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knowledge flows and economic
geography: a research agenda**

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Emerging multinationals, international knowledge flows and economic geography: a research agenda

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Abstract:

One of the most significant changes in the global economy today is the strong increase in outgoing foreign direct investment (OFDI) from emerging economies to industrialised countries. Whereas investment in less developed countries is often motivated by the sourcing of natural resources and cheap labour, knowledge and technology-seeking is an increasingly important motive for multinational enterprises from emerging economies (emerging multinationals, for short) investing in developed economies. The current paper is focussed on the role of emerging multinationals as knowledge-transfer agents and pursues three aims: First, to unravel the distinguishing features of emerging multinationals (as compared to ‘traditional’ multinationals), secondly, to critically discuss the usefulness of conventional theoretical concepts in explaining this new phenomenon and thirdly, to launch a research agenda for near-future research on emerging multinationals, with a particular focus on the economic geography of international knowledge flows.

Key words: emerging multinationals, international knowledge flows, economic geography

JEL: F21, F23, M16, O33

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1. Introduction

One of the most significant changes in the global economy today is the strong increase in foreign direct investment (FDI) from so-called emerging multinationals (multinational enterprises stemming from emerging economies, such as China, India or Brazil) to industrialised economies, particularly the USA and Europe (UNCTAD, 2006). Spectacular examples are the take-over of Jaguar and Land Rover by the Indian company Tata Motors, the take-over of Volvo by the Chinese car manufacturer Geely, the take-over of the British-Dutch steel corporation Corus by the Indian company Tata Steel, the acquisition of IBM home computer by the Chinese company Lenovo and the acquisition of the majority of shares of the largest European shipbuilder Aker Yards by the South Korean company STX. These transactions are, however, only the spearhead of a broader movement that is rapidly gaining momentum. Recent UNCTAD statistics indicate that FDI flows from developing and transition economies have rapidly increased from \$ 12 billion in 1990 to nearly \$328 billion in 2010 which is equivalent to 24.8 % of the world total (UNCTAD, 2011). In terms of FDI stocks these countries accounted for more than 15 % of the world total in 2010 (UNCTAD, 2011). The rapidly increasing global importance of emerging multinationals is also reflected in the annual Fortune “Global 500” ranking. Among the top 500 multinationals worldwide there were 95 companies from developing countries in 2010, compared to only 19 in 1990.

While there is an extensive literature on FDI from industrialised economies (see for instance Dunning, 1998; Markusen, 2004; Blonigen, 2005), also in connection with global production networks (Coe, 2009; Dicken, 2009, 2011; Coe et al., 2008; Hess and Yeung, 2006; Depner, 2006), outgoing FDI from emerging economies is not much researched and hence not well understood yet. The UNCTAD World Investment Report 2006 (UNCTAD, 2006) which had its focus on FDI from developing and transition countries was an important milestone as it raised public awareness and motivated subsequent work. After this groundbreaking report, Sauvart et al. (2008) and Brennan (2011), for instance, edited two volumes with a broad overview of perspectives on emerging multinationals. Although both books deal with the home and host country perspective and come up with a research agenda, they pay little attention to the economic geography of outgoing FDI from emerging multinationals. They can be considered though as a starting point for sounder research on the topic and feedbacks to conventional theories. Amighini et al. (2010) review the recent literature on FDI from emerging multinationals as channel for technologically catching up, whereas Sosa Andrés et al. (2012) analyse the potential opportunities of FDI from emerging multinationals for developing countries. They also compare the determinants of FDI between traditional and emerging multinationals. More specific studies on Chinese multinationals have been done by Rugman and Li (2007), as well as Deng (2008). The former study stresses the knowledge-seeker argument, whereas the latter sees FDI by Chinese multinationals partly as an escape response to home country institutional constraints. Kedron and Bagchi-Sen (2012), Pradhan (2008) and Bukowski (2011), in turn, have recently

carried out detailed analyses of individual Indian pharmaceutical multinationals and their investments in Europe.

The newly emerging South-North FDI and the related new and rapidly changing international division of labour evoke all kind of interesting societal, as well as academic research questions. Moreover, they potentially put existing theories which are based on OFDI stemming from industrialised countries in question. The current paper, therefore, has three major aims: (i) to unravel the main features that distinguish emerging multinationals from 'traditional' multinationals (Section 2), (ii) to critically discuss the usefulness of conventional theoretical concepts in explaining this new phenomenon (Section 3) and (iii) to launch a research agenda for near-future research on emerging multinationals and the economic geography of international knowledge flows (Section 4). Section 5 concludes.

2. Why the new wave of OFDI from emerging economies is different

2.1 The three waves of OFDI from the South

Although unprecedented in scale and dynamics, outward FDI by firms headquartered in the Global South is not an entirely new phenomenon. The empirical literature used to distinguish between two waves of OFDI from developing countries (Dunning and Narula, 1998; Dunning, 1998; UNCTAD, 2006). The first wave lasted from the 1960s until the early 1980s, and investments (originating predominantly from Latin America) were mainly targeted at other developing countries, most often neighbouring countries. The second wave, beginning in the 1980s, was dominated by Asian multinationals, accommodating their export oriented industrialisation strategies. They began to expand mostly in the fast growing foreign markets of other NIEs but they also invested outwardly to access cheap labour in countries less developed than their home countries (Gammeltoft, 2008). In recent years, the largest emerging multinationals (in particular firms from China, India or Brazil) are increasingly challenging traditional multinationals, invest into developed countries, and some first generation emerging economies (e.g. South Korea, Hong Kong, Taiwan) have even become net FDI exporters, a position traditionally reserved for developed countries (Andreff, 2003). Therefore, more and more scholars speak of a *third wave of OFDI from emerging economies*.¹

This new, *third wave* is characterised by a broader range of both, origin and destination countries (with an increasing share of developed countries as destinations), an increasing importance of created asset seeking (and, in particular, knowledge seeking), as well as substantially increased technological and managerial capabilities and an increased vertical control over factor and product markets on the part of the emerging multinationals.

These changes are accompanied (and partly caused) by a fundamental shift in government policies towards FDI. During the first wave of developing country OFDI, many developing

¹ See, for example, Andreff (2003) or Gammeltoft (2008).

country governments pursued an *import substitution* strategy and FDI flows were highly regulated. During the second phase the predominant government strategy shifted from import substitution to *export orientation* and governments began to reduce regulation on capital flows and to remove other barriers to FDI. The new era may be characterised as an era of *global scale Schumpeterian competition* and most emerging economy governments perform a policy of active FDI promotion (Gammeltoft, 2008).

2.2 Something fundamentally new?

One might argue that the current rise of emerging multinationals – although astonishing in its scale and speed – is nothing fundamentally new, since it very much resembles the rise of traditional multinationals from developed countries some decades ago. Such line of reasoning is, however, not convincing, as there are fundamental differences between emerging multinationals OFDI today and traditional multinationals’ OFDI some decades ago (see Table 1).

Table 1: Emerging economy OFDI today and developed economy OFDI in the past

	Current wave of OFDI by Emerging Multinationals	OFDI by ‘Traditional’ Multinationals (1960s - 1990)
Home countries	Southeast Asia, Latin America, South Africa, Russia	USA, Western Europe, Japan
Main destinations	<ul style="list-style-type: none"> – Resource-rich countries – (Less-developed) neighbors – Developed economies 	<ul style="list-style-type: none"> – Triadic countries – Developing and emerging economies (since 1980s)
Transnationality Index	Relatively high	Relatively low
Ownership advantages	Home country and firm specific	Mainly firm specific
Prevailing form of investment by emerging multinationals	Mergers and Acquisitions	(i) Greenfield Investments (ii) Acquisitions and joint ventures (as concerns investment in natural resources)
Industries invested in	Electronics, IT, automotive Knowledge-intensive	Manufactured goods Natural resources

	services Natural resources	
Direction of knowledge flows	From subsidiary to parent and vice versa	From parent to subsidiary
Market Environment	Schumpeterian Unstable	Managerial economies, Relatively stable
Motivation	Home base augmentation → knowledge / technology seeking → branding → resource seeking	Home base exploitation

Source: authors' compilation based on Gammeltoft, 2008; Gammeltoft et al., 2010; Amighini et al., 2010; Narula 2010; OECD, 2006, UNCTAD 2006.

Traditional multinationals' OFDI mostly originated from the triadic countries (USA, Western Europe and Japan), with the US being the frontrunner and Europe and Japan catching up in later decades. Primary destinations were other highly developed (triadic) countries, but emerging and developing countries began to play an increasing role since the 1980s.

Dominant types of FDI were manufactured goods and natural resources and ownership advantages were mainly firm specific. Multinationals operated in a relatively stable environment (managerial economies) and their main internationalisation motive was "home base exploitation", i.e. firms were seeking to exploit their firm-specific competences and capabilities, increase their markets and decrease their costs.

Today's emerging multinationals originate from a broad range of countries in Southeast Asia, Latin America, South Africa and the former Soviet Union. Their destinations are resource rich countries (Australia, various African and South American countries), (less-developed) neighbouring countries and increasingly the highly developed economies of Western Europe and the US. They invest in energy/natural resources (in order to fuel their rapid growth), electronics, IT, the automotive and machinery sector and – increasingly – in knowledge based sectors. Their ownership advantages are in many cases rather home country than firm specific.² Moreover, compared to traditional multinationals, emerging multinationals show relatively high and rapidly increasing degrees of transnationality, meaning that they have relatively large shares of their turnover, employees etc. abroad (Amighini et al., 2010; UNCTAD, 2006). According to the UNCTAD (2006, 137) „the subregion of East and South East Asia has the largest number of TNCs with global aspirations“.

² Goldstein (2007) has argued that emerging multinationals often lack firm-specific ownership advantages. Dunning (2000) has argued that these may partly be replaced by country-specific ownership advantages.

While the internationalisation process of traditional multinationals has mainly been driven by “pull factors”, “push factors” may be as important as “pull factors” in the internationalisation process of emerging multinationals. The OECD mentions various forms of ‘defensive OFDI’ by emerging multinationals, “... such as the need to jump over tariff and non-tariff barriers, to prevent accusation of job destruction (Indian providers of business process outsourcing), to counter eroding domestic margins (China electronics), and to reduce exposure to political risk at home (Russia)” (OECD, 2006, 3).

Most importantly, however, emerging multinationals fundamentally differ in their internationalisation motives and face a completely different competitive environment than traditional multinationals did some decades ago. The main investment motive of emerging multinationals is not *home base exploitation* but rather *home base augmentation*, which occurs when firms seek to access unique resources (in particular knowledge) and to capture externalities created by local institutions and firms (Kuemmerle, 1999). Whereas investment in less developed countries is often motivated by resource seeking, knowledge- and technology seeking is an increasingly important motive for investment in developed economies (UNCTAD 2006, 2011). Multinationals today operate in an increasingly unstable business environment characterised by an increasing modularisation of production, a disintegration of value chains into ever finer slices and an increasing variety of locations. Global competition is becoming increasingly Schumpeterian in nature, i.e. firms and locations face an increasing pressure to compete on innovation rather than on productivity / costs alone (Gammeltoft 2008, Ketels 2004).

Emerging multinationals have some distinct advantages over their rich-world competitors: Large and rapidly growing domestic markets give them scale and cash to invest abroad. They often have access to cheap state finance and, even when they are public companies, they are often family-controlled, which facilitates decision-making (Economist, 2008). On the other hand they face latecomer disadvantages in a well advanced world economy, forcing them to grow rapidly. When rich-world companies entered the international stage, everything moved at a slower pace, whereas in the current phase of globalization “... Organic growth is generally too slow to turn companies into winners” (Economist, 2008).

These peculiar features of the new generation of emerging multinationals and the dramatic changes in the international business environment have important implications for our understanding of the new international division of labour.

First, the simple textbook logic of (extended) product cycle theory, which says that advanced industrialised countries perform highly sophisticated, knowledge-based activities whereas developing economies perform routine tasks in the later stages of the product life cycle, does no longer hold. A major shift in the global economy today is the increasing globalisation of R&D and the shifting of knowledge-intensive activities from advanced industrialised countries to emerging economies. This increasing variety of places leads to an increasing intensity of competition, not only between firms but also between places. This implies that regional, cultural and institutional features that “stick” to specific locations become increasingly important parameters in international competition, a topic we will come back to in Section 4.

Secondly, a major goal of OFDI from emerging economies is the access to knowledge / the augmentation of the knowledge-base. This is not surprising since according to the “*knowledge-based view of the firm*”, knowledge is the most strategically significant resource of a firm. Its outstanding strategic importance arises from the fact that knowledge is a dynamic, valuable, rare resource that is hard to replicate and imitate, making it a major determinant of corporate performance and sustained competitive advantage (Barney, 1991; Kogut and Zander, 1992, Grant, 1996, Teece et al., 1997). However, the kind of knowledge that matters for competitive advantage is not the knowledge that is ubiquitously available but the knowledge that is tacit and sticky as it is tied to persons and, therefore, to locations.³ This implies that location (in particular the micro geography of investment) plays a crucial – and largely unexplored – role in the strategy and behaviour of emerging multinationals.

In a nutshell, a “new breed of multinational company” (Economist, 2008) has emerged, one that differs fundamentally from traditional multinationals and that raises various challenges to the international business community, to politics and to research.

3. Theoretical approaches and their shortcomings

There is a range of theoretical concepts available from different disciplines, such as international economics, international business studies and economic geography, explaining the OFDI patterns of multinationals, to explain internationalisation processes of firms in general. We will discuss the three most prominent approaches – namely the OLI paradigm, global value chains and global production networks – and critically appraise the power of these approaches to explain the surge in emerging multinationals and their OFDI.

3.1 The eclectic (OLI-) paradigm

The eclectic (OLI-) paradigm proposed by John Dunning (Dunning, 1977, 1988, 1993) provides a framework for analysing the decision to engage in FDI, based on three kinds of advantages that FDI may provide in comparison to exports: Ownership, Location, and Internalisation.

- **Ownership** advantages are advantages a firm possesses over its foreign competitors. They largely take the form of intangible assets (such as technology, brand name, economies of scale) and are – at least temporarily – exclusive or specific to the firm possessing them (Dunning, 1979).
- **Location** advantages exist if it is profitable for the firm to combine its ownership advantages with at least some factor inputs outside its home country. The foreign inputs can include a broad spectrum of economic, institutional and political variables.

³ Meric Gertler (2003) has provided an excellent analysis of tacit knowledge and its impact on economic geography.

- Internalisation advantages arise if it is more profitable for a firm to internalise its advantages through an extension of its own activities rather than selling or leasing them to foreign firms.

The OLI framework suggests “... that all forms of international production by all countries can be explained by reference to the above conditions” (Dunning, 1979, 275).

Nevertheless, the original OLI framework has been modified and enhanced several times during the last 30 years. Dunning and his followers have responded to changes in international production, new developments and breakthroughs in related fields of science or simply to criticism by other scholars by co-opting and integrating them into the eclectic paradigm (see Eden, 2003 or Narula, 2010 for an overview and discussion).

The perhaps most prominent theoretical development originating in the OLI framework is the Investment Development Path (IDP) theory (Dunning, 1981; Dunning and Narula, 1998). The IDP theory suggests that a country’s outward and inward FDI position is not static but evolves over time and that it systematically depends on the country’s level and structure of development (UNCTAD, 2006). According to IDP theory countries go through five development stages (from “least developed” to “developed”), the propensity of being a net recipient or net source of FDI depending on the respective stage.⁴ Other modifications and enhancements of the original OLI framework include the implementation of elements of institutional economics, of international business strategy or of asset augmenting and alliance related cross-border ventures (Dunning, 2000). Dunning has claimed that by absorbing and integrating new developments the eclectic paradigm is able to remain “... the dominant paradigm explaining the extent and pattern of the foreign value added activities of firms in a globalizing ... economy” (Dunning, 2000, 163).

While the various enhancements and modifications have contributed to keeping the eclectic paradigm “up to date” they clearly come at a cost. Rajneesh Narula, a prominent proponent of OLI theory and friend to John Dunning argues that “... if the paradigm continues to try and be a ‘big tent’ and a *de facto* theory of the firm that internalises all phenomena related to multinationals, it will be in danger of becoming a tautology without a ‘gatekeeper’ “ (Narula, 2010, 3). The eclectic paradigm should – according to this view – no longer try to be an envelope for all kinds of economic and business theories of multinationals’ activity. Instead, Narula (2010, 5) proposes to strip the eclectic paradigm down to its core⁵, consisting essentially of the original OLI framework augmented with the more recent discussion on internationalisation motives. A question that is of strong relevance in this paper is: Does the OLI paradigm provide an adequate

⁴ In stage one (“least developed countries”) there is very little inward and outward FDI. In the second stage (as GDP per capita rises) inward FDI starts to rise, whereas outward FDI remains negligible. In the third development stage the growth rate of inward FDI tends to decline and that of outward FDI to grow faster. At stage four when countries are fully developed a country’s outward FDI should exceed or equal inward FDI, whereas in the final stage a country’s net investment position is predicted to oscillate around zero. A recent UNCTAD study concludes that “In the broadest sense the IDP holds” (UNCTAD, 2006, 144).

⁵ Narula (2010, 5) speaks of „EP-lite“.

analytical framework for the analysis of the investment behaviour of emerging multinationals, at all?

Emerging multinationals and the eclectic (OLI) paradigm

On the one hand, there can be little doubt that ownership, location and internationalisation advantages remain important building blocks of any theoretical approach trying to explain international direct investment. Their relative importance may change over time, but their principal significance is still valid.

On the other hand – as argued in Section 2 – OFDI by emerging multinationals has a number of new and peculiar features which are not adequately addressed by the OLI-paradigm. Important aspects neglected by the core eclectic paradigm include the following:

- Emerging multinationals appear to invest overseas at an earlier stage in their own (and their countries) development stage than the OLI and IDP theories would suggest (UNCTAD, 2006). UNCTAD (2006, 146) speaks of a “secular shift in the link between development stages and internationalization”, the likely reason being the increased competition and opportunities that characterise the current phase of globalisation.
- Emerging multinationals often seem to lack the firm specific ownership advantages that constitute the main rationale for traditional FDI. In fact, the main motivation in many cases is not exploitation of firm (or home country) specific competencies but the augmentation of the firm’s (and the home country’s) competencies (Moon and Roehl, 2001; Goldstein, 2007).
- Because of its static character the OLI framework is unable to explain the role of accumulated experience in the development of firm capabilities over time (Mathews, 2002; Amighini et al., 2010).
- The interrelation between inward and outward FDI is not sufficiently dealt with in the eclectic paradigm. Obviously, inward FDI activity in the home country gives firms from emerging economies the opportunity to learn from foreigners, enter into global production networks and increase their capabilities – in other words it prepares them for “going global” themselves (Chen and Chen, 1998; Hitt et al., 2000).
- The OLI paradigm gives no sufficient emphasis to institutional and cultural peculiarities (Buckley et al., 2007).
- Although the OLI paradigm explicitly refers to locational advantages most contributions take a merely macro-geographical perspective: Locational advantages are usually interpreted as country specific advantages. This neglects the fact that firm competitiveness is also determined at a micro-geographical level. In other words: The intra-country location plays an important role which is not adequately addressed by the eclectic paradigm.

- Firms and locations face an increasing pressure to compete on innovation rather than on productivity (prices) alone. Tacit knowledge which sticks – at least temporarily – to a specific location is becoming the most strategically significant resource of modern firms. Hence, the multinational firm’s access to tacit knowledge which is neglected by the OLI paradigm should – in our view – be a core element of any convincing theory of international competition.

Although the last two points of criticism appear to be the least prominent in the current discussion they are – from an economic geographer’s and a regional economist’s the point of view – the most serious ones. We conclude that the OLI framework – although still useful as a first orientation and point of reference for scholars of emerging multinationals – misses essential aspects such as the role of the micro geographic environment or the access to tacit knowledge.

3.2 Global value chains (GVC)

The notion of a global value-added chain has been developed by international business scholars who started investigating the strategies of both firms and countries in the global economy in the 1980s (Kogut 1985, Ghoshal 1987). A core issue in the more recent GVC literature is the governance of global value chains by internationally active firms (Geretti 1999, Humphrey and Schmitz 2004, Geretti et al. 2005, Gibbon and Ponte 2005). Of particular interest in the context of this paper is a series of papers by Ram Mudambi and co-authors illuminating the interplay between firm strategy and location of MNEs (Mudambi 2007, 2008, Cantwell and Mudambi 2005, McCann and Mudambi 2005).

Activities along the firm’s value chain⁶ can be broadly grouped into three categories (Mudambi, 2008, 701): the upstream (input) end, the middle and the downstream (output or market) end. Table 2 gives an overview of typical activities at different stages of the value chain.

In the current phase of globalisation, value-added is becoming increasingly concentrated at the upstream and downstream ends of the value chain where one finds activities that are particularly knowledge- and creativity-intensive (Mudambi, 2007). Hence, the pattern of value-added along the value chain may be represented by a u-shaped curve, the so-called “smiling curve” (Everatt et al., 1999; Mudambi, 2007, 2008).

⁶ The firm’s value chain is composed of economically and technologically distinct activities that constitute the firm’s business (Porter and Millar, 1985).

Table 2: An overview of typical activities at different stages of the value chain

Position within value chain	Upstream end	Middle	Downstream end
Typical Activities	<ul style="list-style-type: none"> ▪ Design ▪ R & D ▪ Commercialisation of creative endeavours 	<ul style="list-style-type: none"> ▪ Manufacturing ▪ Standardised service delivery ▪ Other repetitious / mass production processes 	<ul style="list-style-type: none"> ▪ Marketing ▪ Advertising ▪ Brand management ▪ After-sales services

Source: Own design, following Mudambi, 2008

In geographical terms, activities at both ends of the value chain are typically located in advanced market economies, whereas activities in the middle of the value chain are increasingly offshored to emerging economies (Gereffi, 1999; Pyndt and Pedersen, 2006). Obviously, firms controlling different activities along the value chain have differing incentives: Firms from emerging economies which increasingly control the middle of the value chain have strong incentives to acquire knowledge and competencies that allow them to step into higher value activities. This attempt to catch-up with firms from advanced industrialised countries and to gain control over high value activities at both ends of the value chain is a core reason behind the large R&D and marketing investments by fast growing emerging economy enterprises (Everatt et al., 1999; Smakman, 2003; Mudambi, 2008). On the other hand, firms from advanced industrialised countries controlling activities at the ends of the value chain have strong incentives to sustain and augment their competitive advantage by continuously increasing cost efficiency and stripping out standardised activities. Increasing modularisation of production enables them to offshore not only manufacturing activities but also the more standardised upstream R&D and downstream marketing activities to emerging economies (Mudambi, 2008).

Cantwell and Mudambi (2005) and Mudambi (2008) have emphasised that both processes can go hand in hand when multinationals' subsidiaries in emerging economies (such as Motorola's Singapore subsidiary) evolve over time to compete for more advanced and higher value-added activities within the firm. Moreover, knowledge spillovers resulting from multinationals' activities in emerging economies may have the effect that over time local firms arise as competitors to the multinational (Ding and Haynes, 2006).

Mudambi (2008) distinguishes between two strategies with regard to control of the value chain: A *vertical integration strategy* and a *specialisation strategy*. The *vertical integration strategy* aims at taking advantage of linkage economies⁷ between multiple value chain activities, whereas

⁷ Linkage economies arise if controlling multiple activities in the value chain improves the efficiency of each of them (Hirschman, 1977). A typical example is the transfer of tacit knowledge between different firm activities (Nelson and Winter, 1982; Cantwell and Santangelo, 1999).

the *specialisation strategy* aims at identifying and controlling the heart of the value chain, while outsourcing all other activities. The specialisation strategy is likely to generate greater flexibility at the geographic level as outsourced activities can be rapidly transferred to vendors in alternative locations. It is, however, a risky strategy, as firms pursuing this strategy are endangered to lose key complementary knowledge assets associated with standardised activities and find themselves bare of key competencies as technological trajectories change (Mudambi, 2008). Firms pursuing the vertical integration strategy retain more activities in the advanced industrialised economies and are thus less flexible in terms of location. As they transfer less knowledge to their supplier network they may, however, be more resilient, particularly in contexts with weak intellectual property rights (Gertler, 2003).

While the recent advances in the research on global value chains have clearly improved our understanding of the interrelation between MNE strategy and firm location at a macro-geographical (i.e. national or supra-national) level, the GVC literature falls short of providing an analysis of the location behavior of MNEs at the subnational regional or local level.⁸ This is even more problematic for the analysis of emerging multinationals than for the analysis of traditional multinationals since – as we have argued before – knowledge-seeking is an increasingly important investment motive for emerging multinationals and there is ample evidence in the literature that the knowledge that can make the difference in international competition sticks – at least temporarily – to specific locations at the sub-national level. Hence, a better integration of firm strategy and firm organisation issues with the characteristics of the sub-national location is crucial for a better understanding of the causes and consequences of knowledge-seeking investment by emerging multinationals.

3.3 Global production networks (GPN) and strategic coupling

Based on the global value chain (GVC) presented in the previous Section 3.2, global production networks was firstly coined by Ernst and Kim (2002). GPN can be regarded as an analytic tool to study globalisation processes, particularly developed by the so-called Manchester School around Peter Dicken (Coe et al., 2008; Dicken, 2004, 2011; Dicken and Malmberg, 2001; Hess and Yeung, 2006; Yeung, 2009). Their main research focus has been on GPNs steered from traditional multinationals based in industrialised countries. They have studied different industries, such as the car industry, telecommunication industry, retailing, as well as the clothing industry. According to Coe (2009, 556) “GPN analysis seeks to reveal the multiactor and multiscalar characteristics of transnational production systems – and their developmental implications – through exploring the intersecting notions of power, value, and embeddedness”. On the basis of the GPN approach strategic coupling has been developed as a concept to link TNC-steered global production networks with assets at the regional level (Coe et al., 2004). In that way regional

⁸ A similar point is made by Mc Cann and Mudambi (2005).

development is the outcome of the coupling processes between the needs of TNC-steered networks on the one hand and assets available in regional economies on the other hand.

In addition to drawing from the value chain approach (see Section 3.2), the concept draws from several other theoretical underpinnings which include networks and embeddedness, actor-network analysis and global commodities in development studies (Gereffi, 1999; Schmitz, 2004). There are, therefore, a number of significant differences with GVCs. First, the focus on networks and embeddedness implies that, in contrast to the GVC approach, a broad group of actors (geographical agents) is analysed: not only multinationals, but also states (local, regional and national), civil organisations, as well as consumers. Power relations and asymmetries play a key role in the analysis of GPNs. Secondly, in the GVC approach geography is under-theorised. The GPN approach brings geography stronger in: it analyses how actors in GPNs are anchored in different places and multiple scales. In the GVC approach the impact of industry rather than geography (country of origin) on governance is more emphasised.

One main advantage of the GPN approach is that with the help of the approach the points of value creating, value capturing and value enhancing (upgrading) in a global production network can be identified (Coe et al., 2008). Moreover, and this might be particularly relevant analysing emerging multinationals, the points of intervention and resistance within the network, expressed for instance through the work of civil social organisations, can be identified. Cultural diversity and embeddedness affect power asymmetries and network configurations, which is not much dealt with in GVC/GCC approaches. Interestingly, the geography of non-firm actors (labour, consumers, CSOs and the state) potentially can differ from the geography of firm networks which lead to spatial asymmetries. We can often observe a polycentric spatiality of GPNs versus more mono-territorial geographies of states and other non-firm actors. The GPN pays more attention to place-related situatedness which affects the decisions to invest, reinvest or disinvest in specific locations. Cultural and institutional differences manifest themselves particularly with a large group of actors, both firm and non-firm actors, as in a GPN perspective and with actors embedded in strongly differing cultural settings, as often is the case with emerging multinationals. The inclusive character of the GPN approach is therefore particularly suitable to study and analyse emerging multinationals.

According to recent critical papers, however, the GPN approach, due to its holistic and inclusive focus on networks, “has tended to under-play the tensions that arise from the differential powers of key agents” (MacKinnon, 2011, 5; Dawley, 2011). Although in earlier work Coe et al. (2004) stressed the bargaining power of regions vis-à-vis TNCs, Coe and Hess (2011) recently confessed the “dark sides” of strategic coupling: potential ruptures and frictions between GPNs and regions, such as disinvestment, the exit of foreign firms, labour exploitation and a clash of cultures, among others.

All in all, the GPN approach is in principal a useful analytical tool to describe globalisation processes steered by multinationals and is moving recently in interesting evolutionary ways (MacKinnon, 2011; Oro and Pritchardyz, 2011). However, the focus so far has only been on traditional multinationals. In comparison to the older GVC approach, though, it seems to be more

appropriate to analyse emerging multinationals, as it focuses on a broad range of non-firm actors which are important analysing cultural and institutional influences.

We may conclude that there is a range of theoretical concepts available from different disciplines, such as international economics, international business studies and economic geography, explaining the OFDI patterns of multinationals, to explain internationalisation processes of firms in general. Many of these concepts, however, are based on the empirical evidence of traditional multinationals headquartered in North America, Western Europe and Japan, investing in industrialised and emerging countries mainly. We are critical about the explanatory value of these traditional theories explaining the new phenomenon of emerging multinationals, because they pay insufficient attention to some essential factors playing a role for emerging multinationals, such as knowledge transfer, knowledge stickiness, micro-geography, organisation, as well as institutions and culture.

4. Towards a research agenda

Our goal in this section is to identify fruitful (and practically relevant) areas of future research that may stimulate further work in this field along the lines of knowledge transfer, knowledge stickiness, micro-geography, organisation, as well as institutions and culture. Our goal is not to develop a new, alternative theory, but rather by formulating research avenues and questions to stimulate empirical research on emerging multinationals which will lead to new theories in the future in an inductive way. Our discussion is centred around three broad lines of inter-related research that have been neglected so far and – in our view – deserve much more attention in the scientific community: (1) The interrelation between firm organisation, location and knowledge sourcing, (2) The stickiness of knowledge and the micro-geography of emerging multinationals' OFDI and (3) The cultural and institutional dimensions of distance that impact emerging multinationals' OFDI.

We would like to emphasise that the research agenda outlined here is not (and, for obvious reasons, cannot be) complete and is – to a certain degree – contingent on the authors' personal views and preferences. Our goal is reached if we succeed in drawing the profession's attention to the fascinating new research challenges and opportunities that the rise of emerging multinationals generates.

4.1 Firm organisation, location and knowledge sourcing

Why firms transnationalise is explained in many theories we have dealt with in Section 3. But how do they actually organise their transnationalisation processes (Dicken, 2009, 2011)? The traditional view of the *spatial evolution of multinationals* follows the following pattern: a firm

first only serves the domestic market; it then starts to export to overseas markets with the help of local sales agents, it then serves overseas markets with the help of own sales agents and finally establishes overseas production facilities to serve overseas markets (Dicken, 2011). Particularly some traditional multinationals from small countries, such as Switzerland and the Netherlands, seem to bypass one or some of these typical stages of development (Dicken, 2011). With respect to emerging multinationals, the question arises:

What is the spatial evolution of emerging multinationals and to what extent does it differ from the typical spatial evolution of traditional multinationals?

In addition to the spatial evolution of multinationals through time, *internal networks* within multinationals differ from corporation to corporation. There is also a strong variation concerning the degree of embeddedness of subsidiaries within a multinational depending on the overall organisation of the multinational, ranging from a strong hierarchical organisational to an organisation which allows for a strong degree of autonomous decision-making by the subsidiaries. Multinationals are in constant processes of restructuring, reorganisation and rationalisation (Dicken, 2009) making the exact geographical outcome of the organisation of multinationals very dynamic and complex.

The organisation and spatial patterns of *external networks* is another element of firm organisation and geography. How firms within a multinational deal with suppliers and customers and how they manage their outsourcing relations also strongly differs. The different ways of coordinating transnational production networks range from hierarchy, captive, relational, modular to market, in which power asymmetries accordingly range from high to low (Schmitz, 2004).

A final element of the organisation is how multinationals deal with the *tension between globalising and localising forces* (Dicken, 2011). Multinationals are somewhere located between globally integrated (as a response to global competition, for instance) and strongly locally responsive (due to differences in consumer needs and market structures, for instance) and the question is:

Do emerging multinationals differ from traditional multinationals concerning their local responsiveness?

The spatial sequence, internal networks, external networks and the global-local question, require an organisational architecture of multinationals which is influenced by two main factors: the specific industry and its characteristics concerning competition, technology and institutions, as well as the *home base impact*, a factor particularly raised by economic geographers (Dicken, 2009; Dicken and Malmberg, 2001). Research questions related to the home base impact include:

What is the influence of the home base of emerging multinationals on the way they organise their internal and external networks? Do both traditional and emerging multinationals finally tend towards one 'conventional' model of inherent structures and patterns concerning, for instance, ownership, managerial skills and organisational structures (Narula, 2010, 14)?

Firm organisation, therefore, is one big issue that should be on the research agenda for emerging multinationals; *knowledge sourcing* is another one, which is strongly related to firm organisation. Since knowledge is a dynamic, valuable, rare resource that is hard to replicate and imitate, it is a major determinant of corporate performance and sustained competitive advantage (Barney, 1991; Kogut and Zander, 1992; Grant, 1996; Teece et al., 1997). Hence, there exists a host of literature centred on the “knowledge-creating company” (Nonaka and Takeuchi, 1995), learning processes and knowledge management in large corporations (see Easterby-Smith and Lyles (2011) for an overview).

In an increasingly integrated world economy, however, in-house knowledge production is often no longer sufficient to sustain long-run competitiveness. The *global sourcing* of knowledge becomes an increasingly important determinant of competitive advantage and corporate performance. It is also an increasingly important internationalisation motive, in particular for firms originating in emerging economies (UNCTAD, 2006), which raises a number of rather fundamental research questions:

Under which conditions does knowledge-seeking OFDI occur? How do firm traits (such as sector, size, age, country of origin, organisation, and corporate culture) influence the likelihood and the success of seeking knowledge sources abroad?

The complex interrelations between knowledge-seeking multinationals (their firm-specific traits, strategies, absorptive capacity, and organisation) and the target regions of their OFDI are, however, not well understood as yet. A widely-held conception is that knowledge-seeking multinationals tend to invest in foreign locations with a high potential for knowledge spillovers (Almeida, 1996, 155). What this means in practice remains, however, rather unspecific, as target knowledge may be country- or region-specific (e.g. a well-educated, highly productive labour force), firm-specific (e.g. a highly productive competitor, setting international standards) or both, location and firm specific. The scope of the *target region* depends critically on the kind of target knowledge. For example, if target knowledge is location specific and firm specific in nature, the multinational investor needs to locate its learning activities close to the specific firm (or the firm network) possessing that knowledge (Makino and Inkpen, 2003, 247). If target knowledge is just region- (or country-) specific, the exact location within the region (country) is less important.

Which characteristics make regions targets of knowledge seeking OFDI? Which regional actors (universities, lead customers, local firms in the same industry) are targets of knowledge seeking OFDI among traditional and emerging multinationals? How do traditional and emerging multinationals access the different regional actors?

Moreover, very little is known about the *optimal channels* and organisation of knowledge acquisition abroad, the way that foreign direct investment changes the regional knowledge base (endogeneity of the regional knowledge base), and the multiple interrelations between firm idiosyncrasies and firms’ knowledge seeking strategies.

Which are the channels of knowledge acquisition among traditional and emerging multinationals abroad (personal relationships between subsidiary managers / employees and locals or formal

relationships such as strategic alliances or acquisitions) and how is tacit knowledge transferred between the different organisational units of the multinational? Are social networks helpful means of intra-organisational knowledge transfer among traditional and emerging multinationals? How does the subsidiary management in traditional and emerging multinationals deal with their dual role and their multiple embeddedness within the parent firm organisation and the local community in the host country? To which extent should locals be integrated into the multinational? Can there be too much embeddedness (over-embeddedness) of multinationals?

4.2 Knowledge stickiness and the micro-geography of foreign direct investment

Recent advances in the international business literature (e.g. Mudambi, 2007 and 2008) are clearly focussed on the macro-geographic perspective. Locations in this kind of analysis are primarily countries or country groups (home country versus host country; advanced market economies versus emerging economies; North versus South). However, it is well known that the kind of knowledge that really counts is neither ubiquitously available nor available at the country level but sticks—at least temporarily—to specific, narrowly defined micro-geographic locations. It is therefore imperative that the macro-geographic view developed in the international business and trade theory literature is supplemented and augmented by an analysis of locational decisions on a micro-geographical (locations within countries) level. Although as such, economic geography and regional economics with their explicitly spatial focus appear as natural candidates to advance our understanding of the micro-geographic location behaviour of emerging multinationals, they are currently far away from providing a satisfactory understanding of the micro-geographical location behaviour of multinationals (McCann and Mudambi, 2005). The traditional approach in economic geography (Dicken, 2004, Hayter, 1997) is to adopt stylised geographical versions of the traditional product cycle model, arguing that multiplant firms tend to locate their knowledge-intensive activities in the knowledge-rich centres, whereas standardised and routine activities are located in more geographical peripheral areas (McCann and Mudambi, 2005, 1863). While useful as a first approximation, such an approach is not well-suited to explain the actual location behaviour of emerging multinationals, as it does neither take into account the peculiarities and strategies that determine the behaviour of emerging multinationals, nor the *peculiarities of the knowledge* sought by emerging multinationals and the difficulties that the appropriation and transfer of this kind of knowledge involves due to knowledge stickiness.

First, the *structure and strategies* of multinational enterprises in general (and of emerging multinationals in particular) have changed very much in recent years (see also Section 4.1): The increasing modularisation of production and the desire for greater variety of products and services have strengthened the role for strategic decision making at the subsidiary level (Cantwell, 1987; McCann and Mudambi, 2005). The role of subsidiaries within the multinational enterprise evolves over time (Birkinshaw, 1996) and multi-dimensional knowledge flows emerge, not only between parent and subsidiaries, but also between relatively autonomous subsidiaries, such that the simple center-periphery metaphor of the classical product cycle model becomes

increasingly misleading.⁹ To counter some of these general problems there has been case-study work trying to take into account various organisational as well as geographical aspects of multinational firm location (e.g. Arita and McCann, 2002). Yet, however, “very little has been generalised from this case-study type of work” (McCann and Mudambi, 2005, 1864). Hence, there is an urgent need to better understand the following issues:

How do emerging multinationals transfer knowledge between headquarters and subsidiaries? To what extent do their strategies differ from traditional multinationals? Does the increased modularisation of production (fine-slicing) with rather standard procedures and rules of interaction lead to less influence of cultural and institutional peculiarities? (see also Section 4.3)

Secondly, the *spatiality of learning and the stickiness of knowledge* and their impacts on knowledge-seeking FDI are not yet well understood. A standard line of reasoning in the international business literature as well as in economic geography is that the appropriation and transfer of tacit knowledge requires spatial proximity to the sources of knowledge (local buzz), whereas the appropriation of codified knowledge is less space sensitive, as codified knowledge may roam the globe almost without friction (global pipelines) (see the discussion in Bathelt et al., 2004). Although both presumptions are critical, they do not adequately address the nature of tacit knowledge and the problems of knowledge stickiness. The partial ineffability of tacit knowledge (Polanyi, 1966; Tsoukas, 2011) does not only impede the appropriation of foreign knowledge but also the intra-organisational transfer of knowledge, a problem that is increasingly acknowledged in the management literature but widely neglected in economics and economic geography. In fact, a host of empirical studies have shown that efforts to transfer knowledge within firms have a very modest rate of success (e.g. Zander and Kogut, 1995; Argote, 1999). However, not all difficulties in the transfer of knowledge between the different sub-units of a multinational enterprise are rooted in the tacitness of knowledge. There are in fact multiple sources of stickiness, such as the characteristics of the knowledge source (e.g. her motivation, trustworthiness and willingness to cooperate), the knowledge receiver (her absorptive capacity, motivation, organisational and regional embeddedness), the regional environment (e.g. the density of knowledge flows, culture of trust and cooperation in the region) and so forth (Szulanski and Cappetta, 2005). Hence, more research along the following lines is warranted:

What kind of strategies do emerging multinationals develop to establish global pipelines? Are there differences in success rates in transferring knowledge between emerging and traditional multinationals? Are there differences between traditional and emerging multinationals concerning transfer barriers? How do emerging multinationals appropriate tacit knowledge?

⁹ While a common argument says that manufacturing is offshored to low cost locations, whereas R&D is retained in centers with a strong knowledge base, Ørberg Jensen and Pedersen (2011) have shown that not all manufacturing is offshored to low cost locations. By contrast, they present empirical evidence, that advanced manufacturing is offshored to high cost locations like the US. They conclude that a better understanding of the logic of offshoring and its geographic consequences requires to overcome popular stereotypes and to consider additional dimensions of locational characteristics / advantages (Ørberg Jensen and Pedersen, 2011, 24).

How do they handle other sources of knowledge stickiness? How does the regional environment affect the appropriation and transfer of knowledge? How does the presence of emerging multinationals affect the regional innovation system in the target regions?

Unfortunately, research on the multiple sources of stickiness in the international transfer of knowledge (and means to reduce knowledge stickiness) is still in its infancy. Economic geographers should join management scientists in their endeavour to better understand the sources of knowledge stickiness, since any analysis of international knowledge sourcing that neglects the pervasive difficulties in international knowledge transfer remains necessarily incomplete.

4.3 Dimensions of distance: culture and institutions

As research is limited about OFDI of emerging multinationals in general, profound theories are also sparse about the particular role of culture and institutions in this process (Jackson and Deeg, 2008). Firms as parts of a multinational are multiply embedded (Meyer et al., 2011). This means that economic activities are situated and shaped by its local context and social relations, thus, shifting attention from the isolated firm to the variety of influences arising from its internal and external environment, such as institutions (as formalised rules, regulation and laws governing economic interaction) and culture (immaterial norms, values, traditions and social rules (Dunning and Zhang, 2008, 6; Rodríguez-Pose, 2010; Gertler, 2010)). The question, though, is whether differences concerning industries or paths and phases of internationalisation in relation to the role of institutions and culture.

According to Jackson and Deeg (2008) institutions and culture are traditionally addressed in three perspectives, first as costs, secondly as resources and thirdly as distance. From these perspectives research questions will be derived.

First, FDI is regarded as costs in terms of overcoming institutional and cultural barriers, constraints or hazards of host countries concerning, for instance, policy regimes, bureaucracy, entry and exit requirements, IPR protection, communication and negotiation styles or business norms and ethics (Slangen and Beugelsdijk, 2010; Luo and Tung, 2007). If these costs are specific to people entering foreign markets and do not occur in such extent to local firms, liability of foreignness would apply as a source of constraints (Zaheer, 1995). Many emerging multinationals, for instance, face high trade tariffs and quota restrictions in exporting to foreign markets which encourages them to set up own manufacturing and assembling facilities in these countries (Luo and Tung, 2007). Host country institutions and cultures furthermore affect entry mode choices of multinationals, such as China's early limitation of foreign FDI in the form of joint ventures (Tseng and Zebregs, 2002). Apparently, cultural and institutional variables (e.g. legal restrictions, political stability, cultural similarity, investment risk) are a necessary addition

to the traditional approach of transaction costs incurred by search, negotiation and contracting with business partners. One main research question that can be derived from this perspective is:

Do the costs to overcome institutional and cultural barriers differ between traditional and emerging multinational? Are emerging multinationals differently affected by cultural and institutional constraints, or rely heavier on cultural resources than traditional multinationals because they follow different intentions and goals overseas?

Secondly, host countries might offer beneficial institutional and cultural resources which can be exploited through OFDI. New entrants experience preferential financial treatment or less legal restriction by the regional or national governments (Luo and Tung, 2007) or connect to existing ethnic and cultural networks to facilitate business, the latter being characteristic for emerging multinationals (Gao, 2003; Chen and Chen, 1998; Filatotchev et al., 2007). In addition, the institutional infrastructure of the multinational's home country is argued to provide distinct push factors for FDI, such as China's policies towards outward investment in terms of favourable loans and tax regimes, and general policy support (Luo and Tung, 2007; Amighini et al., 2010; Duysters et al., 2009). Also, in case of unfavourable institutional conditions, which crucially limit the corporate development at its home base, OFDI takes shape of a strategy of avoidance and escape (for an overview, see Witt and Lewin, 2007; Luo and Tung, 2007). High tax rates, political instability and restrictive legislation may be among the most frequent singular reasons; in addition, an overall weak national innovation systems (Narula, 2002) and a national socio-economic environment with low rates of institutional adjustment (societal coordinated nations) (Witt and Lewin, 2007) account for a bundle of institutional driving forces of outward investment. A main research questions derived from the perspective of resources is:

What are the main institutional and cultural resources/advantages in host countries for emerging multinationals? To what extent do emerging multinationals differ from traditional multinationals concerning institutional and cultural advantages and disadvantages in host and home countries?

Thirdly, the concept of distance is seen in relation to institutions and culture. By relating the institutional and cultural frames of a potential host country to the home base, similarities or differences are exposed which are argued to influence the location decision of OFDI. The overall assumption is that a high distance between host and home countries increases entry and operating costs for multinationals and thus discourages investment in those nations (Tihanyi et al., 2005; Jackson and Deeg, 2008). This seems to apply particularly to high-technology industries (Tihanyi et al., 2005) as well as to firms at an early stage of internationalisation and little experience in foreign business (Johanson and Vahlne, 1977; Gammeltoft, 2008; Niosi and Tchang, 2009). In order to minimise costs and enhance their competencies, Chinese, Indian and Latin American multinationals, for example, have often started their investment in countries of similar cultural and institutional characteristics before targeting distant economies in the so called third wave of internationalisation. Similar to building up technological capabilities over time, multinationals are predicted to incrementally move into more distant markets in order to familiarise themselves with new cultural and institutional challenges. Research questions derived from this perspective include:

Compared to institutional hazards related to governance quality (e.g. political stability, rule of law, control and corruption), do cultural barriers exert a weaker or stronger influence on emerging multinationals of undertaking activities abroad (Slangen and Beugelsdijk, 2010)? Which strategies (intercultural training, integration of local workforce and managers, etc.) do emerging multinationals employ to overcome the different dimensions of distance and how successful are these strategies? Are emerging multinationals more likely to suffer from liability of foreignness than traditional multinationals? Is the nation state the right level to deal with questions of institutions and culture in relation to emerging multinationals? What role do corporate culture, regional embeddedness and network play in this respect (Johanson and Vahlne, 2009; Gould and Grein, 2009)?

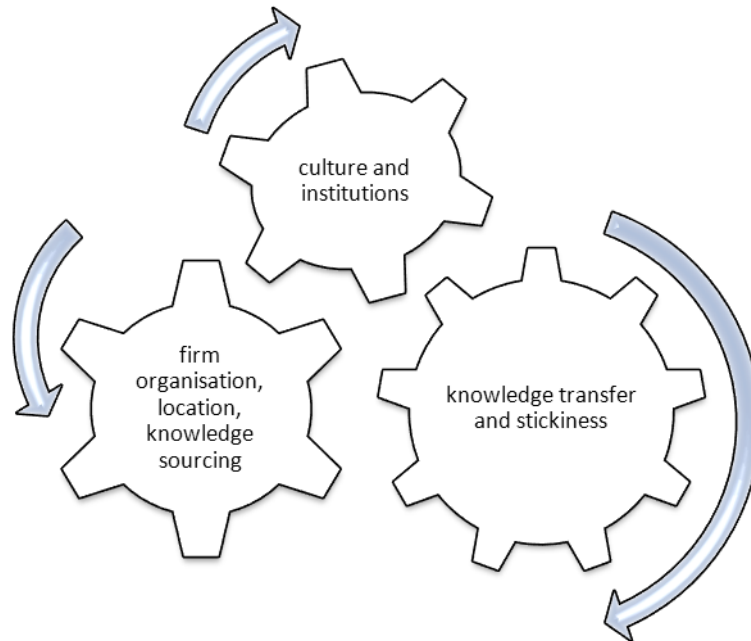
All in all, we need a better understanding of which dimensions of distance matter most and how they can be overcome.

5. Summary and conclusion

Emerging multinationals are reshaping the international division of labour and creating new dynamics in the global economic landscape. The current paper has argued that there are fundamental differences between emerging multinationals and the traditional multinational that entered the stage in the second half of the past century (Section 2). Accordingly, traditional theoretical concepts developed to explain OFDI by the ‘traditional’ multinational corporation are not particularly well-suited to explain the logic and consequences of OFDI by emerging multinationals, as explicated in Section 3.

Moreover, current research on the subject is highly fragmented as the currently available theoretical concepts from different disciplines such as international economics, international business studies and economic geography typically remain rather ‘discipline-specific’ and do not adequately take into account the findings from related work by other disciplines. Hence, a core proposition of the current paper is that we have to cross disciplinary boundaries to be able to analyse and explain this new phenomenon to a satisfying extent. We are in other words in favour of engaged pluralism (Barnes and Sheppard, 2010) between different sub-disciplines that play a role in explaining and describing the new phenomenon of emerging multinationals. In a similar vein Ström and Wahlqvist (2010) recently argued for combining international business theory and economic geography. Our agenda for future research is centred around three broad themes: (1) Firm organisation, location and knowledge sourcing, (2) The stickiness of knowledge and the micro-geography of emerging multinationals’ OFDI and (3) The cultural and institutional dimensions of distance that impact emerging multinationals’ OFDI. These avenues of future research are closely interrelated as is illustrated in Figure 1.

Figure 1: The relations between the research avenues on emerging multinationals



Although we do not claim that these are the only fruitful lines of future research on the topic we argue that progress with respect to questions raised here is particularly important for a better understanding of the international investment behaviour of emerging multinationals. The spatial sciences in general and economic geography in particular appear as natural candidates to advance our understanding of the complex processes at work. Hence (and here we quote Dicken (2004)) it is important that *Economic Geography doesn't miss the boat* and is prepared to play an important role in the analysis and discussion of a phenomenon that can be foreseen to be one of the most important developments in the global economy of the 21st century.

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