Much ado about nothing, or sirens of a brave new world? : MNE activity from developing countries and its significance for development

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Rajneesh Narula

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Rajneesh Narula

John H. Dunning Centre for International Business
Henley Business School,
University of Reading,
PO Box 218, Whiteknights,
Reading RG6 6AA, UK

r.narula@henley.reading.ac.uk

ABSTRACT

This paper examines the evidence on developing country MNEs and outward FDI activity. We do not find evidence of an across-the-board growth in outward FDI from developing countries, either in magnitude, or geographically. Such growth is a narrow phenomenon, limited to a small group of home countries with relatively well-developed knowledge infrastructure, as well as innovation and business systems. These 'new' MNEs have been spurred by greater competition through liberalisation, and have sought to survive by upgrading of their firm-specific assets and *one* means to do so has been by internationalisation. Broadly speaking, much of the rapid expansion of DC MNE activity from countries such as India is not sustainable. We also discuss the effect of outward FDI on the knowledge base of the *home countries* of DC MNEs, as well as the role of DC MNEs in promoting South-South capital and knowledge flows. We argue that DC MNEs are not a superior option to conventional MNEs, as there are few differences in their modus operandi. Besides, MNE-assisted development still depends upon the capacity of the host country to efficiently utilise the spillovers and linkages potentially made available. Many of the DC host countries have endemic political instability, poor transport links and infrastructure, little skilled manpower and are distant from the most important markets. If developing countries are to attract more sophisticated projects they must provide stability, human capital, infrastructure and reliability.

Keywords: FDI, MNEs, developing countries, development, absorptive capacity, knowledge flows, south-south, emerging markets.
JEL codes: F23, L52, O14, O19

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1. Introduction

This paper examines the growth of outward MNE activity from developing countries. The changing nature of outward MNE activity from developing countries is worthy of note; however, its significance should not be overestimated. It does not reflect a fundamental shift in the world economy. Nor – on its own –is it evidence of a shift in economic power from the North to the South. We argue that the growth of a group of firms of a given nationality does not always imply that their success can be extrapolated to the entire economy, or to other, differently-structured economies. The developing world is not a homogenous grouping, unless globalisation requires the principles of the social sciences to be radically revised. We argue that they do not.

We argue here that these patterns of FDI from developing countries – both at the firm level, as well as the country level - continue to reflect extant conceptual and theoretical models and principles, and insofar as these are understood and properly applied. When we follow this approach, we find no evidence of a massive take-off by DC MNEs across the board. Rather, we see consistently increasing outward activity by a specific group of firms from a select group of developing countries that can be accurately described as 'emerging'. The term 'emerging' has been used with great abandon in recent years, but we use it here to mean countries that are at a stage of economic and industrial development – as reflected by their economic structure, absorptive capacity, and business and innovation systems – that permits their firms to industrialise rapidly. These firms may seek become MNEs, but such internationalisation presumes that that the firms have *non-location-bound* firm-specific assets *that have the potential to be upgraded and augmented*, and which therefore allow them to engage in (and control) long-term value–adding activities in foreign locations that are commercially viable. This definition is intentionally specific. The points we will make are these:

1. Not all outward FDI is indicative of superior firm-specific assets and initial advantages that are sustainable;
2. Not all foreign investment is *de facto* FDI;

3. The firm-specific assets of DC MNEs are path-dependent, and reflect the resources, economic structure, technological capabilities and comparative advantages of the home country. This creates cognitive limits to the firm's growth, whether at home or abroad.

Apart from China and Russia, there has been no increase in the number of significant home countries (Brazil, South Africa, India and the Asian NICs were already outward investors by the 1980s). This paper goes on to argue that the most important determinant of outward MNE activity is location advantages of the home country associated with a high level of domestic absorptive capacity. The countries that dominate *sustainable* outward MNE activity are those countries that have the capacity to generate and support innovative activities.

As we will show, the much-commented tendency for DC MNEs to be in direct competition with 'conventional' does not represent a new, 'third wave'. We argue that these MNEs represent a natural progression of earlier trends, hastened by increased liberalisation and greater cross-border competition. This reflects a simple convergence - DC MNEs are simply increasingly behaving increasingly like their developed country competitors. To use Ramamurti's (2008a) terminology, DC MNEs have moved from being infant MNEs to adolescent MNEs in the past 30 years, and are converging upon the 'mature' MNE rapidly.

This paper also discusses whether and under what circumstances outward MNE activity influences home country development. The last section discusses whether and how DC MNEs might contribute differently to host country development, and how this may or may not differ to conventional MNEs. The final section concludes with a look at possible future trends.

2. MNE activities from developing countries: a background

Much of the very early research on internationalisation of firms and the location of production - best exampled by Vernon's (1966) effort- paid little attention to the differences in the nature of MNEs of differing home countries. Affiliates of developed country (at the time, US) MNEs were 'miniature replicas' of their home country operations, truncated in response to firm specific characteristics and the host country characteristics. This reflects to some extent the barriers to trade in a pre-liberalised world. It was also assumed that as follower countries converged, their MNE activity would operate in a similar manner to conventional MNEs.

However, this idea was challenged by the growing phenomenon of MNEs from the developing countries (see e.g. Lecraw 1977, Kumar and McLeod [eds] 1981, Lall [ed] 1983, Khan [ed] 1987, Lecraw 1993). These authors argued that DC MNEs had specific characteristics that were distinct from those originating from the developed countries. As the publication of UNCTAD's World Investment Report 2006 attests to – a report which focuses in its entirety on this issue –the subject has now has become the subject of mainstream enquiry.

Box 1: the key to understanding MNE activity – ownership advantages

The key to engaging in any kind of rent-seeking activity is the possession of ownership specific advantages. A firm's competitive advantages derive from two types of firm-specific assets:

1. Those associated with technological assets in the traditional sense of being technological/engineering assets, such as machinery and equipment, and in the personnel who operate and maintain them. These are asset-type ownership (Oa) advantages.
2. The second type of firm-specific assets are those associated with conducting transactions efficiently, that derive from being able to generate rent by virtue of superior use of intra-firm hierarchies, both within and across national borders. In addition there are those that derive by virtue of the multinationality of the firms and can be termed 'advantages of common governance'. These are transaction-type ownership (Ot) advantages (see Dunning 1993, Cantwell and Narula 2001).

It is important to note that MNEs can exist in the absence of technology type ownership advantages, generating rent simply from its superior knowledge of markets and hierarchies. Ownership advantages are not advantages in the same sense as comparative advantages, in that they are not simply relative to other firms in the home country, or to domestic firms in the host country, but are advantages in relation to other firms that they compete with, regardless of nationality.

It is important to note that innovative advantages are differentiated and relative concepts, not indicative of some notional technology frontier (Cantwell and Narula 2001). It is important to note that differentiated firm-specific strengths that constitute a firm's ownership advantages do not always imply an overall absolute cost advantage. Hence, firms that are not world leaders or do not hold an overall absolute cost advantage over most indigenous firms in the countries in which they invest may still have ownership advantages especially in operating in certain differentiated kinds of products and services. In addition, the kinds of networks a firm is involved in – its relational assets – also provide an important O advantage.

O advantages derive and are a function of the location advantages of their home country. Thus, the O advantages of firm reflect the comparative advantage of their home location and its economic structure, in addition to the kinds of firms (both MNE and domestic) present, and its knowledge infrastructure.

Much of the earlier empirical work – best described as the first wave - indicated a strong and marked trend for DC MNEs to focus their investments in neighbouring and other countries which were at a similar or an earlier stage of their development. This preference was a direct result of their lack of international experience - these locations had offered resource endowments for markets which were broadly similar to those of their home countries. Furthermore, their ownership advantages were of a type most suited to these L advantages (and often *induced* by them), and were based on technologies at the end of their product life cycles (given that most developing countries had import-substituting programmes that limited the direct participation of MNEs). In other words, these DC MNEs had few transaction-type ownership advantages, and only the most basic form of asset-type ownership advantages - those that derived from the efficient acquisition and adaptation of imported technologies[2]. These advantages were enhanced by the prevalence of import-substituting, inward looking policy regimes amongst most developing countries whose relatively small markets encouraged small scale production, particularly suited to these MNEs. The assets of these firms were primarily country-specific, determined by the market distortions introduced by the home country policies, and only sustainable where similar location advantages existed in other countries. Indeed, as we will see in the next section, a majority of the outward FDI from developing countries still demonstrates a similar geographical bias. The first wave sketched a description of a 'different' kind of MNE that - so it was argued - differed considerably from that of 'conventional' industrialised country MNEs, in terms of its ownership advantages, motivation, geographical direction and mode of overseas activity.

In a later contribution, Dunning *et al* (1998), argued that the evidence on DC MNEs had shown an evolution over time, and by the early 1990s, there was a second wave of FDI activity by DC MNEs, distinct from the first wave. Both waves existed simultaneously from the same home countries. The second wave MNEs tended to come from countries at a higher stage of industrial development that had evolved structurally towards industrial sectors which are capital- and knowledge-intensive. These firms engaged in simultaneously in outward FDI to locations with appropriate comparative advantages (often lesser developed countries) for their natural-asset intensive and labour-intensive activities, while, at the same time, they also engaged in both

[2] See Lall (1983) for a succinct discussion.

market-seeking and asset-augmenting FDI in the more developed countries. In other words, they were increasingly becoming global, demonstrating features of 'conventional' MNEs.

We have recently seen a flurry of publications on the rapid growth of MNEs from developing countries, which, from some accounts are now ubiquitous[3]. Further, this growth of new MNEs is regarded as indicative of the increasing competitiveness of their home countries, which (some have argued) herald the beginning of a new world order. Other publications have conducted case-studies of MNEs from a variety of developing countries, demonstrating-collectively – that this is a wide phenomenon, that include all but the least developed countries. Others have focused on China and India, or more broadly, on the BRICS. Thus, in the next part of this paper we ask: does this evidence represent a 'third wave', with distinctly different characteristics from the previous two waves, or – as this paper proposes to show – that this new activity is simply a natural extension of the second wave?

3. Gradual evolution of the second wave or a radical shift?

What have been the reasons for the growth in DC MNEs activity over the last decade? Expanding from Dunning *et al* (1998)'s view that the first and second wave of DC MNEs represents part of a continuum, we will argue that the current 'new wave' can be characterised as an intermediate stage in the evolution of MNE activity, between the first wave DC MNEs and 'conventional' MNEs[4]. Note that the conventional MNE from the developed countries as a homogenous group is very much a generalisation, and used here entirely for illustrative purposes. Not all are equally experienced in foreign activities, and indeed go through a similar evolution of size, structure, strategy, and assets as they expand abroad, much as DC MNEs have done.

Table 1 shows the main characteristics of these three groups of MNEs. In many cases, the very same firms have simply shifted their focus over time from similarly endowed economies in the developing world, to investing in the developed countries. The evolution of the 'first wave' MNEs towards the 'second wave' MNEs was initially enhanced by the fundamental (but gradual) change in the structure of the world economy, much of which is often generalised as being a direct result of globalisation. These changes can be considered from the developing

[3] See for instance, contributions to Ramamurti and Singh (2008b). Also, see special issues of Industrial and Corporate Change 2009 (edited S. Athreye and S. Kapur), and Journal of International Management 2007 (edited by P. Aulakh).

[4] Not all such MNEs are equally experienced in foreign activities, and indeed go through a similar evolution of size, structure, strategy, and assets as they expand.

country perspective as being of two kinds. First, there are those that have been largely *exogenous* to these countries but which have affected their economic structure both as members of the world economic order and as individual economies. Globalisation – in the sense of greater cross-border economic interdependence between firms, markets and countries - has impacted on firms by creating broader and more competitive markets across countries. This has had two effects on the developing countries:

a. Firms in all countries (whether developing or developed) have potential access to larger markets. At the same time, the growing complexity of products and services (in that most now require a broader range of competences from different sectors) has raised the costs of innovation, design and production. Providing similar products across larger *de facto* markets has also become essential to defray the costs and risks of such sunk costs, and firms need to have large economies of scale and a high minimum efficient scale. This has meant that firms in these industrial sectors need to expand internationally to justify production;
b. With falling tariff barriers and global accords such as those associated with the WTO, firms in developing countries that were able to generate economic rents in their protected home markets from mature products and services utilising 'inferior' ownership advantages some distance away from the technological frontier were unable to continue do so, due to growing competition from developed country 'conventional MNEs, whether through exports or FDI. This has forced technological trajectories and standards to converge, such that there is greater international competition, and inter-sectoral competition.

In other words, firms increasingly need to have competitive advantages that are globally viable, rather than domestically or regionally so, and this has been further enhanced by the innovation of space-shrinking technologies, falling trade barriers, and transportation costs (Narula and Dunning 2000).

There have also been structural changes *within* individual countries in direct response to these exogenous changes, and as such may be considered as *endogenous* to most developing economies. These endogenous changes are primarily associated with the actions and policies of governments. One of the most important of these changes over the past decade or so has been a

fundamental shift in the policy orientation of developing countries from an import-substituting role (or a centrally-planned one) to an export-oriented, outward looking one. The extent of liberalisation varies between countries: in some cases it is associated with a more pro-active and market facilitating role, while in others it is simply reactive or even laissez-faire. Nonetheless, despite this broad range of policy options, it is safe to generalise that most countries have a greater level of inward MNE activity, and this has fundamentally changed the market structure of most countries, in some cases crowding-out domestic actors, and in other cases, strengthening them.

Growing competition at home has meant that the privilege of slow and gradual building-up of ownership advantages through licensing and joint ventures is rarely an option. Nor can they continue to follow the product life cycle model and depend primarily on obsolete production and process technologies (for which markets may still exist in countries at lower stages), but must simultaneously also seek to emulate best practice.

Most developing economies had also nurtured state-owned enterprises and national champions as part of their economic and industrial policies. They often also provided protection against competition, and subsidised their outward expansion (and this still remains the case in certain countries like China). Although various agreements within the WTO (combined with economic liberalisation) have led to the dissolution – or at least a weakening of such state support – this has paradoxically helped some[5] to improve their ownership advantages by providing them with the initial impetus to internationalise. Others have responded to the challenge by expanding abroad rapidly in a more aggressive way. Greater competition has prompted other firms to upgrade their assets by partnering with foreign MNEs, while others have sought to improve their firm-specific assets through greater investment in R&D, whether at home or abroad. Firms that have survived have tended to do so by following the same 'game plan' as 'conventional', MNEs in the use of (and integration into) global production networks and supply chains.

Greater competition primarily from foreign entrants in the home market has had several consequences for firms that have hitherto operated in closed markets. Some of the more

[5] At the same time, some of the earlier internationalising firms proved to be not as successful as MNEs, particularly as rents from protected home markets began to dry up in a post-liberalisation scenario. A number of such firms have experienced considerable restructuring of their foreign operations, sometimes withdrawing completely by selling off their foreign assets

successful domestic firms were acquired (whether voluntarily or otherwise) by foreign investors (Narula and Marin 2005, Humphrey *et al* 1998) while others have sought to upgrade their O advantages to compete more effectively, although the extent to which firms have been aggressive about upgrading their technological capabilities, products and services has varied considerably (Giuliani *et al* 2005, Morris and Barnes 2008).

Not all DC MNEs have been successful in expanding abroad, and as we discuss in a later section, not all have the requisite ownership advantages to do so. Indeed, the ones that have been successful are mainly those that have sought to be proactive about upgrading, through internationalisation. A number of these MNEs have expanded through M&A, although this phenomenon is much smaller in relative terms than many observers have made out (Barnard 2006).

To some extent, some of the 'first wave' characteristics of their activities will continued to reflect their home country origins, in maintaining a strong regional focus, as well as in the kinds of sectors they prefer to concentrate in. Nonetheless, a number of DC MNEs seek to present themselves not as MNEs from South Africa, India or China, but they adopt the *modus operandi* of 'conventional' MNEs (Barnard 2006). Indeed, several of them relocated their headquarters to the US or the EU, and/or list themselves on stock markets there.

Although some (see e.g. Gammeltoft 2008, Andreff, 2003) have argued that MNEs from the BRICS countries represent a 'third wave', we will argue that this simply represents a catching-up phenomenon. Rather, the so-called third wave is actually 'Two Prime' – an advanced version of the second wave. As DC MNEs evolve and acquire greater experience of international operations, competing directly with conventional MNEs, and managing cross-border activities, they naturally move closer to the structure and patterns of the conventional MNEs, displaying similar ownership advantages, managerial skills, organisational structures and so forth.

As globalisation has increased the role of inward FDI in many developing countries, this has changed their L advantages, and not surprisingly, the O advantages of domestic firms. In certain instances, their O advantages have been eroded and have been crowded-out, while in other cases, firms have benefitted from the competition effect, as well as through spillovers and linkages.

*****Table 2 about here *****

***** Figure 1 about here*****

4. The evidence on DC MNEs: Does the data indicate a change in trends?

In this section we shall examine whether, and to what extent, the significance and pattern of DC MNE activity has changed in both relative and absolute terms since the 1980s. Ideally, this would require proper benchmark studies across countries, but such data is rarely available. A number of studies have been based on case analysis of a firm or certain groups of firms with specific nationalities. Although they provide plenty of detail, they have the disadvantage of a selection bias, and it is not always clear whether these findings can be extrapolated as being representative of their home economies. On the other hand, FDI data gives a better picture of trends at the country-level, and to what extent some home countries are able to propagate firms with the capacity to engage in international activities, and how these have changed over time. Nonetheless, as we explain in Box 2, there are also significant limitations to the use of FDI data.

A number of studies point to the rapid growth of developing country FDI stocks as a percentage of total outward stock from 9.8 per cent to 14.7 per cent between 1993 and 2007, as evidence of the increasing importance of these countries as sources of outward FDI. This data is summarised in Figure 1 and Table 2. We proceed in Figure 1 (for raw data, see Table 2) to adjust the stock figures for the BRICS countries, which seem to have a monotonic effect on the graph, with an increase from 7.2 per cent to 11.39 per cent over 15 years. When we extract the Asian NICs, however, we see a sudden drop in the outward FDI stock as a share of total world FDI stock, such that there seems little or no change in the trend over the period from 6.4 per cent to 6.97 per cent over the same period. As these data are nominal, and undeflated, this implies a *decline* in real terms over time once Singapore, Hong Kong, Taiwan and Singapore are eliminated. If one eliminates the NICs, BRICS (in other words, 9 countries), the percentage of outward FDI from developing countries actually *declines* even in nominal terms, from 3.0 per cent to 2.4 per cent between 1993 and 2007. This does not reflect, then, a broad-based phenomenon, but the case of a rather small group of countries. Indeed, once we eliminate outward FDI stock from NICs, BRICs, GCC[6] and tax havens, outward FDI stocks from

[6] The countries of the Gulf Cooperation Council (GCC) are the main oil exporting countries of the Middle East. We use the term GCC and Middle East Oil Exporting Countries as synonyms in this paper.

developing countries *fell* from 2.05 per cent or total to 0.44 per cent of the total between 1993 and 2007. This data suggests that most of– if not all - the growth in outward MNE activity from 'developing countries' comes from a group of countries that are for all intents and purposes developed[7], and have been so, since the beginning of the new millennium.

Box 2: The superiority of FDI stocks as a measure of MNE activity

There is a widespread tendency to use on the volume of FDI flows, as this is often the only data available, and gives an idea of capital provided from foreign sources. For the purposes of estimating the *value* of foreign-owned economic activity in a given economy, however, it is much better to use stock data. Flow data are estimated by the central banks for balance of payments purposes and only indicate the amount of new investments coming into a host economy in a given year, and take no account of reinvested earnings, capital raised in the domestic capital markets, transferred between subsidiaries in the same host location, or disinvestments (if the capital remains in the host country). For purposes of accuracy then, the appropriate unit of analysis should be FDI stocks. FDI stock data gives a more accurate idea of the contribution an MNE makes to the host economy, and has a monotonic relationship to its local value-adding activities. It also provides a better measure of how this significance changes over time, and by taking into account previous investments, it allows us to compare the relative importance of MNEs between countries.

Where FDI stocks are not available, international agencies such as UNCTAD estimate stocks by taking a accumulated of flows for a certain number of years as a rough proxy. Although such estimations are not always perfect, they still provide a better estimate of changing trends in the value of MNE activities. For a discussion, see Narula (1996, pp 42-44), Zhan, J. (2006)

***** Table 3 about here*****

Table 3 gives details of the outward FDI stock of the 20 largest home countries amongst the developing countries for 4 periods 1993, 2000 and 2007. The first thing worth noting is that there are no new countries in the list of the top 20 home countries (which excludes the Middle East oil exporting economies, and tax havens). These 20 countries accounted for 8.6 per cent of total outward FDI in 1993, and in 2007 these same countries accounted for 14.12 per cent. As a

[7] Indeed, the continued inclusion of the Asian NICs in the classification of developing countries seems somewhat strange and even problematic, given that the GDP level on a per capita basis (whether on a PPP or nominal basis) have clearly converged with the developed world.

percentage of outward FDI from the developing countries as a whole, this Figure is 87.9 per cent and 96.3 per cent respectively for the same years.

Table 3 also lists the level of outward FDI stock on a per capita basis. Despite the considerable focus on the growth of outward FDI from India, its outward FDI stock on a per capita basis remains the lowest of the 20 countries in all three periods, having increased from just US$0.3 to US$25.1 over the 14 year period, and even in 2007 was less than countries such as Philippines and Indonesia, and a third that of China, and is even lower than Nigeria and Colombia. The data for the BRICS countries in general indicate that Brazil and South Africa were already major outward investors in 1993, and indeed may have *declined* in relative terms over time. It would seem, therefore, that the case of China and Russia were the only significant new entrants over this period. Consider also that Russia presents a special case, having moved from being a political superpower, with a strong military-industrial complex to an 'emerging economy'. Indeed, several indicators of technical and scientific indicators in the 1980s make it difficult to argue the case that Russia's development can usefully be compared with other so-called emerging economies, and continues to possess elements of a knowledge infrastructure which is very much 'world class' (Narula and Jormanainen 2008), but have not fully made an effective transition that allow these assets to be efficiently exploited within a capitalist framework.

Indeed, the data in Table 3 indicates that the analyses conducted more than 10 years ago of the outward FDI activity from developing countries continues to be relevant: it shows that growth in outward MNE activity has primarily been with a very small group of countries, the majority of whom that are at a level of development consistent with the predictions of the investment development path (Dunning 1981, Dunning and Narula 1996, Narula and Dunning 2000, 2010). These are countries that have a certain threshold level of economic development, and would be classified as late stage 2 and stage 3, and whose home locations have an appropriate level of location advantages that are ordinarily associated with competitive advantages of domestic firms of the levels that could support sustainable growth of outward FDI.

***** Table 4 about here*****

Earlier studies have shown that there is a clear association with level of economic development of a given country and the propensity of its firms to engage in outward FDI (See Narula and Dunning 2010 for a review). Thus, we are able to test whether outward FDI has been growing faster or slower than economic development for groups of countries at roughly the same stage of development, and between groups. In other words, we can see if the developing countries (and within developing countries, which sub-groups) have a more rapid growth in their outward FDI activity. We utilise GDP per capita as a crude indicator of economic development, Table 4 shows that although GDP per capita of the least developed countries has grown more rapidly during the first 7 years of the new millennium, it has increased at a faster rate for the low-middle income and upper middle income countries. This suggests that economic convergence has not grown, although the data would suggest that divergence, at least, is no longer the case, with the ratio of GDP per capita for low income to high income countries having increased marginally from 1.3 per cent to 1.6 per cent between 1993 and 2007 (Table 4).

Turning to the same ratio for outward FDI per capita, there has been no increase in outward FDI from the least developed countries between 1993 and 2007, with an noticeable (and statistically significant) increase for upper middle income countries in relative terms (Table 4). Indeed, turning to the BRICS countries, they increased from 1 per cent to 1.3 per cent, hardly a large increase at all. In comparison, the NICs outward FDI increased from 55.4 per cent to 121 per cent over the same time period. This confirms that outward FDI is not increasing rapidly from developing countries as a whole, and is largely associated with countries at a relative high level of development. In other words, it has been growing faster with upper middle income countries and less so in lower-middle income countries.

***** Table 5 about here*****

Although comparable data on the industrial composition of outward FDI are somewhat scarce, Table 5 gives some idea for Brazil, Russia, India and China, the BRICs countries show considerable heterogeneity. China invests less than 10 per cent of its total outward FDI abroad in the manufacturing sector (Table 5). This compares with the case of Brazil which invests less 3 per cent. India, and Russia, by contrast, seem to invest roughly 50 per cent in the secondary sector. Indeed, all four countries have a large interest in FDI in the tertiary sector, with Brazil

investing 96.8 per cent of total outward FDI stock in services, compared with 65 per cent for China, 51 per cent for Russia and just 37 per cent for India. Table 6 gives us a clear idea that a majority of the outward FDI from the BRICS countries is of a regional nature.

***** Table 6 about here*****

5. Sustainable outward FDI: not all ownership advantages are equal.

Certain assets are country- or location-specific in nature: these derive *inter alia* from privileged or monopolistic access to natural resources; a monopoly/oligopoly granted by government policy; subsidies provided, sometimes in the form of low-cost loans. With the exception of capital subsidies specifically for the purposes of outward FDI, privileged access to the home market only provides an *initial advantage* to venture abroad (Rugman 2008). The initial advantage is generated indirectly, in that even where unit costs of activities abroad are greater than competitors in the host market, economic rents generated from the monopolistic position at home can cross-subsidise foreign operations. A number of Chinese outward MNEs have the advantage of being state-owned enterprises (SOEs) (Ding 2000, Buckley *et al* 2007, Huang 2008) which allows them to generate a lower rate of return on their foreign activities.

A number of the home countries of DC MNEs are part of a subset of developing countries that have utilised - to different degrees - a combination of import-substituting policies with outward export orientation (see e.g. Lall 1996, Amsden 2001). They have all enjoyed government patronage and support, either as national champions or as members of privileged oligopolies, with access to government contracts, subsidies, trade and investment barriers to foreign competitors, and the careful and leveraged use of local content, lax property right regimes, and technology transfer agreements that enabled them to grow strong in protected domestic markets. Many began their international expansion with active government support, were able to cross-subsidise their monopoly profits at home against the cost of international expansion, or were proactive in overseas expansion because of home country liberalisation and the consequent end to their protected home markets. They are not entrepreneurial start-ups that began to compete internationally based entirely on their own merits. This is especially so in the case of Indian MNEs, such as Mittal, Tata, Reliance and Birla, but was also the case in other MNEs from developing countries (such as those from Thailand, Mexico, Korea, Taiwan, Hong

Kong, China and Malaysia). They benefitted from the import-substitution era where oligopolistic profits were permitted to a few 'national champions' (entry and exit in any given industry were controlled by the state, which only licensed a few select firms).

Such expansion provides an initial basis for expansion, and is not sustainable in the long run, unless other existing asset- or transaction-type firm-specific advantages are augmented or new ones developed or acquired (Ramamurti 2008a, Pananond 2007). However, augmenting or acquiring ownership advantages is not costless, nor is it always feasible. I will discuss this in greater detail in section 4.2, which focuses on strategic asset-augmenting activities.

This is not to distract from the fact that a number of these companies have succeeded in upgrading their ownership advantages and no longer dependent on captive markets, large capital bases, and discounted interest rates, or the advantages that derive there from. But it is important to remember that these are the firms that have *thus far* survived their international expansion reflects a selection bias. It does not necessarily imply either, that their expansion strategies will necessarily continue unabated, having, in many cases, little or no prior experience in coordinating and controlling cross-border integrated operations. It is not yet clear whether on average they have scaled back further than large conventional firms, but anecdotal evidence suggests that there are few new entrants, and that their failure rate is no lower than firms in general.

Indeed, there is a trend for MNEs to seek greater economies of scope and scale by creating greater integration wherever possible. However, this varies by industry, reflecting opportunities to seek rationalisation of activities such that regional or global scale economies are achieved and duplication reduced, while still maintaining some level of local responsiveness. Greater competition has forced almost all cross-border operators to seek greater integration to achieve lower costs.

Many of these firms are amongst the largest in their home markets, and are themselves part of large industrial groups (sometimes with cross-holdings and common ownership) with interests in several industries, and also derive location-specific ownership advantages from privileged access to intra-group transactions and intermediate goods within the same family of firms, but these advantages are not necessarily available when they move abroad. However, where other members of the same domestic networks (even in the absence of formal ties) have

international operations, their knowledge and competences of foreign activities positively influence internationalisation (Yiu *et al* 2007, Elango and Pattnaik 2007).

Another initiaL advantage (and not necessarily location-specific) derives from close relationships with governments in their home countries. This works at two levels. First, by virtue of their size and importance in the home economy, they have close relationships with state-owned organisations, ministries and policy makers, and are able to influence domestic policy, as well as the associated technology and science infrastructure to their own needs, and in many cases, these have evolved around and with their own domestic activities, often over a long period of time. Such linkages confer the basis to generate economic rent for incumbents, and are a cost to new entrants or those less entrenched in the domestic milieu. These advantages are not transferable to foreign markets, and establishing 'membership' in business and innovation networks in new locations is not costless (Narula 2002). At the same time, not all DC MNEs have privileged access to these networks, particularly those that are smaller, and/or start-ups. For such firms, outward FDI may also be a means to exit institutional constraints at home (Witt and Lewin 2007)[8] and access technological resources associated with innovation systems elsewhere which have not been captured by the larger and more dominant national champions (Narula and Zanfei 2005).

Second, many countries have now established – directly or indirectly, policies that promote outward FDI (Giroud *et al* 2009, Fortanier and van Tulder 2009, Kumar and Chadha 2009). Some home countries provide fiscal incentives such as low cost loans either to the MNE, to the host country, or to both (such as for resource-seeking investments in the case of China), while other home countries make political interventions on behalf of the investing firm. Although this is a tactic that has been utilised for centuries to gain trade and investment concessions, and access to restricted sectors of the host economy, it has hitherto been a policy followed by first-world home countries and MNEs (Kaplinsky and Morris 2009).

Several commentators have noted that a considerable amount of outward FDI from developing countries is actually 'round-trip' FDI, which is outward FDI by firms seeking to reinvest these same funds in the home country as inward FDI, which attracts specific incentives and subsidies not always available to domestic firms (Huang 2008). This behaviour has been

[8] Child and Rodriguez 2005 have noted that Chinese firms may pursue outward FDI as a means to minimise disadvantages of having a purely domestic footprint.

particularly noted for Chinese firms investing in Hong Kong and some tax haven countries such as Cayman Islands, Virgin Islands, etc. These three regions were the destination of over 75 per cent of outward FDI flows from China from 2003 and 2006, although the ultimate beneficiaries of these investments are hard to determine (Morck *et al* 2008). Earlier estimates suggest that round-tripping of foreign direct investment could account for about 25 to 30 per cent of inward FDI in China (Harold and Lall, 1993; World Bank, 2002)[9].

One of the reasons many developing countries discouraged outward FDI prior to liberalisation was that outward activity represented an excuse for capital flight. This motivation cannot be discounted. Morck *et al* (2008) note that this remains an important reason for Chinese some percentage of Chinese outward investment. In the case of Russia, high levels of political and economic uncertainty as well as considerable regulatory constraints after the collapse of the Soviet Union resulted in considerable capital flight (Kalotay 2002)

Of course, the pendulum has swung the other way: the same domestic firms vilified by their home governments for capital flight 20 years ago, are now seen as symbols of national virility. Thus, it is worth highlighting the importance of 'hubris' as a (unsustainable) motivation for outward FDI by DC MNEs, both of the owners, as well as of the home country governments. Ramamurti (2008b) notes China's explicit intention to have 50 Chinese firms amongst the Fortune 500 by 2010. India's government has likewise begun to promote its large firms' foreign investments. Bharti Telecom attempted to merge with MTN of South Africa in 2008, but when it transpired that their relative size and international experience would mean that MTN would *de facto* be acquiring Bharti, its CEO withdrew from the merger citing national pride[10]. Indeed, being a multinational firm with an overseas presence is often seen by management of companies as a symbol of success. However, it is one thing to acquire such assets, it is quite another to integrate and manage them successfully, and reap the benefit of the economies of common governance. Tata's acquisition of both Tetley's and Jaguar Land Rover have both been loosely integrated (if at all) with the Tata's other operations either at home or elsewhere. Where such firms have sought to integrate more deeply, the lack of experience in managing cross-border activities is reflected in their failure to reap scale economies. This is not novel to DC MNEs:

[9] Table 6 shows that some 70 per cent of Brazil's outward FDI stock is directed towards these countries, although the evidence is less clear as to whether this is for tax purposes rather than round-tripping.

[10] '"Bharti's vision of transforming itself from a homegrown Indian company to a true Indian multinational telecom giant, symbolizing the pride of India, would have been severely compromised." The situation was "completely unacceptable," Bharti said.' Source: New York Times, May 24 2008, '$50 Billion Bharti-MTN Deal Falls Apart'

acquisitions rather than greenfield activities have the advantage of rapidity, but require greater ownership advantages to maintain. On the other hand, acquired assets are easier to divest since they continue to have a resale value, should the firm wish to sell because it has decide to change it strategic direction, or its earlier enthusiasm may have waned (Athreye and Kapur 2009).

Box 3: Outward investment does not imply that the investing firm is an MNE

Foreign *direct* investment differs from portfolio investment in the fundamental importance of *control* by the investing firm: the investor's aim is not simply to generate an adequate return on their capital, but to engage in the management of the foreign subsidiary, actively determining its strategy and subsequent implementation. The basis for this control is presumed to be the possession of some kind of ownership advantage, which may be entrepreneurial, managerial or technological. Where a firm is an acquisition, the acquiring firm is presumed to have such an ownership advantage relative to the firm it is acquiring: ownership level being equal, it is presumed that the firm that controls the joint venture must possess some superior assets.

In the days of capital controls, ownership implied control: .most statistical offices have continued to classify projects as FDI based simply on the share of ownership. Most countries take the benchmark of 50 per cent or greater as an indicator that the firm is controlled by a foreign-owned firm, while in other instances (as in the case of inward FDI into the US), 10 per cent ownership implies all the assets of the acquired firm are foreign-controlled. Almost all host countries evaluated FDI projects on an individual basis to confirm the intention of the investment, and the kinds of effects it might have on the host economy, as well as the kinds of assets it planned to utilise.

This is no longer as easily done, nor do countries seek to restrict foreign investment flows, having in most cases agreed to WTO regulations that guarantee national treatment to foreign investors.

It should not always be presumed, therefore, that a foreign investment is necessarily a foreign *direct* investment. It may represent an institutional investment – through for instance, a private equity firm, or a portfolio investment. This is the case in many of the acquisitions by oil exporting countries (including the Middle East countries, but also Russia) where individuals or (state-owned, or influenced) firms have access to capital and acquire ownership in companies which give them the *potential* to exert control.

The acquisition of dominant share in a foreign-based enterprise may be undertaken because it provides superior oversight and reduces the costs of shirking compared to non-equity modes of cooperation or a minority equity share. Thus firms may overvalue the benefits of having a dominant, majority or wholly-owned foreign affiliate, because the investor's home country does not provide it the experience of trusting other modes of entry share. Morck et al (2008) argue that this is the case with many Chinese firms. Such investments are *de jure* FDI, but *de facto* portfolio investments.

6. DC MNEs and acquisition of 'strategic' assets

There is considerable ambiguity as to what constitutes strategic asset-seeking investment. This has led to a variety of activities being classified as asset-seeking, and I want to revisit the logic underlying this motivation before discussing its importance for DC MNEs.

To an extent, all investments – whatever the mode of entry, whether portfolio or direct, equity or non-equity – have a strategic aspect. 'Strategic' activity by a firm implies actions that have the potential to improve their long-term (i.e. future) product and/or market positioning, and by implication and design, the firm's profitability in future periods. To fully understand the ambiguity of referring to specific activities as 'strategic', consider whether any investment or activity undertaken can explicitly be described as non-strategic. Activities can be either more strategic, or less so, but all actions have implications for the long term, and only takes on meaning when we regard strategic as having an orthogonal relationship with transaction cost minimising behaviour. In other words, firms that undertake activities that are considered to be strategic imply that they may not necessarily be activities that generate immediate economic rents, but are expected to do so in future periods.

It is possible (and likely) that most kinds of activities are strategic in this sense. Firms may seek to acquire assets by M&A which are strategic for their long term well-being, say extractive rights (as for instance Chinese firms are increasingly doing in Africa or Latin America), and can therefore be both strategic and resource-seeking simultaneously. Other firms may engage in an M&A in an important market abroad to acquire distribution channels, and this too would be both strategic and market-seeking. However, having multiple motives is one thing, and activities that have a long-term potential for firm-growth are quite different, which is the primary sense as originally implied by Dunning (1993) and others in introducing the term 'strategic asset-seeking' or 'strategic asset-augmenting' as a separate and distinct motivation. Where firms engage in strategic asset-seeking activity, they are explicitly (and primarily) seeking *learning opportunities*, rather than seeking to *invest for strategic purposes in specific assets*. Not all types of outward MNE activity necessarily imply significant learning opportunities for the home-based operations of the MNE. In the case of natural resource-seeking investments for instance, they rarely represent channels for reverse technology transfer. It is worth noting that there is considerable FDI by DC firms in sectors where firms by necessity require a physical foreign presence, particularly in service based industries. Some of these investments are

'strategic' in the sense that banks and insurance companies need to maintain overseas operations in financial centers such as New York and London, and be capitalized or at least be registered as having a legal presence in those locations. Yet others require a physical presence to be in proximity to clients. Such investments are both market-seeking and resource-seeking and while knowledge acquired from such operations helps improve best practice, the extent to which they benefit home-country operations depends upon the extent to which the MNE itself seeks to evolve into a global integrated enterprise, or maintain its foreign operations as *de facto* free-standing enterprises with weak links to the parent company.

Let us therefore define strategic asset-augmenting activities here very clearly as those which are intended primarily to create opportunities that enhance their firm-specific competitive assets. If this is so, it is not entirely clear whether such firms are able to internalise and efficiently utilise such knowledge acquired to generate sustainable Ownership advantages that can be exploited elsewhere, particularly where they do not possess the necessary complementary assets to do so. Asset-seeking activities imply the active augmentation of existing ownership advantages through, *inter alia*, R&D (Dunning 1993), or through cooperative agreements. It is for this reason that a number of authors (e.g, Kuemmerle 1996, Narula and Zanfei 2005, Criscuolo *et al* 2005) prefer the term asset-augmenting activity to describe activities *whose primary purpose is the generation of new knowledge which augments existing competences, whether this be through their own (formal) R&D activities, or through other non-hierarchical means in partnership with other economic actors.*

Thus, while surveys (e.g. UNCTAD 2006) and research publications (e.g. Mathews 2002, 2006) continue to suggest a growing amount of strategic asset-seeking FDI by DC MNEs, not all of this is 'strategic' in a strict sense, since it may have no direct impact on the firm-specific asset of these firms.

7. How does outward MNE activity matter for home country development?

It seems reasonable to argue that since there is considerable research indicating the nature of the relationship between *inward* MNE activity and *host country* development (see Narula and Dunning 2010 for a review), the same principles should be mirrored in *outward* MNE activity and *home country* development. Broadly speaking, beyond direct impact on balance of

payments, employment and capital flows, etc, the real importance of inward MNE activity is associated with opportunities for learning by domestic economic actors in the host economy due to externalities. By extension, therefore, we would expect that outward MNE activity has the potential to create learning opportunities for the home country.

However, even with inward FDI, the link with development remains an indirect one: Where inward MNE activity results in positive externalities, and *when* domestic firms have the capacity to usefully internalize these externalities, and *if* the non-firm sector supports domestic capacity building, there will be industrial development (Narula and Dunning 2010)**.** The primary development effect derives from opportunities to improve the location advantages of the host location, as well as the ownership advantages of the domestic firms. Learning in general requires proximity: while codified aspects of knowledge can be transferred in arms-length transactions and across distances, (in the forms of blueprints, manuals, books) as well as embodied in equipment. Such knowledge is explicit as it is possible to codify, standardise and record, and is thus easier to diffuse. Knowledge that is not explicit is often tacit. Tacit knowledge refers to intuitive knowledge that is based on based on experience. Tacit knowledge is thus context specific and restricted to the economic actors who control it. Moreover, it is created though experience based learning processes such as *learning-by-doing* (Arrow 1962) and *learning-by-using* (Rosenberg 1982). Tacit knowledge is a prerequisite to understand and use codified knowledge, while itself possible to obtain unaided by codified knowledge (Polanyi 1969). Nevertheless, the partition between the two kinds of knowledge is not always obvious; rather they are mutually dependent, giving economic knowledge the character of being compound by both tacit and explicit elements (Lundvall and Johnson 1994, Nonaka and Takeuchi 1995, Cowan, David and Foray 2000, Lam, 2000). It is best communicated in face-to-face interaction between people and that a social context is essential for constructive knowledge diffusion by way of *learning-by-interaction*. Interactive learning is used to communicate knowledge amongst firms and between firms and other relevant actors that may serve as knowledge suppliers to an innovation system. A typical example of this is the so-called user-producer relationships, which are vertical linkages of relatively close interactive learning associations between users and producers in different fractions of the value chain.

This tacit nature implies that even where knowledge is available through markets, it still needs to be modified to be efficiently integrated within the acquiring firm's portfolio of technologies.

In addition, the tacit nature of knowledge associated with production and innovation activity in these sectors implies that "physical" or geographical proximity is important for transmitting it (Blanc and Sierra, 1999). While the marginal cost of transmitting codified knowledge across geographic space does not depend on distance, the marginal cost of transmitting tacit knowledge increases with distance. This leads to the clustering of innovation activities, in particular at the early stage of an industry life cycle where tacit knowledge plays an important role (Audretsch and Feldman, 1996). Thus, knowledge spillovers tend to be more intense between parties that are located close to each other in space. Various explanations have been offered for this finding, such as the tacit nature of knowledge (as discussed above), but also the existence of spillovers due to a common pool of resources in a region (e.g. skilled labour, educational institute or specific scientific equipment). In other words, proximity is an important basis for transferring knowledge, whether this transfer is undertaken intentionally (due to formal vertical or horizontal linkages), or unintentionally (e.g. because of imitation by rivals).

In the case of *outward* MNE activity, the link is more tenuous, there is automatically a question of distance between the source of the spillovers and the beneficiaries. It also presumes close, regular and intentional knowledge links between the foreign subsidiary and the parent firm. Lastly, it presumes that knowledge flows are *reversed* from their traditional direction, and this change of net direction is systematically utilized. i.e. flows from the parent to the subsidiary are qualitatively and quantitatively similar to those between foreign subsidiary to the parent. This is a phenomenon that is known as reverse technology transfer (e.g. Håkanson & Nobel Nobel, 2001, Håkanson & Nobel, 2000, Frost and Zhou. 2005). In addition, it also presumes that there are strong linkages and associated knowledge flows from the parent located in the home country and the innovation system in the home location. An empirical study by Potterlberghe and Lichtenberg (2001) finds evidence in favour of the idea that outward FDI contributes to increasing the home country productivity. However, further evidence remains sparse.

The link is even more tenuous between outward FDI and home country learning opportunities developing countries for at least five reasons. First, knowledge flows – even by developed country firms- tend to primarily exploit the ownership advantages of the parent, in what is conventional knowledge transfer, with relatively little (and often minor) knowledge flowing in the opposite direction. Indeed, upwards of 90 per cent of MNE activity is considered to be home-base asset-exploiting. Second, knowledge flows require systematic linkages between

the parent and the foreign subsidiary. Not all foreign subsidiaries are closely linked with the parent, and this depends on a number of internal organisational factors. The subsidiary may have evolved independently of the parent firm (either because the subsidiary is an acquisition, or because the MNE's strategy is based on a 'federal' model of freestanding and largely autonomous country affiliates, as may also be expected with a firm that engages in a multi-domestic strategy). As a result, some multinationals tend to be organised as a loosely coupled network of relatively autonomous subsidiaries, each with its own strategic goals and activities (Astley and Zajac 1990, Birkinshaw 2002). This may simply reflect their strategic importance as well. A subsidiary which primarily functions as a sales office to process exports is unlikely to be deeply integrated with the parent. Even where sales might be high, such an operation may have little to contribute in terms of knowledge flows. Third, reverse technology transfer implies strong and consistent interdependencies with the innovation systems and a high level of embeddedness with economic actors and institutions at home. However, in many developing countries, the innovation system is under developed, and these MNEs have expanded internationally precisely because they wish to *reduce* their dependence on the home country innovation system. Fourth, managing complex cross-border knowledge flows requires very particular organisational capabilities of firms, and these are O advantages that only a small handful of MNEs possess (Criscuolo and Narula 2008). Fifth, much of outward FDI by DC MNEs tends to be natural resource seeking or trade-supportive, which generate few opportunities for systematic learning.

A number of researchers have suggested that DC MNEs are increasingly engaging in a strategic asset-seeking FDI, where the primary aim is to explicitly acquire new competences. That is, the primary goal is to boost the firm's ownership advantages. But it is essential to highlight a very fundamental condition for such activity: firms must have existing ownership advantages to augment, or initial ownership advantages with which they can barter or exchange. Furthermore, firms require some level of in-house expertise in the field, if they are to successfully utilise the acquired knowledge because information is often-context-specific. Thus, MNEs with greater initial ownership advantages have a greater absorptive capacity to be able to extract and utilise the potential for new innovation to be found in locations. Many firms have been very successful in upgrading their O advantages through such means. *However, the improvement of a firm's ownership advantages does not automatically imply that there will be*

consequent improvements in the location advantages of its home country. We will discuss this at greater length in the next section.

7.1. What conditions allow home countries to benefit from outward MNE activity?

The discussion on the benefits of outward MNE activity on the host country can be classified within three areas:

1. Balance of payments effects
2. employment effects
3. learning and technological effects

By and large, the benefits from outward MNE activity are hinged upon the opportunities to upgrade the L advantages of the home country, and we will concentrate on the last of these three. However, this is contingent upon a complete chain of events and three very specific sets of interactions, which are depicted in Figure 2:

1. Outward FDI activity needs to result in a systematic and non-negligible upgrading of the O advantages of the foreign affiliate. This presumes that the O advantages of the affiliate are sustainable, and that it possesses the initial assets which will allow them to effectively absorb the spillovers through linkages with the innovation system of the host location;
2. the organisation structure of the DC MNE must be sufficiently sophisticated (in other words, highly integrated across borders) to allow for the transmission of these new and augmented assets by reverse technology transfer to the parent firm in the home country;
3. the parent firm must be sufficiently integrated with local actors in the home country, such that these augmented technologies are available to them, and that they have the necessary absorptive capacity to efficiently utilise these assets.

***** FIGURE 2 ABOUT HERE*****

In short, the upgrading of location advantages of the home country presumes considerable absorptive capabilities of the MNE subsidiary, high managerial and organisational capabilities of the MNE such that they are able to exploit economies of common governance, and high absorptive capabilities of the home country.

It is well-known that the O advantages of firms are a function of the L advantages of the home country, and that significant levels of outward FDI activity are normally also associated with such well-developed country-specific business and innovation systems (Narula and Dunning 2010). Just as with inward FDI, countries lagging too far behind are not able to efficiently interpret and internalise technology, whether its source is trade-related or FDI-related. The existence of threshold level effects has been reported in empirical analysis on inward FDI and trade related R&D spillovers (Girma 2005, Fu 2008, Borenzstein *et al.* 1998, Xu 2000), all of which show that FDI has a positive impact on developing countries and regions within those countries that have attained a certain minimum level of absorptive capacity. In a similar vein, the work of Rasiah (2002) points to the fact that up to the threshold level of absorptive capacity, basic infrastructure is more important, but progress towards more technology-intensive manufacturing activities depends on the existence of 'high tech infrastructure'. Indeed, Criscuolo and Narula (2008) argue, national absorptive capacity requires a system-wide view of the economy. The complex chain of relationships and interdependencies that this implies are mapped pout in Figure 3.

*** FIGURE 3 ABOUT HERE***

It is worth noting that high levels of absorptive capacity do not always imply equal benefits of absorbing technologies at all stages. The cost of imitation increases as the follower closes the gap with the leader and the number of technologies to be imitated reduces. That is, the amount of knowledge readily available that the follower country can exploit is smaller, because most of it has already been imitated, and the residue is more complex, having a higher level of tacitness. Once a country is near the international best-practice a higher level of uncertainty is involved, and it is complicated to identify what is relevant, how to solve problems related to the exploitation of new technology: the task difficulty and the knowledge complexity rapidly increases (Criscuolo and Narula 2008).

Threshold levels of L advantages that are associated with threshold levels at which inward FDI has positive growth effects on host economies, and are also a necessary condition for which outward FDI can be effectively internalized by the home country – *should the MNE have the capability and intention to transfer these to their home location*. This fits the arguments

proposed by the investment development path that outward FDI from developing countries is systematically related to inward MNE activity, and that outward MNE activity is often associated with a high level of inward MNE activity, since they are both a function of the quality of the L advantages of the economy in question (Narula and Dunning, 2000, 2010)[11]. As Nayyar (2008) notes in the case of India, Outward FDI is dominated by firms which have considerable technological capabilities which they have developed over a long term. Table 7 gives some indicators of the technological and absorptive capacities of the most important DC home countries, and helps makes this point.

8. Implications of DC MNE activity for developing host countries

What are the implications for developing country *host* countries from developing country MNEs? There is no strong evidence that DC MNEs have a specific interest in South-South activities, although relatively speaking, some DC MNEs have invested quite a considerable amount of FDI in the developing world. However, again, this tends to be from a small group of countries, and indicates a strong regional character, reminiscent of the first wave (Table 1). That is, it tends to be either resource-seeking or trade-supportive FDI. It is sometimes market-seeking, but often in sectors where specific characteristics of the products and services are especially suited for countries with similar conditions.

The similarity of conditions has been much commented upon the literature. More recently, Aulakh (2007) and others point to knowledge of operating in similar institutional conditions which are predominated by complex, informal institutions which create greater uncertainty, or as Khanna and Palepu (2006) put it, institutional 'voids'. That is, developing country MNEs – such as those from China, India and South Africa - are able to discount the greater risk of operating in such environments because they have more experience – either at home or in other similar countries – which provides them a location-specific O advantages not necessarily available to investors from developed countries. Del Sol and Kogan (2007) point to the ownership advantages that Chilean MNEs have in 'liberalisation know-how'. Chile underwent liberalisation much earlier than other Latin American countries, and firms were able to leverage this knowledge in other regional markets.

[11] Liu *et al* (2005) find that outward FDI is not related to inward FDI in the case of China, perhaps pointing to the possibility that at least some of Chinese outward FDI has the characteristics of portfolio investment.

Do DC MNEs contribute more or less than developed country MNEs to developing host economies? The data on this subject is mute, although there is some suggestion that South-South FDI has advantages because technologies used are 'more appropriate'. This argument is not a new one – indeed, this was proposed originally in earlier studies (see White 1981) - although later studies showed that DC MNEs used similar equipment, production processes, and products as developed country firms (Lall 1983, Narula 1997).

Indeed, on the surface, it is hard to argue that DC MNE firms provide more benefits. In Africa, DC MNEs tend to be smaller, have smaller local subsidiaries, employ fewer workers, pay lower wages, provide less training to workers, use more expatriates, less skilled local workers, and use less local content (and import more imported inputs) (UNIDO 2007).

The UNIDO survey does indicate that investors from the developing world have larger investment plans in Africa for the future than their Northern counterparts, but this may also reflect the fact that conventional MNEs have been established for a longer period of time, and have fewer opportunity for growth. Overall, DC MNEs may indeed represent a new (and growing) source of capital, but it is less clear that it represents a new source of technology, or that they engage in activities that have greater opportunities for positive externalities.

It is our contention in this paper – and confirmed by the UNIDO (2007) survey for the case of Africa, that there is no (or no longer a) clear North-South difference in terms of MNE subsidiaries and their related benefits as DC MNEs move inexorably towards management and organisational structures and strategies that are no different from conventional MNEs, except insofar as it reflects international experience and size. The UNIDO survey concludes that it is best to examine foreign investment along the following categorization (UNIDO 2007: 130):

1. Large, old, MNE subsidiaries – most of which are from the developed countries, and were established prior to liberalisation. These often have historical and colonial links. They tend to be capital intensive, and have expanded regionally.
2. Global/regional exporter subsidiaries – these are relatively new post-liberalisation MNE subsidiaries, often DC MNEs. They tend to be smaller MNEs which are concentrated in low value manufacturing sectors, and are focused on export markets such as garments, agricultural products and textiles.
3. Free-standing foreign-owned companies that have no clear association with a foreign 'parent'.

Kaplinsky and Morris (2009) point to a slightly different categorisation for Chinese investments. They suggest three groups. The first are the state-owned firms, which are indeed controlled and coordinated by parent firms based in China, and to varying extents respond to and act in accordance with the policies of Chinese state. They fit our understanding of what is FDI and these firms can certainly be considered to be DC MNEs in the sense intended (see discussion in Box 3).

The second group are private firms incorporated in China. The third are firms owned by Chinese citizens who have emigrated to Africa. These two groups are best described as 'free-standing foreign-owned firms'. That is, there is little or no systematic association with a 'parent company' in the nominal home country. Such firms are, for all intents and purposes, domestic firms that happen to be owned by nationals of a foreign country (Gu 2009). From a development perspective, these two groups are not very different to their domestic counterparts and may provide fewer opportunities for spillovers and linkages to the domestic economy than *de facto* FDI, or even domestic investors[12]. They tend to be relatively small in scale and in the services sector, or are engaged in trading activities. Their impact in terms of capital, linkages and spillovers is relatively minor. However, in terms of social impact and visibility, the significance of such small scale activity *in toto* should not be underestimated. Estimates of Chinese migrants in Africa range from 270000 and 750000 (Mohan and Tan-Mullins 2009). It is hard to say what percentage own businesses, but certainly a sizeable percentage are entrepreneurs of various descriptions. Such investments tend to displace domestic firms and entrepreneurs, and create resentment in societies where unemployment and underemployment tends to be high, and where resentment to migrants of other ethnic groups – whether other tribes in the same country, other African countries, or elsewhere - is rarely far from the surface.

To what extent do these Chinese MNEs affect development? Certainly, the 'opportunity cost' of Chinese FDI is almost zero, especially for some of the poorest host countries. That is, in the absence of Chinese investment there might well have been none. Bear in mind that many of these Chinese MNEs have – either with the help of state-sponsored loans, or independently – invested in parallel in infrastructural projects such as railways and roads needed to bring the

[12] Given that an equivalent domestic investor is less likely to repatriate their earnings, at the very least one can also argue that such free standing Chinese companies. Indeed, such small-scale investors are not a new phenomenon in Africa: Lebanese and Indian trading companies have been engaged in such activities for almost a century throughout Africa.

natural resources to market, there would almost certainly have been little chance that other investors would be seek to extract these resources. It also suggests that these Chinese state-owned MNEs view is decidedly long-term, since infrastructure and capital-intensive investment projects will not show a return for decades.

The sustainable development effects beyond capital inflows can often be relatively small in extractive industries, regardless of nationality of ownership. They tend to employ mostly unskilled workers. Much of the plant, equipment and supplies are imported. Chinese firms have been accused of bringing in Chinese workers rather than using local employees, and of using Chinese suppliers rather than local ones. However, the extent to which this is done is exaggerated (Kragelund 2009), and reflects to a great extent the inexperience of Chinese companies in running international activities rather than a malevolent intent. Relatively little local processing of the raw materials is undertaken locally. Manufacturing investments in general provides greater opportunities of spillovers and linkages, and in most cases Chinese manufacturing activities tend to be relatively small-scale, undertake relatively low-value adding activities.

At a more general level, the motivation of the inward FDI plays an important role. Policy makers and commentators fall into a well-known trap of presuming that the development potential of every dollar of FDI flow is the same, regardless of industry and regardless of the capacity of the host country to efficiently utilise the spillovers and linkages that are potentially made available. Not all FDI projects are equal in terms of spillovers and linkages. $100 million to acquire drilling rights will likely employ a few unskilled local workers, utilising mainly skilled expatriates. All its equipment may be imported, and very little local processing will be undertaken. On the other hand, an equivalent investment the manufacturing sector (whether trade-supportive or market-seeking) may well employ thousands of local workers, create linkages with local colleges and universities, promote better farming practices amongst domestic producers, and create the opportunity for other investors to set up. In short, it is likely to be better embedded, if for no other reason than that of necessity. 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, communication costs between parent and affiliate are high and the home and host markets are relatively similar in terms of intermediate goods. Driffield *et al*

(2010) note that the opportunity for spillovers tends to be lower for asset-seeking types of FDI, compared to asset-exploiting activities.

Investments in infrastructure projects, likewise, may be initially capital intensive, but do not necessarily generate significant sequential investments, or generate relatively large amounts of spillovers. Indeed, the focus on initial investments rather than sequential investments – whether through new flows or through reinvested earnings - is an area of policy myopia, and illustrates again the shortcomings of using FDI flow data (Box 1).

The primary difference between conventional MNEs and DC MNEs in developing countries– as their ownerships advantages become increasingly similar - comes down to experience. The conventional MNEs have – *ceteris paribus* – greater experience with managing international operations. DC MNEs are not always familiar with how to build linkages, or with integrating themselves in local communities to become embedded in society. Certainly, as they acquire experience of these locations, and of operating as an MNE, they are likely to start developing more linkages.

9. Future directions and policy implications.

The evidence we have reviewed indicates rather starkly that there is little evidence of an across-the-board growth in outward investment by firms from developing countries. Although there has been growth, this is a much narrower phenomenon, limited to a small group of home countries with relatively well-developed knowledge infrastructure, as well as innovation and business systems.

We have argued that while these locations have spawned domestic firms which have expanded rapidly abroad, there is also evidence that a considerable proportion of this activity is somewhat premature, and based on ownership advantages that may well have been sufficient to succeed at home, and in host countries with similar conditions, but are ultimately insufficient to be sustainable in the longer run. Nonetheless, DC firms are exposed to greater competition with liberalisation, and this means that if they are to survive in the longer run without the benefit of captive domestic markets, they need be more aggressive about the upgrading of their firm-specific assets and *one* means to do so is by internationalisation. However, we can also expect that a number of these DC MNEs will not prove able to survive in a globalised world where they

must compete with 'conventional' MNEs who have greater experience and managerial know-how of managing across borders and achieving economies of common governance.

Nonetheless, we can also expect – despite the probably high failure rate – a greater number of DC firms will seek to expand abroad, although most will demonstrate greater caution, and remain regional, as expected of first wave DC MNEs. We have made the point that these 'waves' exist simultaneously, and are not exclusive. That is, as firms garner greater international experience and improving stock of ownership advantages (both transaction – and asset-type), it is natural for them to move towards second wave behaviour, and eventually will become indistinguishable from conventional or mature MNEs.

It is not clear to us, however, that DC MNEs present a new and alternative channel for capital flows and knowledge flows for host developing countries. First wave MNEs may prefer to invest in less developed countries in low value added manufacturing or natural resource extracting sectors. However, these activities do not provide opportunities for significant knowledge transfers and on the whole cannot be expected to provide significant spillovers and linkages. Further, as these MNEs become more competitive, they too will shift their higher value adding activities to be closer to the developed countries which are their primary markets, or to locations which have the location-specific assets to upgrade their firm-specific assets. In other words, South-South FDI is unlikely to prove as a viable alternative to North-South FDI, and some may argue, on a dollar-for-dollar basis, opportunities for spillovers and linkages may actually be lower. In the long-run, and assuming these DC MNEs continue to grow they will behave increasingly like their Northern counterparts, and also move their activities away, unless there are distinct improvements in the developing host countries location advantages.

Ultimately, inward FDI reflects the location advantages of the host countries, and although they may offer cheap natural resources and low labour costs, productivity levels remain low. In addition, many of the poorer countries have endemic political instability, poor transport links and infrastructure, little skilled manpower and are distant from the most important markets. This means that most DC MNEs will necessarily seek to invest elsewhere. Southern MNEs seek the same kinds of location advantages and market opportunities as Northern MNEs, and if developing countries are to attract more sophisticated projects they must provide stability, human capital, infrastructure and reliability.

We have also examined the possible effect of outward FDI on the *home countries* of DC MNEs. This is an especially complex process, as we have tried to illustrate. It presumes three sets of embeddedness: that the subsidiary in the host country is sufficiently integrated with the host actors; that the subsidiary is deeply integrated with the parent firm, and that efficient structures exist to transfer the knowledge acquired to the home country; and lastly that the links with the home country innovation system promote dissemination. Lastly, we discussed the role of DC MNEs in promoting South-South capital and knowledge flows, and suggest that as far as developmental effects are concerned, DC MNEs are not a superior option to conventional MNEs.

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TABLE 1: Characteristics of three types of MNEs

	'First Wave' DC MNE 1970-1980ss	**'Second Wave' DC MNE 1990s**	**'Second Prime wave' DC MNE 2000s**	**'Conventional' MNEs**
Ramamurti Terminology	**'infant MNEs'**	**'Adoloscent MNEs'**	⇨	**Mature MNEs**
Destination	regional FDI: neighbouring countries and other developing countries	Majority still regional, but expanding to a global basis	In between second wave and conventional	Global basis
Motivation	resource seeking & market seeking in developing countries	<u>In developing countries</u> resource and market seeking in <u>In industrial countries</u> asset-seeking and market seeking in .		Efficiency-seeking - MNE motivation aimed at optimising use of each country's comparative and competitive advantages
Type of outward FDI	<u>In developing cties</u> natural-asset intensive, small scale production in light industries (Heksher-Ohlin, moving towards undifferentiated Smithian industries	<u>In developing cties</u>: natural asset intensive sectors as in first wave; <u>In industrialised cties</u> (a) assembly-type, market-seeking FDI primarily in Smithian industries (b) asset-seeking investment in schumpeterian industries		Capital- and knowledge-intensive (schumpeterian) sectors capital/labour ratio dependent on natural/created asset of host.
Ownership advantages	**Primarily country-of-origin-specific**. Fundamental Oa advantages, no Ot advantages	**Both firm- and country-specific**		**Mainly firm-specific** Advanced Oa and Ot advantages.
Examples of ownership advantages [adapted and modified version of Lall (1983) page 7]	1. Conglomerate group ownership 2. Technology (mostly adapted) 3. Management adapted to third world conditions 4. Low cost inputs (including managerial and technical personnel) 5. 'Ethnic' advantages	1. Conglomerate group ownership 2. Management adapted to third world conditions 3. Low cost inputs (including managerial and technical personnel) 4. 'Ethnic' advantages 5. Some product differentiation 6. Limited marketing skills 7. Vertical control over factor/product markets 8. Subsidised capital		1. Large size - economies of scale 2. Access to capital markets 3. Technology 4. product differentiation 5. Marketing know-how 6. Cross-country management skills 7. Globally efficient intra-firm activity 8 Vertical control over factor/product markets

Table 2 DC outward FDI stock (as a per cent of World outward FDI stock)

	1993	2000	2007
All DCs	9.77 per cent	14.02 per cent	14.66 per cent
All DCs less BRICs	7.18 per cent	12.36 per cent	11.39 per cent
All DCs less NICs	6.42 per cent	6.61 per cent	6.97 per cent
All DCs less (BRICS & NICs)	3.02 per cent	3.60 per cent	2.42 per cent
All DCs less (BRICS, NICs & GCCs)	2.65 per cent	3.43 per cent	1.89 per cent
All DCs less (BRICS, NICs, GCCs, Virgin Islands, Cayman Islands & Panama)	2.05 per cent	1.83 per cent	0.44 per cent

Table 3 Outward FDI of 20 largest DC (excluding GCC countries and 'tax havens'), different years

	1993				2000				2007			
Home country	***OFDI stock***		***OFDI stock per capita***		***OFDI stock***		***OFDI stock per capita***		***OFDI stock***		***OFDI stock per capita***	
	US$ millions	*Rank*	*US$ dollars*	*Rank*	*US$ millions*	*Rank*	*US$ dollars*	*Rank*	*US$ millions*	*Rank*	*US$ dollars*	*Rank*
Brazil	42688	1	277.2	5	51946	4	303.3	10	129840	5	685.8	9
Hong Kong	39114	2	6521.2	1	388380	1	57863.5	1	1026587	1	147646.6	1
Taiwan	36989	3	1761.8	3	66655	2	2992.1	3	158361	3	6897.9	3
South Africa	17952	4	456.3	4	32333	5	726.2	5	54562	9	1140.3	7
China	13768	5	11.6	18	27768	6	21.9	19	95799	6	72.5	17
Singapore	13209	6	3984.6	2	56766	3	14093.0	2	149526	4	32583.5	2
Argentina	8085	7	238.4	6	21141	8	574.7	7	26873	13	682.8	10
Korea	5441	8	123.1	7	26833	7	570.8	8	66220	7	1366.6	8
Mexico	3386	9	38.5	11	8273	12	84.5	11	44703	10	424.7	12
Venezuela	2447	10	117.0	8	7676	13	317.5	9	13814	15	502.3	11
Nigeria	2411	11	24.5	12	4132	15	34.7	15	5514	20	38.3	19
Russia	2300	12	15.5	16	20141	9	137.1	12	255211	2	1794.7	6
Malaysia	1437	13	73.5	10	15878	10	675.8	6	58175	8	2167.4	4
Indonesia	1294	14	6.8	19	6940	14	33.8	17	21426	14	95.3	16
Turkey	1263	15	22.7	13	3668	16	58.4	14	12210	16	177.2	14
Chile	1111	16	80.7	9	11154	11	733.3	4	32469	11	1957.9	5
Thailand	960	17	16.5	14	2203	18	35.3	16	7025	18	106.9	15
Philippines	908	18	13.8	17	2044	19	26.8	18	5573	19	62.9	18
Columbia	591	19	15.9	15	2989	17	70.6	13	10383	17	218.5	13
India	294	20	0.3	20	1859	20	1.8	20	29412	12	25.1	20

	1993	2000	2007
Sum of 20 DCs' OFDI	195,653	758,780	2203,684
Share of all DCs' OFDI	87.85 per cent	88.04 per cent	96.31 per cent
Share of World's OFDI	8.58 per cent	12.34 per cent	14.12 per cent

Sources:
1. UNCTAD major FDI indicators (WIR2008), http://stats.unctad.org/fdi/ReportFolders/reportFolders.aspx
2. World Economic Outlook Database, April 2009 Edition, IMF World Economic and Financial Surveys

Table 4 Changes in GDP and outward FDI stock per capita in 1993, 2000 and 2007

	GDP per capita			changes		O/FDI per capita			changes	
	1993	2000	2007	00/93	07/00	1993	2000	2007	00/93	07/00
Low-income economies	287.0	334.4	618.5	1.2	1.8	2.8	4.7	16.9	1.7	3.6
Low-middle income economies	541.8	866.9	2007.9	1.6	2.3	8.9	20.0	65.9	2.2	3.3
Upper-middle income economies	3262.6	3718.9	8006.2	1.1	2.2	164.2	326.9	1169.0	2.0	3.6
High-income economies	21650.7	25794.5	38162.2	1.2	1.5	2293.9	5905.3	13982.7	2.6	2.4
20 DCs average	1249.6	1640.3	3388.2	1.3	2.2	61.1	215.2	578.1	3.5	6.4
BRICs average	643.5	972.7	2517.0	1.5	2.6	24.5	38.6	180.6	1.6	4.7
NICs average	10559.1	13957.3	21795.5	1.3	1.6	1271.8	6730.8	16884.8	5.3	2.5
World	4520.3	5263.9	8257.4	1.2	1.1	0	0	0	-	-
Ratio LI/HI	1.3 per cent		1.6 per cent			0.12 per cent		0.12 per cent		
Ratio LMI/HI	2.5 per cent		5.3 per cent			0.39 per cent		0.47 per cent		
Ratio UMI/HI	15.1 per cent		21 per cent			7.2 per cent		8.4 per cent		

Sources:
1. UNCTAD major FDI indicators (WIR2008), http://stats.unctad.org/fdi/ReportFolders/reportFolders.aspx
2. World Economic Outlook Database, April 2009 Edition, IMF World Economic and Financial Surveys
3. World Development Indicators 2008, the World Bank

Table 5 Outward FDI stock of BRICs, by Industry (US$ millions or No. of deals)

	Brazil[1] O/FDI stock , 2003		Russia[2] No. of deals, 1995-2004		India[3] Top20 OFDI , Apr.1996 -Nov.2004		China Accumulated Net OFDI at end of 2006	
Total	***44,769***		***143***				***75025.55***	
Primary	***259***	***0.6 per cent***	***3***	***0.0 per cent***	***361.6***	***3.6 per cent***		***25.0 per cent***
Agriculture, hunting, forestry and fishing	59	0.1 per cent	1	0.0 per cent			816.7	1.1 per cent
Mining, quarrying and petroleum	200	0.5 per cent	2	0.0 per cent			17901.62	23.9 per cent
Secondary	***1,190***	***2.7 per cent***	***67***	***46.9 per cent***	***5,385.2***	***53.5 per cent***	***7529.62***	***10.00 per cent***
Food, beverages and tobacco	230	0.5 per cent	9	6.3 per cent				
Textiles, clothing and leather	41	0.1 per cent						
Wood and wood products	39	0.1 per cent						
Publishing, printing and reproduction of recorded media	0.1	0.0 per cent						
Coke, petroleum products, gas and nuclear fuel	205	0.5 per cent	14	10.0 per cent				
Chemicals and chemical products	30	0.1 per cent	10	7.0 per cent				
Rubber and plastic products	143	0.3 per cent						
Non-metallic mineral products	23	0.1 per cent						
Metal and metal products	158	0.4 per cent	15	10.5 per cent				
Machinery and equipment	104	0.2 per cent						
Electrical and electronic equipment	134	0.3 per cent						
Precision instruments	0.1	0.0 per cent						
Motor vehicles and other transport equipment	83	0.2 per cent						

Other manufacturing	0.3	0.0 per cent			5,385.2	53.5 per cent	**7529.62**	**10.00 per cent**
Tertiary	***43,319***	***96.8 per cent***	***73***	***51 per cent***	***3,741.9***	***37.1 per cent***	***48777.6***	***65.01 per cent***
Electricity, gas and water	20	0.0 per cent	8	5.6 per cent			445.54	0.6 per cent
Construction	695	1.6 per cent					1570.32	2.1 per cent
Trade	1,908	4.3 per cent	9	6.3 per cent	473.9	4.7 per cent	12955.2	17.3 per cent
Hotels and restaurants	14	0.0 per cent					61.18	0.1 per cent
Transport, storage and communications	207	0.5 per cent	11	7.7 per cent			7568.19	10.1 per cent
Finance	22,355	49.9 per cent	32	22.4 per cent	110.4	1.1	-	-
Business activities	17,982	40.2 per cent	-	-	-	-	-	-
Leasing and Business Services	-	-	-	-	-	-	19463.6	25.9 per cent
Real Estate	-	-	-	-	-	-	2018.58	2.7 per cent
Education	1	0.0 per cent	-	-	-	-	228.00	0.0 per cent
Community, social and personal service activities	138	0.3 per cent	-	-	-	-	1203.15	1.6 per cent
Information Transmission, Computer Services and Software	-	-	-	-	-	-	1449.88	1.9 per cent

1) Adopted and modified from Sauvant, Karl P. 2005. New Sources of FDI: The BRICs Outward FDI from Brazil, Russia, India and China. ***Journal of World Investment and Trade***,Vol.6, No.5, p.658

2) Case study on outward foreign direct investment by Russian enterprises. ***Trade and Development board Commission on Enterprise, Business Facilitation and Development Expert Meeting on Enhancing the Productive Capacity of Developing Country Firms through Internationalization,*** page 6, Geneva, 2005

3) Approved O/FDI Flow, TOP 20 (plus Brazil) Destinations**.** Adopted from: Sauvant, Karl P. 2005. New Sources of FDI: The BRICs Outward FDI from Brazil, Russia, India and China. ***Journal of World Investment and Trade***,Vol.6, No.5, p.667

4) Adopted from: *China Statistical Yearbook 2007*, National Bureau of Statistics of China

Table 6 Outward FDI stock of BRICs, by major destinations (US$ millions or No. of deals)

Brazil[1] O/FDI stock , 2003			Russia[2] No. of deals, 1995-2004			India[3] Top20 OFDI , Apr.1996 -Nov.2004			China Accumulated Net OFDI at end of 2006		
Total	***54,892***		***Total***	***143***		***Total***	***10,480.80***		***Total***	***75025.55***	
	0			**7**	**4.9 per cent**		**1842.2**	**16.1 per cent**			**63.95 per cent**
Asia			**Asia**			**Asia**			**Asia**	**47978.05**	
			China *	1			531.1	4.6 per cent	Hong Kong	42269.91	56.34 per cent
			Mongolia	2		Hong Kong		2.2 per cent	Japan	223.98	0.30 per cent
			Kazakhstan	4		Singapore	251.3	0.9 per cent	Singapore	468.01	0.62 per cent
						China	103.4	2.0 per cent	Republic of Korea	949.24	1.27 per cent
						Viet Nam	228.9	1.1 per cent		-	-
						Sri Lanka	120.4	1.0 per cent			
						Kazakhstan	118.6	0.9 per cent			
						Iran	103.4	1.9 per cent			
						Oman	211.7	1.5 per cent			
						United Arab Emirates	173.4				
Europe	**6,758**	**12.40 per cent**	**Europe**	**91**	**63.64 per cent**	**Europe**	**2,693.40**	**23.6**	**Europe**	**2269.82**	**3.03 per cent**
	439	0.80 per cent	United Kingdom	6							0.27 per cent
United Kingdom	132	0.20 per cent	Lithuania	9		United Kingdom	615.6	5.4	United Kingdom	201.87	0.63 per cent
Germany	186	0.30 per cent	Czech Republic	5		Germany			Germany	472.03	0.06 per cent
France	2,062	3.80 per cent	Germany	5		France	101	0.9	France	44.88	1.24 per cent
Luxembourg	1,794	3.30 per cent	Latvia	4		Russia	1,751.40	15.3	Russia	929.76	
Spain	1,079	2.00 per	Netherlands	4		Netherlands	225.4	2			
Portugal											

		cent								
Other European	458	0.8 per cent	Turkey	1						
			Transition economies	76						
				0						**25.29 per**
Caribbean Sea	**37719**	**68.6**	**Caribbean Sea**			**Caribbean Sea**	**1515.8**	**13.3**	**Caribbean Sea**	**18977.1**	**cent**
	6,925	12.60 per cent					625.3	5.5			0.02 per
Bahamas						Bermuda			Bahamas	17.52	cent
	22,248	40.50 per cent									18.94 per
Cayman Islands						Virgin Is. (E)	803.4	7	Cayman Islands	14209.19	cent
	6,710	12.20 per cent				Malta	87.1	0.8			6.33 per
Virgin Is. (E)									Virgin Is. (E)	4750.4	cent
	0			**0**			**1,917.70**	**16.8**			**3.41 per**
Africa			**Africa**			**Africa**			**Africa**	**2556.82**	**cent**
						Mauritius	1,005.70	8.8			
						Sudan	912	8			
	6286	**11.40 pe**		**0**			**32**	**0.3**			**26.25 per**
Latin America		**r cent**	**Latin America**			**Latin America**			**Latin America**	**19694.37**	**cent**
Panama	779	1.40 per cent									**0.17 per**
						Brazil	**32**	**0.3**	Mexico	128.61	**cent**
Uruguay	3,641	6.60 per cent									
	2293	**4.20 per**		**6**	**4.20 per**		**2,145.40**	**18.8 per**			**2.12 per**
North America		**cent**	**North America**		**cent**	**North America**		**cent**	**North America**	**1587.02**	**cent**
							2,145.40	**18.8 per**			**0.19 per**
Canada			Canada			United States		**cent**	Canada	140.72	**cent**
	2,293	4.20 per cent	United States	6							**1.65 per**
United States									United States	1237.87	**cent**
	324	**0.60 per**		**0**			**334.3**	**2.9 per**			**1.25 per**
Oceania		**cent**	**Oceania**			**Oceania**		**cent**	**Oceania**	**939.48**	**cent**
	324	0.60 per					**334.3**	**2.9 per**			**1.06 per**
Australia		cent				Australia		**cent**	Australia	794.35	**cent**
											0.07 per
									New Zealand	51.27	**cent**
Others	**1,378**	**2.50 per cent**	**Others**	**24**	**16.78 per cent**						

1) Adopted and modified from Sauvant, Karl P. 2005. New Sources of FDI: The BRICs Outward FDI from Brazil, Russia, India and China. ***Journal of World Investment and Trade***,Vol.6, No.5, p.656

2) Case study on outward foreign direct investment by Russian enterprises. ***Trade and Development board Commission on Enterprise, Business Facilitation and Development Expert Meeting on Enhancing the Productive Capacity of Developing Country Firms through Internationalization,*** page 6, Geneva, 2005

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4) Adopted from: *China Statistical Yearbook 2007*, National Bureau of Statistics of China

Table 7 Outward FDI and R&D relevant indices of 20 DCs

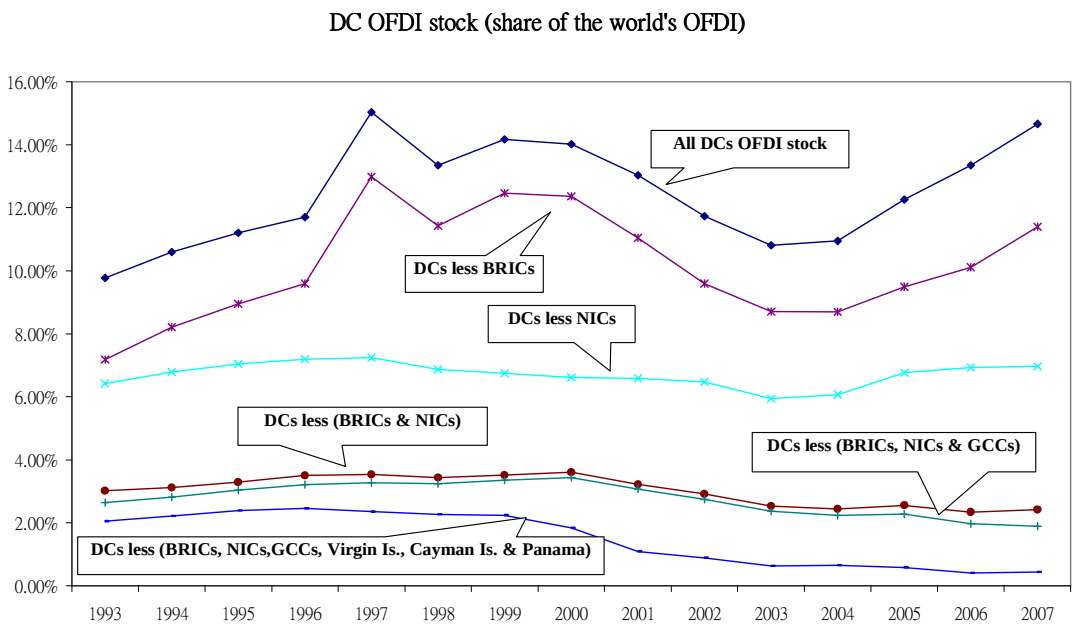
Country	FDI Outflows as per cent of GDP, 2000-05	Royalty and License Fees Receipts (US$/pop.), 2006	Researchers in R&D / Mil. People, 2006	Total Expenditure for R&D as per cent of GDP, 2006	University-Company Research Collaboration (1-7), 2007	Scientific and Technical Journal Articles / Mil. People, 2005	Patents Granted by USPTO / Mil. People, avg 2002-2006	High-Tech Exports as per cent of Manuf. Exports, 2005	Firm-Level Technology Absorption (1-7), 2007	Value Chain Presence (1-7), 2007	Internet Users per 1000 People, 2006	ICT Expenditure as per cent of GDP, 2006"
Argentina	0.2	1.76	768.04	0.44	2.9	78.92	1.4	6.6	4.2	2.8	210	6.9
Brazil	0.4	0.55	462.06	0.91	3.4	52.93	0.75	12.8	4.9	3.6	230	6.4
Chile	2.3	3.36	832.74	0.68	3.5	95.67	0.93	4.8	5.2	4	250	5.2
China	0.2	0.12	714.61	1.34	4.1	31.89	0.35	30.6	5	3.7	100	5.3
Colombia	1.1	0.25	127.08	n/a	3.2	8.9	0.24	4.9	4.2	3.7	150	8
Hong Kong, China	16.4	35.31	2.120.42	0.74	4.6	275.03	91.75	33.9	5.8	5.6	550	8.8
India	0.2	0.02	n/a	0.61	3.5	13.35	0.3	4.9	5.6	4.6	50	6.1
Indonesia	0.3	1.19	n/a	n/a	3.1	0.93	0.08	16.3	4.7	3.7	70	3.1
Korea, Rep.	0.6	41.53	3.723.28	2.99	5.4	339.5	88.44	32.3	6	5.7	700	6.6
Malaysia	1.6	1.07	508.93	0.63	4.9	23.97	3.03	54.7	5.8	5	430	6.8
Mexico	0.4	0.83	331.46	0.41	3.2	37.85	0.95	19.6	4.4	4	180	3.3
Nigeria	n/a	n/a	n/a	n/a	3.1	2.56	0.02	1.7	4.4	3.2	60	3.4
Philippines	0.1	0.07	44.33	0.14	3.1	2.1	0.24	71	4.9	4.1	50	6.7
Russian Federation	1.5	2.1	3.246.21	1.07	3.2	100.68	1.34	8.1	4.1	2.6	180	3.2
Singapore	9.2	125.41	5.479.14	2.36	5.3	831.22	97.01	56.6	6	5.4	380	9.3
South Africa	-0.3	0.97	386.43	0.87	4.2	51.01	2.71	6.6	5.4	3.4	110	10
Taiwan, China	n/a	n/a	3.839.12	n/a	5.1	476.95	293.44	42.6	6	5.2	640	6.3

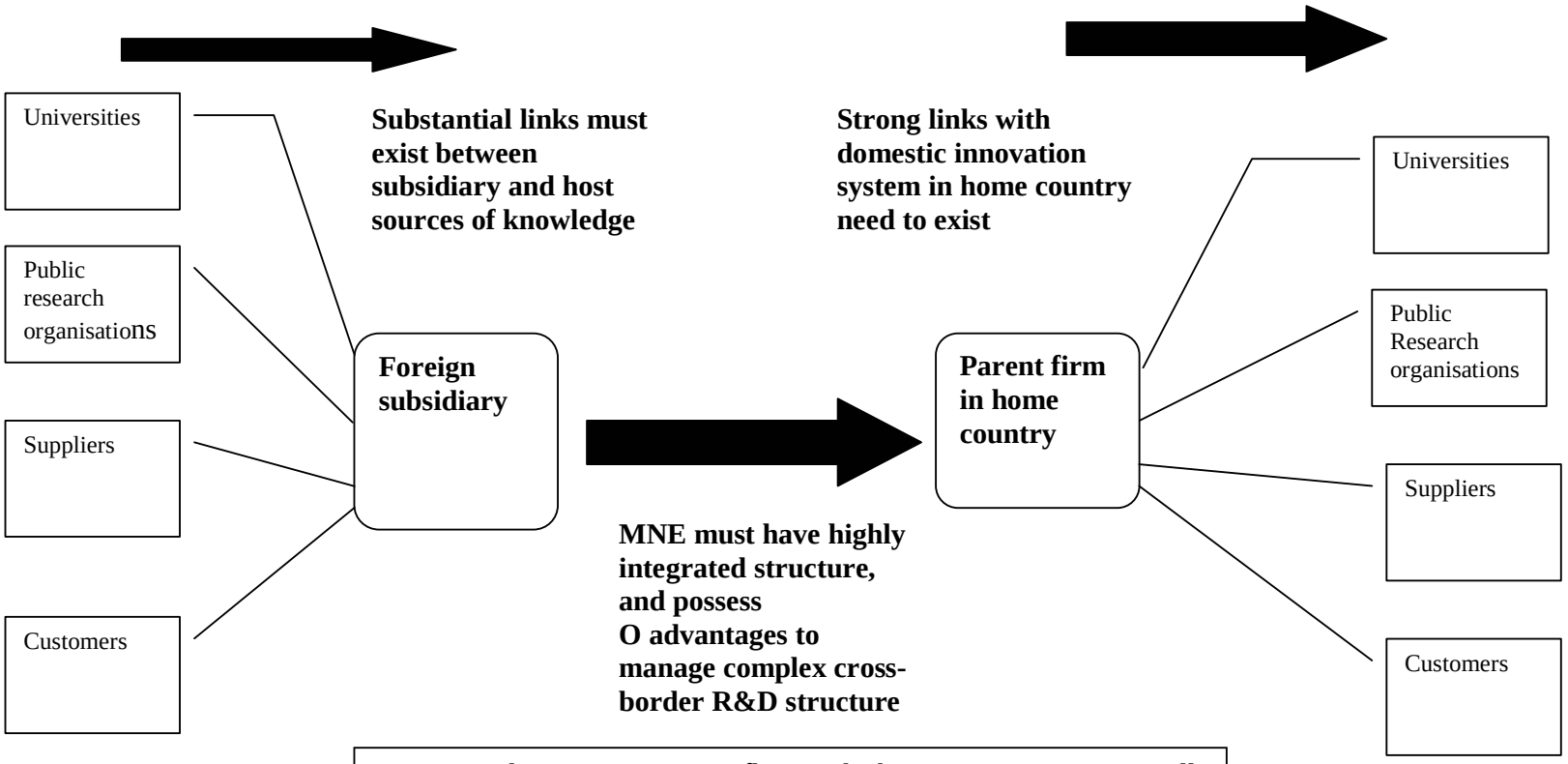
Thailand	0.2	0.72	286.87	0.25	4.1	19.82	0.66	26.6	5.2	3.9	130	4
Turkey	0.3	0	476.12	0.67	3.3	108.44	0.26	1.5	5.4	4.3	170	8.2
Venezuela, RB	0.7	0	206.51	0.25	2.9	20.09	0.89	2.7	4.6	2.4	150	3.7

Country	FDI Outflows as per cent of GDP, 2000-05	Royalty and License Fees Receipts (US$/pop.), 2006	Researchers in R&D / Mil. People, 2006	Total Expenditure for R&D as per cent of GDP, 2006	University-Company Research Collaboration (1-7), 2007	Scientific and Technical Journal Articles / Mil. People, 2005	Patents Granted by USPTO / Mil. People, avg 2002-2006	High-Tech Exports as per cent of Manuf. Exports, 2005	Firm-Level Technology Absorption (1-7), 2007	Value Chain Presence (1-7), 2007	Internet Users per 1000 People, 2006	ICT Expenditure as per cent of GDP, 2006"
World	4.47	32.51	1.659.76	0.95	3.35	159.91	22.04	10.9	4.77	3.83	233.64	5.82
Netherlands	12.2	252.46	2.297.77	1.79	5	850.8	92.52	30.1	5.5	5.7	890	6.3
G7	3	129.21	3.606.84	2.19	4.66	590.94	146.45	20.2	5.61	5.61	580	6.6
High Income	14.76	107.19	3.330.26	1.88	4.29	499.37	78.09	17.89	5.53	4.91	514.36	6.04
Low Income	0.04	0.08	141.35	0.35	2.75	2.78	0.02	7.08	4.35	3.03	38.24	6.25
Lower Middle Income	0.28	3.32	693.59	0.39	2.75	14.63	0.16	7.23	4.28	3.29	123	5.26
Upper Middle Income	0.6	4	967.41	0.61	3.3	76.84	1.22	10.03	4.66	3.68	238.15	5.84

Source: Knowledge for Development, Knowledge Assessment Methodology, Custom Scorecards (KAM 2008) , the World Bank (http://web.worldbank.org/WBSITE/EXTERNAL/WBI/WBIPROGRAMS/KFDLP)

Figure 1 DC OFDI stock (percentage of World's OFDI)

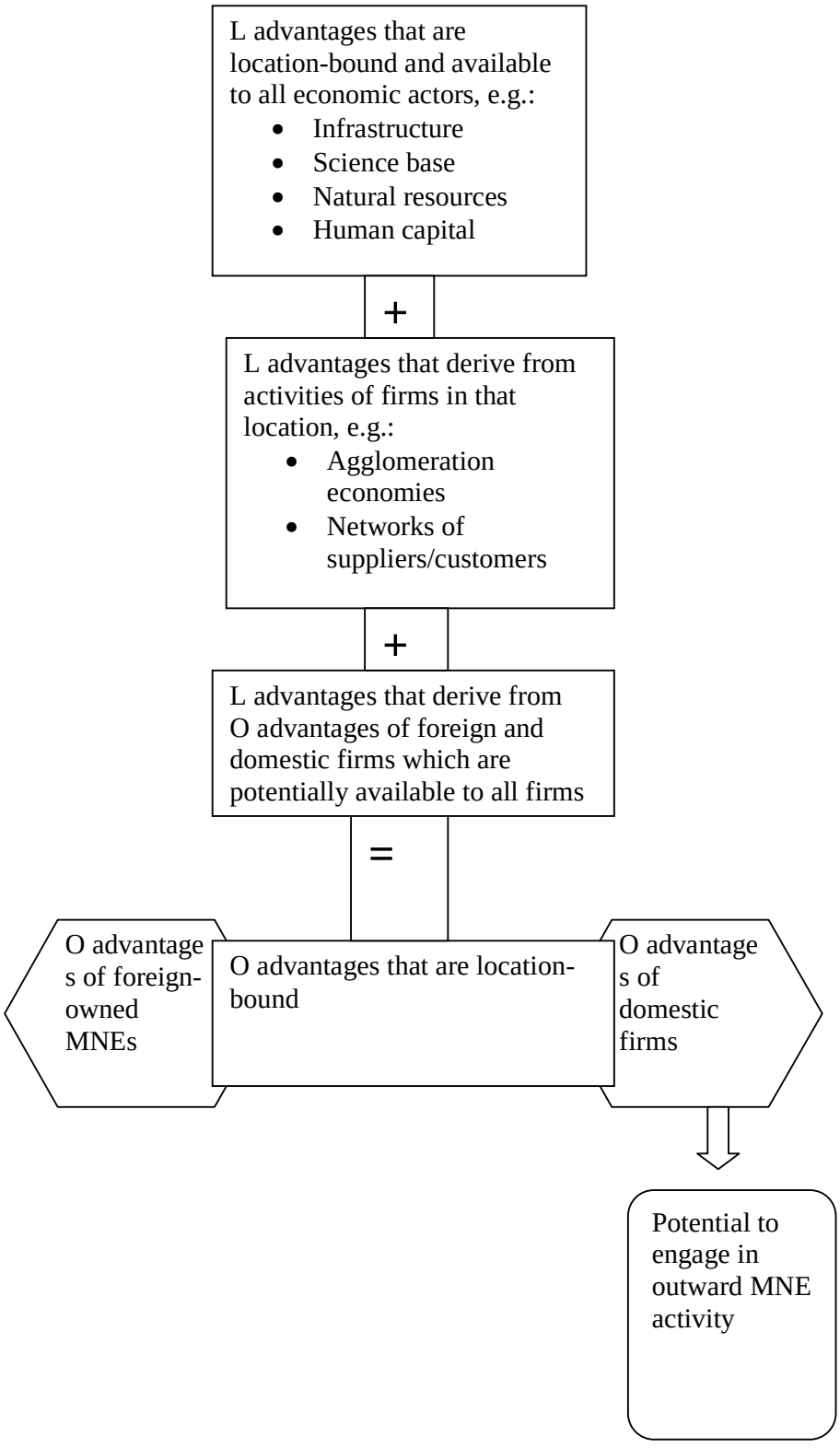




For outward MNE activity to influence the home country economy, all three of these sets of linkages must be well-developed

Figure 2: conditions that permit upgrading of the home country's L advantages by ourwad MNE activity

Figure 3 the relationship between L advantages, O advantages, and propensity to engage in outward MNE activity.



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