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The political economy of globalization: revisiting Stephen Hymer 50 years on

John H. Dunning and Christos N. Pitelis [*]

We discuss issues pertaining to the political economy of globalization in the context of the seminal contribution by Stephen Hymer. While Hymer's contribution to the theory of the transnational corporation and foreign direct investment is widely recognized, his contribution to the political economy of what he called "multinational corporate capital" has received less attention. In this paper, we revisit some of the issues he raised, notably uneven development, global governance and central planning in the context of post-Hymer scholarly thinking and the shifting global landscape. In so doing, we also speculate on the challenges and future of globalization.

Key words: Stephen Hymer, international political economy, institutions, globalization, sustainability

Note from the second author:

John Dunning and I started working on this paper in 2004 and completed the work in 2007. The objective was to write a paper on the theme of "If Hymer were writing now". John drafted 12 pages of notes setting out his major ideas on this theme and I undertook the task of producing the first draft based on his notes. Throughout the drafting process, John was closely involved, amending each draft. As it happened, a total of three papers emerged out of this work. The first on Hymer and the theory of the TNC and FDI, titled "Stephen Hymer's contribution to International Business scholarship: an assessment and extension", was published in the Journal of International Business (Dunning and Pitelis, 2008). The second is the present article. It deals with the wider issue of Hymer's views on the political economy of globalization. The third includes some speculations as to what Hymer would be writing now, were he still alive. This paper is a chapter of a volume of collected papers by John (Dunning, 2010).

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The present version of this paper has been seen and approved by John in its current form, save for some minor updating of references. This explains why some references have dates subsequent to 2007. At the time, I discussed with John about possible outlets for this paper, including this journal. Following John's death, I decided to publish this paper in its current form, rather than risking any revisions which I could never know if they would be acceptable to John. The Editor of this journal and an anonymous reviewer were kind enough to agree to this approach. In this context, the current paper is in need of some updating and it includes some overlap with the other two papers that we had intended to edit out. In John's absence, I felt I should not do this either, presenting the paper as it is, namely as John's last views on the contribution of Stephen Hymer on the political economy of globalization.

Christos N. Pitelis

1. Introduction and overview

Our aim in this paper is to reassess issues pertaining to the "political economy of globalization" in the context of revisiting the contribution of Stephen Hymer on the occasion of the fiftieth anniversary of his now classic doctoral thesis. Hymer (born in 1934, and passed away in a car accident forty years later, in 1974) made a seminal and lasting contribution to the theory of the transnational corporations (TNCs) and foreign direct investment (FDI), and to International Political Economy. He was one of the first economists to explore the nature and determinants of the internationalization of production ("globalization") and its relationship to international development, TNC-host country relationships and global governance. Hymer first articulated his views 50 years ago, in his doctoral thesis (completed in 1960), and later, in about 40 articles in economics and political economy journals. Among these, an article written in French in 1968 and two articles written in 1970 – one in the *American Economic Review* (Hymer, 1970a) and the other in a edited volume by Jagdish Bhagwati (Hymer, 1970b) – proved to be most influential.

In his 1960 thesis (published by MIT Press in 1976), Hymer criticized extant theory of foreign portfolio investment, not only for its inability to explain some "stylized facts" of FDI, but, more importantly, for its failure to explicate how the power, strategies and governance

of firms might influence their decision to cross national boundaries. He distinguished between different modalities by which firms might extend their territorial ambit, e.g. by licensing, tacit collusion, joint ventures and FDI, and he tackled the question as to why a firm would choose to own and/or control productive activities in a foreign country, despite the obvious costs of so doing, e.g. those arising from language, cultural and other barriers to venturing into unfamiliar locations. Hymer was the first economist to address the question "Why TNCs?" and "Why FDI?" *vis-à-vis* alternative forms of foreign operations. In his thesis, Hymer suggested three – two major and one minor – reasons for a firm to undertake FDI. The two major reasons were the "removal of conflict" between firms in different countries and the profitability of exploiting firm specific advantages from a foreign location. The benefit of diversification was the minor one – minor, because diversification did not necessarily involve the control of overseas assets.[1]

In his doctoral thesis, Hymer already attributed FDI to market imperfections, mainly of the structural type (Dunning and Rugman, 1985). However, he did explicitly mention that in choosing to own foreign value added activities, a firm "substitutes", "internalizes" or "supersedes" cross-border markets (Dunning and Pitelis, 2008).

In his 1968 article, Hymer further developed this line of thought. He explicitly acknowledged and built on Ronald Coase's classic article (Coase, 1937) by attributing the superiority of firms over markets to high market transaction costs. In his 1970 article (Hymer, 1970a), Hymer dealt with the "efficiency/concentration" of TNCs. He saw the two terms as synonymous, in so far as he perceived the efficiency of TNCs to be that directly related to oligopolistic decision-making. In this article, Hymer drew on Alfred Chandler's work (Chandler, 1962) in proposing a "law of increasing firm size", and went on to assert that one result of this law was that "bigness is in part paid by fewness and

[1] The "removal of conflict" idea is in line with Michael Porter's subsequent (1980) analysis of the "five forces of competition", and is similar in spirit to it. Besides the conventional "collusion" in international markets, Hymer claimed that "removal of conflict" is achieved through "interpenetration of investments". Both Hymer's and Porter's analyses drew heavily on early industrial organisation (IO) analyses of structure/performance (Bain, 1956) that dominated IO circles at the time, and which emphasized barriers to entry, concentration and collusion as crucial determinants to the ability of a firm to capture rents. Subsequent development in IO and the resource-based theory of the firm have questioned this focus; see Mahoney (2005) for a more extensive discussion.

a decline in competition" (p. 54). As a consequence, he recommended that international anti-trust institutions and policies should be strengthened, and the protection – indeed encouragement – of local "infant entrepreneurs" (p. 55).[2]

In the same article, Hymer recapitulated some of his earlier ideas on the TNC and FDI, and went on to complement his "law of increasing firm size" with that of "uneven development". He also applied "location theory" to the Chandlerian analysis of the evolution of the firm. In doing so, he examined the relationship between the "microcosm" and the "macrocosm" of TNC activity. This led him to articulate a "correspondence principle", which attempted to identify and relate the centralization of control within corporations to the concentration of economic activity within the international economy.

For Hymer, the need of TNCs to access both new markets and natural resources would lead them to consider investing in less developed countries. While he acknowledged this would frequently benefit the recipient economies, he argued that it would, more often than not, result in a dependent and uneven development. In cases where the increasing power of TNCs was likely to erode that of host countries, it would do so unevenly; less so for stronger states than for weaker states. In time, this would, according to Hymer, bring about the emergence of a variety of supranational organizations, help create an international capital market, further the spread of international production, and lead to a system of global governance. The perceived distortions and the inequities of "global monopoly" led Hymer to conclude that a socialist economic system of the central planning type was preferable to that of market forces as a way of organizing the creation and distribution of wealth.

Taken as a whole, Hymer's contribution predated much of the extant theory of the TNC, such as the transaction-costs-internalization analysis of Buckley and Casson (1976), Rugman (1981) and Hennart (1982), and the eclectic paradigm of Dunning (1977).[3] Hymer even predicted a move towards the current externalization (outsourcing) of the cross-border activities of TNCs.

[2] This is a variant of the "infant industry" argument.
[3] The genealogy is set out and analysed in Dunning (2003).

Hymer's views of the TNC and FDI have been widely acknowledged and celebrated. He is considered to be the father-figure of the field of International Business and many papers and special issues or journals have been written on his work and contribution.[4] In contrast, little has been written on Hymer's contribution to Political Economy. We try to rectify this here, while simultaneously celebrating the fiftieth anniversary of Hymer's doctoral thesis.

In terms of method and structure, in section 2, we derive and present Hymer's analytical framework in the context of the time he worked. We then consider the evolution of Hymer's analytical framework, and the predictions and prescriptions he drew from it in section 3 In section 4, we assess Hymer's scholarly contribution, in terms of its consistency with his own analytical framework, and the shifting global landscape and scholarly thinking, and extend his framework and revisit his predictions and prescriptions. Finally, in the last section, we speculate on the future of globalization as seen through the lens of this new perspective and provide concluding remarks.

2. Hymer's era and framework

2.1 Hymer's era

Hymer lived in an era in which inter-firm competition was predominantly based on the economies of scale, and was conducted between oligopolies. At the time, production of most goods and services was concentrated in planned economies or undertaken by large private hierarchies in market economies. There was little sign, in the late 1960s and early 1970s, of the ability (or, indeed, the willingness) of any developing country to "take off" or pursue an independent development path. To Hymer, even his own homeland, Canada, looked more like a colony than a nation. He felt like an "alien" in a country whose economy was largely controlled by large foreign-owned (especially United States) businesses. As he saw it, the primary objective of TNCs was to protect and enhance the monopolistic advantages which they had developed in their home markets, through territorial expansion (Cohen et al., 1979).

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[4] See, for example, *Contributions to Political Economy* in 2002, *International Business Review* in 2006 and Dunning and Pitelis (2008).

Hymer's time was also one in which the tenets and methodologies of neoclassical economics dominated, yet at the same time, the concept of "*homo economicus*" and of the goals and means of development were being increasingly challenged, particularly by "Marxist" scholars (Dunning, 2006). Hymer himself made his "cathartic" commitment to Marxism in 1967. Earlier, he had received a formal training in mainstream economic theory, and was widely acknowledged by those who knew him to have a superior analytical mind (Kindleberger, 1984). In his 1968 paper, he embraced Coasean transaction cost analysis and Bain-type industrial organization (IO) theory as extant, and set himself the task of applying these concepts to explain the determinants of cross-border direct investment. [5] Critical elements of the IO perspective were, first, its comparative static nature, second, its assumption of perfect knowledge[6] and a given state of technology, and third, its treatment of inter-firm cooperation primarily as a means of engaging in price collusion.

In this context, Hymer's adoption of the concept of global collusive oligopoly would appear to be a natural outcome of his background, and to be consistent with related scholarly thinking of the time. Hymer's "neoclassical" doctoral thesis, for example, is a close precursor of the subsequent Marxist analysis by Baran and Sweezy (1966). This framework focused almost exclusively on (surplus) "value capture" through the exploitation of monopoly power, and downplays the role of "value creation" through the efficient allocation of resources and capabilities. For Charles Kindleberger (writing in 1984 and 2002), there had been little scholarly advance on our understanding and the causes of FDI since Hymer. While we would assert that Hymer's scholarship predates the later ideas on FDI and the TNC, we also believe that its near exclusive focus on monopoly led him astray in his analysis of prescription and prediction on some issues. To substantiate our claims, we start with Hymer's analytical framework.

[5] For the most part, the theory of international trade at the time regarded the firm as a black box. Even Ray Vernon's (1966) product cycle theory of international trade and investment addressed itself to the activities of firms rather than the firm per se. Hymer had already used product life cycle arguments to explain the push towards diversification (Cohen et al, 1979).

[6] This is even if it is "asymmetric".

2.2 Hymer's Framework

The extant theory of the firm at the time of the writing of Hymer's thesis was the neoclassical market structure-based approach, as set out by Bain (1956). The idea that incumbent oligopolists behave collusively was central in Bain's work and gave rise to Hymer's first major reason for FDI – *viz.* the reduction of rivalry. When firms are interconnected, he wrote, "they compete in selling in the same market or one of the firms may sell to the other" and because of this, "it may be profitable to substitute centralised decision making for decentralised decision making" (Hymer, 1976, p. 37). In the case of horizontal competition, be it between firms within a country or across national borders, he observed that "some form of collusion may be profitable. One form of collusion is merger" (*ibid*., p. 38).

Hymer drew support for the reduction of rivalry thesis from the description by Dunning (1958) of the international "tobacco case" (p. 89). Hymer fully cited Dunning's description, that

> "at the turn of the century, the British tobacco industry was literally "invaded" by American capital. Restricted in its sales by a high tariff wall imposed on U.S. cigarettes, the American Tobacco Company acquired the young and prosperous firm of Ogden's, Ltd., in September 1901, and straight away launched an extensive publicity campaign to sell cheap cigarettes. The Chairman of the U.S. company at that time made no secret of his intentions, viz.: "to obtain a large share of the tobacco trade both of England and the Continent," and he threatened to spend up to £6 million in doing just this. The reaction of the British producers was prompt for within a month of the purchase of Ogden's, thirteen of the leading tobacco companies had amalgamated and formed themselves into Imperial Tobacco Company, with an issued capital of £14 ½ million. Then followed several months of cut throat competition between the two concerns. Eventually, a market sharing agreement was reached in September 1902; Ogden's became part of the Imperial Tobacco group, which was given the monopoly of the British and Irish markets, whilst the United States and its dependencies were to be supplied by the American Tobacco Company. A new concern, the British-American Tobacco Co., Ltd., was set up to handle the remainder

of the export business and was allocated factories both in the United States and in the United Kingdom" (Dunning, 1958, pp. 30–31).

The part of this extract referring to cut throat competition which eventually led to market sharing was to be used almost verbatim by Hymer in most of his major subsequent works (Hymer, 1968, 1970a, 1970b). It was subsequently extended in his joint publications with Rowthorn (Hymer and Rowthorn, 1970) and later received formal support by Graham (1990) and by Rowthorn (1992).[7]

While the reduction or rivalry thesis was an extension of received IO theory, the "advantages" thesis was largely Hymer's own conception and may be regarded as the forerunner of internalization theory (see Dunning and Pitelis, 2008). Based on such insights, Hymer was able to make his fascinating predictions, extrapolations and prescriptions that we aim to revisit here.

From an epistemological point of view, there are several important questions that can be usefully addressed. These are (i) how Hymer's conceptual framework is linked to his predictions, extrapolations and prescriptions; (ii) to what extent the shortcomings of his framework help explain some of his most problematic predictions and prescriptions; and (iii) whether, and how, an improved analytical framework might allow a set of predictions that may have been made in Hymer's time, but which are more in line with subsequent developments in the global landscape. We shall deal with each of these questions in turn.

3. Hymer's evolving ideas

In his thesis and his 1968 paper, Hymer integrated IO with Coase's internalization theory and extended both to explain the international expansion of the firm (Casson, 1990; Dunning and Pitelis, 2008). In addition, Hymer (1968) also drew on *Strategy and Structure* by Chandler (1962), and another classic book in the Marxist tradition *Monopoly Capital* by Baran and Sweezy (1966). Coase, Chandler, and Baran and Sweezy were important for Hymer's evolving analytical framework.

[7] Scholars such as Yamin (1991), Cantwell (1991) and Pitelis and Sugden (1991), have subsequently claimed that the reduction of rivalry idea was an important contribution by Hymer and should have not been discounted.

Hymer's two other major papers were contemporaneous.[8] In both papers, the major influences on his thinking were Coase (1937), Chandler (1962), and Chandler and Redlich (1961). He also drew on a joint paper with Stephen Resnick on international trade and "uneven development" (Hymer and Resnick, 1969/70). In Hymer (1970a), his focus on markets and firms is directed at their implications for the international division of labour, one type being coordinated by markets, the other by entrepreneurs. Hymer then built on Chandler (1962) and Chandler and Redlich (1961) to examine the evolution of the large corporation from its Marshallian beginning to the multidivisional, the conglomerate and then the TNC. He pointed to three levels of decisions within the firm. The lowest (third) level concerns the governance over day-to-day operations; level two is responsible for coordinating managerial decisions throughout the enterprise; and level one is responsible for "goal determination and planning" or "strategy not tactics" (Hymer, 1970a, p. 442).

Hymer (1970a) also attempted to develop his ideas in four new directions: first, the issue of oligopoly and dynamic (or inter-temporal) efficiency; second, the focus of decision-making; third, the relationship between large firms and (small) countries; and fourth, the idea of "supra-nationality" (global governance). We briefly deal with each of these directions.

In neoclassical IO theory perfect competition and perfect contestability are necessary conditions for static (Pareto) efficiency. However, they also remove any inducements to innovate, as they result in zero monopoly profits. This observation was originally made by Schumpeter (1942), and was later extended by Baumol (1991) for the case of contestable markets. If innovation is seen as a determinant of long-term growth, it follows that some sort of imperfect market structure could be better for dynamic efficiency. Schumpeter's concept of creative destruction could be viewed as a means of effecting long-term (inter-temporal) efficiency through big business competition. In this sense, while oligopoly is a form of static inefficiency, it may well be a source of dynamic, inter-temporal efficiency (Penrose, 1959).

[8] Hymer cited his paper in the Bhagwati volume (Hymer, 1970b) in the paper published in the *American Economic Review* (Hymer, 1970a)

Hymer's attempt to critique Schumpeter was framed in terms of the direction of technological change induced by oligopolies. In particular, Hymer suggested that oligopolies would aim to create a demand for their products, first by introducing them to the developed countries, and then to other countries. The orchestration of the process by a few corporations interested in their own profit made it unlikely that they would make optimal use of extant scientific and technological developments (Hymer, 1970a, 1970b).

On the international hierarchy of decision making, Hymer predated the contemporary global integration versus local responsiveness debate. (See Barlett and Ghoshal, 1989). In Hymer (1970a), he observed that the governance of TNCs was torn in two directions. On the one hand, they needed to adapt to local circumstances in each country. This called for decentralized decision-making. On the other hand, it was in their interests to co-ordinate their activities in various parts of the world and stimulate the flow of the ideas and managerial capabilities from one part of their empire to another. This called for more centralized controls. In Hymer's words, TNCs "must develop an organizational structure to balance the need to co-ordinate and integrate operations with the need to adapt to a patchwork quilt of languages, laws, and customs" (p. 445).

As regards the relationship between large investing firms and small host countries, Hymer observed their different objectives, the former being primarily interested in maintaining the net surplus from their operations of the foreign affiliates, and the latter in the net benefits created by them. He argued that as TNCs usually had more bargaining power, it might be possible for them to pursue their interest at the expense of the development of small developing countries, leading to a state of "underdevelopment". However, Hymer went on to argue that such extreme cases were no longer possible because of the increased political strength of the local middle class in most developing countries and because of the changed nature of foreign investment. He observed that modern TNCs were interested in manufacturing in developing countries as well as accessing raw materials; they, therefore, wanted a growing market for advanced products and an educated, urbanized labour force. They were no longer tied to traditional backward governments, rather choosing to have a stake in an active government sector that promotes growth and provides education and infrastructure. The "new

foreign investment" was, then, a far cry from the "banana republic" (p. 447). However Hymer believed that the emergent development retains "an uneven quality, and all the inefficiency that that implies, albeit in a more advanced and progressive form than characterized the enclave economies of the previous round of foreign investment" (p. 447)

The erosion of state power led Hymer to ask, "who is [going] to perform the government's functions?" (p. 448). He continues that "multinational agencies will need to be developed to maintain full employment and price stability. Yet such organizations do not exist at present, nor can they be built quickly" (p. 448).

Hymer concluded by prescribing central planning as the most suitable macro economic institution to set the rules for wealth creation. He felt that the large corporation illustrates how real and important the advantages of large-scale planning are, but it does not tell us how best to achieve wider domains of conscious co-ordination. Broadly speaking, there are two main alternatives. Either TNCs integrate one value added activity over many countries or states should integrate many industries in one country. According to Hymer, the advantage of the second option is that it keeps the economy within the boundary of the polity and the society. It thus causes less tension and creates the possibility of bringing economic power under control by removing the wastes of "oligopolistic anarchy" (Hymer, 1970a, p. 448).

In the other paper written in 1970 (Hymer 1970b), Hymer revisited and further pursued these ideas. In this contribution, Hymer looked towards the year 2000. In doing so, he formulated two economic laws: *viz.* the Law of Increasing Firm Size and the Law of "Uneven Development". Here, besides being influenced by the scholarly writings of Coase and Chandler, Hymer drew extensively on the work of Karl Marx. He also addressed issues raised earlier by Alfred Marshall, Joseph Schumpeter, Adam Smith, Karl Polanyi, Ray Vernon and Chester Barnard.

In Part I of this paper, Hymer first reiterates and expands on his ideas in the earlier papers (Hymer, 1968, 1970a) on the evolution of large firms. In particular, he attempts to extrapolate the trends in business enterprise (the "microcosm"), on the macro-economic environment (the "macrocosm"). He claims that a regime of North Atlantic TNCs would tend to produce a hierarchical division of labour

between geographical regions which corresponded to a vertical division of labour within the firm. It would tend to centralize high-level decision-making occupations in a few key cities in the industrialized countries: these would be surrounded by a number of regional sub-capitals, while the rest of the world would comprise a multitude of smaller towns and villages. Income, status, authority, and consumption patterns would radiate from the cities along a declining curve, with the result that any existing pattern of income inequalities and dependency would be perpetuated.

For Hymer, the application of "location theory to the Chandler-Redlich scheme suggests a *correspondence principle*, which relates centralization of control within the corporation to centralization of control within the international economy". Applying this idea to the world economy, he predicts the creation of "core" cities and economies, and a "hinterland", with the growth in the hinterland resulting in growth in the core, but not *vice versa*. He further suggests that a two stage "trickle-down" and demonstration effect would tend to reinforce "patterns of authority and control". This process, according to Hymer, is likely to reduce options for development, and erode the power of the nation states, but asymmetrically – more so for small than for large countries, as in his words "Government – in the metropolis can,…. capture some of the surplus generated by the multinational corporations and use it to further improve their infrastructure and growth" (Hymer, 1970b, p. 128).

In Part III, Hymer discusses political economy issues, including the potential role of labour, the middle classes, excluded groups, and the "socialist bloc". He concludes that, despite any advantages it may possess the multinational "creates hierarchy rather than equality, and it spreads its benefits unequally" (Hymer, 1970b, p. 133). He moves on to prescribe "a system of regional planning" or "a socialist solution" (p. 135). He expresses some optimism for this to happen. Again, in his words, although "power at the centre is great … …the forces for positive change are much stronger and the centre seems to be losing its will and self-confidence" (p.135).

4. Hymer's framework, predictions and prescription in relation to subsequent developments

4.1 Framework, predictions and prescription

Hymer's analytical framework involved a focus on the superior profitability which he perceived internalization would confer on firms: first from their ownership of, or access to, particular assets, competences, coordinating abilities; and second, from an increase in market power through the reduction of competition. Hymer treated these two benefits arising from control as being the same. He claimed that "the control of the foreign enterprise is desired in order to remove competition between that foreign enterprise and enterprises in other countries. Or the control is desired in order to appropriate fully the returns on certain skills and abilities" (Hymer, 1976, p. 25). This treatment is questionable. While any reduction of rivalry or inter-firm collusion are practices almost exclusively concerned with power-control, rather than with efficiency enhancement, capturing value out of one's various advantages can help engender efficiency and value creation (Dunning and Pitelis, 2008).

Hymer eschewed from the question of whether advantages can be used efficiently. He tried to tackle the question of inter-temporal efficiency and market structure by focusing on the "direction of change" and its uneven characteristics. Importantly, Hymer failed to deal with the relationship between the static and dynamic efficiency of firms. Nor did he seek to identify the origin or creation of the "advantages", and their relationship not just to value appropriation/capture, but also to efficiency as well as the link between value capture and efficiency. In addition, Hymer claimed that the direction of innovation by TNCs was not necessarily in line with consumers' needs, and that any spillover effects were unevenly distributed between developed and developing nations. Both these arguments are contestable. The first involves the difficult issue of defining what the needs of the people are. The second assumes that an alternative system would have better properties – an issue to which we shall later return.

A final, yet crucial, aspect of Hymer's perspective concerns the process of integration itself. In Hymer's work, this is exclusively seen as a strategy for profitability through market power. This argument has two limitations. First, once it is acknowledged that integration may help reduce market transaction costs, its value-creating efficiency element has also to be part of the picture. This becomes even more the case when

one incorporates some of the other efficiency advantages discussed by Hymer (1968, 1970a, 1970b), such as the speed of intra-firm knowledge transfer and the learning advantages which the internationalization of production helps facilitate.

To summarize, for Hymer, the advantages of integration in terms of value capture through monopoly power effected through the reduction in production and transaction costs, provided the *raison d'être* for FDI and TNC activity. On this basis, Hymer predicted, first, a continued increase in firm size and the interpenetration of cross-border investment, market-sharing and global collusive oligopoly; second, unevenness of development between developed and developing countries which results from extrapolating the microcosm of the TNC to the macrocosm of international political economy; and third, the need for "supra-nationality" and global governance, in order to address the failures of the TNCs and nation states to provide global governance. On this basis, Hymer prescribed central planning – the vertical integration of industries within nations by national governments, instead of integration of the same industries by private TNCs across nations (Hymer, 1970a, 1970b).

Hymer's first prediction has been extensively discussed on the international business literature.[9] Here our focus is on his predictions on uneven development, central planning and global governance. First, we critically assess Hymer's predictions and prescriptions on the basis of their consistency with his own analytical ideas and arguments. Then, we repeat this exercise in the context of our contemporary global landscape and that of scholarly thinking. Following this, we aim to build on the work of Hymer and subsequent scholars by suggesting a framework that overcomes the limitations of Hymer's model, and speculate a little on how he might have revisited his ideas with the benefit of that framework. Finally, we venture into some predictions and prescriptions of our own about the future of global capitalism.

Starting from Hymer's "law of uneven development", this is in line with his belief that firm specific asset-based advantages and competences primarily originate in developed countries, and then "trickle down" to developing ones. This leads to his opinion of an asymmetrical erosion of the power of developing countries. In this

[9] See, for example, Dunning and Pitelis (2008).

context, the idea of the emergence of a "pyramid" of decision making and the possibility of a "core" and a "hinterland" follow almost naturally from his assumptions and his prediction that this will lead to an uneven division of the benefits of growth in favour of developed countries.

Hymer's idea of "uneven development" flies in the face of traditional neoclassical growth theory (e.g. Solow, 1956) and the ideas underlying the Washington Consensus (Dunning, 2003, 2006). These theories and arguments predict convergence of economies with developing countries having more scope for further improvement (Sala-i-Martin, 2006). It also differs from "development of underdevelopment" arguments, which suggest that TNCs can create or help sustain the underdevelopment of countries (Eden and Lenway, 2001), as opposed to their development, even of the uneven type. Finally, parts of the contemporary outward FDI from developing countries is of an asset-augmenting kind and directed to developed countries. Rightly or wrongly, many developing countries believe this is one of the ways – and certainly the speediest – to reduce the technological gap between them and the richer industrial economies.

Despite its "middle ground" position, the uneven development thesis only follows under Hymer's specific assumptions, particularly concerning the role of the state (its nature, motivations, interests and constraints) in developing countries, as well as its willingness and/or ability to devise and implement policies that lead to catch-up. Accordingly, the predictive power of his thesis depends crucially on these underlying assumptions and frameworks.

Hymer's prediction on the need for international organizations, and for some kind of global governance to regulate the operations of TNCs follows from his observation that such firms and the erosion of the power of nation states leave a vacuum which needs to be filled. It has also proven prophetic. Following his work, organizations such as the World Trade Organisation (WTO) have emerged, which today play an important role influencing the rules of the game in international trade. A major lacuna in Hymer's analysis, however, concerns the question of the purpose of this emergence. Hymer does not articulate a theory of the nation state and its competition and regulation politics *vis-à-vis* TNCs. In the absence of a theory of the state, competition, industrial

and regulation policies, it is difficult to identify exactly the contents of the vacuum which "supra-nationality" is expected to fill.

Hymer's prescription for "central planning" may also follow from his analysis, if we assume that any efficiency advantages of private TNCs will continue to be generated even in their absence. In this case, it would make sense to replace the advantages of size (and eliminate its downsides) by integrating industries within nations. Of course, we would also need to assume the absence of government failure – a rather heroic assumption (Chang, 1994).

4.2 Post-Hymer developments in relation to his ideas

In respect of the theory of the TNC and FDI, the major development in the 1970s and 1980s was more intensive examination of the "transaction costs" approach, and the introduction of the OLI (ownership, location, internalization) paradigm as set out by Dunning.10 As we have already established, it is now accepted that Hymer was the father figure of the internalization approach to understanding the modality of international business activities. In contrast to Hymer, however, the transaction costs approach and the OLI paradigm focus on the efficiency impact of the advantages. The value creation component of FDI and TNC activity was also strengthened by the other major scholarly developments on the theory of FDI and the TNC in the 1990s, viz the resource-based and evolutionary theories, for example, Teece (1977) and Kogut and Zander (1993). Such theories draw on the resource-based view (RBV) of strategic management.11

How exactly might we best incorporate an efficiency-value creation element into Hymer's framework of thinking? One way to approach this issue might be to revisit Hymer's predictions, extrapolation and prescription, from a knowledge-learning-based lens and then compare how these might help explain the post-Hymer's shifting global landscape. We may then also dare to speculate a little on the future of global capitalism using this revised framework.

[10] See Eden (2003) for the historical evolution of the OLI, and Cantwell and Narula (2003), Dunning (2001, 2006) for more recent extensions.

[11] See Mahoney (2005).

Starting with Hymer's predictions, a value creation cum value capture perspective is consistent with the "law of increasing firm size"; indeed, it adds credence to it. For example, Penrose (1959) has cogently argued that a firm's ability to access or learn from new knowledge will tend to remove any constraints to growth, including those which arise from any deficiency of managerial services and the difficulties for authoritative communication and coordination. These limits will tend to recede as firms learn and act to ameliorate them. In this sense, while there are limits to growth, they do not arise from size per se as predicted by Hymer. The main contribution of the combined value creation/value capture perspective is its argument that growth may be the result of improved efficiency, innovation and learning as much as of increasing market power.12

Through efficiency and/or an extension of their market and political power, and by organic growth or acquisitions, the last 50 years has seen a continuous growth in the world's largest firms. This gives credence to Hymer's first law (Dunning and Pitelis, 2008). Thus the incorporation of the efficiency and value creation into Hymer's model, adds more support to his first "law". The recent dynamic growth of outsourcing (UNCTAD, 2003; Teece, 2006), alongside continued growth of firm size moreover, is testimony to the strength of Hymer's analytical framework and his superior insight.

On the other hand, Hymer's predictions with respect to global collusive oligopoly have been less successful. While sectors and companies, as diverse as beverages, commercial aircraft (Boeing-Airbus) and IT appear to be in line with Hymer's predictions, in others there is intensifying competition through innovation, new entrants, trade liberalization, improvement in information and communication technologies, and reduced transportation costs. Interestingly, it is often

[12] As noted, the idea that large firms will try to capture value through both efficiency and power is also a theme of Edith Penrose (1959, 1995). Importantly, Hymer's focus on potential collusive behaviour between developed countries states and their TNCs, to further their common interests extends Penrose's views to the political arena. More recently, Boddewyn and Brewer (1994), suggest that political power can be an important means of obtaining market power and competitive advantage. For them "Political behaviour can be a source of efficiency, market power, and legitimacy" (p. 1371) The addition of political power to market power helps support Hymer's focus on value capture through the possibility of "imperialism". At the same time Boddewyn and Brewer's focus on efficiency helps expose Hymer's exclusive focus on monopoly.

through the very presence of large players that new competitors emerge. The emergence of Chinese competitors to United States electronic and computer firms have come from the international strategy of such firms: Lenovo, after its acquisition of the PC division of IBM, is set to become a major global player. Outsourcing has helped create major Indian IT players, who now compete head-on with the leading TNCs from the developed countries (Teece, 2006). In short, we would claim that Hymer failed to appreciate the importance of new competition (Best, 1990) through innovation, the emergence and role of small firms and the role of government in developed and developing countries. While firms keep growing, the scope for "global collusive oligopoly" in major, especially "high-tech" industries seems to be far off. This is particularly the case in a changing global landscape, in which the very boundaries of firms and sectors become fused and fuzzy and non-collusive forms of inter-firm cooperation abound (Richardson, 1972).

Concerning Hymer's prediction of the growth of "supra-national" entities, post-Hymer international organizations such as the WTO have emerged; the roles of the World Bank and the IMF have become more high profile; regional groupings such as the EU have widened and deepened their integration and new groupings have appeared. It is, however, less clear whether "supra-nationality" has emerged for the reasons advanced by Hymer. For Hymer, "supra-nationality" was needed to fill the vacuum created by the erosion of state power. However, he offered little specific guidance of the nature and role of such organizations. For example, his "imperialism thesis" (Cohen et al., 1979) would suggest he thought that international organizations would lead to an increased concentration of economic power. Certainly, the World Bank and the IMF have subsequently been criticized along these lines (e.g. Stiglitz, 2002). Moreover, Hymer correctly predicted the growth of "supra-nationality", but he failed to either integrate it fully into his value capture framework or explore its complexities, nature and contradictions. In short, Hymer's "supra-nationality" thesis is neither fully in line with his own analytical framework, nor adequately developed. This remains a critical area for further research (Boddewyn and Brewer, 1994).

The above considerations are also relevant to any assessment of Hymer's prediction of dependent and "uneven development". The events of the last 35 or more years seem to have been rather unkind to

Hymer here. While it is true that large areas in the globe, notably Africa, have remained underdeveloped, there have also been spectacular successes, notably in Asia and the Central and Eastern Europe, at least before the recent crisis. Since the early 2000s, for example, China and India are experiencing dramatic growth; and are doing so by applying a wide array of policies and development models often favourable both to inbound and outbound FDI. While these countries initially exhibited significant state intervention (Chang, 2002), India's most recent development (e.g. the growth of the IT sector in Bangalore) seems to have taken place without such intervention (Hill, 2009). The take-off of Central and Eastern European firms has been linked, among others, to "near-shoring" by TNCs and remittances form their migrants. More generally, a new paradigm of development seems to be emerging (Dunning, 2006).

Hymer's exclusive focus on value capture also led him to underplay the significance of learning by developing countries, competitors and the introduction of pro-development government policies. Post-Hymer's development has been uneven, but often in favour of developing countries. This possibility was not considered by Hymer, because of his emphasis on the power of large firms to protect "their" technologies and competitive advantages, out- compete their rivals, and weaken the power of developing countries. While large firms do try and achieve these objectives, some nation states are very strong, new TNC competitors from developing countries do emerge, competitors from developing countries do manage to access, absorb and upgrade technology (Ramamurti, 2004). In all, there exists a very complex dynamic system, which is simply not explicable in terms of large firms controlling everything all the time. While post-Hymer "uneven development" in favour of those already better off has taken place (Driffield and Love, 2005), on balance, "uneven development" seems to have favoured some emerging countries.

Our discussion of the last two points also weakens the force of Hymer's belief in the merits of "central planning". Even with global collusive oligopoly and uneven development, the case for central planning as a macro-institutional system should be at least partly based on its relative efficiency properties – which Hymer failed to discuss. In particular, he gave little attention to the ways in which governments might facilitate the positive externalities of inward FDI. One example

is the promotion of industrial districts and clusters. As documented particularly by Porter (1990), agglomerations of inter-linked firms, including TNCs, that compete and cooperate in a particular activity in a particular location, are frequently a potent source of locally-based economic development. They are also an alternative mode of organizing production to "central planning" that combines much of the efficiency of large and small size, but also exploits and sometimes adds to the social capital of host countries (Dunning, 2005; Pitelis, 2009).

Hymer underplayed all these possibilities. This led him to prescribe central planning to counteract the (perceived) negative effects of value capture by TNCs. This prescription was based on the assumption that "central planning" would maintain the efficiency of capitalism in resource allocation, while ridding its inefficiencies. But theory suggests that central planning will tend to be inferior in terms of dynamic efficiency through innovations (Hayek 1945). Over the last three decades, central planning collapsed as an economic system in most emerging countries. Victorious capitalism, on the other hand, is now plagued with one of its worst crises ever, even resorting to its own idiosyncratic form of central planning and rampant protectionism. This invites a more nuanced appreciation of the links between the private and public sectors and the mix of market, hierarchy and cooperation, than currently extant (Mahoney et al., 2009).

5. Learning, institutions and sustainability: concluding remarks

The main focus of recent research on the nature and implications of FDI and TNC activity has been on evolution, efficiency, learning innovation and the dynamic interplay between the competitive advantages of firms and countries. Attempts to incorporate firm-specific assets and competences into the equation include those of Caves (1982), Teece (2006) and Kogut and Zander (1993). Increasing attention has been paid to asset-augmenting FDI, including that of TNCs from developing countries (UNCTAD, 2005). Madhok and Phene (2001) and Rugman and Verbeke (2002) tried to incorporate Penrosean and resource-based ideas into the TNC. Various contributors to Cantwell and Narula (2003) have suggested reconfigurations or extension of the OLI paradigm. More recently, Dunning and Lundan (2008) explicitly incorporated the content and quality of institutional capital into the

eclectic paradigm, while Pitelis (2007) reinterpreted and extended its tenets in terms of learning, imperfect cognition and strategic behaviour of firms. While we would accept that many of these ideas were anticipated by Hymer (1970), by choosing to focus on the value capture advantages of the TNC, he neglected an important part of its attributes. In concluding this paper, we speculate as to what a more nuanced, learning, knowledge, capabilities, innovations and institutions-based view of the TNC that combines value capture with value creation would imply for Hymer's prescriptions and predictions.

First, as already observed, the new emphasis on the learning attributes of FDI and TNC activity supports the "increasing firm size view" of Hymer. As pointed out by Penrose (1959), this process of growth is efficient, almost by definition. While firms do, and often manage to capture value resulting from such growth by way of monopolistic practices, and the building of "impregnable bases", sustained growth results from innovation and efficiency. To the extent that "big business competition" fuels that process, it is an important vehicle for value creation.

Concerning "collusion", Penrose (1959), like Hymer (1970), and others were not oblivious to the potential inefficiency in sectors controlled by large firms, which might stem the process of competition. Penrose argued, however, that the emergence of small firms, appropriate anti-trust policies, institutions and attempts by government of developing countries to safeguard their interests, would make it infeasible for large firms to maintain collusion on a global scale for other than short periods of time. It would appear that this Penrosean view, currently enforced by much of the new learning on FDI and the TNC, is proving to be more accurate than that of Hymer.

The "new learning" on the TNC and FDI would prescribe the need for new supranational organizations, which focused on sustainable value creation. Such a focus would entail the facilitation of mutual learning, knowledge transfer and the spread of "good practice", standards and institutions to furthering development. They should aim to remove market distorting constraints to development, arising, inter alia, from inadequate property right protection, ineffective competition policies and corruption and the strategic trade policies by developed countries that hinder the development process of developing countries (Chang,

2002; Bianchi and Labory, 2006). Such a new perspective would suggest a focus on removing the potentially negative effects on sustainable value creation, arising from some unacceptable value capture practices of firms and nations (Mahoney et al., 2009).

Such an approach would also help explain and remedy a process of "uneven development" in favour of catch-up. A learning-sustainable value creation view of firms and nations would allow for the transfer of best global technological and organizational practices. In addition, the need of TNCs to access and learn from the competences and institutions in the countries in which they operate might suggest the need for a more decentralized and "hierarchical" organizational structure aimed at leveraging affiliate skills (Birkinshaw and Hood, 1998). While in some cases (e.g. the contribution of foreign affiliates to the innovatory process), this has happened (UNCTAD, 2005), in others it has not (Pearce and Papanastassiou, 2006; Yamin and Forsgren, 2006)

These arguments are not meant to assert that convergence necessarily follows as learning and knowledge accumulation increases. Instead learning provides more degrees of freedom for developing countries to pursue strategies that will facilitate development. For a variety of reasons, some developing countries will be successful, others will not (Chang, 2002).[13] However, those that are successful may well eventually be able to effect independent and favourable development trajectories. While Hymer's predominant focus on power-related issues and value capture led him to adopt the proposition of uneven and dependent development, our perspective would point to a more nuanced approach to development, but would offer more scope for agency and less predetermined outcomes.

A knowledge-learning based perspective to development would all but be alien to the prescription of central planning. While static efficient allocation of resources through central planning is possible (Lange, 1936), any chances for its success would need to assume an omnipotent, omniscient central planner. Planning, moreover, might blunt the incentives of firms to innovate and/or to learn from others. All these remove important sources of efficiency. Yet, it is perhaps a

[13] For a discussion of political economy issues by IB scholars see Brewer (1993), Brewer and Boddewyn (1994). Eden and Lenway (2001), point to the political foundation of globalisation which they consider shaky.

paradox that while post-Hymer developments have been very harsh on the central planning thesis, they have not necessarily reduced the role of the state. Indeed in some respects, the state's role in ensuring that there are the right kind and quality of institutions in place to facilitate market transactions is probably as important as it has ever been; nowhere is this more the case than in the emerging economies (Chang, 2002). The recent financial crisis has confirmed this spectacularly (Stiglitz, 2007).

In recent years, the learning perspective has been widened to embrace a more diverse, pluralistic view of capitalism. Such a view acknowledges, first, the role of a growing number of extra market organizations, including NGOs and special interest groups; second, the widening goals and/or prioritization of existing goals, development and the ways in which these may be best achieved (Dunning, 2006); third, the recognition by governments from both developed and developing economies of the need to continuously reappraise their policies and institutions in the light of a changing global scenario. Certainly, we believe that were he writing today, Hymer would wish to be at the centre of debate on these topics.

In all, Hymer's contribution to the theory and political economy of the FDI and the TNC opened up a new field of scholarly endeavours and also predated much of what was to follow. Having said this, Hymer chose to focus on only half of the story, *viz.* the value capture by firms, at the exclusion of efficiency and value creation. Perhaps this was because he believed that the same efficiency properties would be present, whatever the efforts of firms to capture value. This has proven problematic, not least because it is sometimes that exactly because firms aim to capture value that they need to create value in the first place. Alongside his beliefs that large TNCs were all powerful, that capitalist states in developing nations were weak, that small firms had no chance to compete, and that a socialist state would be able to solve the problems of capitalism, Hymer made some predictions and prescriptions that have since proved to be unsupportable. Notable among these were his global collusion thesis, the inevitability of dependent and uneven development, and his prescription of central planning.

While Hymer discussed issues related to knowledge and institutional learning, he chose to do so selectively. Were he writing in

the first decade of the twenty-first century, we believe he would have revisited some of his ideas, from a perspective based more on knowledge and institutional learning that he himself helped develop. This would have led him to adopt a more balanced and nuanced outlook to both economic and social development. His constantly evolving thought, from 1960 to the early 1970s, make us confident that this would have been the case. Rowthorn (2006), Hymer's co-author of many important works, supports this idea by observing that Hymer was an independent spirit and very much his own man.

In concluding, we have claimed that a knowledge and institutional learning based perspective, to which Hymer had himself contributed, would point to a more nuanced understanding of the role of large firms in globalization and capitalistic development. Such a perspective would pay attention to the interactions between value creation and value capture at the evolving nature, functions and organization of both market and non-market institutions (Boddewyn, 2003). A learning perspective would point to the need to adopt organizational forms that facilitate learning and growth by small firms, and by states to adopt policies that aid development. In addition, the emphasis on such a perspective on value creation and value capture would point to the need for a focus on relative efficiency of alternative organizations, institutions and systems.

Looking to the future, a learning-value creation perspective would point to the need to address constraints on the sustainability of the value generation process. Such constraints are likely to arise whenever entrenched power structures are reflected in monopolistic practices by firms and by strategic trade policies of developed countries, which may work against the interests of developing countries (Chang, 2002; Pitelis, 2009). Unacceptable ethical standards in developed and developing countries, market distortion, collusive relationships of firms and states, actions by one or other constituents of global capitalism that might damage the environment, lead to excessive social inequalities or reduce security (Boddewyn and Brewer, 1994; Argitis and Pitelis, 2001; Mahoney et al., 2009).

While many of the above were not Hymer's chosen concerns or focus, they are well within his chosen pursuit for a better world. An institutional learning and sustainability perspective adds credence

to Hymer's concern and calls for learning and actions to improve our world – Hymer's chosen agenda.

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Exports and Local Sales Patterns of United States and Japanese Multinational Enterprises in East Asia

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This paper examines the local market and export orientation of the affiliates of Japanese and United States transnational corporations (TNCs) in East Asian countries using up-to-date affiliate-level panel data for the period 1989–2005. The main results suggest that the export strategies of TNC affiliates reflect the distinct national characteristics. Japanese affiliates in East Asia, especially in China, have a higher propensity to export to the home country compared with United States affiliates. United States affiliates in China have a higher propensity to export to third-country markets. On the other hand, the share of local sales for these two groups of foreign affiliates have become similar over time.

1. Introduction

The debate about whether Japanese and United States translational corporations (TNCs) behave differently in a given host country has a long history in the literature of FDI and international business management (e.g. Kojima, 1978; Lipsey, 1995; Dobson and Yue, 1997; Encarnation, 1993, 1999; Ravenhill, 1999; Ramstetter, 1999; Fukao et al., 2006). It has been often claimed that the operations of Japanese TNC affiliates are relatively closed with a tightly controlled buyer-supplier linkage (Froot, 1991; Belderbos, 1997; Hacket and Srinivasan, 1998; Borrus et al., 2000). On the other hand, United States TNCs' operations are often characterized as an open system with fully integrated modularity and extensive use of independent subcontractors and contract

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manufacturers (Sturgeon, 2003).[1] While acknowledging this difference in characteristics, some argue that the operations of TNCs from different home countries would become similar with the passage of time as newcomers mature and the ongoing process of globalization force TNCs to emulate international best practices in global business operation. Hence, a common evolution of Japanese and United States TNCs in a given host country should be expected (Encaration, 1993; Dunning et al., 2007). On the other hand, other studies claim that the operations of foreign affiliates are deeply rooted in the national characteristics of the parent TNC, and hence their distinctive operational characteristics are likely to remain regardless of their operational maturity or competitive pressure (Kojima, 1978; Borrus, 1997; Encarnation, 1999).

Despite a long history of the debate, there has so far been a lack of systematic analysis to fully assess the contrasting views on the key differences in the operational characteristics of Japanese and United States affiliates. This paper aims to contribute to the fledging literature by focusing on exports and local sales patterns of Japanese and United States TNC affiliates in East Asia, using up-to-date affiliate-level panel data for the period 1989–2005.[2] There are two novel features of the present study compared to previous research. First, this paper utilizes data for a longer time-span and for a more recent period.

[1] Development of modular production has been one of the most notable changes in the United States electronics machinery industry over the past 15 years. The modular production network is driven by contract manufacturers who provide traditional and standardized manufacturing functions, product (re)design, component processing and purchasing, inventory management, routine tests, as well as after-sales services and repairs. It is also facilitated by highly standardized inter-firm linkage requiring less frequent and intense interactions. These functions of contract manufacturers are highly modular in nature, being accessed and shared by a wide array of 'lead firms'. The use of contract manufacturers may bring cost and flexibility advantages to "lead firms" (Borrus et al., 2000; Sturgeon, 2003). As a result of the widespread use of the modular technology, major firms such as Hewlett Packard and Ericsson in the electronics industry have been able to sell most of their worldwide manufacturing infrastructure to contract manufacturers, Solectron and Flextronics (Sturgeon, 2003). The modular production network has also spread into other industries in the United States. In the United States automotive industry, Ford and General Motors (GM) have retained vehicle design and final assembly but rely on an increasing volume of components such as entire automotive interior systems, headlights, carpets, cockpits, and interior panels and module design supplied by Leair, Johnson Contrils, Magna and TRW

[2] Other studies explore other aspects of the operations for Japanese and United States TNCs such as the ownership structures and industrial organization. This paper focuses on exports and local sales patterns because only these variables can be extracted in a consistent series.

Most of the comparative studies of United States and Japanese FDI covered the 1980s and the early 1990s when Japanese FDI in East Asia was at its infancy stage. Hence, observed operational differences between Japanese and United States affiliates may have emerged from the differences in the timing of FDI entry and the length of operational experience in the host country (so-called "the vintage effect"). More importantly, two major events have occurred in East Asia since the late 1990s, namely the Asian financial crisis and the continued rapid economic growth of China. Second, the analysis in this paper models exports and local sales patterns in a much more sophisticated way by controlling for the factors affecting exports and local sales patterns of Japanese and United States affiliates. Most of the existing studies use statistical techniques that only explore the cross-sectional variation of export and local sales patterns or case studies based on company surveys in selected Asian countries (Ramstetter, 1999).

Our main finding suggests that national characteristics do remain in the operations of TNCs' foreign affiliates. In particular, Japanese affiliates in East Asia – particularly in China – have a predominant tendency to export to the home-country compared with United States affiliates. United States affiliates in China have, on the other hand, a relatively higher propensity to export to third-country markets. These findings are consistent with the observation on the main characteristics of Japanese and United States affiliates. Interestingly, we do not find such differences in the degrees of local market orientation of these two groups of affiliates.

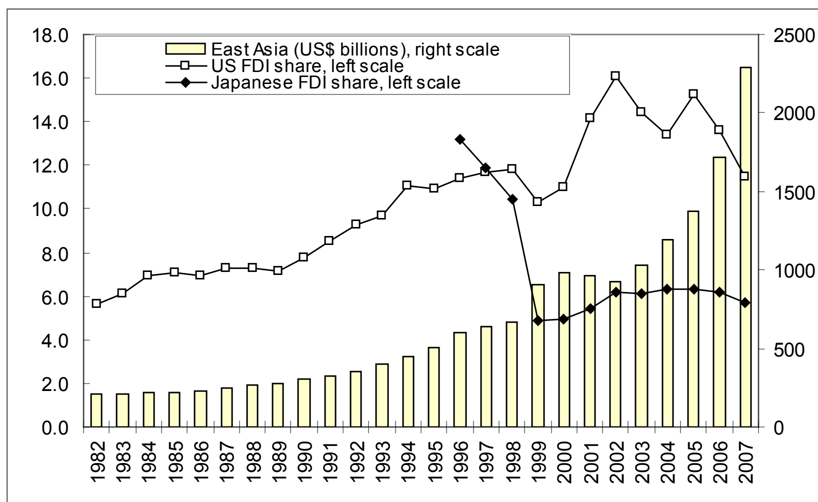
The rest of the paper is organized as follows. Section 2 provides an overview of United States and Japanese FDI patterns in East Asia. Section 3 compares operational characteristics of United States and Japanese TNCs in the region. Section 4 describes the empirical specification and data used, followed by a discussion of the results. The last section summarizes key findings and discusses policy implications.

2. United States and Japanese FDI in East Asia

Figure 1 displays the share of United States and Japanese FDI in the total FDI stock in East Asia over the period 1982–2007.[3] The data show the gradual increase in the importance of United States FDI in East

[3] See appendix table 1 for the definition of East Asian economies.

Figure 1. FDI Stock in East Asia and the shares of Japan and the United States, 1982–2007



Source: UNCTAD, http://www.unctad.org/Templates/Page.asp?intItemID=1923&lang=1.
The United States Bureau of Economic Analysis, http://www.bea.gov/international/index.htm#omc
JETRO, http://www.jetro.go.jp/indexj.html

Asia. In particular, the share of United States FDI increased significantly in the 2000s. Between 1984 and 1989, the United States' share of FDI stock in East Asia remained around 7 per cent. After a gradual increase of the United States share in the 1990s and a dip at the time of the 1998/99 financial crisis, the United States' share in FDI stock in East Asia rapidly increased from 11 per cent in 2000 to 16 per cent in 2002, recording its peak during the period of the study.

The United States investment pattern in East Asia contrasts with that of Japanese FDI.[4] Most notably, the Asian financial crisis in 1998/99 severely affected the pattern of Japanese investment in East Asia. The Japanese FDI stock dropped from $77 billion in 1998 to $44 billion in 1999. Its share in the FDI stock of East Asia decreased from 10 per cent to less than 5 per cent in just one year. Since then, in contrast to United

[4] Data on Japanese FDI stock is obtained from the JETRO (Japan External Trade Organisation) website. FDI stock data is also available at the Japanese Ministry of Finance (MoF), but the data are only available up to 2004. Because our focus is on the latest period in the 2000s, the FDI stock data from JETRO is used.

States FDI, the level of Japanese FDI did not recover fully to the pre-crisis level and the share of Japanese FDI remained at around 6 per cent in the FDI stock of the East Asia region.

Table 1 shows country/region distribution of United States and Japanese FDI stock between 1996 and 2007 – the period for which the most recent comparable data are available. Several marked differences between United States and Japanese FDI patterns emerge from table 1. First, the importance of East Asia as their investment location differs between Japan and the United States. In 1996, East Asia accounted for 33 per cent of Japanese worldwide FDI stock, whereas it only represented less than 10 per cent of United States FDI stock. The majority of United States FDI is in Europe, and its share increased from 55 per cent in 1996 to 62 per cent in 2007.

Second, the share of East Asia in the total outward FDI stock of Japan declined from 33 per cent to 26 per cent between 1996 and 2007, whereas that of United States FDI remained virtually unchanged during the same period. Indonesia contributed most to this decline of Japanese FDI. In 1996, Japanese FDI stock in Indonesia amounted to $17 billion, which was 7.2 per cent of the world stock of Japanese FDI. This share is the largest share within individual countries listed in table 1 at that time. However, the amount of Japanese FDI stock in Indonesia was halved from $17 billion to $8.3 billion and the corresponding share significantly dropped from 7.2 percent in 1996 to 1.6 percent in 2007. Indonesia became less attractive for Japanese FDI in the post-crisis period due to political instability and social unrest. In contrast, United States investment in Indonesia remained virtually unchanged after the financial crisis.[5]

Third, China became a much more important destination for Japanese FDI, while its share for United States FDI remained very small. In 1996, United States FDI flows to China amounted to $3.8 billion, which then increased to $28.3 billion in 2007. However, it only accounted for 1.1 per cent of the total United States FDI stock. In contrast, Japanese FDI into China increased rapidly from $8 billion 1996 to $37.8 billion in 2007, and the corresponding share of China rose from 3.4 per cent to 7.4 per cent. In 2007, China had the largest Japanese FDI stock in

[5] United States FDI stock in Indonesia was $8.3 billion in 1996 and increased to $10 billion in 2007.

Table 1. Country/region composition of United States and Japanese FDI stock

US billions of dollar and share in total FDI	United States		Japan		United States		Japan	
	in US$ billion				*in % share in total FDI stock*			
	1996	2007	1996	2007	1996	2007	1996	2007
East Asia	68.0	263.2	78.8	132.3	9.6	10.5	33.0	25.8
China	3.8	28.3	8.1	37.8	0.5	1.1	3.4	7.4
Hong Kong (China)	14.4	47.4	9.4	9.1	2.0	1.9	3.9	1.8
Korea, Rep. of	6.5	27.2	3.5	12.1	0.9	1.1	1.5	2.4
Singapore	14.9	82.6	11.4	17.6	2.1	3.3	4.8	3.4
Taiwan Province of China	4.5	16.4	4.0	7.7	0.6	0.7	1.7	1.5
Indonesia	8.3	10.0	17.2	8.3	1.2	0.4	7.2	1.6
Malaysia	5.7	*15.7*	5.8	8.2	0.8	0.6	2.4	1.6
Philippines	3.5	6.7	2.9	5.8	0.5	0.3	1.2	1.1
Thailand	5.0	15.0	15.8	19.8	0.7	0.6	6.6	3.9
Viet Nam	0.0	0.3		1.7	0.0	0.0	0.0	0.3
Japan	34.6	101.6			4.9	4.1		
India	1.3	13.6	0.8	4.2	0.2	0.5	0.3	0.8
Canada	89.6	257.1	3.5	9.5	12.6	10.2	1.5	1.9
Mexico	16.8	91.6	0.5	1.4	2.3	3.6	0.0	0.3
Oceania	35.9	84.4	9.9	18.9	5.1	3.4	4.1	3.7
Europe	389.4	1551.2	47.7	148.7	55.2	62.1	20.0	29.0
South America	57.3	93.3	11.4	53.2	8.1	5.7	4.8	10.4
Africa	8.2	27.8	0.4	3.9	1.2	1.1	0.2	0.8
Middle East	8.3	29.4	1.0	3.1	1.2	1.2	0.4	0.6
TOTAL	705.7	2498.5	238.4	512.9	100	100	100	100

Source: The total FDI stock figures also include tax heavens. The United States Bureau of Economic Analysis,http://www.bea.gov/international/index.htm#omc for United States FDI and JETRO, http://www.jetro.go.jp/indexj.html for Japanese FDI data.

East Asia. Related to this point, the data suggest no evidence of the popular "China fear", in the sense of China drawing FDI inflows at the expense of inflows to other East Asian countries (Eichengreen and Tong, 2007). Despite the dramatic increase of China in Japanese FDI stock, the Republic of Korea increased its share in Japanese FDI from 1.5 per cent in 1996 to 2.4 per cent in 2007. For United States FDI, Singapore's share increased from 2.1 per cent in 1996 to 3.3 per cent in 2007. This suggests that although the importance of China in both Japanese and United States FDI in East Asia has gone up, this did not occur through a reduction in FDI in other countries in the region. This finding is

consistent with other studies arguing that the China fear should not be overstated (Athukorala, 2007; Eichengreen and Tong, 2007).

3. Export Propensity of United States and Japanese affiliates

Table 2 presents data on the export-orientation of United States and Japanese TNC affiliates in East Asia and other countries for the period 1989–2005. The data in table 2 suggest contrasting patterns of export-orientation between United States and Japanese affiliates. The export intensity of United States affiliates in East Asia declined from 61 per cent in 1989/90 down to 50 per cent in 2004/05, while that of Japanese affiliates increased from 47 per cent to 49 per cent during the same period. At the level of individual country, this contrasting pattern is more striking. Export intensity of United States affiliates in Singapore and Hong Kong (China) declined from 84 per cent and 61 per cent in 1989/90 to 65 per cent and 49 per cent in 2004/05, respectively, while Japanese affiliates in these countries became highly export oriented, reaching over 60 per cent in 2004/05. This suggests a shift in the production patterns of United States affiliates from exporting to more local market sales. Interestingly, United States affiliates in Malaysia are more export-oriented than the Japanese counterparts. Perhaps, Malaysia's unique position reflects the dominant presence of United States major electronics producers such as Intel, whose assembling operations are a vital part of their global production operations.

Despite the popular perception, there is no evidence to suggest that United States affiliates in China are primarily export-oriented (Branstetter and Foley, 2009). In 2004/05, the operations of United States affiliates in China remained highly local-market oriented with only 36 per cent of the total sales going for exports (as compared to 45 per cent for Japanese affiliates in China). Japanese affiliates in China have much more home-country export oriented compared with United States affiliates. In 1989/90, exporting to the home country accounted for 41 per cent of the total exports of Japanese affiliates in China, which increased to 64 per cent in 2004/05. In contrast, home-country export intensity for United States affiliates in China is significantly lower: 3.5 per cent in 1989/90 and 24 per cent in 2004/05. Perhaps, this difference suggests that United States affiliates rely more on third-country exports, hence reducing a connection with parent firms in the United States.

Table 2. Local sales and export orientation of United States and Japanese TNCs activity, 1989–2005

	Export-sale ratio				Export to home country as a share of total exports			
	Japan		United States		Japan		United States	
	1989/ 1991	2004/ 2005	1989/ 1991	2004/ 2005	1989/ 1991	2004/ 2005	1989/ 1991	2004/ 2005
East Asia	46.5	49.3	60.6	49.7	36.6	46.5	59.4	33.8
China	56.9	44.7	14.8	36.1	41.1	64.3	3.5	24.0
Hong Kong (China)	43.6	66.2	64.9	49.3	49.2	54.4	51.2	37.7
Indonesia	23.6	43.5	0.0	15.8	57.3	49.0		9.8
Korea, Rep. of	34.0	23.1	33.9	27.6	46.8	49.6	78.2	26.9
Malaysia	73.8	51.4	77.4	70.8	25.4	40.0	63.4	59.5
Taiwan Province of China	40.5	30.5	35.8	39.3	43.5	46.5	69.2	45.3
Philippines	54.8	76.3	34.6	69.7	33.9	41.3	45.0	36.9
Singapore	57.2	60.9	84.4	61.0	26.9	21.8	64.2	24.8
Thailand	36.0	47.4	48.7	45.0	41.8	41.7	23.5	26.5
Japan			16.6	10.9			49.1	28.0
India	0.1	22.2	2.7	14.0	0.0	1.7	0.0	38.4
France	36.5	22.4	34.4	35.9	7.4	12.3	8.1	14.9
Germany	36.2	48.3	40.9	46.0	1.2	8.8	8.2	9.4
United Kingdom	43.1	46.4	33.9	36.0	5.7	4.1	17.1	15.5
Canada	46.1	74.5	39.8	38.0	24.8	2.7	90.8	90.5
Brazil	22.4	33.8	15.3	31.1	35.3	9.8	50.1	17.7
United States	7.2	9.3			53.3	36.5		
Mexico	59.7	50.0	31.2	40.8	0.2	1.0	92.0	76.0

Source: The United States Bureau of Economic Analysis, http://www.bea.gov/international/index.htm#omc and RIETI, http://www.rieti.go.jp/jp/database/d08.html

Geographical distance and the related trade costs could be another factor explaining this difference. United States affiliates' operations in NAFTA countries exhibit patterns similar to Japanese affiliates in China: over 90 per cent of the total exports of United States affiliates in Canada went to United States in 2004/05 and similarly around 76 percent of exports of their affiliates in Mexico were shipped to the United States.

Table 3 summarizes the operational activities of United States and Japanese affiliates in East Asia at the industry level in 2003. Because of different industry classification used for United States and Japanese FDI data, it is not possible to have the same industry categories for Japan and the United States even at the most aggregated level. However, some general inferences emerge from table 3. Both United States and

Table 3: United States and Japanese affiliates in East Asia by industry, 2003

(a) – United States affiliates

	Food	Chemicals	Primary and fabricated metals	Machinery	Computers and electronic products	Electrical equipment, appliances, and components	Transportation equipment	Total manufacturing
Sales to United States (%)	4.4	1.6	0.5	5.2	27.1	23.0	12.7	17.1
Sales to other foreign countries (%)	22.1	32.5	0.0	37.2	34.4	32.6	16.5	29.7
Local sales (%)	73.5	65.9	99.5	57.6	38.4	44.4	70.9	53.2

Source: The United States Bureau of Economic Analysis, http://www.bea.gov/international/index.htm#omc

(b) – Japanese affiliates

	Textiles	Other mfg.	Chemi-cals	Primary metals	Metal products	General machinery	Electrical machinery	Communi-cation	Transport equipment	Precision machinery	Total mfg
Sales to Japan (%))	28.8	27.1	11.1	17.1	21.4	32.6	25.6	31.6	15.9	48.2	25.1
Sales to other foreign countries (%)	24.5	20.2	33.3	23.6	20.6	20.4	31.4	33.1	17.9	19.9	26.5
Local sales (%)	46.6	52.7	55.7	59.0	57.3	47.0	42.9	35.4	66.1	30.9	48.3

Source: RIETI, http://www.rieti.go.jp/jp/database/d08.html

Japanese affiliates in East Asia have high export intensity in electronics-related industries (Athukorala and Yamashita, 2006, 2008; Ando and Kimura, 2005). In comparison, United States and Japanese affiliates in transport equipment are more local market oriented: about 70 per cent of the total sales goes to local market in the case of United States affiliates and 66 per cent in the case of Japanese affiliates. Higher intensity of local sales for transportation equipment compared to electronics can be explained by the value-to-weight ratio. Exporting auto parts and components is constrained by the higher transportation costs (due to the heavy weights).

4. An Econometric Test

4.1 Empirical Model and Data

This section formally examines whether United States and Japanese affiliates systematically differ in terms of their operations in East Asia using affiliate-level data for the period 1989–2005. The basic specification attempts to explain three measures of TNC operation (as the dependent variable) in a given host country after taking into account economic fundamentals and geographical distance from the home country. After pooling the data for Japanese and United States TNCs together, the interaction terms involving the dummy variables for Japan and the year should indicate whether there are systematic differences between United States and Japanese affiliates over time.

The basic specification of the model takes the following form:

$$(1) \ln EXP_{h,t} = \beta_0 + \beta_1 \ln GDP_{h,t} + \beta_2 \ln GDPP_{h,t} + \beta_3 \ln DST_{h,t} + \beta_4 \ln WGE_{h,t} + \delta_1 Year*JPNEA + \delta_2 Year*JPNNEA + \delta_3 Year*USNEA + \ldots + Year + \varepsilon_{h,t}$$

where subscripts *h* and *t* denote the host country and the year, respectively. The symbol *ln* before a variable indicates that the variable is in natural logarithm form. For the dependent variable (*EXP*), three different measures of TNC affiliate activities are used: the ratio of host country (local) sales to total sales, home country exports to total sales, and third country exports to total sales of TNC affiliates in a given host country. The dummy variable *JPNEA* equals one if Japanese affiliates operate in East Asia. The dummy variable *JPNNEA* assign one if Japanese affiliates are in non-East Asian countries. The dummy variable *USNEA* assign one if United States affiliates are in non-East Asian countries.

These dummies variables are interacted with the time dummy (*Year*) for which the base year is set to 1989. Hence, the base group for the dummy variables is United States affiliates operating in East Asia. With the time dummy included, it provides a direct test as to whether the observed differences in the operations of Japanese and United States affiliates persisted over time.

Equation (1) also includes variables which are commonly used in this type of analysis. The first three explanatory variables in Equation (1), GDP (*GDP*) and GDP per capita (*GDPP*) of host countries and the geographical distance (*DST*) between United States/Japan and the host countries are familiar gravity variables. Equation (1) also includes the average manufacturing wages (*WGE*) in the host countries. It is hypothesized that countries with lower manufacturing wages attract export-oriented TNC affiliates. Hence, we expect that higher wages in the host country is associated with lower exports of TNC affiliates. Equation (1) also includes country-specific fixed effects which are thought to be important for this type of gravity-type specification. The *DST* variable with United States and Japan essentially captures the time-invariant specific country-effects. Finally, the heteroscedasticity-consistent standard errors clustered within host countries are used.

4.2 Data

A panel data set for the period 1989–2005 for United States and Japanese affiliate is constructed. This is the longest time period for which both United States and Japanese affiliate-level data are available. The data set covers 23 host countries which are selected based on data availability.[6] Data for the measures of TNC operational activities (host country sales of Japanese and United States affiliates, their exports to home country and exports to third countries) are obtained from the Research Institute of Economy, Trade and Industry (RIETI) FDI database[7] for Japanese affiliates and from the Annual Survey of United States Direct Investment Abroad conducted by the Bureau of Economic Analysis (BEA) at the United States Department of Commerce[8]. Data for manufacturing wages in the host countries were also compiled from the BEA database.

[6] See appendix table 1 for the list of countries.

[7] Available at http://www.rieti.go.jp/jp/database/d08.html

[8] Available at http://www.bea.gov/bea/ai/iidguide.htm#USDIA1

The BEA collects wage bills paid by majority-owned[9] foreign affiliates of United States TNCs operating in various host countries. This data source was chosen because of the wide availability of labour costs data. However, the wage levels at the foreign affiliate of United States TNCs do not reflect the true national level wages. In fact, many studies have found foreign affiliates of TNCs pay much more than local firms (Lipsey, 2003). However, this upward-bias is less important when undertaking a comparison of wage levels across countries and over time. What is more important is to measure wage costs in a consistent manner. The BEA data set meets this requirement. One unavoidable limitation is that there are no data for the United States. Therefore, the manufacturing wage data for the United States is extracted from the Annual Survey of Manufacturing of the United States Census Bureau. A summary of the variables and data sources is provided in appendix table 2.

4.3 Results

Table 4 presents the main estimation results with Reg. (1) taking the ratio of local sale to total sales of TNC affiliates as the dependent variable; Reg. (2) the ratio of export to the home country to total sales; and Reg (3) the ratio of export to third country markets to total sales. Table 5 present the results of estimation in which the East Asia regional dummy is replaced by the China dummy variable.[10]

Most strikingly, there is strong evidence to suggest that the home country export intensity of Japanese affiliates is positive and statistically significant and the estimated coefficient is gradually becoming larger over time (Reg 2 in table 4). This suggests that the Japanese affiliates in East Asia increasingly became more home-country export oriented over time, compared with United States affiliates. Note that this strong difference still persists even after controlling for geographical distance between the home and host countries. This is consistent with the general consensus that Japanese TNCs maintain a tight linkage between parent firms in Japan and their foreign affiliates through intra-firm trade. Perhaps, Japanese affiliates in East Asia mostly undertook the assembling activities for Japanese goods, and then those assembled

[9] That is, more than a 50 per cent share of control.

[10] In an experimental analysis, a dummy variable is specified to include both China and Hong Kong (China). However, there are not much differences of results. Hence, a dummy variable only with China is used.

goods were then exported back to Japan for further value added activities. Results for other two indicators suggest similarities between Japanese and United States affiliates. With regard to the local sale and third-country export intensities, United States affiliates have a higher intensity compared with their Japanese counterparts, indicated by the negative sign of the coefficient for *JPNNEA*, although this difference is not statistically significant (Reg 1 and 3 in table 4). The finding may be interpreted as suggesting that there were similarities between United States and Japanese affiliates in terms of the expansion strategies for the local market and third-country markets .

Table 4: Explaining intensity of exports and local sales of Japanese and United States affiliates in East Asia, 1989–2005

	(1)		(2)		(3)	
	Log local sales ratio		Log home country export ratio		Log third country export ratio	
log GDP	0.195*	(0.027)	-0.114	(0.395)	-0.068	(0.636)
log GDPP	-0.141	(0.070)	0.285	(0.117)	0.204	(0.159)
log dist	0.0375	(0.631)	-0.697	(0.087)	0.690**	(0.004)
Log wage	0.107	(0.391)	-0.377	(0.245)	0.129	(0.591)
y90*JPNEA	-0.003	(0.953)	0.125	(0.170)	-0.142	(0.219)
y91*JPNEA	-0.111	(0.052)	0.328*	(0.028)	-0.096	(0.466)
y92*JPNEA	-0.108	(0.114)	0.379*	(0.011)	-0.086	(0.554)
y93* JPNEA	-0.143	(0.134)	0.491*	(0.033)	-0.234	(0.361)
y94* JPNEA	-0.115*	(0.048)	0.430*	(0.039)	-0.178	(0.340)
y95* JPNEA	-0.108	(0.062)	0.504*	(0.029)	-0.305	(0.118)
y96* JPNEA	-0.171*	(0.031)	0.693**	(0.005)	-0.389	(0.107)
y97* JPNEA	-0.250*	(0.018)	0.758**	(0.003)	-0.285	(0.176)
y98* JPNEA	-0.294*	(0.012)	0.794**	(0.002)	-0.304	(0.285)
y99* JPNEA	-0.284*	(0.025)	0.729**	(0.001)	-0.272	(0.331)
y00* JPNEA	-0.328*	(0.018)	0.751***	(0.001)	-0.239	(0.391)
y01* JPNEA	-0.353*	(0.026)	0.748**	(0.001)	-0.263	(0.392)
y02* JPNEA	-0.311*	(0.044)	0.686**	(0.001)	-0.224	(0.446)
y03* JPNEA	-0.319	(0.079)	0.711**	(0.002)	-0.303	(0.310)
y04* JPNEA	-0.295	(0.110)	0.499*	(0.046)	-0.260	(0.429)
y05* JPNEA	-0.259*	(0.025)	0.571**	(0.003)	-0.219	(0.475)
Constant	-5.207*	(0.036)	6.040	(0.330)	-7.946	(0.106)
Number of Obs.	706		688		694	

Note: See the definition of a dummy variable JPNEA in the main text. The estimated coefficients for other sets of dummy variables (JPNEA and USNEA) with interaction of year dummies are also not displayed in the Table. P-values in parentheses Year dummies are included, but the results are not presented. Third country refers to countries other than host and home countries. The symbols for statistical significance (two-tailed test) denoted as *** p<0.01 (1 percent), ** p<0.05 (5 percent) and * p<0.1 (10 percent).

Table 5 shows that Japanese affiliates in China have increasingly become much more home-country export oriented compared with United States affiliates. Except for the first few years, such differences are statistically significant and the estimated difference has been growing over time (Reg 5 in table 5). This again indicates the predominant preference of Japanese TNCs for maintaining a closer linkage between their operations in China and Japan. Reg (4) in table 5 suggests that over time, the difference in the local sales intensity between Japanese and United States affiliates in China became statistically insignificant,

Table 5. Explaining intensity of TNC affiliates economic activities in China, 1989–2005

	(4)		(5)		(6)	
	Log local sale ratio		Log home country export ratio		Log third country export ratio	
log GDP	0.270***	(0.000)	-0.556*	(0.043)	-0.296*	(0.027)
log GDPP	-0.131*	(0.046)	0.474	(0.058)	0.214	(0.097)
log dist	0.00501	(0.923)	-0.829***	(0.000)	0.381*	(0.034)
Log wage	0.00412	(0.968)	-0.757	(0.169)	0.189	(0.339)
y90*JPNCH	-0.065	(0.604)	-0.415	(0.531)	0.064	(0.788)
y91* JPNCH	-0.214*	(0.019)	0.290	(0.515)	-0.141	(0.389)
y92* JPNCH	-0.546***	(0.000)	0.855**	(0.003)	-0.123	(0.211)
y93* JPNCH	-0.454***	(0.000)	1.271***	(0.000)	-0.103	(0.165)
y94* JPNCH	-0.305***	(0.000)	0.918***	(0.000)	-0.154*	(0.044)
y95* JPNCH	-0.315***	(0.000)	1.218***	(0.000)	-0.277***	(0.000)
y96* JPNCH	-0.231***	(0.000)	1.223***	(0.000)	-0.272**	(0.002)
y97* JPNCH	-0.205***	(0.000)	1.336***	(0.000)	-0.295**	(0.007)
y98* JPNCH	-0.168**	(0.002)	1.401***	(0.000)	-0.423***	(0.000)
y99* JPNCH	-0.086	(0.088)	1.368***	(0.000)	-0.541***	(0.000)
y00* JPNCH	-0.107	(0.063)	1.553***	(0.000)	-0.614***	(0.000)
y01* JPNCH	-0.058	(0.307)	1.567***	(0.000)	-0.816***	(0.000)
y02* JPNCH	-0.097	(0.116)	1.544***	(0.000)	-0.718***	(0.000)
y03* JPNCH	-0.028	(0.661)	1.485***	(0.000)	-0.765***	(0.000)
y04* JPNCH	-0.023	(0.738)	1.718***	(0.000)	-1.010***	(0.000)
y05* JPNCH	-0.096	(0.204)	1.798***	(0.000)	-0.906***	(0.000)
constant	-7.037***	(0.001)	18.49*	(0.027)	0.997	(0.807)
Number of Obs.	706		688		694	

Note: A dummy variable JPNCH replace East Asian dummy (EA) with a China dummy (CH). The estimated coefficients for other sets of dummy variables (JPNCH and USNCH) with interaction of year dummies are also not displayed in the Table.p-values in parentheses Year dummies are included, but the results are not presented. Third country refers to countries other than host and home countries. The symbols for statistical significance (two-tailed test) denoted as *** p<0.01 (1 percent), ** p<0.05 (5 percent) and * p<0.1 (10 percent).

suggesting the increasing importance of local sales for both affiliates. On the other hand, Reg (6) indicates that United States affiliates become more third-country exports oriented. By and large, export strategies of United States and Japanese affiliates respond quite differently in China, suggesting different evolutionary patterns of those affiliates, while the level of local market orientation gradually became similar over time.[11]

In sum, we found strong evidence of a home-country export orientation by Japanese affiliates operating in East Asia (and China). This suggests a strong linkage between parent firms of Japanese TNCs and their foreign affiliates. More interestingly, we found very different responses of export strategies between Japanese and United States affiliates in China. It appears that Japanese affiliates in China have the role of assembling operations for Japanese products by exporting to the home country. United States TNCs mainly use China as a production point for exporting to third-country markets.

5. Conclusions

We examined the export and local market sale patterns of Japanese and United States affiliates in East Asia and China using the affiliate-level panel data set for the period 1989–2005. The main results suggest that the export strategies of TNC affiliates reflect the distinct national characteristics. We found the predominant preference of Japanese affiliates operating in East Asia, particularly in China, for exporting to the home country compared to United States affiliates. This is consistent with the observation that the operations of Japanese TNC affiliates are relatively closed with a tightly controlled buyer-supplier linkage between the parent firms and their overseas affiliates (Froot, 1991; Belderbos, 1997; Hacket and Srinivasan, 1998; Borrus et al., 2000). Interestingly, United States affiliates in China export relatively more intensively to third-country markets. This may be related to United States TNCs' export strategies of fully integrating modularity and the extensive use of independent subcontractors and contract manufacturers (Sturgeon, 2003). On the other hand, local market orientations between United States and Japanese TNC affiliates have become similar over time.

[11] A similar interpretation of the result is also made by Greaney and Li (2009). However, their analysis is not based on a statistical analysis.

This result has important policy implications for the formation of better foreign investment policy in East Asian host economies. Even if a host country initially attracted export-oriented type of FDI, these affiliates may actually evolve to become more local market oriented as the economy develops. Hence, the ongoing process of production fragmentation and growing trade in parts and components in the region should be welcomed by policy makers since they open up for new opportunities.

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Appendix

Table A.1. List of 23 host economies

Australia
Belgium
Brazil
Canada
*China
France
Germany
*Hong Kong, China
*Indonesia
Italy
Japan
*Korea, Rep.
*Malaysia
Mexico
*Taiwan Province of China
Netherlands
*Philippines
India
*Singapore
Spain
*Thailand
United Kingdom
United States

Note: Marked countries are those defined as East Asian economies.

Table A.2. Summary of variable definition and data used in regression

Label	Definition	Data Source
MNE	local sales, exports to home country, and exports to third countries divided by total sales of foreign affiliates of Japanese and United States TNCs in host country	Japanese TNCs data are compiled from Research Institute of Economy, Trade and Industry (RIETI) FDI Database at http://www.rieti.go.jp/jp/database/FDI2009/index.html United States TNCs data are compiled from the *Annual Survey of US Direct Investment Abroad,* the Bureau of Economic Analysis, United States Department of Commerce, http://www.bea.gov/bea/ai/iidguide.htm#USDIA1. .
GDP	GDP in constant US$ (base year=2000)	World Bank Development Indicators online database, World Bank , http://devdata.worldbank.org/dataonline/
GDPP (GDP per capita)	GDP per capita in constant US$ (base year=2000)	As above
Distance	The geographical distance in Kilometres	Jon Haveman's International Trade Data Source, http://www.macalester.edu/research/economics/PAGE/HAVEMAN/Trade.Resources/TradeData.html.
WGE	Employee compensation and value added by United States TNCs foreign affiliates	For countries except for the United States, the data are compiled from the electronic data files of the *Annual Survey of US Direct Investment Abroad,* the Bureau of Economic Analysis, United States Department of Commerce, http://www.bea.gov/bea/ai/iidguide.htm#USDIA1. The United States wage rates are obtained from the Bureau of Labour Statistics, the United States Department of Labour at http://www.bls.gov/home.htm.

Developing country FDI and development: the case of Chinese FDI in the Sudan

Huaichuan Rui *

This paper examines the development implications of Chinese investment in the Sudan to enable a better understanding of the impact of foreign direct investment (FDI) from developing countries. By examining China's early investment in the Sudan by the Chinese National Oil Corporation (CNPC) and the consequent cascade effect on the Sudan's significant economic growth during the decade between 1997 and 2007, this paper highlights how progress was achieved through interaction between Chinese FDI and host institutions. It demonstrates that developing country FDI can make positive contributions to development particularly in developing countries, due not only to its capacity appropriate for developing countries, but also to its strategies and mindset more adaptable to the development needs and institutional environment in the host country. While extant research often emphasizes how institutions make FDI's impact on host countries differ and how institutions in developing countries should be improved in order to attract FDI, this research indicates that proactive adaptation of strategy by transnational corporations (TNCs) to fit local needs and institutions may be more effective for improving institutions and consequently the development in host countries.

Key words: foreign direct investment (FDI), development, transnational corporation (TNC), China, China National Petroleum Corporation (CNPC), Africa, natural resources

1. Introduction

Africa, as home to 300 million of the globe's poorest people, presents the world's most formidable challenge for development. Traditional policies to promote development, such as aid and trade, are considered unsuccessful (**Birdsall** et al., 2003; Easterly, 2009), while foreign direct investment

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(FDI) from developed countries had been stagnant for decades up to 2005 (UNCTAD, 2007). However, the recent dramatic rise of FDI from developing countries has brought both hope and concern for Africa's development. FDI inflows to Africa rose from $29 billion in 2005 to $36 billion in 2006, and to $53 billion in 2007 (UNCTAD, 2008).[1] Despite the current financial crisis, inflows to Africa increased by 27% in 2008, to another record high of $88 billion (UNCTAD, 2009, p. 42). Inflows did show a decline in 2009 to $59 billion, but it was believed that the decline was comparatively "moderate" and this was because that "new investors provided a buffer" (UNCTAD, 2010). Many of these new investors are from developing countries.

The driving force behind this recovery was primarily the boom in the global commodity markets, which led to large FDI inflows into the primary sector (UNCTAD, 2006, 2007). China has substantially increased its investment in Africa at a drastic pace. Its annual investment flows into Africa were only $20 million in 1997 and $75 million in 2003, but rose to $317 million in 2004, $392 million in 2005, $520 million in 2006, and then more dramatically rose to $1,574 million in 2007, $5,491 million in 2008 and $9,107 million in 2009 according to the Chinese Ministry of Commerce (MOC, 2007, 2009, 2010a).[2] A World Bank source, on the other hand, estimates that the figure was less than $1 billion per year before 2004 and over $7 billion per year after 2006 (Foster et al., 2008). If this estimate is accurate, China may account for well above 10% of total FDI Africa received in the period between 2000 and 2008.

China's investment relationship with Africa is often described as "dominated by extractive activities" (Jenkins and Edwards, 2006, p. 16). However, this claim does not reflect the whole picture of China-Africa relationship. Trade between China and Africa doubled to $18.5 billion from 2002 to 2003,, then jumped to $73 billion in 2007, and $106.84 billion in 2008, all record highs (MOC, 2010b). In 2009 with the background of global financial crisis, trade between China and Africa was still as high as $91.07 billion. More importantly, China became the largest trading partner of Africa for the first time, ahead the United States, France and the United Kingdom (MOC, 2010a). Detailed data show that in 2008, Africa's exports to China reached $50.84 billion, of

[1] The $ sign refers to the US dollar in this paper.

[2] This annual figure obviously excluded the Chinese investment in oil, because CNPC alone invested over $5 billion in Sudan by 2006 (CNPC, 2006).

which 71% were crude oil; Africa's imports from China hit $56 billion, of which most were textile and clothes, machinery, transport equipment base metals and footwear.[3] These data indicate that the surge of trade between China and Africa was driven by not only China's increased imports of African oil but also Africa's rising demand for Chinese goods.

China is also deeply involved in Africa's infrastructure construction. The Infrastructure Consortium for Africa (ICA) estimated that $42.1 billion was committed by bilateral, multilateral and private sector sources for African infrastructure in 2007. Chinese commitments equalled $4.5 billion while G-8 members of the ICA collectively committed $3.5 billion (DFID, 2008).

At the China-Africa Cooperation Forum in 2006, President Hu Jintao announced China's commitments to Africa, including the doubling of aid by 2009; providing concessionary credits of $3 billion; establishing a $2 billion fund to support Chinese investment in Africa; cancelling $1.3 billion debt due in 2005 for low-income countries; and expanding market access to African products (Hu, 2006). Since 2007, China has become a donor to the World Bank's International Development Association with a contribution of $30 million in 2007. China has increased its contribution to the African Development Bank to $120 million – its largest ever contribution.

This paper attempts to analyse the development impact of Chinese FDI in the Sudan from a perspective of developing country FDI located in developing countries. The focus will be on two considerations concerning China's FDI in Africa. One is that China's FDI in Africa relates to an important issue deserving much more research, namely developing country FDI located in developing countries. FDI from developing countries has risen rapidly over the past two decades[4], and is considered to have particularly important implications for

[3] "China Africa trade up 45% in 2008 to $107 billion", *China Daily*, 11 February 2009. Also Brown and Zhang (2009).

[4] FDI outflows from, and inflows to, developing countries set new records in 2007 of $253 billion and $500 billion respectively (UNCTAD, 2008). More importantly, global FDI flows from and to developed countries have been severely affected worldwide by the current financial crisis. However, FDI outflows from and inflows to, developing countries kept growing in 2008 although they have been slowing down since 2009 (UNCTAD, 2009).

host developing countries (UNCTAD, 2006), but there is not sufficient empirical research to demonstrate such implications.

Another consideration is that China's FDI in Africa may have particular implications for development. FDI is generally perceived to have more direct impacts on development than trade and aid, because FDI brings not only direct but also indirect impacts on host countries. Moreover, FDI in resource-rich countries is particularly controversial for its implication for development. Rich natural resources could bring development, as evidenced by both developed countries, such as Australia and Canada, and developing countries, such as Botswana, Brazil and Chile. At the same time, resource booms may also become a curse (e.g. Karl, 2007; Pearce, 2005). In the case of Chinese resource-seeking FDI in Africa, a controversy has arisen as to whether China is engaging in a new colonialism in Africa, through which resources will be extracted but poverty left unchanged, or even worsened (Broadman, 2007).

The remainder of this paper is organized as follows. Section 2 provides an overview of the current research on the impact of FDI – particularly FDI from developing countries – on development. Section 3 sets out the research questions and methods. Section 4 demonstrates how Chinese investment and host institutions interact, and how they together impact on the Sudan's economy and society. Section 5 discusses development implications of Chinese FDI in the Sudan. Since econometric testing has not been possible at this stage, this paper concludes with some propositions for future empirical research.

2. Developing country FDI in developing countries: implications for development

How to promote development has been a long-running research concern for scholars across disciplines including international business research. The key development issue concerning international business scholars might be how FDI benefits the social and economic development of host countries.

The eclectic paradigm (Dunning, 1980) postulates that a firm internationalizes only when three inter-related advantages in ownership (O), location (L) and internalization (I) are present. Transnational

Corporations (TNCs) are often considered as the transferors of a bundle of resources and competences, including financial capital, technology, managerial and organizational capabilities and marketing skills, i.e. traditional asset-based ownership advantages (Dunning and Lundan, 2008). A firm internationalizes to exploit such ownership advantages if L and I advantages also exist. From this perspective, transnational corporations (TNCs) expand their operations overseas for their own interests but could make various direct and indirect contributions to the host countries, given their superior ownership advantages or capabilities over local firms. Direct impacts include those on the structure of trade and the balance of payments, on technology transfer, on local market structure, on the level of employment and human resource development, and on average labour productivity and wages. In addition, there are indirect impacts which affect local firms in the host economy. These effects may be transmitted through linkages with TNCs, or increased competition and knowledge spillovers to the local economy (Dunning and Lundan, 2008, p. 551).

TNCs' potential positive contributions may include the following. First, when investing in host countries, TNCs generate income and tax revenues for the host country. Second, TNCs may also establish backward and forward linkages (Hirschman, 1958), through which transfer of technology to local firms may take place. Third, TNCs may interact with the local economy through hiring workers and providing training, generating income and contributing to skills development. Fourth, the affiliates might have spillover effects, e.g. through the impact of competition that might spur local firms to improve their performance (UNCTAD, 2007).

However, TNCs' investment – even with their superior capacity – does not always result in generating positive impacts stated above. In fact, TNCs have been criticized for failing to enhance local firms' capability; using technology that is not always appropriate for local circumstances; creating merely low-wage jobs; and (ab)using their powerful political and economic position in host countries (Kolk et al., 2006).

Interestingly, while developing country TNCs are often thought to possess less ownership advantages than developed country TNCs (Mathews, 2006), they are believed to have particular implications

for host developing countries (e.g. Cuervo-Cazurra and Genc, 2008; UNCTAD, 2006; Yeung, 1994). First, their investment is located more in developing countries than in developed countries; over the years, South-South FDI has been increasing significantly in value. Second, it accounts for a larger share of inward FDI in developing countries, especially least developed countries. Third, the motivations, locational advantages sought, and ownership specific advantages of developing-country TNCs differ in several respects from those of TNCs from developed countries (UNCTAD, 2006) and therefore may also generate different development impacts. Following this trend to identify the difference between TNCs from developed and developing countries, Cuervo-Cazurra and Genc (2008) provide an empirical analysis to argue that developing country TNCs tend to be less competitive than their developed country counterparts, partly because they suffer from the disadvantage of operating in home countries with underdeveloped institutions. However, this disadvantage can turn out to be an advantage when they operate in countries with "difficult" governance conditions, because developing country TNCs are used to operating in such institutional conditions.

Based on their latest empirical research, Luo and Rui (2009) provide a new conceptual framework of "ambidexterity" to argue why and how TNCs from developing countries or emerging markets have stronger motives and abilities than their counterparts from developed countries to build and leverage ambidexterity to offset their late-mover disadvantages. They behave co-evolutionarily to deal with the more challenging external environment they face at home and abroad, leverage their co-competence (transactional and relational) to compete against their global rivals, develop co-opetitive (simultaneous cooperation and competition) ties with their business stakeholders, and maintain co-orientations (leveraging competitive advantages to bolster short-term survival and compensating competitive disadvantages for long-term growth). While the major external environment determining developing country TNCs' ambidexterity is the context of much intense competition and close network in global business, the internal environment is believed to be the more adaptive goals, strategies and mindset of developing country TNCs towards host countries. The latter are considered important factors determining the impact of FDI on development (Yamin and Sinkovics, 2009). In line with the findings of Luo and Rui (2009), Prahalad (2010) provides examples of the ways

in which TNCs can adapt their processes and technologies to local conditions, thereby unleashing potential entrepreneurial incentives in local managers and bringing positive effects on development in countries like China and India. The crucial factor to make this happen, according to Prahalad (2010), is that TNCs needs to have the mindset of "serving the poor".

The implication from international business literature is clear. FDI, including resource-seeking FDI and investment originating from developing countries, has potential to promote development, but this depends not only on TNCs' capacity but also on their goals, strategies and mindset and whether they fit with the host country needs and appropriate for the host country's institutional arrangement. The question is how to achieve such a fit. Section 4 addresses this question by exploring the case of Chinese investment in the Sudan.

3. Research questions and methodology

The Sudan, territorially the largest country in Africa, has been selected as a case study for several reasons. First, the Sudan is the largest recipient of cumulative FDI from China in Africa by taking the oil investment into account. Second, Chinese FDI in the Sudan has been initiated and still dominated by oil investment. Third, the Sudan is a typical least developed country in Africa, combining advantages and disadvantages shared by sub-Saharan Africa as a whole. Research findings from the Sudan could provide many lessons for the rest of Africa. The following questions formed the core of the research project on Chinese FDI in the Sudan:

1. What are the basic patterns and features of Chinese FDI in the Sudan?
2. What are the strategies, capabilities, and contributions of the Chinese TNCs in the Sudan?
3. What are the important factors, apart from natural resources, that attract Chinese FDI to the Sudan?
4. Has the government created a sovereign wealth fund, as a step towards avoiding a "resource curse"?
5. What are the development implications for the Sudan from Chinese FDI?

As neither Chinese nor Sudanese authorities were able to provide the full range of archival data and information required for this research, the author found fieldwork and interviews more suitable. Over a hundred interviews were conducted during four overseas field trips from 2005 to 2009[5], including three to Beijing focusing on the strategies and perceptions of Chinese firms on their investment in Africa, and one in the Sudan, focusing on local institutional environment and development implications from FDI. Follow-up interviews were carried out in 2009 and again in May 2010 through emails and phone calls. Interviewees in both countries included government officials, industrial experts, executives and site mangers of the Chinese TNCs under study and their affiliates in the Sudan. The views of NGOs, local firms linked to Chinese firms, and local residents in the Sudan were also sought.

Given the sensitivity of the research topic, all interviewees were promised anonymity unless they were willing to be named. Key interviewees include the chief executive of Chinese National Petroleum Corporation (CNPC) Nile Ltd in the Sudan, who was also the General Manager of GNPOC – the largest oil consortium in the Sudan; the chief executive of Khartoum Refinery; a dozen middle level managers among CNPC's affiliates in the Sudan; Mr Ali Yousif Ahmed, senior official of the Sudanese Ministry of Foreign Affairs and the former Sudanese Ambassador to China from 1993 to 1998; Mr. Hao Hongshe, Commercial Consul of the Chinese Embassy in Khartoum, and former official at the Ministry of Foreign Affairs in China who dealt with Sudanese relations in 1990s; head of the Africa Bureau at China's Export and Import Bank; five officials at the Ministry of Finance, the Ministry of Investment, and the Ministry of Energy and Minerals in the Sudan; a few NGO staff members at the Sudan Working Group, and two academics who research the Sudan's history and Darfur in particular. This paper was based on the information and views collected from all of these sources as well as other anonymous interviewees.

We also collected archival data from government departments of Sudan, including the Ministry of Investment, the Ministry of Finance, the Ministry of Energy and Minerals, and the Bank of Sudan, which are especially valuable because most of the data are in Arabic and

[5] This research on Sudan is part of the large project entitled "China's onward investment", for which the author has carried out fieldwork and interviews in many countries since 2005 and the project is still ongoing.

not publicly available. Corporate annual reports, speeches by CEOs, published books and journal papers were also carefully studied. This paper is based on all these data as background but takes the CNPC as the case study.

4. Chinese FDI and cascade effect in the Sudan: major findings

The analysis in this section is based on the examination of the cascade effect on the Sudan's economy during the decade 1997–2007. In this paper, a cascade effect refers to the phenomenon that the initial Chinese investment in the Sudan's oil industry brought the direct effect of large revenues and the indirect effect of industrial linkages. The subsequent re-investment of the oil revenue by the Government of the Sudan and diversifying foreign investment in non-oil sectors led to other industries taking off, and the emergence of domestic investment and local entrepreneurs.

4.1 Chinese engagement in the Sudan

Poverty has been a consistent challenge for the Sudan. Its per capita GDP was $38 in 1997, when CNPC started its oil investment in the country. Physical infrastructure is generally inadequate. Institutions are among the most diverse due to the geographical, ethnical and political division among its population. At the same time, the country is among the wealthiest in terms of natural resources, not only oil, but also minerals, water and agricultural land. It has substantial potential for rapid infrastructure, industrial and service development. This provides enormous business opportunities for local firms and TNCs. FDI in the Sudan's oil industry can be traced back several decades; oil majors like Chevron explored for hydrocarbons but eventually gave up due to the civil war and the failure to meet the demand from the host Government to speed up oil extraction.

China's engagement in the Sudan started as early as the 1970s, mainly providing aid and loans for non-commercial purposes. China provided a total of $89.3 million in aid and loans to the Sudan in the 1970s and 1980s (Ministry of Finance, Sudan, 2008), when the Chinese economy was still relatively poor. The bilateral relation was cooler during the 1980s when China's top leadership shifted its policy to focusing on

domestic development. In the early 1990s, it was the Government of the Sudan that initiated a renewal of the relationship with China, which led to a close commercial tie between the two countries. While FDI by Chinese firms (excluding oil investment) between 2000 and March 2008 was $249 million (table 1), bilateral trade between the Sudan and China rose from $103 million in 1990 to $9.7 billion in 2007 (Central Bank of Sudan, 2008, 2010). The accumulated aid and loans amounted to $2.2 billion by 2005 (Sudanese Ministry of Finance, 2008). In 2010, China was the Sudan's largest trading partner while the Sudan was China's third largest trading partner in Africa, after Angola and South Africa. The first delegation invited by the Government of the Sudan to explore investment opportunities visited the Sudan in 1995. This visit included

Table 1. Chinese direct investment in the Sudan (Non-oil Part)

Year	Projects (employees)	Amount (US$)	Industries
2000	5	38,440,451	Petrochemical service station, Roads and Bridges (2), Computer Assembly, Bricks
2001	1	200,000	Leather products
2002	2	1,531,800	Furniture, plastic products
2003	3	12,071,850	Leather products, furniture, lighting bulb
2004	8 (414)	10,889,933	Plastic products (2), leather products, garment, food (2), oxygen supply, building material manufacture (2)
2005	12 (828)	46,376,952	Steel Manufacture, building material manufacture (2), plastic products (2), poultry and vegetables, earth moving, restaurant, roads and bridges (3), construction equipment
2006	17 (1141)	97,178,745	Transportation (3), advertisement, soil analysis, construction (2), *irrigation,* plastic products (3), construction equipment, *medical equipment, mining,* computer equipment, furniture, car component manufacturing and engineering
2007	22 (1615)	33,574,420	Car service (4), *constructions(2), transportation, hotel,* media and advertisement, farms (2), poultry products, engineering workshop (2), steel, plastic products (3), mining (2), cement, garment
Mar-08	4 (386)	8,530,039	*irrigation,* agricultural products, miscellaneous (flooring and blankets), Plastic Products
2000-Mar2008	74	248,794,190	

Source: Ministry of Investment, Sudan (2008). Interpreted from Arabian language and then categorized by the author with assistance of her colleague.

Notes: (1) Data for China's investment in oil and petrochemical are not shown in this table. They are highly confidential and managed by the Ministry of Energy and Mining, the Sudan. (2) Employee numbers were not available until 2004.

a tour of the Zhong Yuan Oilfield, later developed by an affiliate of CNPC.

4.2 CNPC invests in the Sudan: capability, strategy and mindset

CNPC is China's largest producer and supplier of crude oil and natural gas, accounting for, respectively, 57% and 80% of China's total output in 2010. It is also a major producer and supplier of refined oil products and petrochemicals, second only to Sinopec. CNPC started its foreign expansion in 1993 but made no significant progress until 1997, when it acquired large stakes in Kazakhstan, Peru and the Sudan. By 2010, CNPC had about 80 overseas projects in 29 countries. It is now ranked sixth among the world's largest petroleum companies.

CNPC's capability is closely related to its dominant position in China's oil and gas industry, inherited from two major restructurings within China's oil and petrochemical industries. Before the 1980s, China's entire oil and gas exploration and production was controlled by the Ministry of Petroleum Industry. In 1988, the State Council dissolved this ministry and established CNPC to take control of its assets. The assets CNPC owned then were mainly upstream, as Sinopec was to control the downstream assets. This arrangement continued until 1998, when both companies were allocated assets covering upstream and downstream.

With over 50 years' operation, CNPC possesses unique, advanced petroleum technologies6, which supported the development of the Chinese petroleum industry as well as its overseas projects. In the Sudan, for example, by using technologies developed in China for passive rift basins and under-explored basins, CNPC made a discovery of five billion barrels of oil in Block 3/7 of the Melut Basin, a basin abandoned by western companies (Chief Executive of CNPC Nile Ltd interviewed on 21 April 2008, Khartoum).

[6] For instance, the non-marine petroleum geological technology put an end to the "China is poor in oil" argument and led to discoveries of large oil fields within China. The application of large heterogeneous sandstone reservoir development technology, separate zone production, water-cut control, and tertiary recovery technologies stabilized the production of the Daqing oilfield at around 50 million tons per year for 27 consecutive years, a record for the world petroleum industry. CNPC also owns technologies for the commercial development of small fault-block reservoirs (Zhou, 2006).

Another important capability which assisted CNPC to win contracts was its ability to provide products and services at a lower price or in difficult circumstances, even in underdeveloped and military-conflict countries like the Sudan. The lower price was based on cost advantages, with costs a third less than the Western bidders in some cases. This was particularly attractive for developing host countries with "too little money for too many unfulfilled projects" (an anonymous Sudanese interviewee, 24 April 2008).

While TNCs are often accused of lacking the mindset to serve the poor (Prahalad, 2010), CNPC has many reasons to locate in the poor and serve the poor, as evidenced by examples such as establishing the refinery and petrochemical industries so as to allow the host country to climb up to the oil industry value chain.

This was influenced by its strategic intent of internationalization (Rui and Yip, 2008). As the investment in the Sudan was initiated by the two Governments, CNPC was therefore expected to be locally responsive in order to maintain the close relation between the two countries. At the same time, when resource nationalism makes global competition for oil reserves more intense, CNPC has to grasp any opportunity to increase its oil reserves and equip itself with international standards of technology, health and safety and corporate social responsibility in order to win international contracts.

On 29 November 1996, the four partners from Canada, China, Malaysia and the Sudan signed with the Government of the Sudan on a draft production sharing agreement for the exploration and development of Block 1/2/4 oilfield. In 1997, the Greater Nile Petroleum Operating Company (GNPOC) was established as a consortium, formed by CNPC, Petronas, Talisman Energy which sold its share to the Indian State-owned company - Oil and Natural Gas Corporation Limited (ONGC) - in 2003, and Sudapet (representative of the host Government). Based on the shares they held, which was 40%, 30%, 25% and 5% respectively, CNPC became the operator of GNPOC. By 2008, CNPC had invested in seven projects in the Sudan, including four oil exploration and development projects, one pipeline, one refinery, and one petrochemical project, worth an estimated $5 billion (an official at the Ministry of Energy and Mining, interviewed on 5 May 2008, Khartoum).

4.3 CNPC's investment in the Sudan: direct and indirect impacts

Direct impacts

The direct impacts that CNPC's investment has made on the Sudan are best represented by the huge revenue the country has received. The first barrel of oil was produced and exported from the Sudan in 1999. The Sudan's revenue rose substantially year by year between 2002 and 2008 with the increasing oil output and price (table 2). Our follow-up interviews in May 2010 regarding the declining global oil price and its impact revealed interesting facts. The Sudan was impacted relatively little by the fall in oil price after 2008, because its oil exports were managed under long-term contracts in which the price paid for oil export from the Sudan gradually increased irrespective of the world market price, ensuring the stability of oil income.[7]

Compared with the financial crisis, the presidential election in 2010 was perceived to have far more negative impacts on the Sudan's economy in 2009 and 2010, as reflected in the data for year 2009 in table 2. Given the unpredictable result of the election, business activities including FDI "almost came to a standstill" before and during the elections (Sudanese entrepreneur interviewed on 29 May 2010).

Another direct impact is the employment and training provided for locals. Employment localization and training have been kept as a central issue and paid particular attention during more than 10 years of CNPC's operation in the Sudan. Three major reasons can be identified. One is that with growing experience of dealing with TNCs, the Government of the Sudan has become much stricter in requiring TNCs to use local human resources. The previously relaxed terms and conditions regarding employment in FDI contracts have changed to the current explicit requirement of at least 50% – in some cases as high as 95% – for local employees (Sudanese interviewee who participated in the negotiation in 1996 with CNPC, 5 May 2008). Another reason is that CNPC understands the importance of meeting such demands for its

[7] Compared with the financial crisis, the presidential election in 2010 was perceived to have far more negative impacts on the Sudan's economy in 2009 and 2010, as reflected in the data for year 2009 in table 2. Given the unpredictable result of the election, business activities including FDI "almost came to a standstill" before and during the elections (Sudanese entrepreneur interviewed on 29 May 2010).

Table 2. The Sudan economy in figures 2002-2009

Year	2002	2003	2004	2005	2006	2007	2008	2009
Population (Million)	32.7	33.6	34.5	35.4	36.3	37.2	39.2	40.3
GDP Per Capital (US$)	474	572	619	703	831	1247	1480	1356
Inflation %	8.3	7.7	8.5	8.5	7.2	8.1	14.3	11.2
Growth Rate of GDP (%, in current prices)	6.5	6.1	9.1	8.3	9.3	10.2	6.8	4.5
Exports (FOB) (US$ million)	1949	2542	3777	4824	5656	8902	12480	7834
Imports (FOB) (US$ million)	2152	2536	3586	5946	7104	7722	9097	8528
Agricultural Sector Contribution to GDP %	46.0	45.6	39.2	26.6	39.2	28.9	31.0	31.2
Industrial Sector Contribution to GDP %	23.1	24.1	28.0	33.3	28.3	33	31.4	23.8
Services Sector Contribution to GDP %	30.9	30.2	32.8	40.2	32.5	38.1	37.6	45
Governmental Revenue (US$ million) *	2991	2814	4095	4873	6030	9578	12635	8504‡
Southern Sudan Net Oil Revenue Shares (US$ million)				814	1216	1662	2938	1060‡

Sources: Central Bank of Sudan, 2008, May 2010.

Notes: * Converted from Sudanese Dinar (SDD) at US$1= 250 SDD; ‡ Estimates.

long-term success in the Sudan as well as in other countries. Finally, the resulting cost advantage will be important as China's own labour costs increase. Table 3 presents CNPC's employee localization, showing an average of 73% in GNPOC, the CNPC-led Consortium, by 2008 based on the CNPC source. Our follow-up interview in May 2010 with a Sudanese entrepreneur, who was familiar with the overall "Sudanization plan" designed by the Government of the Sudan, provided the following data: by May 2010, the Sudanization ratio (percentage of the Sudanese in the total employees) was 93% in GNPOC, 90% in PDOC, 85% in Block 6, and 84% in Petronas-run WNPOC 84%[8]. This is consistent with the figures provided by CNPC. Interestingly, we discovered that lower skilled jobs in GNPOC had a lower level of localization, compared with higher skilled jobs. This result matches the findings at other Chinese firms in the Sudan, which all complained that applicants for lower-level jobs were more difficult to find, due to the lack of experience and communication skills of local people, many of whom are unable to speak English.

[8] WNPOC is managed by Petronas and there are no Chinese employees in this company. So this figure refers to the fact that the Sudanese account for 84% of the total employees and the Malaysians account for 16%.

Table 3. CNPC's employment localization in the Sudan

Name		Chinese	Sudanese	Localization (% of Sudanese to total)
CNPC as operator				73 (average % as operator)
1	Block 1/2/4	32	1200	93*
2	Block 3/7	52	902	88
3	Block 6	88	286	66
4	Block 15	8	25	63
5	Block 13 **	8	14	45
6	Khartoum Refinery Corporate	375	795	68
7	Khartoum Petrochemicals	34	189	59
8	Petrochemical Trading	4	131	97
CNPC's subsidiaries as contractors **				59 (average % as sub contractors)
1	Oriental Exploration	145	1453	91
2	Pipeline Administration	321	96	23
3	Engineering Construction	1515	282	16
4	Greatwall Drilling	745	1263	63
5	Logging Corporate	145	412	74
6	Liao He Oil Exploration	56	274	83
Total average				66

Sources: CNPC, 2008; A Sudanese interviewee, May 2010.

Notes: * Data in 2008 and again in May 2010. ** Data by Feb 2008.

Three styles of training have been provided in CNPC for local employees: on-site training, training in CNPC's headquarters in Beijing and overseas investment sites, and selecting those with potential to study in China and return to work in the Sudan. For example, since 1998, CNPC has spent $1.5 million to enable 35 Sudanese students to study and obtain degrees in Petroleum at the university at Beijing (CNPC, 2008, pp. 4–5).

Indirect impacts

The indirect impacts of CNPC's investment in the Sudan are best represented by its linkage effect. FDI in oil is often criticized for contributing little to development due to limited linkage opportunities. Because of the large volume of investment involved and the relatively low transportation costs of the end products, oil majors have been reluctant to establish petrochemical plants in developing countries (Oman and Chesnais, 1989). It has been difficult to encourage oil TNCs

to develop downstream activities where and when it is in the host country's long-term economic interests. In this regard, CNPC's impact on the Sudan's economy arises not only from its oil exploitation, but also from its petrochemical business.

As early as in March 1997, CNCP and the Government of the Sudan officially signed the general agreement on jointly investing and constructing Khartoum Refinery Co. Ltd (KRC) with each party holding a 50% share. KRC began its operation in 2000 with a refinery capacity of 2.5 million tons, which was expanded to 5 million tons by 2006. The refinery was entirely designed and constructed by Chinese firms, with key equipment brought from China, France and Germany. CNPC acquired international technology to deal with wasted oil at this refinery to meet the environmental standard set by the host country as well as the international standard. Its production capacity can meet demand of not only the entire Sudan, but also a small amount of export. Petrol stations in Khartoum are run by a wide range of global companies including Shell, Petronas and CNPC, offering much lower prices than the global market. According to the Agreement signed by the two sides, CNPC was required to transfer all its technology required for the operation of KRC to local enterprises within eight years. To meet this requirement, training for local employees was provided in the Sudan and China. A Chinese executive admitted that this was a difficult task, and was concerned about the safety of the refinery after the transfer. According to this executive, the problem was due to the country not having experienced industrialization and to the lack of public understanding of factory disciplines.

Petrochemicals are considered an important downstream business of the oil industry, and key to providing inputs for diverse industries, leading to development of manufacturing. CNPC helped establish Khartoum Petrochemical Ltd, alongside the refinery. At the peak time, 340 employees worked at the factory, of which 89 were Chinese, 35 Bangladeshi, and 216 local. One Sudanese employee stated that he resigned from his previous primary school teacher position to work in this factory because of the higher salary. He was paid $300 per month given his site manager role, while his Bangladeshi colleague was paid $250 per month and drivers $800–900 per month. Although still small (52 tons/day) this factory is already able to meet the domestic demand for woven sacks. The executive revealed that the factory would

Table 4 Capital invested by Sudanese and foreign investors for the period 2000 – 2009 (Million US$)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
By Sudanese investors	Industrial	287	696	399	1083	1458	2967	3123	4757	8435	3847
	Services	579	931	778	1908	2026	6372	7079	6429	11212	2941
	Agricultural	20	25	12	38	36	184	144	108	252	97
	Total	886	1652	1189	3029	3520	9523	10346	11293	19897	6885
By foreign investors*	Industrial	73	426	566	351	348	973	1669	3037	1025	845
	Services	229	281	344	275	527	2216	1115	1603	3951	1917
	Agricultural	10	3	57	156	4	16	200	381	176	653
	Total	**312**	**710**	**967**	**782**	**879**	**3205**	**2984**	**5020**	**5151**	**3415**

Source: Ministry of Investment, the Sudan, May 2010.

Notes: * Capital invested by foreign investors includes those partnerships between foreign and domestic investors.

soon be expanded in order to develop ethylene products, another highly demanded business in the Sudan.

There are other linkage effects, too. With the increased development of the oil and petrochemical industry in the country, domestic firms have grown and played complementary roles. The oil consortium for Block 17 was led by the Sudanese and the CEO worked with GNPOC and is able to operate this new oil consortium. The service company Red Corporate, whose CEO was also a Sudanese who worked in GNPOC, provides project management services to large oil companies, previously just in the Sudan but now in other African countries as well. This further stimulates the increase of equipment suppliers such as DAL Group, the top indigenous private company in the Sudan.

Interestingly, many highly qualified and experienced Sudanese living abroad have returned to the country since 2003 to explore the opportunities in the booming domestic economy. Table 4 demonstrates the rapid rise in domestic investment from 2000, especially in the industrial and service sectors, indicating linkage effects.

4.4 Diversification effort and the cascade effect in non-oil industries

Previous literature claims that the resource curse could be overcome and development would be achieved if the host government

were able to use the resource income wisely, e.g. establishing oil stabilization funds and diversifying FDI to important non-oil industries. The Government of the Sudan has set up a stabilization fund, the Oil Revenue Stabilization Account, which, by late 2008, was among the 50 largest such funds globally. Meanwhile, during the last decade, a wide range of projects have been started or completed by government re-investment of the oil revenue. Among the Government Development Programme between 2000 and 2005, investment in agriculture was increased from $6 million to $47 million, in infrastructure from $2.5 million to $17 million, in social welfare including education and health from $1.4 million to $7 million (Ministry of Finance, Sudan, 2008). In addition, as the booming economy attracts a new influx of foreign and domestic investment, the Government has encouraged investors to enter non-oil industries.

The Oil Revenue Stabilization Account

In oil-rich developing countries, the oil industry is playing an increasing role in how a country's oil and gas is extracted, where the revenues go, and how the general public will benefit. An oil fund is considered important for managing oil revenues for long-term development, as well as for overcoming the "Dutch disease" of rising exchange rates that could choke off non-oil industrial development. One function of an oil fund is to keep the economy stable by making investment expenditures within the economy counter-cyclical. In practice, developing countries like the Sudan are expected to keep a large proportion of their natural-resource funds in safe foreign investments (e.g. US dollar bonds), as it preserves their value and avoids the risk of currency appreciation. The econometric estimation results from a 30-year panel data set of 15 countries with or without an oil fund suggest that oil funds also deliver macro-economic benefits, being associated with reduced volatility of broad money and prices and lower inflation (Shabsigh and Ilahi, 2007).

The Government of the Sudan set up its Oil Revenue Stabilization Account in 2002, with an asset amounting to $24.6 million in 2007, $122.4 million in 2009, and an estimated $122.4 million by April 2010 (IMF, Ministry of Finance of the Sudan, cited in Lim, 2010). There is no evidence that the Government of the Sudan has used this account for current spending. There has been an international scrutiny on the

Sudan's oil revenue and its role in the civil conflict. Setting up such a transparent fund would be positive for the country in its effort to attract donors (Melby, 2002).

Investment in infrastructure

As of 2002, the Sudan had 5,995 km of rail track but more than 90% of the track was out of use due to civil war damage and lack of maintenance. The overall road system was 11,900 km, of which 4,320 km was paved, in a country of 2.5 million km^2. Crucially, there was only one major road, the Khartoum-Port Sudan road, which accounted for 1,197 km and was completed in 1980. However, the Sudan's infrastructure construction began to speed up since 2002 due not only to the rising oil revenue, but also to the availability of international investment and loans for which oil export was a precondition. Another high quality road between Khartoum and the Merowe Dam, stretching more than 2,000 km, was completed in 2008. Port Sudan, the sole port of the country, has been upgraded. Several power plants have been constructed and put in use, leading to a lower frequency of power cut. The project of the Merowe Dam on the Nile is a case in point. This is the largest hydropower project in Africa. The purpose of the project is power generation, water supply for irrigation and flood control. By 2005 in Sudan, the power generation capacity of only 600 MW was available for about 35 million people, which was less than 20 Watts per person.[9] Insufficient funding and the lack of investor interest stalled the

Table 5. Major investors in the Merowe Dam construction project*

No.	Investor	Fund (in millions of US$)
1	Government of the Sudan	575
2	Government of China	520
3	Arab Fund for Economical and Social Development.	250
4	Saudi Fund for Development	200
5	Abu Dhabi Fund for Development	150
6	Kuwaiti Fund for Economical Development	150
7	Sultanate of Oman	106
8	State of Qatar	15
	Total	1966

Source: Merowe Dam Construction Committee, the Sudan, 2010.

Note: *Funding contributors for migrations compensation due to dam construction are not listed.

[9] This is about one fifteenth of their Egyptian neighbours, and less than one hundredth of the OECD average.

project for several decades. After 2000, a greatly improved credit rating brought an influx of foreign investment. The total investment (including spending on migration) was estimated about four billion euros, of which a large proportion was funded by foreign investors (table 5). The contracts for the construction of the dam were signed in 2002 and 2003. The dam's power generation capacity was 1,250 MW, doubling the national capacity. Chinese company Sinohydro was contracted to construct the dam while ABB provided power equipment. At its peak, this dam construction required 5,000 employees, of which 2,500 were local. The dam was completed and started generating electricity in 2009, significantly easing the country's longstanding power shortage.

Investment in agriculture

The Sudan is an agricultural country. An internal 2008 report by the Government of the Sudan shows that in 2008, agriculture provided 40% of its GDP, 65% of its employment, and 80% of its non-oil export income. Before oil export began in 1999, agricultural export was the sole source of foreign exchange. Although rich in land and water, the Sudan's agriculture was underdeveloped due to the civil war as well as the lack of capital, equipment, electricity, water supply (with no adequate connections to the Nile) and technology to improve productivity (Internal document, 2008). The Government has realized the importance and huge potential of this sector, stressing "agriculture is Sudan's another oil" and set year 2009 as "Agricultural Year", together with a grand development plan 2007–2010 to attract future investment.

Local companies like Dal Group have suffered from high import price for agricultural products which are major inputs of their food and soft drink businesses. Dal has said it is extremely keen to cooperate with Chinese companies like COFCO to develop agriculture business, possibly even a bio fuel business. Chinese TNCs also play an important role in the sector by providing agricultural equipment, as seen in Dal's storage.

Furthermore, farms were set up by Chinese entrepreneurs when they realized that there is demand among Chinese workers in the Sudan for certain vegetables that are not produced locally. They started to set up farms to produce these vegetables. One farm the author visited in the suburb of Khartoum was run by a Chinese woman, who came to

the Sudan as a doctor, but turned herself into a farmer when sensing the lack of local supply. She hired about 30 employees in her farm, who were all local except for two farm technicians hired from a Chinese agricultural science academy. She hired local employees because of "lower cost and constraint by the migration rule", as she was allowed to hire two employees only from China. There were two other farms in Khartoum run by Chinese when she started five years ago, but by 2008 there were more than 10 in the region. These farms supply agricultural goods to not only Chinese companies but also local markets.

5. Discussion and conclusion: development implication

5.1 Development implication

Since the Sudan started to export oil in 1999, significant changes have taken place in its economy. It has one of the fastest growing economies in Africa (second only to Angola, another resource-rich country now emerging from civil war), with an average annual growth rates of more than 9% between 2005 and 2009 (see table 2). By regional and even global comparison, this represents exceptional economic growth. The Government is making use of the economic growth as foundation to promote development, including setting up a resource-stabilization fund, diversifying investment to non-resource sectors, encouraging domestic investment, installing much improved infrastructure including electricity and water supply, ending the decades long civil war with the oil revenue sharing agreement, and promoting free movement between the south and north of Sudan, which had been deeply divided as a result of European colonial intervention long before China's arrival. It can be further demonstrated that these positive developments were achieved through the interaction between FDI and host institutions.

5.2 How TNCs' capacity, strategy and mindset fit the local needs

Our case study indicates that investment by developing country TNCs in another developing country does provide good fit between TNCs' goals, strategy and mindset and development needs of the host country, as well as between TNCs and host institutions. We discovered

that CNPC and the Sudan met each other's needs for the following reasons.

(1) Table 6 shows that since 2003, China has climbed to the third position in oil importation and is now close to Japan as the second largest oil importer. Chinese imports increased rapidly from 1.9 million barrels per day in 2000 to approximately 3.8 million barrels per day in 2006 (ENI, 2008). The Sudan is able to provide China 8% of its total need (Bank of Sudan, 2008).

(2) While the Sudan has plenty of oil, it lacked the capital and capability to turn the resources into national wealth and long-term development. CNPC provided them, enabling oil exploration and a successful start of oil exports.

(3) While the Sudan was under international sanctions and Western firms were reluctant to invest in the Sudan, CNPC was willing to invest, having taken into account of not only the close relationship between the two countries, but also the difficulty of accessing oil resources in the global market. This latecomer disadvantage impedes CNPC's global strategy and compels it to pursue investment in areas which longer-established TNCs have written off as geologically or politically unworkable.

(4) Concerned about developing country TNCs' less advanced technological and managerial capabilities, the Sudan hires developed country TNCs to supervise developing country TNCs. It has concluded a production sharing agreement with foreign investors and applies international health, safety and environment (HSE) standards to achieve both quality and cost efficiency. To avoid poor institutions harming its long-term interests in the host country, and with the strategic intent to learn international management skills, CNPC is willing to work under such supervision as the production sharing agreement also sets obligations for host countries, e.g. providing a safe investment environment.

(5) Given the large amount of investment CNPC has every reason to demand good governance to ensure a higher return on its investment. To do so, the company does not directly criticize the host institutions but persuades the host government to improve by demonstrating attractive prospect on FDI's benefits to the host economy. The host government, on the other hand, has realized the "necessary and urgent" need to establish formal laws and regulations to benefit

from FDI (official at Sudanese Ministry of Energy and Mining, interviewed in April 2008). For example, the Ministry of Energy and Mining published for the first time an "Investor Manual on Energy and Mining Fields" in 2006 to inform and instruct potential investors, which also lists detailed information on oil blocks for potential investors (table 7 is one example). Furthermore, improving efficiency and addressing the problem of corruption have also been considered by the host government as necessary for attracting potential investors and keeping existing investors in the Sudan. Most importantly, understanding that a peaceful environment is vital for attracting FDI, the Governments and the rebels in the south eventually signed the Comprehensive Peace Agreement in 2005, by allowing the south to share 40% of the oil revenue.

Consequently, the mutual benefits brought not only much improvement to the capabilities of both sides but also the better understanding and deeper cooperative relationship. CNPC has accumulated rich experience in working in a least developed country, while the Sudanese gained experience of managing natural resources and of ensuring more local benefits from TNCs.

Table 6 The top ten oil import countries in the world (thousand barrels/day)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
United States	9710	10428	10945	11084	11716	12120	11805	12562	13482	13947	13841
Japan	5615	5519	5265	5263	5377	5042	5125	5168	5106	5233	5127
China	**841**	**1305**	**1094**	**1238**	**1886**	**1754**	**1975**	**2572**	**3383**	**3346**	**3834**
Germany	2995	2997	3082	2889	2917	2977	2825	2851	2884	2946	2934
Rep. of Korea	2514	2849	2664	2827	2934	2851	2694	2666	2720	2697	2823
Netherlands	1866	1943	1945	1932	2105	2153	2129	2155	2318	2506	2658
India	1076	1142	1267	1488	1667	1714	1775	1960	2077	2218	2464
France	2152	2179	2309	2227	2308	2281	2243	2320	2353	2426	2355
Singapore	1716	1768	1707	1690	1622	1678	1705	1655	1895	2128	2349
Italy	2166	2189	2266	2162	2210	2145	2165	2188	2164	2179	2137
Top 10 countries	30651	32319	32544	32801	34742	34715	34438	36096	38381	39626	40522
Rest of the World	18202	19159	19530	19321	19925	20516	20715	21259	22771	23202	23706
World	48853	51478	52073	52121	54667	55232	55153	57355	61152	62829	64228

Source: ENI, 2008.

5.3 The unique role of Chinese TNCs in the Sudan's development

While this paper has provided some insights on the contribution of Chinese investors to development in the Sudan, this still leaves open the question of whether this is the best alternative for the Sudan. As noted above, China has never been the sole investor in the Sudan. Before Chinese investors entered the country in the late 1990s, Western oil firms had been exploring for oil in the Sudan for decades. Since the arrival of Chinese oil firms, TNCs including most of the top oil firms from developing countries have been working with the Chinese on projects such as GNPOC. As observed by the United Kingdom Department for International Development (DFID), Chinese investment in the African oil sector is growing rapidly, but it is still a small player. The accumulated investment by TNCs in Africa is $170 billion, of which China has invested just $17 billion (DFID, 2008). It is therefore reasonable to assume that other investors could also contribute to promoting Sudanese development. Indeed, besides CNPC, there are a large number of global and national oil companies investing in the Sudan (table 7).

Data on other relevant investors in the Sudan collected for this study enable a comparative view of the Chinese contribution. To supplement past comparisons, questions comparing CNPC with Western oil firm (mainly Chevron) and other developing country oil firms (mainly Patronas and ONGC) were raised with interviewees working for the Ministry of Energy and Mining; GNPOC; local firms partnered with these firms; and the general public. Data collected indicate that Chinese investors have several features which enable them to make a unique contribution to the Sudan's development.

First, Chinese investors are more willing to take risk. Here, comparison with Chevron is especially revealing. Chevron was granted its oil concession in 1974 and discovered oil in 1978. The Shell (Sudan) Development Company Limited subsequently took a 25% interest in Chevron's project. Together, the companies spent about $1 billion in extensive seismic testing and the drilling of 52 wells (Talisman Energy, 1998, p. 4.). However, Chevron suspended its operation in the Sudan by the end of 1984 and eventually withdrew. According to John Silcox, the president of Chevron's overseas operations at the time, withdrawal was made because they did not want to expose their employees to

Table 7. An overview of the oil operating companies and their shareholders in the Sudan

Operators	Shareholders (% of shares in bracket)	Block
Greater Nile Petroleum Operating Company (GNPOC).	CNPC (40%), Petronas (30%), ONGC (25%) & Sudapet (5%)	Blocks 1,2 & 4
Petrodar Petroleum Operating Company (PDOC).	CNPC (41%), Petronas (40%), Thani (5%), SINOEC (6%) & Sudapet (8%)	Blocks 3 & 7
White Nile Petroleum Operating Company (WNPOC).	Petronas (68.875%), ONGC (24.125%) & Sudapet (7%)	Block 5A
White Nile Petroleum Operating Company (WNPOC).	Petronas (39%), Lundin (24.5%), Sudan CNPC (95%) & Sudapet (5%)	Block 5B
Petro-Energy Operating Company.	China National Petroleum Company International, Sudan CNPC (95%) & Sudapet (5%)	Block 6
White Nile Petroleum Operating Company (WNPOC).	Petronas (77%), Sudapet (15%) and Hi Tech (8%)	Block 8
Sudapak Operating Company.	Zaver Petroleum Co. Ltd. (85%) and Sudapet (15%)	Block 9,11 & A
Sahara Oil Company.	Alqohtani & Sons (33%), ANSAN WIKFS (20%), Sudapet (20%)	Block 12A
Coral Petroleum Operating Company.	CNPC red sea, Pertamina, AfricaEnergy, Ecpress oil, Sudapet and Dinder Group	Block 13
Salima Oil Company.	PetroSA (80%) & Sudapet (20%)	Block 14
Red Sea Petroleum Operating Company (RSPOC).	CNPC, Petronas, Sudapet, Hi Tech., The Nigerian Express Oil	Block 15
International Petroleum Company in Sudan Limited (IPSL).	Owned by Lundin (100%)	Block 16
Star Oil Company.	ANSAN WIKFS (66%) and Sudapet (34%)	Block 17
TOTAL Exploration – Sudan.	Total Exploration (32.5%), Marathon Petroleum (32.5%), Kuwait Foreign Petroleum Exploration Co. (25%) & Sudapet PC (10%)	Block B
Advanced Petroleum Operating Company (APCO).	PanEnergy Oil & Gas (32.5%), Hi Tech (32.5%), Sudapet (17%), Khartoum State (10%) and Heglieg (8%)	Block C

Source: Oil Exploration & Production Authority, Ministry of Energy & Mining, the Sudan, 2008.

"undue risk" in the middle of a civil war zone.[10] The fact that Chevron's employees were attacked several times by the southern rebel groups[11] was the direct cause of the company's suspension of operations, but

[10] *Wall Street Journal*, 1 November 1984.

[11] Civil war between the southern and northern Sudan started well before the 1970s when Chevron discovered oil. The Addis Ababa agreement of 1972 that ended the first civil war in the Sudan provided qualified rights for the autonomous southern regional government to receive revenues accruing from mineral and other natural resources in the South. At the time of the agreement in 1972, no one was aware of oil deposits in the south. After the discovery of oil in 1978, southerners feared that the government, always dominated by the northern elite, would deny the south jobs and other benefits. More conflicts between the South and North took place (Alier, 1973, p. 244).

interviewees in the Sudan believed that the low global oil price and availability of better quality oil reserves around the world in the mid-1980s also played a part in Chevron's decision. CNPC, on the other hand, took the risk of entering the Sudan in 1995 when the civil war had stopped but conflicts between the south and the north persisted. The Chinese deployed a different approach to dealing with the risk, including encouraging the peace process and sharing the oil revenue between the rebels in the south and the Government. Most Chinese interviewees including the Commercial Consul believed that poverty is the fundamental cause of the conflicts in the Sudan, and stimulating the economic development will contribute to the peace process if a fair deal on oil revenue sharing can be reached.

Second, Chinese TNCs are willing and able to work on low-margin projects, which enables the Sudanese to implement more affordable projects. Chinese bidders for sub-contracts in the oil and infrastructure sectors could offer prices one third lower than their Western and even Malaysian and Indian counterparts. This was further supported by the lower cost of labour and equipment in China. For example, CNPC's engineers in the Sudan are paid less than one third of the salary of their Western counterparts such as Schlumberger and are entitled to much fewer holidays. Although Malaysian and Indian TNCs may have a wage level as competitive as Chinese TNCs, they do not enjoy the great advantage of cheap and reliable supplies of equipment available in China.

Third, CNPC has technology, human resources, equipment and efficiency to provide a comprehensive service covering oil exploration, refining and petrochemicals, and therefore offer the foundation for sustainable development of the Sudanese oil industry. It was noted that well before the Chinese entry, the Government of the Sudan had a vision to "build up the integrated Sudan Petroleum Industry and make the oil industry the engine of Sudan's economy" (CNPC, 2006). Such an integrated Sudan Petroleum Industry was envisaged to have upstream exploration as well as downstream petrochemical production for export via pipeline. CNPC was able to provide all the technology and equipment needed to realize this vision. Other TNCs in the Sudan including Petronas and ONGC are able to provide most of the required technology and equipment, but it is questionable whether they would have provided the same technology and equipment at

the same price and more importantly, completed the projects within the same time frame. CNPC has achieved several world records in the oil industry in terms of the speed of construction in the Sudan. The company built a 15 million ton oil field in one and a half years. It also succeeded in establishing a pipeline totalling 1,500 kilometres in 11 months and took only two years to set up the Khartoum Refinery with a processing capacity of 2.5 million tons of crude oil. The Chinese and Sudanese interviewees who participated in the projects attributed such a speed to China's centralized and integrated corporate system and the Chinese hardworking spirit. While Western TNCs tend to spin off non-core businesses and make strategic use of outsourcing, many Chinese TNCs still keep an integrated structure with hundreds of thousands of employees. CNPC had 1.67 million employees across all oil-related businesses by 2009. This structure, which is often viewed by organizational analysts as disadvantageous, turns out to be effective in mobilizing all the capabilities to complete comprehensive oil projects in a short time period. One Sudanese manager in GNPOC compared CNPC with Petronas and ONGC. He concluded that efficiency is the major difference between the three companies and further elaborated that while CNPC was very quick in decision-making, Petronas and ONGC would arrive at decisions "slowly" and inevitably "lost many opportunities". It was also revealed that the 1,500 km pipeline project was initially contracted to an affiliate of Petronas, but had to allow a CNPC unit to take over after failing to meet the deadline set by the Government of the Sudan.

Finally, CNPC as the largest State-owned oil firm in China considers itself to have the obligation to maintain good relationship with the Sudan and also to protect "China's image". At the same time, it also enjoys strong support from the Government of China and State-owned banks. Given these obligation and support, Chinese managers are able to use long-term strategy to develop relations with the host institutions. Counterparts from the West and Petronas and ONGC are more constrained by short-term considerations including profit maximization. For example, while CNPC could make a huge financial commitment to the Sudan with Government and bank support, Petronas and ONGC have less support from their respective Government and more constraints from their shareholders. Both companies are investing in several oilfields, but none of them could make funding, equipment,

engineering and efficiency commitments to the Sudan comparable to CNPC's.

5.4 Propositions for future research

Rapid and sustained economic growth is only the first step towards development. FDI appears to have played a role in the Sudan's development, but it remains insufficient, with its benefits heavily dependent on continued appropriate co-evolution of TNCs and host institution strategy.

Further research is needed for a better understanding of the development implications in the Sudan, especially of the Government's plans for education, health, for non-oil sectors like agriculture, for oil income distribution, and for the institutional environment including tax and other FDI policies. Recent events also necessitate an examination of the impact of global financial liquidity constraints and the rapid oil price decline since mid-2008, even though the current crisis only partly contributes to the reduced oil revenue and FDI in the Sudan (as shown in tables 2 and 4). The country's peace was achieved largely because the Government agreed to share the oil revenue with the south. The negative impact on FDI and the entire economy arising from the potential instability at the time of the Sudan's 2010 presidential election indicates that stability is of paramount importance to the Sudan's development. Above all, this is a necessity to improve both FDI strategy and the country's capacity and the institutional environment so that the Sudan could not only attract FDI but also maximize the benefit of FDI.

The following propositions are therefore considered important for further research:

P1: The Sudan's development will be adversely affected by the impact of global financial liquidity constraints and the rapid oil price decline.

P2: The Sudan's development will take off as long as the country successfully channel oil profits to the manufacturing and service sectors, and ensure the continuing growth of these sectors.

P3: The Sudan's development will take off as long as the FDI has produced sufficient linkage and spillover effects, while local human capital is ready to take use of the opportunities.

P4: The Sudan's development will take off as long as the peace can be kept and Darfur issue can be resolved.

P5: The Sudan's development will take off as long as FDI works hand in hand with host institutions.

This investigation, although taking the Sudan as a detailed case-study, may provide some development implications for the expansion of China's investment in Africa as a whole. According to the *World Investment Report 2009* (UNCTAD, 2009, p 42), the number of policy measures adopted by several African countries continued to make the business environment more conducive to FDI. The Sudan's case is consistent with this observation. The case of the Sudan may also have implications to other developing countries as this is a typical case of South-South FDI. Despite some positive effects of FDI on the Sudan's economy, it is important to emphasize the contextual nature of the impacts observed and the limitations of the information available. At the same time, the commercial and social impact of Chinese TNCs and their role in shaping more inclusive local policies stand in contrast to the generally negative portrayal of China's political involvement in the Sudan. There are identifiable links between Chinese-led oil development and the move towards resolving the internal conflicts.

In addition to facilitating understanding of Chinese involvement in Africa, this paper may also make some theoretical contributions to international business research on the development implication of developing country FDI. It demonstrates that developing country FDI can make positive contributions to development particularly in developing countries, due not only to its capacity appropriate for developing countries, but also to its strategies and mindset more adaptable to the development needs and institutional environment in the host country. While current researches often emphasize how institutions make FDI's impact on host country differ (e.g. Boudier-Bensebaa, 2008) and how institutions in developing countries should be improved in order to attract FDI,[12] this research indicates that TNCs' proactive adaptation of strategy to fit local needs and institutions may be more effective for improving institutors and consequently the development in host countries.

[12] e.g. the argument of "governance matters" (Hout, 2010).

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RESEARCH NOTE

Urgent tasks for research on Russian TNCs

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Rapid cross-border expansion of Russian firms in the past decade has stimulated much research interest in Russian foreign direct investment (FDI), especially since 2003. This paper identifies several problems in the existing literature which still persist, in spite of the significant progress in research on Russian transnational corporations (TNCs). The paper stresses the importance of Russia's unique recent history and its implications for the choice of investment destination for Russian firms. This paper concludes by suggesting that studies focusing on a more nuanced influence of the State on large as well as small and medium-sized Russian TNCs should be undertaken.

Keywords: Russian TNCs, multidisciplinary approach, internationalization, the post-communist economy, FDI drivers, neighbourhood effect, state support

1. Introduction

Less than one third of the 20 largest Russian transnational corporations (TNCs) began their cross-border expansion in the 1990s or during the Soviet period (Kuznetsov and Chetverikova, 2009a, pp. 18–25). Illegal forms of capital flight was more common in the first decade of the difficult post-communist transformation. At the end of 2000, the Russian outward foreign direct investment (FDI) stock was only $20.1 billion and accounted for mere 0.3% of the global outward FDI stock (UNCTAD, 2010, pp. 172, 176). The real boom in Russian FDI began in 2003 and its peak was reached in 2007. During the current global economic crisis, market capitalization of companies worldwide fell. This process led to a significant reduction in the value of Russian foreign

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assets although instances of large divestments by Russian TNCs were rare. As a result, the Russian FDI outward stock, which reached $370.2 billion at the end of 2007, decreased to $205.6 billion at the end of 2008. Then it reached $318.7 billion at the end of 2009 (Bank of Russia, 2010a). Nevertheless, Russia now ranks 15th in terms of outward FDI stock and accounts for 1.3% of the world total (UNCTAD, 2010, pp. 172–176).

The increase of Russian FDI has naturally stimulated scientific research on Russian FDI and its emerging TNCs. Before the boom of Russian FDI started, we could find only one monograph on the topic (Bulatov, 1997) and several articles in leading Russian and Western scientific journals or collected volumes (Bulatov, 1995, 1998, 2001; Vinslav et al., 1999; Heinrich, 2001; Liuhto, 2001a, 2001b; Liuhto and Jumpponen, 2001; Peregudov, 2001; Andreff, 2002; Boyarko, 2002). In contrast, several monographs, special reports and more than 150 articles on various aspects of Russian FDI and TNCs appeared in the period 2003–2009. This was not surprising because Russian researchers tried to understand significant changes in the strategies of Russian companies while foreign experts (especially from the EU countries) tried to assess the drivers of unexpected increase in Russian investment in their countries.

Despite the rapid growth of the scholarship on Russian FDI in recent years, several topics remain a field for heated discussions. In the remainder of this paper, I will identify two areas requiring further research. One group of on-going research questions are concerned with the drivers of Russian investment expansion (section 2). While scholars usually cite the lack of information as the origin of disagreements, I would argue that the main problem is methodological. The second group of research questions is over the role of the State and features of State support for Russian FDI (section 3). Concluding thoughts are give in section 4.

2. Drivers of Russian internationalization – do we need a new multidisciplinary theory?

The analysis of Russian TNCs is often based on comparison with TNCs from other countries. Russian TNCs have also been analysed in the framework of the theory of internationalization which, in fact, are

developed over the years for the analysis of TNCs from the United States and West European countries (Andreff, 2003; Kalotay, 2004; Bereznoy, 2008; Filippov, 2008). Thus, the main task for the research on Russian TNCs is the explanation of various deviation of Russian outward FDI from the theoretical norm and "typical" TNCs based in developed countries.

The level of economic development is usually considered as a basic factor explaining the international investment position of the country. However, the case of the Russia Federation is at odds with such investment-development path theory (Kalotay, 2008, pp. 88–89). Different explanations for the unique evolution of Russian FDI have been put forward (e.g. Kuznetsov, 2007a, pp. 7-11). The most widely accepted argument is that Russian FDI is a form of capital flight prompted by the unfavourable business climate in the Russian Federation (e.g. Kheyfets, 2008, p. 10). However, it is questionable whether cross-border investment by many Russian TNCs really constitutes a form of capital flight. Many Russian conglomerates (oligarchs' empires) have rapidly evolved into classic TNCs. Furthermore, the problems of Russian business environment are not necessarily unique (Bereznoy, 2008, pp. 33–36).

The difficulty in analyzing Russian TNCs arises mostly from the inadequacy of existing FDI theory. Kalman Kalotay has shown how FDI theory might be developed in light of the findings from research on Russian TNCs (e.g. Kalotay, 2008, pp. 99–103). Clearly, TNCs' decisions concerning FDI depend on their characteristics, objective of undertaking FDI, as well as host and home country factors. However, what are the features that are crucial for FDI decisions? Before developing an analytical framework, it is necessary to ask if it is productive to add new elements for every new phenomenon of FDI to the existing theories.

I am not convinced that modern TNCs from the United States and Western Europe are "typical" TNCs while Russian TNCs belong to a special case. We find very different types of firms among Russian TNCs, some of which are comparable to "classic" Western TNCs while others are very different from those based in developed countries (e.g. Kuznetsov, 2007a). We may also note that different types of British TNCs existed one century ago, such as so-called free-standing companies (Wilkins, 1988). New types of TNCs are emerging among developed countries,

too – for instance, international new ventures and re-internationalized companies (e.g. Oviatt and McDougall, 1995; Welch and Welch, 2009).

The late Professor John Dunning recognized the need for widening the eclectic paradigm of international production to embrace asset-augmenting FDI. Some companies try to overcome their disadvantages by acquiring strategic assets overseas. For instance, steel and chemical TNCs often buy foreign firms with unique technologies. Such cases are typical for firms in the Russian Federation and other "emerging markets" (e.g. Moon and Roehl, 2001), but FDI with a similar motive is undertaken by in most developed countries. For example, in the 1970s and 1980s, German oil companies rapidly expanded abroad for the control of resources.

The picture becomes even more complicated in the case of large TNCs with many affiliates which simultaneously start several different FDI projects. In such cases, TNCs can support even loss-making foreign affiliates for a period of time.[1] Some large Russian companies attempt to invest abroad (usually in the CIS) simply because almost all similar companies try to develop overseas business. One failure with a FDI project is not crucial for such companies. If their foreign affiliates are successful, companies will receive a new useful experience for future projects.

There are several levels of explanation for FDI expansion and we need both microeconomic and macroeconomic approaches, drawing on the ideas from economic and political theory of international relations, both from the static and dynamic perspectives. On the one hand, all of the drivers and determinants of FDI are connected with each other. That is why some scholars try to develop one theory for the explanation of the whole FDI phenomenon. On the other hand, at the firm level, it is easier to analyse TNCs' investment activities from a more specific perspective applicable only to certain specific cases. For example, individual wishes of business tycoons are not very important for the explanation of modern German or British FDI because there are hundreds sizable German or British TNCs for any individual TNC to matter. In contrast, the owners of the few competitive industrial

[1] The best example of such a TNC is Basic Element, which is one of the largest Russian industrial groups, that undergoes problems of many foreign affiliates during the global crisis but continues its worldwide FDI activities.

giants in the Russian Federation can determine the whole character of its FDI expansion. For instance, Alexey Mordashov controls the largest Russian steel TNC, Severstal (see table 1). The company is registered and listed in the Russian Federation (while its every second member on the Board is foreigner). In a contrasting example, Roman Abramovich and his partners own the second largest Russian steel TNC, Evraz, which is registered in Luxembourg and its shares are listed only on the London Stock Exchange. This decision cannot be explained by some conflicts between Mr. Abramovich and the Government. However, it is well-known that Mr. Abramovich prefers to live in the United Kingdom (where he stayed even when he was the governor of Chukotka District of the Russian Federation). Indeed, the influence of particular circumstance and preferences of individual owners can be a significant determinant of Russian FDI. Their personal decisions can also determine the role of FDI expansion for their companies – some of these businessmen want to become members of the "global business elite" while others try to seek only political rent within the Russian Federation. As a result, there are many large private oil companies in Russia but only few of them try to invest abroad.

I think the most underestimated approaches in FDI theories are historical and geographical methods of analysis.[2] Two important aspects deserve special consideration. First, a non-linear characteristic of economic development determines the importance of various indicators and hence GDP per capita may not be the most appropriate indicator. Second, historical and geographical circumstances may give rise to a significant neighbourhood effect for FDI.

Competitive advantages of companies are typically based on their knowledge assets and sometimes can be exploited only by way of FDI. For example, Russian managers have received a unique experience from the period of instability during the post-communist transformation and can use it in their competition with global leaders in various developing countries. Flexible organizational structures of large Russian private

[2] It is well known that some countries have followed an uneven path of economic development. For example, Argentina, Russia (within its modern borders) and some Central European countries were among high income countries at the beginning of the twentieth century. The first group of TNCs from these countries appeared a century ago. However, rapid economic internationalization of these countries began only in the 1990s or the 2000s. Researchers often underestimate the role of human capital and temporary institutional barriers in FDI processes.

Table 1. Ranking of 20 top Russian multinationals, end of 2008

No.	Name	Main industries of specialization	Foreign assets, US$ million	Foreign sales, US$ million	Foreign employment, thousand
1	LUKOIL	Extraction of oil & gas / refined petroleum products and chemicals / petroleum products retail	23,577	87,677	23.0
2	Gazprom	Extraction of oil & gas / gas distribution / electricity production	21,408	79,412	~ 8.0[a]
3	Severstal	Iron & steel / mining of metal ores and coals	~ 12,198[a]	13,514	~ 14.0[a]
4	Evraz	Iron & steel / mining of metal ores and coals	11,196	12,805	29.5
5	RENOVA	Conglomerate	~ 8,500[a]	9,150	31.2
6	Basic Element	Conglomerate (non-ferrous metals dominate)	~ 6,200[a]	n.a.	n.a.
7	Novolipetsk Steel (NLMK)	Iron & steel / mining of metal ores	4,985	7,138	5.9
8	Sovcomflot	Sea transport	~ 4,642[a]	n.a.	~ 1.0[a]
9	Norilsk Nickel	Non-ferrous metals / mining of metal ores	4,600	10,355	3.9
10	VimpelCom	Telecommunications	4,386	1,520	10.3
11	Sistema	Conglomerate (telecommunications dominate)	3,804	3,983	11.0
12	TMK	Metal tubes	2,361	2,302	4.1
13	Mechel	Iron & steel / mining of metal ores and coals / electricity production	2,315	4,609	7.9
14	Zarubezhneft	Extraction of oil / refined petroleum products	~ 1,900[a]	n.a.	0.7
15	INTER RAO UES	Electricity production and supply	1,374	1,594	~ 13.0[a]
16	Koks	Iron & steel / mining of metal ores and coals	1,073	2,091	3.5
17	Eurochem	Agrochemicals	1,015	3,168	1.1
18	ALROSA	Mining of diamonds / jewelry production and trade	860	1,472	3.1
19	FESCO	Sea and railway transport	~ 707[a]	75	~ 1.0[a]
20	OMZ	Electric power machines / iron & steel	377	588	1.1

Source: Kuznetsov and Chetverikova (2009a, p. 2, 9).

[a] The symbol '~' indicates that the amount is an estimate by the IMEMO team. In other cases reports and questionnaire answers of companies are used.

companies are also very convenient for TNCs in some circumstances (Kuncinas, 2006, p. 24). Of course, the dominance of oil and metal companies among largest Russian TNCs raises questions about the real scale of Russian human capital (see table 1). However, we see rapid internationalization of the Russian telecommunication TNCs and many middle technology-based Russian TNCs, including IT-companies such as Tecnoserv, Croc, LANIT and Playfon (Kuznetsov, 2010, p. 20).

Territorial proximity and close psychic distance (due to linguistic, cultural and historical ties) play an important role in explaining the geographical distribution of Russian FDI. The "neighbourhood effect" is evident in FDI from a range of countries, but it is especially relevant for Russian TNCs for which the main determinant can be found in its historical circumstances (Kuznetsov, 2008a, 2008b, 2008c).

Although the world's largest economies, except China and Japan, are also among the main recipients of FDI from Russia,[3] the shares of Ukraine, Belarus, Uzbekistan, Armenia, Serbia or Montenegro in Russian FDI were much higher than their shares in global FDI (UNCTAD, 2010, pp. 167–176). Russian TNCs are "fortunate" in terms of neighbouring countries. Many other emerging economies share the border with developing countries with few possibilities for significant FDI (e.g. India and South Africa) or with rich countries with higher wages and intensive competition (e.g. Mexico and Slovenia). The Russian Federation, in contrast, is largely surrounded countries with Russian or other Slavic-speaking population, common features of economic and legal systems, problems of post-communist transformation, developed industrial chains and strong cultural and political ties.

As a result, the shares of former Soviet republics and some Slavonic Balkan countries are significant (see table 2). Moreover, we should remember that almost two thirds of Russian FDI in the period 2007–2009 was round-tripping and trans-shipping FDI received in certain offshore economies. The final destination of these types FDI flows are usually the CIS, Central European countries or the Russian Federation itself (e.g. Pelto et al., 2003). In many cases, Russian companies

[3] Russian FDI in the United Kingdom and Mediterranean countries are often connected with investments in real estate. The appearance of non-European countries among the most important destinations (for instance, Canada, India and the United Arab Emirates) may perhaps shows the maturity of some Russian companies.

Table 2. Destinations of non-financial FDI outflows (net) from Russia, 2007-2009

Destination	2007, US$ million	2008, US$ million	2009, US$ million	Total, US$ million	Total, %
CIS countries	*3,244*	*2,413*	*3,109*	*8,766*	*6.1*
Ukraine	1,601	551	671	2,823	2.0
Belarus	765	619	896	2,280	1.6
Kazakhstan	103	326	974	1,403	1.0
Uzbekistan	354	414	223	991	0.7
Armenia	269	266	166	701	0.5
Other countries	152	237	179	568	0.4
Top 10 destinations of mainly round-tripping and trans-shipping FDI	*34,302*	*26,548*	*29,320*	*90,170*	*62.5*
Cyprus	14,630	9,369	16,930	40,929	28.4
Netherlands	12,502	2,732	3,624	18,858	13.1
British Virgin Islands	1,425	3,790	2,366	7,581	5.3
Bermuda	2,689	3,257	793	6,739	4.5
Switzerland	1,404	2,426	1,807	5,637	3.9
Luxembourg	497	2,722	1,420	4,639	3.2
Gibraltar	886	1,190	2,127	4,203	2.9
Cayman Islands	52	718	296	1,066	0.7
Belize	-10	50	236	276	0.2
Ireland	227	294	-279	242	0.2
Five largest EU members	*3,731*	*6,716*	*4,263*	*14,710*	*10.2*
Germany	674	1,860	1,178	3,712	2.6
United Kingdom	2,454	3,886	2,166	8,506	5.9
France	257	217	386	860	0.6
Italy	87	295	162	544	0.4
Spain	259	458	371	1,088	0.8
Top 10 other European destinations	*1,001*	*2,237*	*4,116*	*7,354*	*5.1*
Hungary	-12	542	1,789	2,319	1.6
Austria	230	253	458	941	0.7
Bulgaria	168	387	229	784	0.5
Czech Republic	248	319	142	709	0.5
Serbia	44	11	609	664	0.5
Finland	110	154	185	449	0.3
Montenegro	188	173	85	446	0.3
Sweden	-55	177	254	376	0.3
Bosnia and Herzegovina	1	55	287	343	0.2
Latvia	79	166	78	323	0.2
United States	974	7,265	1,628	9,867	6.8
Canada	181	6,723	20	6,924	4.8
United Arab Emirates	901	240	60	1,201	0.8
Turkey	183	272	106	561	0.4
India	13	401	2	416	0.3
Other destinations	681	1,387	2,244	4,312	3.0
Total	*45,211*	*54,202*	*44,868*	*144,281*	*100.0*

Source: Bank of Russia (2010b).

established small trade and service affiliates abroad in the 1990s for specific purposes necessitated by the post-communist transformation. For example, Russian businessmen tried to take advantages of the privileges accorded to foreign investors by the Government during the privatization through round-tripping FDI. They wanted to avoid barter or even artificial bankruptcy of their enterprises when the whole Russian economy had a severe non-payment crisis and a lack of liquid assets. In the 2000s, owners of Russian companies continued to use offshore economies for other purposes (including FDI activities) because of the lack of confidence in the protection of property rights in the Russian Federation.

Given the historical, cultural and institutional background of Russian TNCs, which differ significantly from those of developed country TNCs, analysis of those firms would necessitate a framework that could take into account those factors.

3. The role of the State

Another urgent research issue is the role of the State in Russian TNCs' expansion abroad. There is a wide-spread perception that the State has a significant influence on the operation of Russian TNCs, especially among foreign scholars. Of course, the strength of a State can be understood in different ways but I prefer to distinguish the abilities of the ruling groups to hold their political power from their abilities to realize political goals. In the case of the Russian Federation, in spite of absolute political dominance of the ruling party "United Russia", the administration of President Medvedev and Prime Minister Putin has not been able to make significant progress in the acceleration of Russian industrial modernization or in the struggle against corruption (although these aims are among their priorities). The success of the Russian Federation in foreign policy is more evident because some of the weaknesses of the post-communist era were rectified in the 2000s. However, several urgent problems still persist in the Russian Federation, including the visa regime of the EU countries for Russian nationals, which has been likened to a new Iron Curtain separating the Russian Federation from the rest of Europe.

It is difficult to draw a distinction between Russian State-owned and private companies in some cases. In fact, "patriots" (State-controlled

corporations with political goals which take precedence over business rationality) and "conformers" (private companies which frequently operate in line with Russia's official policies) are rare examples.[4] It is not uncommon that top-managers of a Russian TNC under State control abuse their position and pursue their own interests. Such managers ignore both Russian national interests as well as the economic objectives of the TNC. Thus, it is impossible to characterize all State-owned firms as patriots. Managers of the firms in the "conformer" category very often have close relationship with State officials and they often exploit such relations successfully. A good example is found in Moscow. Mr. Luzhkov was the mayor of the Russian capital during the period 1992–2010.[5] It is difficult to see any realization of Russian national interests in Luzhkov's activities. While his wife Elena Baturina became billionaire and the richest woman in Russia, Moscow suffers from a lack of basic infrastructure. Baturina's company controls a large part of the construction industry in Moscow and now invests abroad.

Moreover, it is difficult even to say that Russian private companies are more efficient (in pure economic terms) than similar Russian State-owned corporations. The main reason for this situation is connected with key features of the Russian privatization process in the 1990s. In fact, some resource-based companies had owners who had close relationship with Boris Yeltsin's administration imposed on them. In contrast, some State-owned firms were "saved" from such questionable privatization. For example, in the 1990s, Zarubezhneft controlled only a former Soviet oil project in Viet Nam which was very profitable for the State. Its planned privatization was shelved and, today, Zarubezhneft successfully continues its foreign operations. Furthermore, this State-owned company has diversifies its operation in terms of geography and business.

Some companies have assumed a leading role in the Russian economy due to State participation but it is difficult to see any special State support in their cross-border expansion. For example, the Bank of Moscow is one of the largest Russian banks with affiliates in Belarus, Estonia, Latvia, Serbia and Ukraine. It was founded by the Moscow regional government, which today controls two thirds of the Bank's

[4] These terms coined by Vahtra and Liuhto (2004, p. 94).

[5] After the political reform introduced by Vladimir Putin, the Mayor of Moscow is chosen by presidential appointment rather than election.

shares. Indeed, the Bank of Moscow was allowed to compete with State-owned giant Sberbank due to the participation of the regional government. However, the Bank of Moscow became more successful in its management and tried to conquer markets of neighbouring countries at the beginning of the 2000s (its affiliate in Serbia was founded only in 2008). As for Sberbank, it began its foreign expansion only in 2006 and today its presence abroad is limited to the CIS area.

At the same time, we can see some examples of coordination between Russian TNCs and Russian foreign policy. For instance, Russian private companies toed the line with the Russian Government's official position and temporarily decreased their economic contacts with Estonia in 2007 after a grave of Soviet soldiers was desecrated in Tallinn (Kuznetsov and Chetverikova, 2009b, pp. 75–76). However, it is difficult to find strictly defined Russian national goals (interests) in many other cases. For example, there are opposite views on the gas conflicts with Ukraine and investment in gas transportation in Belarus. Some experts speak of the end of Russian gas diplomacy and real transformation of Gazprom into a classic TNC while others perceive it as the beginning of an active gas diplomacy. Russian political influence is a factor of Russian investment expansion in Central Asia (much like in the case of United States firms' investment in Latin America or German TNCs' investment in Eastern Europe) but it is not a crucial factor (Kuznetsov, 2008c). It is impossible to prove strong connection between Russian investment and Russian foreign policy in countries of Asia and Africa, although sometimes the Russian Government tries to help Russian private TNCs in those regions.[6] The Government usually protects existing projects while its role at the initial stages of Russian investment is not significant.

The current Government support for Russian outward FDI is weak and uses only a few instruments (Kheyfets, 2007; Kuznetsov, 2007b, pp. 259–261). The main problem seems to be the lack of experience in investing abroad. For example, the State insurance agency for export credits and FDI is only in plans of the Russian State Bank for Development and Foreign Economic Affairs (Vnesheconombank). The Russian Federation has also modest positions in the field of double taxation and bilateral investment treaties, especially outside traditional regions of Russian firms' foreign expansion. The whole ideology of the

[6] The best example is Rusal.

current investment policy appears to centre on the protection of dozens of existing Russian TNCs.

Large Russian companies sometimes try to enlist the support of the Government with claims of investment protectionism in foreign countries. The best example was Surgutneftegaz. In 2009, this Russian company tried to become a direct investor of the largest Hungarian oil and gas company MOL through the purchase of its 21.2% shares. However, the Hungarian Government changed the law and Surgutneftegaz became a portfolio investment. Of course, Surgutneftegaz gave a cause for such a decision because there was no information about its real owners, but at the same time, there is widely held perception that the political establishment in the EU does not welcome the rise of Russian TNCs, especially in the energy industry.[7]

5. Conclusions

In this paper, my aim is to demonstrate ambiguity of some wide-spread perceptions about the activities of Russian TNCs and then to outline urgent tasks for further research on Russian TNCs.

First, I stress that the Russian Federation has followed a unique and unusual path of economic development in the twentieth century because of its political situation. Although TNCs from the Russian Federation may have the similar drivers and determinates of internationalization as do developed country TNCs to an extent, the type of dominant large national conglomerates that are typical in the Russian Federation are rare in developed countries. As a consequence, scholars in the field of Russian FDI need to take note of the specific nature of certain Russian TNCs, most notably the influence of the Soviet past on the economic activities of the Russian Federation and its neighbouring countries. The Soviet past has created certain institutional barriers for outward FDI. At the same time, common history and culture of the CIS and Baltic states has facilitated FDI by Russian TNCs.

Second, I try to draw attention to various patterns of interaction between the Russian Government's officials and Russian State-owned and private TNCs. The situation can change when State support for

[7] MOL is a key company for the Nabucco pipeline project, which bypass the Russian territory.

Russian outward FDI becomes more complicated. However, the manner of such intervention is not predetermined and may be influenced by recommendations of scholars. For example, the choice of the main target of State support (Russian business giants or hundreds of middle investors) will determine the whole ideology of the Russian policy in the field of outward FDI.

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BOOK REVIEWS

Global Electrification. Multinational Enterprise and International Finance in the History of Light and Power, 1878-2007

William J. Hausman, Peter Hertner and Mira Wilkins

(Cambridge, Cambridge University Press, 2008), 487 pages

Over the last decade or so, huge transnational corporations (TNCs) operating in the electricity sector – as well as in other infrastructure sectors including communications, transportation and water – have emerged to occupy important positions in the rankings of the world's most important TNCs. In 2009, firms including EDF, Suez, RWE, Endesa, Veolia and National Grid, listed in the UNCTAD ranking of the world's non-financial largest TNCs (UNCTAD, 2009). Indeed, the UNCTAD team was quick to pick up on the importance of infrastructure services in FDI, addressing the topic in the *World Investment Report: The Shift Towards Services* (UNCTAD, 2004), and again, more specifically on the infrastructure services, in the *World Investment Report: Transnational Corporations and the Infrastructure Challenge* (UNCTAD, 2008). A key concern coming out of this latter report was the unevenness of FDI in infrastructure by sector and country, the major upshot being that, despite a global surge in investment in these sectors, some developing countries now face significant under-investment in particular infrastructure sectors. This dilemma was analysed again at the UNCTAD "First Symposium on FDI *for* Development" in March 2010. Infrastructure services can claim to be a special part of the economy. Not only do they provide basic services to households and communities – water, transportation, communications and energy – but also provide the infrastructure upon which the rest of the economy depends to function. Growing internationalization of infrastructure ownership brings opportunities and challenges: today, privately or publicly-owned utilities based in a foreign country may be partially or wholly responsible for the provision of electricity to those living in another. Since household electricity has been considered a basic service for much of the twentieth century, and has also historically been considered a strategic sector for governance, this development is complex and fascinating.

The volume under review, written by three eminent scholars, is a timely and ambitious project which focuses on understanding the role of international finance and TNCs in the process of global electrification over the long term. The book sets out in a quite masterly fashion the evolution of both the role of TNCs and international finance more generally in the spread of electrification around the world from the 1870s to the 1970s, and also includes some discussion of the period to 2007 (for this recent period, see Clifton, Comín and Díaz-Fuentes, 2007). From complexity, the book aims to distinguish different phases in the relationship between TNCs, international finance and global electrification throughout the period, whilst painstakingly highlighting the major exceptions and nuances. This relationship turns out to be partly cyclical, since the involvement of international finance and TNCs in electrification has ebbed and flowed over time, though involvement has taken different forms in each "wave". The current wave of investment in electricity from the 1990s represents the second major wave, the first occurring from the nineteenth century to around the outbreak of the First World War. Between these phases and, particularly from the 1940s onwards, the role of the state increased in the sector, and a period of what the authors call "domestification" took place. The authors opt for the term "domestification" over "nationalization" since the period was accompanied by a withdrawal of international investment but replaced by combinations of both public and private national capital. Just as a strong state role in electricity became consolidated, the wave of privatization and liberalization began, promoting, once more, the renewed involvement of international finance and TNCs back into electricity (Clifton, Díaz-Fuentes and Revuelta, 2010). In the second wave, however, utilities themselves played a key role in the process. The story of the shifting involvement of international finance in the electrification process tells us a lot about the broader patterns of the world economy over the long term.

The volume seeks to explain the process of global electrification in spatial terms, using particular organizing concepts. First, there are close links between urban centres, electrification and various forms of international investment. Urban areas were electrified in most countries world-wide before rural ones, due to pre-existing demand for light, power and transportation, reinforced by the capital intensity and economies of scale characterizing the sector. By the end of the nineteenth century, most cities and towns, with the exception of the

least developed parts of the world, had some type of electric service. From the 1920s, household electricity was increasingly perceived as an essential service, no longer a luxury for some, and it became imperative in developed countries to extend the services to rural areas, often via government stimulus. But the urban/rural logic was not the only observable pattern. The authors also discuss other cases, particularly what they call the "enclave form". Here, "company towns", that is, areas where a TNC, having often located due to the availability of natural resources, derived from mining, plantations, or oil (such as TNCs headquartered in North America or Europe with operations in developing countries), was set up, requiring electric power. The process of electrification of the railroads also shaped the geographic logic of their development.

The book is organized into seven chapters. The first two chapters set out the major concepts used in the rest of the book. Chapter one provides an overview of the extent and spread of electricity around the world, using an interpretation which intertwines analysis of technological change, invention, geography and economics, and attempts to quantify the role of foreign investment in electricity around the world for the period 1878–1972, which is usefully summarized in a single table (Hausman, Hertner and Wilkins, 2008, pp. 31–33), which covers nearly ninety countries. Chapter two, rightly observing that most theories and descriptions of TNCs have been dominated by assumptions about the manufacturing sector, adapts theories to better understand the various forms of international finance involvement in electricity over time by providing typologies. Chapters three to five cover, chronologically, the evolution of TNCs and international finance involvement in the process of global electrification, divided into the periods: nineteenth century to 1914; 1914–1929 and 1929–1945. They include interesting discussion of the Russian Revolution, decolonization and the emergence of national grids, and the consequences on the organization of electricity.

The final two chapters contain the conclusions. Chapter six analyses the post-war period to 1978, which was characterized by continued private sector involvement, though the "writing is on the wall", opening the door to "domestification". Chapter seven observes that, as soon as what had once been a truly internationalized private sector was largely consolidated as domestic, new economic policies of privatization, liberalization and deregulation took hold from the 1980s.

By 1990, a dramatic resurgence of international direct investments in the electric utilities sector had occurred, though, in the first few years of the twenty-first century, some of these new international investors were encountering difficulties.

This volume is the result of a project which begun in the early 1990s, through pre-sessions and sessions at the World Economic History Congress and the Business History Congress. Its authors acknowledge significant input from other experts, including Dominique Barjot, Jonathan Coopersmith, Kenneth Jackson, Pierre Lanthier, H. V. Nelles, John L. Neufeld, Harm Schröter and Luciano Segreto, as well as dozens more international experts. Research involved use of multiple historical archives in dozens of languages, and synthesis of three major strands of historical literature on TNCs and international finance, the evolution of the electricity sector, and international banking and finance. The book is refreshing and unusual in that it combines an accessible style of lively, engaging writing, accessible to non-specialist readers, without compromising on the complexity of the material at hand. It will be of interest to scholars of international business, historians and social scientists in general. The authors wrote this book wishing it to be a key reference point for scholars wishing to more fully understand the role of TNCs and international finance in the evolution of electricity around the world. Today, with the "second wave" of international finance in the electricity sector, it provides a crucial background for those researchers interested in understanding contemporary developments from a historical perspective.

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Multinational Enterprises and the Global Economy

John Dunning and Sarianna Lundan,
(Edward Elgar, Cheltenham, 2008), 960 pages,
second edition

This is the second edition of the celebrated volume by Professor John H. Dunning, first published in 1993, which has now been not only updated but also enriched with the addition of a number of new topics. This addition was not least due to the expertise of the co-author, Sarianna Lundan, in the institutional aspects of international business and the internal governance of transnational corporations (TNCs). It is a comprehensive synthesis of all the theories in International Business based on extremely rich data evaluation in almost all fields of TNC activities and their environment. It is a "creative masterpiece which unbundles the DNA of the field of international business " as described by Alan Rugman in his assessment of this volume.

At the time of the global economic, social and environmental crises – for which TNCs' cross-border activities are often blamed – the volume helps understand the motivation and driving forces for internationalization, and also provide an excellent guide for analysing what are the effects of their activities on the host as well as home countries from a very broad social, political and economic perspective. In this way, it highlights the problems of today's global economy. Indeed, by emphasizing the role of institutions, the volume foresaw the present shift from a free market fundamentalism to more government regulations, to more balanced interface between the market and government, to proactive firms and government policies and realization "that markets are not a free good" (p. 762) in the coming multi-polar century.

The major novelty of the book is its insight into the institutional aspects of TNC activities, namely the extent to which institutions may become a driver of the internationalization process, their social

implications and business government relations. The authors overcome the shortcomings of the narrow, somewhat ethnocentric, unifaceted linear and static economic approach of the mainstream scholarly thinking in the 1970s and early 1980s, which paid little attention to the extent and quality of institutional infrastructure and social capital. They have demonstrated that the consequences arising from TNC activities are strongly embedded in the institutional environment, not only of the host and home countries, but also the regional and global institutional environment. Sarianna Lundan's contribution in these aspects has undoubtedly enriched the book, making it even more comprehensive and all embracing than its first edition.

Although the second edition follows basically the same structure as the first (i.e. five main sections comprising facts and history, organization of TNCs, impact of their activities, implications for policy, future developments), there are important changes in some of the chapters. Apart from the already mentioned new institutional issues, it contains some new or substantially expanded chapters. This combination of complete, almost encyclopedic overview of research in International Business and putting it into a comprehensive theoretical framework is the main virtue of this volume. The reader can find almost any issues related to the subject covered and almost all relevant theories explained.

More attention is given, too, to country-specific aspects of foreign direct investment (FDI) and to outward FDI and their impact on the home country. Chapter 4 on theory is strengthened while the evolutionary aspects of TNC development is substantially augmented in a separate chapter. In discussing the determinants, the issue of institutions has been brought into the OLI paradigm as a special advantage, distinct from asset-based and transaction-based advantages. The relationship between institutions and economic growth follows the contemporary development in the theory of institutions and endogenous growth theory. More attention is also given to the subjects of networks and learning aspects, which have been much researched in the last decade. The book concludes with the chapter on the future of TNCs, calling for new regulations at the global level, which has been absent since the collapse of the international economic system in the 1970s.

Although my students were shocked by the number of pages when I included this book as a textbook for their course, the book is really a must for all students of International Business. Its comprehensiveness makes it a wonderful resource book, in addition to providing necessary theoretical guidance for understanding major driving forces of cross-border activities of TNCs. With its new approaches, particularly with regard to institutions, the volume also brings to International Business contemporary trends in the institutional theory, including informal institutions and networks.

The second edition of this book is a major new achievement in International Business literature. It contextualizes – even more than before – TNCs in the evolving global environment and advances outside the narrowly defined International Business literature. The recent financial and economic crisis only enhances the need for such a complex and interdisciplinary approach. By explaining the real driving forces of globalization and TNC's activities in a broader social context, it contributes to better understanding of contemporary International Business. Therefore, it is a must for students of International Business as a reference book as well as almost all embracing theoretical framework for the study of FDI, TNCs, and, more generally, the globalization.

It is hard to imagine that anyone would expect more from such a comprehensive book. I would, nevertheless, note some wishes of mine. First, it would be practical if it could be developed as a real textbook, much reduced in length, probably with less empirical evidence. Secondly, it would be helpful if the link between International Business theory and the New Trade theory would be addressed more systematically. The latter increasingly touches upon TNC activities, without necessarily acknowledging what has been achieved already in the International Business literature. Finally, although the book has already contributed a lot to highlighting what is important and what not in International Business research, it could go further is prioritizing research areas and giving guidance for future research.

This volume is a must for scholars, businessmen and policy makers alike. It is so comprehensive and empirically rich that everybody can find a wealth of information according to his interests. It is indeed an "authoritative guide to contemporary multinational business, but a

major historical resource for the future" as stated by Mark Casson in his assessment of the book. It will surely become a classic work referred to in the years to come even more frequently as its first edition.

Dr. Marjan Svetlicic
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University of Ljubljana
Slovenia

GUIDELINES FOR CONTRIBUTORS

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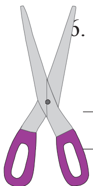

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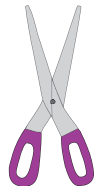

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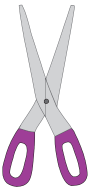

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