.1152
	[p-value]	(0.040)	(0.219)	(0.000)	(0.621)	(0.000)	(0.917)
	Causality [p-value]	(0.000)	(0.444)	(0.000)	(0.931)	(0.000)	(0.978)
- From Growth:	Sum Coeff.	0.2404	0.6298	0.1784	0.3868	0.1910	0.2824
	[p-value]	(0.020)	(0.000)	(0.029)	(0.000)	(0.028)	(0.035)
	Causality [p-value]	(0.028)	(0.000)	(0.031)	(0.000)	(0.028)	(0.001)
<i>Country Effects</i>							
- From GrFDI:	Sum Coeff.	0.2624	-0.1547	0.3046	0.1309	0.4021	0.0915
	[p-value]	(0.014)	(0.110)	(0.000)	(0.321)	(0.000)	(0.238)
	Causality [p-value]	(0.000)	(0.368)	(0.000)	(0.735)	(0.000)	(0.598)
- From Growth:	Sum Coeff.	0.2405	0.2414	0.1528	0.1866	0.1511	0.1486
	[p-value]	(0.024)	(0.001)	(0.031)	(0.029)	(0.020)	(0.040)
	Causality [p-value]	(0.033)	(0.000)	(0.032)	(0.011)	(0.024)	(0.003)
<i>Country & Time Effects</i>							
- From GrFDI:	Sum Coeff.	0.2526	-0.1673	0.3008	0.1207	0.4251	0.0999
	[p-value]	(0.010)	(0.105)	(0.000)	(0.433)	(0.019)	(0.585)
	Causality [p-value]	(0.000)	(0.173)	(0.000)	(0.857)	(0.011)	(0.939)
- From Growth:	Sum Coeff.	0.1772	0.3503	0.1467	0.1778	0.1505	0.1214
	[p-value]	(0.025)	(0.000)	(0.009)	(0.021)	(0.006)	(0.010)
	Causality [p-value]	(0.026)	(0.000)	(0.002)	(0.007)	(0.005)	(0.015)
No. Countries		22	22	50	50	18	18
No. Observations		252	252	585	585	216	216

Source: Authors' calculations.

Table 7
Dynamic Relationship between Economic Growth and Cross-Border Mergers and Acquisitions (M&As): Causality Tests
72 countries, Annual Data for the 1987-2001 period

		Industrial Countries		Developing Countries		Latin America	
		To: M&As	To: Growth	To: M&As	To: Growth	To: M&As	To: Growth
<i>OLS Estimation</i>							
- From M&As:	Sum Coeff.	0.8952	0.0144	0.3025	-0.1621	0.4686	-0.1114
	[p-value]	(0.000)	(0.863)	(0.004)	(0.347)	(0.001)	(0.412)
	Causality [p-value]	(0.000)	(0.524)	(0.029)	(0.239)	(0.004)	(0.199)
- From Growth:	Sum Coeff.	0.1145	0.5183	0.1080	0.3933	0.1097	0.1760
	[p-value]	(0.029)	(0.000)	(0.042)	(0.000)	(0.031)	(0.020)
	Causality [p-value]	(0.023)	(0.000)	(0.046)	(0.000)	(0.039)	(0.000)
<i>Time Effects</i>							
- From M&As:	Sum Coeff.	0.8122	0.0760	0.3121	-0.1294	0.3932	-0.1030
	[p-value]	(0.000)	(0.398)	(0.005)	(0.316)	(0.001)	(0.877)
	Causality [p-value]	(0.000)	(0.543)	(0.025)	(0.473)	(0.001)	(0.322)
- From Growth:	Sum Coeff.	0.3330	0.6178	0.2004	0.3960	0.2047	0.1742
	[p-value]	(0.044)	(0.000)	(0.047)	(0.000)	(0.035)	(0.042)
	Causality [p-value]	(0.032)	(0.000)	(0.020)	(0.000)	(0.026)	(0.001)
<i>Country Effects</i>							
- From M&As:	Sum Coeff.	0.4699	0.1068	0.2033	-0.1142	0.2575	-0.2286
	[p-value]	(0.002)	(0.394)	(0.035)	(0.418)	(0.029)	(0.263)
	Causality [p-value]	(0.000)	(0.675)	(0.027)	(0.707)	(0.039)	(0.355)
- From Growth:	Sum Coeff.	0.2580	0.2574	0.2305	0.1849	0.2088	0.1485
	[p-value]	(0.005)	(0.001)	(0.025)	(0.021)	(0.010)	(0.030)
	Causality [p-value]	(0.030)	(0.000)	(0.020)	(0.010)	(0.013)	(0.003)
<i>Country & Time Effects</i>							
- From M&As:	Sum Coeff.	0.5017	0.1909	0.2614	-0.0828	0.2481	-0.0818
	[p-value]	(0.020)	(0.152)	(0.004)	(0.596)	(0.024)	(0.730)
	Causality [p-value]	(0.032)	(0.342)	(0.025)	(0.659)	(0.021)	(0.405)
- From Growth:	Sum Coeff.	0.3249	0.3292	0.2001	0.1308	0.1612	0.1424
	[p-value]	(0.029)	(0.000)	(0.011)	(0.016)	(0.028)	(0.005)
	Causality [p-value]	(0.046)	(0.000)	(0.010)	(0.007)	(0.020)	(0.010)
No. Countries		22	22	50	50	18	18
No. Observations		252	252	585	585	216	216

Source: Authors' calculations.

Table 8
Summary of Results

	Industrial Countries	Developing Countries	Latin America
From Greenfield FDI to M&As	.	+	.
From M&As to Greenfield FDI	+	+	+
From Greenfield FDI to Domestic Investment	+	+	+
From Domestic Investment to Greenfield FDI	.	.	.
From M&As to Domestic Investment	+	+	+
From Domestic Investment to M&As	.	.	.
From Greenfield FDI to Economic Growth	.	.	.
From Economic Growth to Greenfield FDI	+	+	+
From M&As to Economic Growth	.	.	.
From Economic Growth to M&As	+	+	+

Note: "." represents no significant effect and "+", a statistically positive effect.

APPENDIX**Table A. Sample of Countries**

No.	Country Name	Region	No.	Country Name	Region
1	Argentina	AMER	37	Jamaica	AMER
2	Australia	IND	38	Jordan	MENA
3	Austria	IND	39	Japan	IND
4	Belgium	IND	40	Kenya	SSA
5	Bolivia	AMER	41	Korea, Rep. Of	EAP
6	Brazil	AMER	42	Sri Lanka	SA
7	Botswana	SSA	43	Morocco	MENA
8	Canada	IND	44	Madagascar	SSA
9	Switzerland	IND	45	Mexico	AMER
10	Chile	AMER	46	Mali	SSA
11	China	EAP	47	Mauritius	SSA
12	Cote d'Ivoire	SSA	48	Malaysia	EAP
13	Colombia	AMER	49	Nigeria	SSA
14	Cape Verde	SSA	50	Netherlands	IND
15	Costa Rica	AMER	51	Norway	IND
16	Germany	IND	52	New Zealand	IND
17	Denmark	IND	53	Pakistan	SA
18	Dominican Republic	AMER	54	Panama	AMER
19	Ecuador	AMER	55	Peru	AMER
20	Egypt	MENA	56	Philippines	EAP
21	Spain	IND	57	Portugal	IND
22	Finland	IND	58	Paraguay	AMER
23	France	IND	59	Saudi Arabia	MENA
24	United Kingdom	IND	60	Senegal	SSA
25	Ghana	SSA	61	Singapore	EAP
26	Guinea	SSA	62	El Salvador	AMER
27	Greece	IND	63	Sweden	IND
28	Guatemala	AMER	64	Swaziland	SSA
29	Hong Kong	EAP	65	Thailand	EAP
30	Honduras	AMER	66	Tunisia	MENA
31	Indonesia	EAP	67	Turkey	MENA
32	India	SA	68	Taiwan	EAP
33	Ireland	IND	69	Uruguay	AMER
34	Iceland	IND	70	United States	IND
35	Israel	MENA	71	Venezuela	AMER
36	Italy	IND	72	South Africa	SSA

Table B. Summary Statistics

		FDI Gross Inflows	Greenfield FDI	Cross-Border M&As	Gross Domestic Investment	Economic Growth
Industrial	Mean	0.0310	0.0141	0.0169	0.2090	0.0207
	Median	0.0161	0.0056	0.0078	0.2059	0.0206
	Std. Dev.	0.0689	0.0621	0.0259	0.0388	0.0241
	Nobs.	263	263	263	263	263
Developing	Mean	0.0213	0.0148	0.0065	0.2318	0.0177
	Median	0.0125	0.0093	0.0003	0.2260	0.0186
	Std. Dev.	0.0297	0.0303	0.0181	0.0749	0.0412
	Nobs.	585	585	585	585	585
Latin America	Mean	0.0249	0.0160	0.0089	0.2130	0.0115
	Median	0.0187	0.0126	0.0012	0.2100	0.0138
	Std. Dev.	0.0271	0.0233	0.0180	0.0570	0.0399
	Nobs.	216	216	216	216	216