

Does FDI cause development? The ambiguity of the evidence and why it matters

Rajneesh Narula¹ and Nigel Driffield²

The contribution that inward FDI makes to development has been examined in a number of contexts including the relationship between inward FDI and new firm formation; growth; innovation, exports and competitiveness. However, no debate has proved so contentious, or so long lasting as that concerning the extent to which inward FDI stimulates productivity growth in the host country. There are two reasons for this. The first is simply the importance of the question. The growth literature is consistent in identifying productivity growth as the main driver of development. Studies by Klenow and Rodriguez-Clare (1997), Hall and Jones (1999) and Easterly and Levine (2001) among others have demonstrated that total factor productivity growth explains far more of the variation in cross country per capita income growth than the more traditional drivers of growth such as institutions or capital (physical and human) accumulation. Secondly, both policy makers and academics have long since held the view that there exist “spillovers” from FDI. That is, inward investment generates some form of indirect knowledge or technology transfer from parent to affiliate, and subsequently from affiliate to the local economy (Driffield et al 2010). The big questions that form the basis of this debate forum are simple enough: Do MNEs cause net positive externalities to host countries or not? Why is the empirical evidence on the role of FDI in development so ambiguous, especially for the developing countries? Given the vigour and universality with which FDI (circa 2012) is considered to be a ‘good thing’, central to the economic development plans of almost all developing countries, an outsider may be forgiven for thinking that these questions should by now have unequivocally positive answers. However, these are not innocuous questions that trouble only a few specialists in the field interested in the arcane minutiae of theory, as this debate forum intends to illustrate.

The importance placed by nation states on attracting FDI borders on the obsessive. FDI is seen by most countries as an elixir: a source of management techniques, technologies, best practice in governance, capital, etc. There are a variety of investment promotion agencies seeking to attract multinational enterprises (MNEs) to particular locations through myriad systems of incentives. Supranational and international agencies (from the OECD and the UN to the WTO and the EU), donor countries and NGOs offer guidelines, training programmes, advice, how-to manuals and assistance on how to negotiate, attract and embed MNEs. International agreements (some non-binding and others binding) on FDI and MNEs are attached to almost every bilateral and multilateral initiative.

¹ Henley Business School, University of Reading, RG6 AA, UK

² Aston Business School, Aston University, B4 7ET, UK

It has not always been so.

Less than 40 years ago, MNEs were seen as the sharp and unpleasant edge of capitalism and neo-colonialism, the cause of persistent underdevelopment, capital shortages and a threat to political and economic sovereignty. Policy orientation in developing countries were designed to enhance domestic capacity through import-substitution, with MNE presence restricted to certain sectors (and even these were design intended to be phased out over time as domestic firms were deemed able to do so).

Now that the pendulum has swung so far in the other direction, then, why is the evidence on FDI-assisted growth so thin on the ground? Arguments such as the inertia in institutional reform are not enough to explain the absence of take-off in the majority of developing countries, some 20 years after the process of economic liberalisation began.

The contributors to this EJDR forum have addressed these questions with vigour – and intentionally, much like the wise (blind) men examining an elephant, one extremity at a time – point us to different reasons why the evidence does not conform to the expectations of both scholars and the policy community. The explanations they offer point us in three different directions.

Comment [ND1]: Not really my taste, and may be considered to imply a degree of myopia on the part of the authors ?

The principle of FDI-assisted development builds around the concept that MNEs possess firm-specific assets which provide them with an advantage over domestic firms in the host location – known in the literature as ownership-specific advantages (O advantages). Such firm specific advantages are often characterised as technology based, relating to economies of scale, capital intensity and R&D, but are also be associated with management techniques, organizational skills, and the knowledge of markets, and the expertise to exploit them efficiently. These O advantages are not establishment-specific, but may derive from the multinational nature of the MNE. By virtue of its operations in multiple locations, it has (potential) access to information that is embedded in other plants that it operates in other locations, as well as ‘know-who’ knowledge: they are familiar with suppliers, customers and so forth that allow MNEs to be more efficient in generating economic rents through cross-border arbitrage and entrepreneurship.

The principle of FDI-assisted development derives from the concept of relative backwardness in economic development (Veblen 1915, Gerschenkron 1952), and Findlay’s (1978) conceptualisation that the potential for technological diffusion via FDI is positively linked to the relative ‘technology gap’ between the home and host economy. Findlay (ibid) endogenised the rate of technical change in a backward region as a function of its exposure to foreign capital. In this view, FDI (as opposed to arms-length technology transfers) is a more effective means to permit imitation because personal contact between those who has the knowledge (the MNE) and those who wished to acquire it

(domestic firms) facilitated the transfer process. Essentially, MNE activities result in externalities, which in turn are acquired and internalised by domestic economic units, thereby leading to a catching-up phenomenon.

It is important to distinguish between externalities, spillovers and linkages. Externalities imply outcomes of a MNE's actions that are made available to other economic actors (say, domestic firms) at no cost (although *Zanfei* argues in his commentary that there is no such thing as a free lunch: there are only 'effects', some of which are paid-for, and others are not-paid-for). Spillovers are externalities that accrue from one firm to another, and – as *Morrissey* (this issue) points out – imply a process of learning by the recipient firm, because of some formal or informal association between the firms in question. All spillovers are externalities, although all externalities are not spillovers, because externalities can accrue to firms which are not in a transactional association with the MNE (as *Castellani* discusses, focusing on the concept of pecuniary spillovers). Such transactional associations by definition imply a linkage, such that all spillovers are linkages (but the reverse is not true). That is, where transactional associations occur in the absence of intentional or unintentional learning, they are linkages, but not spillovers. However, as the commentaries of both *Morrissey* and *Giroud* (this issue) also point out, in practise, spillovers are nowadays associated with research that depend upon inferred productivity changes and aggregate empirical analyses that rely on production function analysis (see *Driffield and Jindra*, this issue). In practice, linkages studies tend to focus on distinct and separate effects relying on individual firms and MNEs (or affiliates) as the unit of analysis. Linkages studies are nowadays seen as a means to clarify firm-level relationships. Both presume the presence of learning as an outcome.

Much of the empirical work that exists has taken these basic ideas as their starting point. However, a variety of simplifications and assumptions have crept into the analysis, either to assist empirical testing and mathematical elegance, or to sit more comfortably with the assumptions of particular schools of economic thought. Overall, the contributions to this debate forum highlight a number of important issues.

First, much of the emphasis that the theoretical or conceptual literature has placed on the importance of spillovers is based on Dunning's (1979) classic exposition of what he termed ownership advantage. Dunning asserted that a necessary condition for inward investors to prosper in a foreign environment was that they possess some form of firm-specific advantage over host country firms. While these firm specific assets were characterised by Dunning as encompassing a number of phenomena, including patents, managerial ability, access to finance, the ability to coordinate resources or supply chains internationally, and greater influence in both goods and factor markets, these are often characterised purely in terms of technological advantage. This is either because the focus of the researcher is on technology or productivity differences between firms (Davies and Lyons 1991, Cantwell, 1989,

1991), but perhaps more often because rather erroneously the researcher has focussed on this element of O advantage to the exclusion of all other types of O advantages as has been the case in the spillovers literature. The literature has therefore over-relied on the issue of technological advantage, and has therefore in turn sought evidence of technology transfer between inward investors and host country producers, as the only evidence of the beneficial effects of inward investment.

Second, it has proven to be useful to empiricists to assume that technology embodied in MNEs is easily (and costlessly) transferred. As Zanfei argues in his commentary, externalities have costs, and are therefore, by definition not externalities, much in the same way as Teece (1976) refuted that technology can be made available at zero social cost. Wang and Blomström (1992) also questioned the original 'technology gap' hypothesis and suggested a model explicitly recognises two types of costs associated with technology diffusion– the costs to the multinational transferring technology to its subsidiary and learning costs of domestic firms.

Third, the MNE is utilised as a 'black box'. It has largely been assumed that all MNE affiliates possess similar O advantages as the MNE's parent firm, and that its potential for spillovers and the creation of domestic linkages are identical. Different kinds of subsidiaries will provide different kinds of potential linkage and spillover effects (Lall and Narula 2004, Marin and Bell 2006, Jindra et al 2009, Castellani and Zanfei 2006, Narula and Dunning 2010). However, the O advantages of a subsidiary are not necessarily a subset of its parent. In addition to the transfer of assets from the parent to the subsidiary, the subsidiary also evolves its own set of managerial and technological capabilities which may either be as a response to location specific characteristics, or because the subsidiary has evolved independently of the parent firm. Decisions in terms of sourcing and linkages may differ from that of a sister subsidiary in another host location.

Fourth, as Morrissey's contribution emphasises, FDI can have different motivations, and each has significantly different development potential. That much of the literature ignores the variation in motivation reflects the fact that a few decades ago, MNE activity was primarily driven by cost-economizing considerations as well as efforts to overcome market failures to trade. Cross-border organization structures were simple, and motivations for specific subsidiaries tended to be overwhelmingly resource seeking or market-seeking, with a minority of MNEs engaged in efficiency-seeking or strategic asset-seeking activities. The emphasis has shifted considerably over the last 30 years, in that MNEs have become increasingly sophisticated in managing and integrating activities across borders, and even relatively new and smaller MNEs are organized to maximize cross-border efficiencies and take advantages of the economies that derive from multinationality (Narula and Dunning 2010). MNE operations increasingly tend to involve multiple motivations simultaneously (Criscuolo et al 2005).

Motivations are indicative of the potential consequences of their activities, and changing motivations over time reflect how locations are perceived to have evolved by MNEs. MNE motives and strategies are interrelated. Domestic market oriented affiliates generally purchase more locally than export-oriented firms because of lower quality requirements and technical specifications. MNEs create more linkages when they use intermediate goods intensively, when communication costs between parent and affiliate are high, and when the home and host markets are relatively similar in terms of intermediate goods. Affiliates established by M&A are likely to have stronger links with domestic suppliers than those established by greenfield investment, since the acquired firm may have established linkages that are likely to be retained if they are efficient. The quality of linkages also varies significantly by industry. In the primary sector, the scope for vertical linkages is often limited, due to the use of continuous production processes and the capital intensity of operations. As *Morrissey* (this issue) discusses, the absence of FDI spillovers in Sub-Saharan Africa in the empirical literature reflects the rather large share of such FDI to the primary and services sector.

Fifth, not all host locations have the capacity to exploit the O advantages of inward FDI, because they simply do not have the absorptive capacity to do so. This matters at both the firm and the country level. MNE-assisted development requires that domestic firms (and other domestic actors) have the capacity to usefully internalize spillovers and to undertake and act as collaborators and suppliers to MNEs. Where domestic firms are in competition with MNEs, they must have the capacity to benefit learn from MNEs; otherwise they may be crowded-out. In short, MNEs must have domestic actors with a certain threshold level of absorptive capacity to link *with*, to spill over *to*. Greater participation of MNEs should ideally lead to a crowding-in effect, with MNE activity stimulating new and more efficient domestic economic activity that might not have occurred had not the MNE invested in that location. On the other hand, the contrary result – that of crowding-out – where domestic firms are displaced, out-competed or pre-empted by foreign-owned MNEs – is an outcome that countries seek to avoid. However, where there is a mismatch between the technological capabilities of the host location (and those of its firms) and the MNE, FDI may not prove to have limited development effects (Bell and Marin 2004, Portelli and Narula, 2006). Therefore, even if intra-firm knowledge transfer occurs, there is no guarantee that the domestic economy in which the affiliate is located will benefit as a result.

Absorptive capacities are not only firm-specific, but are also associated with a country or location. The capacity to absorb on a national level is a function of not just the firms within an economy. It is important to understand that while learning and absorption take place at the firm level, the success or failure of individual firms occurs in orchestration with an entire “system” (Criscuolo and Narula 2008). Innovation and learning involve complex interactions between a firm and its environment. The environment consists firstly of interactions between firms especially between a firm and its network of customers and suppliers. Secondly, the environment involves broader factors shaping the behaviour

of firms: the social and perhaps cultural context; the institutional and organizational framework; infrastructures; the processes which create and distribute scientific knowledge, and so on. To put it simply, if the institutions and organizations are absent or underdeveloped, economic actors within the system will be unable to absorb and efficiently internalize knowledge (Lorentzen 2005).

Zanfei's point about the concept of 'paid-for' effects is especially relevant here: simply because there are spillovers from an MNE, does not mean that these may be internalised by a potential recipient firm (or country) costlessly. Establishing the conditions for adaptation and assimilation of knowledge flows which may not be systematic or coordinated in nature, and may be embodied in human capital, equipment, or indeed organisations requires systematic coordination through industrial policy, and require long term investments in public and quasi-public goods (Narula and Dunning 2010).

Sixth, the fact that there are not always *net* positive effects points to the lack of transferability of certain MNE advantages (Aitken and Harrison 1999, Mody 2004, Narula and Dunning 2010). MNEs may have a low marginal cost to utilize the O advantages of their parent (whether in the form of advertising, brand names, technological assets, or knowledge of networks). Such advantages of multinationality and size are simply not available to domestic firms. They may also more efficient in exploiting these advantages, not being encumbered with the inertia that derives from being integrated into the local system, and the associated path dependent political and social obligations (Wang and Yu 2007).

Seventh, one must consider that not all affiliates automatically have access to the leading technology of their parent company, and, notwithstanding the possibility of inadvertent leakage, multinational enterprises frequently go to considerable lengths to internalise their knowledge and prevent or control its transfer to third parties.

Eighth, there is - in much of the literature - a serious disconnect between the data that are available, and the requirements of the model to properly identify the conflicting effects. The challenge therefore for scholars in this area is to generate data that better captures international technology flows, in both directions between parent and affiliate, to consider theoretical developments in terms of firm location and the motives for firms to engage in FDI, and to link this to high quality analysis of firm performance in both the host and home countries.

Ninth, as *Driffield and Jindra* (this issue) discuss, there are significant limitations in the most commonly employed empirical approaches. They highlight the limitations of much of the existing literature. The extant literature typically infers technology transfer from estimates of productivity (growth) that are then related econometrically to measures or proxies of inward investment. Much of the early literature aims to identify and quantify "intra-industry" effects. That is, whether inward FDI

generates productivity growth within the industry of the investment. This has since expanded to include inter-industry effects, seeking to proxy supply chain linkages between MNEs and local suppliers with for example input-output tables, to then infer upstream or downstream effects (Smarzynska-Javorcik, 2004, Driffield et al 2002). While on one level these have generated more convincing and reliable results than the earlier literature, they still highlight a number of limitations, as well as a gap between the theoretical and empirical literature. These issues are discussed in more depth by *Giroud, Morrissey and Driffield and Jindra* elsewhere in this debate forum.

What has increasingly become clear – and this is reflected in the much more pragmatic policies and selective approach of countries that have successfully leveraged FDI for their developmental objectives – is that there is a powerful interaction between the firm-specific advantages of MNEs and the endowments and competitiveness of the host country milieu. Countries that have taken a ‘generic’ approach to FDI as a determinant of development *per se* have largely been disappointed (Lall and Narula 2004). This is the message that *Mirza and Zhan* of UNCTAD emphasise in their contribution to this debate forum. Context matters, absorptive capacity matters, institutions matter, the economy matters, indeed, a lot matters, or - at the risk of sounding tautological – everything matters! FDI and development are concatenated and interrelated, and reality

References

- Aitken, B. & Harrison, A. (1999) Do domestic firms benefit from direct foreign investment? Evidence from Venezuela, *American Economic Review*, 89(9), pp. 605-618.
- Bell, M. & Marin, A (2004) Where do FDI-related technology spillovers come from in emerging economies? An exploration in Argentina in the 1990s, *European Journal of Development Research*, 16, pp. 653-686.
- Cantwell J.A. (1989) *Technological Innovation and Multinational Corporations*, Basil Blackwell, Oxford.
- Cantwell, J.A. (1991) 'The international agglomeration of R&D', in M.C. Casson (ed.), *Global Research Strategy and International Competitiveness*, Basil Blackwell, Oxford.
- Criscuolo, P, Narula, R. & Verspagen, B. (2005) Measuring knowledge flows among European and American multinationals: a patent citation analysis, *Economics of Innovation and New Technologies*, 14, p. 417-433.
- Criscuolo, P. and Narula, R. (2008). A novel approach to national technological accumulation and absorptive capacity: Aggregating Cohen and Levinthal, *The European Journal of Development Research*, 20/1: 56-73.
- Davies, S.W. and Lyons, B.R. (1991) 'Characterising relative performance: the productivity advantage of foreign owned firms in the UK', *Oxford Economic Papers*, vol.43, pp.584-95.
- Driffield, N Love, J.H. and Menghinello, S. (2010) The Multinational Enterprise as a Source of International Knowledge Flows: Direct Evidence from Italy. *Journal of International Business Studies*,. 41 (2) pp. 350-359.
- Driffield, N.L., Munday, M. and Roberts, A. (2002) 'Foreign Direct Investment, Transactions Linkages, And The Performance Of The Domestic Sector.' *International Journal of the Economics of Business*, Vol. 9(3) pp. 335-351.
- Easterly, W., and Levine, R. (2001). 'It's Not Factor Accumulation: Stylized Facts and Growth Models', *World Bank Economic Review*, 15 (2): 177-219.

- Findlay, R. (1978) Relative backwardness, direct foreign investment and the transfer of technology: A simple dynamic model, *Quarterly Journal of Economics* 92 (1), pp. 1-16.
- Gerschenkron, A. (1962) *Economic Backwardness in Historical Perspective*, Harvard University Press, Cambridge.
- Hall, R. E. and Jones, C. I (1999). 'Why Do Some Countries Produce So Much More Output per Worker than Others?', *Quarterly Journal of Economics*, 114: 83-116.
- Klenow, P., and Rodriguez-Clare, A. (1997b). 'The Neo-Classical Revival In Growth Economics: Has It Gone Too Far?', NBER Macroeconomics Annual 1997, 12: 73-103.
- Lall, S. & Narula, R. (2004) FDI and its Role in economic development: Do we need a new agenda, *European Journal of Development Research*, 16(3), pp. 447-464.
- Lorentzen, J. (2005) The absorptive capacities of South African automotive component suppliers, *World Development*, 33, 1153-1182
- Marin, A. and Bell, M. (2006). Technology spillovers from Foreign Direct Investment (FDI): the active role of MNC subsidiaries in Argentina in the 1990s, *The Journal of Development Studies*, 42/4: 678-697.
- Mody, A. (2004) Is FDI Integrating the World Economy? *The World Economy*, 27(8), pp. 1195-1222.
- Narula, R., Dunning, J.H. (2010), Multinational enterprises, development and globalisation: Some clarifications and a research agenda, *Oxford Development Studies*, Vol. 38, No. 3, pp. 263-287.
- Portelli, B. and Narula, R. (2006). Foreign direct investment through acquisitions and implications for technological upgrading. Case evidence from Tanzania, *European Journal of Development Research*, 18, 59-85.
- Smarzynska-Javorcik, B (2004) 'Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages', *American Economic Review*, 94(3): 605-27
- Teece, D. J. (1976) *The multinational corporation and the resource cost of international technology transfer*, Ballinger Publishing Company, Cambridge, MA.
- Veblen, T. (1915) *Imperial Germany and the industrial revolution*, Macmillan, London.
- Wang, J. Y. and Blomström, M. (1992) Foreign direct investment and technology transfer – A simple model, *European Economic Review*, Vol. 36, pp. 137-155.