



## BIROn - Birkbeck Institutional Research Online

Gannon, Brian (2007) Offshore is organisations as MNES: the relevance of international business theory to offshoring multinationals. In: UK Academy of Information Systems Conference 2007, May 2007, Manchester, UK.

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/22053/>

*Usage Guidelines:*

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html>  
contact [lib-eprints@bbk.ac.uk](mailto:lib-eprints@bbk.ac.uk).

or alternatively

# OFFSHORE IS ORGANISATIONS AS MNEs: THE RELEVANCE OF INTERNATIONAL BUSINESS THEORY TO OFFSHORING MULTINATIONALS

## Abstract

*The rapid development of the IS offshore industry has resulted in the creation of new forms of multinational enterprises (MNEs). These have emerged and matured over the past decade, and are relatively under-researched. In contrast, globalisation and international business have long been the focus of research, although there is little research on MNEs in the IS offshore industry.*

*This paper assesses how elements of existing MNE theory fit offshore IS multinationals. It takes three constructs associated with the MNE theory – internalisation, differentiated networks and knowledge transfer - and applies these to the IS offshore industry. The rationale for this analysis is that understanding differences between ‘traditional’ and offshore MNEs will provide insight on strategy, management, structure and operation of these new organisations.*

*The research concludes that offshore MNEs differ in some ways from more widely studied multinationals. Thus, while some aspects of MNE theory fit the new IS offshore MNEs well, others do not. Further research in this area could provide greater insight on emerging forms of organisation in this relatively new industry, and on their behaviour, operation and performance.*

## Key words

*Offshore; multinational enterprise (MNE); internalisation; globalisation; differentiated network; knowledge transfer.*

# 1. INTRODUCTION

The rapid development of the IS offshore industry has resulted in the creation of large multinational enterprises (MNEs). Some offshore MNEs have originated in industrialised economies – recent manifestations of Systems Integration (SI) or management consulting firms such as Accenture which typically provide offshore software development as part of a wider portfolio of ‘multi-shore’ consulting, technology and outsourcing services. Others have originated in developing economies, particularly India, and are new firms dedicated to exporting labour and IT-enabled services to western economies – the so-called ‘pure play’ offshore IS providers such as Wipro.

Commercially, suppliers of offshore IS services have graduated from simple sourcing models such as providing individuals to do specific tasks to complex and sophisticated cross-border contractual and resourcing arrangements with their customers. In effect, the industry exhibits all the elements of a globalised market (Tallman and Fladmoe-Lindquist, 2002). Multi-shore SI organisations and pure-play offshore firms both exhibit similar characteristics, such as their use of a global development model (GDM) to provide consistent IS services to their clients and both can be categorised as MNEs. These new types of organisation are notable for two possibly related reasons: first, the speed at which they have emerged and matured; and second, the limited amount of research that has been focused on them.

By contrast, globalisation, MNEs and international business have long been the focus of research. This ranges from early studies of the theory of the MNE (Hymer, 1960; Dunning, 1973; Perlmutter, 1969; Buckley & Casson, 1976; Teece, 1977) to the more recent work by Rugman and Verbeke (2003). Perspectives include political, cultural, and economic dimensions, illustrated with multiple case studies that are company, industry and temporally specific.

To date, few scholars have applied MNE theory to offshore IS MNEs, or to this sector as a particular example of international business. This may be because it does not always conform to the more traditional patterns of multinational evolution – for example, many non-western offshore providers adopt an exclusively export-focused approach to international growth. Since MNE theory has proven valuable in understanding how aspects of traditional MNEs function – for example, in the area of strategic human resource management - it may be that it can be used to provide similar insights for offshore MNEs.

## **Scope of research**

The field of MNE research is very wide, in effect comprising elements of multiple disparate disciplines. Three predominate, termed in this paper economic, organisational and international business perspectives.

Economic theories help explain how and why MNEs evolve and function, particularly in respect of their investment and economic decisions (for example, what drives them to invest in a particular location - foreign direct investment (FDI) strategy - and the form that investment takes (‘entry mode’).

Organisational theories are mostly concerned with explaining how the MNE should be organised and managed, and predicting how they will perform under certain circumstances. It incorporates the strategic management perspective on MNE development, and also on the maturity profiles and models that illustrate MNE evolution.

International business theories are used to describe the body of research that looks at such aspects of the MNE that depend on cultural affinity and distance between parts of the MNE, and the challenges associated with knowledge transfer across inter-organisational boundaries.

This categorisation is not exclusive – several studies look to provide insights into the behaviour of the MNE by combining two or more research paradigms, and thereby reconcile seeming discrepancies unearthed by one or other research direction. An example of this is Rugman and Verberke’s (2003) attempt to link internalisation and strategic management perspectives.

In this study, three frequently cited MNE constructs – one from each of the three theoretical perspectives described above – have been selected to highlight where similarities and differences occur when mainstream theory is applied to the case of offshore MNEs. This is intended as an inductive theoretical statement to be followed by a validation phase; in effect, a preliminary framework to support further research in this area, particularly with a view to subsequent validation and empirical study.

The rest of this paper is structured as follows. The next section provides an overview of the emerging IS offshoring industry and defines some of the terms used in this research. This is followed by a brief review of the literature on IS offshoring and on MNEs. Subsequent sections categorise theoretical antecedents to MNE theory, identifying the three primary constructs used in this study. The final section of the report highlights where current MNE theory is relevant to offshore MNEs, and where it falls short, and presents an agenda for future research.

## 2. OVERVIEW OF IS OFFSHORING AND MNE DEFINITIONS

### Overview of the IS Offshoring Industry

In less than a decade, the practice of IS offshoring has become commonplace. Offshoring occurs when a company engages resources from another country – most often an economy where the cost of IS labour is significantly lower - to conduct software development and maintenance activities on their behalf. Offshoring can be insourced, where all team members are employees of the same parent organisation, or outsourced to a specialist offshore services supplier. Whether in-sourced or outsourced, offshore IS teams face challenges not associated with more traditional co-located development (Dubé & Paré, 2001), particularly where the cultures of the participants differ.

The primary reason companies source offshore services is to gain cost efficiencies through labour arbitrage (Ramarapu et al, 1997; Carmel and Agarwal, 2002). Secondary advantages of offshoring include quality of output, the increased access to leading-edge (and legacy) technologies and skills, the increased labour pool flexibility and access to international markets (Ravichandran & Ahmed, 1993). The risks associated with offshore development can be typified as strategic (primarily in deciding how to divide up the work across sites) and operational (the processes, skills and tools needed to allow the project to function optimally) (Herbsleb and Moitra, 2001).

Although IS offshoring is having a profound impact on many aspects of the IS environment in developed countries, it has not yet been the focus of significant research activity. The research that predominates addresses primarily the drivers, the risks and the enabling factors of distributed software development. With some exceptions (Rajkumar and Mani, 2001; Mathrani et al, 2005; Khan et al, 2003), much of the existing research focuses on the customer or demand-side of the business, and these studies have tended to be US-centric. Currently, few studies address the supplier landscape.

### Definitions of MNEs

Perlmutter (1969) describes three types of multinational – ethnocentric, geocentric and polycentric - defined in terms of the headquarters orientation towards its subsidiaries. Behrman (1974) also identifies three types of international organisation - the ‘classic investor’, who invests abroad for export or to procure supplies; the “international holding company” that produces goods in a specific country for supply in that country only; and the “multinational enterprise’ - one that supplies multiple markets through a network of integrated and co-ordinated facilities in different countries. Shorter definitions are provided by Ghoshal and Bartlett, and by Buckley and Casson:

“A multinational corporation consists of a group of geographically dispersed and goal-disparate organisations that includes its head-quarters and the different national subsidiaries.” (Ghoshal and Bartlett, 1990)

“...an enterprise which owns and controls activities in different countries.” (Buckley and Casson, 1976).

Bartlett and Ghoshal describe industries as ‘international’ and ‘transnational’. In these definitions, the terms are applicable to the MNEs that operate in the industries because they exhibit the characteristics of the industries. The international industry is defined thus:

“We call industries ... where the key to success lies in one’s ability to transfer knowledge (particularly technology) to overseas units and to manage the product life cycle efficiently and flexibly, international industries.” (Bartlett and Ghoshal, 1987).

By contrast, a ‘transnational’ industry is one whose business is driven by simultaneous demands for global efficiency, national responsiveness and worldwide learning.

One characteristic that is shared by most early commentators is the almost exclusive definition of MNEs as product companies, despite the existence of service MNEs, for example in tourism and finance. Boddewyn *et al* (1986) note that no agreement on the definition of a service MNE exists.

In this paper, the definition of an offshore IS MNE includes those organisation of the type described previously – namely, multi-shore SIs and ‘pure play’ offshore IS providers that have operations and resources in more than one country. It excludes a particular instance of offshore provider, the wholly owned subsidiary (WOS) of non-IT companies dedicated to providing offshore IS services to that company alone (sometimes termed a ‘captive’ offshore operation). This represents a classic example of vertical diversification for the traditional MNE – establishing of a specific business function (in this case IT processing) in a given location to capitalise on location-specific advantages (generally lower cost of labour).

### **3. LITERATURE REVIEW AND THEORETICAL ANTECEDANTS**

#### **Literature on IS Offshoring**

Although there are studies that address specific aspects of offshore development - for example, the role of development methodologies (Ramarapu *et al*, 1997) – more often scholars describe the rationale for offshore development, its associated benefits, the risks of offshore development and key success factors. Most begin by noting that offshoring is one of the fastest growing phenomena in IS in recent years and that it is an accepted component of modern software development practice.

The fundamental business question associated with offshore software development is whether the associated risks are outweighed by the benefits (Delmonte & McCarthy, 2003). The literature shows that the primary rationale for companies using offshore services has been the search for cost efficiencies through labour arbitrage.

There is consensus also on the main categories of risk associated with offshore development. McFarlan (1981) describes four categories of risk associated with any systems development project – size and complexity of project, project structure, technology used and user factors (number of user interactions and number of user sites) – and these equally apply to offshore projects (Rajkumar and Dawley, 1997). Ravichandran & Ahmed (1993) identify three special problems associated with distributed software development as language barriers, differences in laws and regulation, and fragile infrastructure. The key success factors in global software development are derived from an analysis of the risks. Thus, four “critical success factors” are defined as maturity of the management team; level of strategy and commitment demonstrated by senior management; maturity of the organisation’s processes; clarity of the objectives and level of preparation (Delmonte & MacCarthy, 2003).

There are few studies that look at offshoring from the perspective of the offshore services provider, and little reference to the strategic management, organisation and operation of these companies. Recent research is providing new insights into offshoring as a phenomenon. The related papers by Farrell (2005), Levy (2005) and Doh (2005) highlight some of the emerging social issues associated with offshoring - Levy in particular stressing the tensions and social cost of wholesale adoption of the practice.

#### **Literature on MNEs**

Three research strands are described briefly, noting that the intent (similar to that described by Doz and Prahalad (1991)), is not to provide an exhaustive review of the theoretical and empirical literature, but merely to highlight how a few key contributions in these streams contribute to research on MNEs.

#### **The Economic View of the MNE and the construct of Internalisation**

Early work focused on economic and competitive models of the MNE (Hymer, 1960; Vernon, 1966; Caves, 1971). Using Coase’s (1937) general framework explaining the existence of the firm, it identified how international corporations or MNEs came into being, and why direct foreign investment (FDI) came about. Hymer (1960) first states the theory of FDI, noting that the firm internalises or supersedes the market. Caves (1971) identifies the two principal features of FDI by the MNE as ordinarily effecting a net transfer of real capital from one country to another and representing entry into a national industry by a firm established in a foreign market. Buckley and Casson (1976) were concerned also with generating a theory that would predict the future growth and structure of MNEs. They identified five factors to account for the growth of MNE activity after the Second World War which again emphasised the theory of internalisation as a driving force for the creation of MNEs. A related stream of research is the body of work on the product cycle model and literature related to the internationalisation of industrial R&D (Vernon, 1966; Ronstadt, 1977; Lall, 1979).

Internalisation arises as a response to imperfections in intermediate product markets, including various types of knowledge and expertise (which can be embodied in patents, human capital and so on). Buckley (1988) describes the internalisation theory as resting on two general axioms: first, that firms choose the

least cost location for each activity they perform and second, that firms grow by internalising markets up to the point where the benefits of further internalisation are outweighed by the costs. It is clear that the theory of internalisation is closely related to transaction cost theory (Williamson, 1979).

Doz and Prahalad (1991) note that the assumptions used in transaction cost theory are too restrictive and culturally bound to do more than highlight managerial issues, and that their primary use is as a starting point in considering boundaries and control issues.

### **The Organisational View of the MNE and the differentiated network**

In her analysis of the impact of Hymer's work, Tolentino (2002) notes that the intellectual focus of academic work in the theoretical stream of managerial strategy, organisational structure and systems or processes in the literature:

“...has typically revolved around determining the strength and direction of the relationship between organisational structure and managerial strategy; the use of appropriate control mechanisms; and the adoption of a proper fit of the organisation with the environment.”

Some authors, according to Hedlund (1986), tended to view the firm hierarchically (headquarters controlling subsidiaries directly), believing hierarchy to be the dominant stable form of organisation. Perlmutter's (1969) ethnocentric and polycentric description of the MNE, essentially corresponding to centralised and decentralised operating models, offered a radically different perspective. The network-based MNE models (Hedlund, 1986; Prahalad and Doz, 1987) build on Perlmutter's definition of the geocentric organisation. Bartlett and Ghoshal's (1989) typology introduced the multinational, multidomestic and transnational organisations, characterised by the relationships and information flows between headquarters and subsidiaries and by the degree of control exercised by one upon the other. Another conceptualisation regarded the MNE as an internally differentiated and integrated inter-organisational network of distributed and interdependent resources and capabilities (Ghoshal and Bartlett, 1990).

Research from the 1990s onwards has tended to place less emphasis on a hierarchical view of the MNE and more frequently takes the view of the MNE as a network of differentiated intra- and inter-firm relationships (Tolentino, 2002). This acknowledges that foreign subsidiaries have resources and expertise that gives them greater independence, and enables them to play a greater and more active role in the success of MNEs, for example by creating firm-specific advantages (FSAs). Further, more effective organisation of knowledge and innovation and more widespread sharing of technology across the network helps diffuse new learning quickly across boundaries. This perspective assumes a distributed labour division among subunits of the MNE arranged in an integrated network configuration (*ibid.*).

This theme is the foundation of the differentiated network MNE presented by Bartlett and Ghoshal (1989), who argue that the view of MNEs as a differentiated network of subsidiaries is the appropriate theoretical background to understand the global integration of multinational networks. Rugman & Verbeke (2003) describe the differentiated network MNE as one of the more influential new streams in international management research.

### **The International Business view of the MNE and Knowledge Transfer**

This perspective overlaps with theories of globalisation that take a strategic view of the world as a single market in which to do business (Tallman and Fladmoe-Lindquist, 2002), and rests upon the basic premise that replication throughout the firm of advantageous, intangible, knowledge-based assets is a prerequisite for MNE success (Martin and Salomon, 2003). This research stream represents a rich and varied perspective on the theory of the MNE. Kogut and Zander (1993) promote the idea that

“The multinational corporation arises not out of the failure of markets for the buying and selling of knowledge, but out of its superior efficiency as an organisational vehicle by which to transfer this knowledge across borders.” (Kogut and Zander, 1993)

Gupta and Govindarajan (2000) provide an empirical assessment of the impact of knowledge flows, using the subsidiary as a unit of analysis. Shenkar (2001) employs the widely used construct of Cultural

Distance (CD) – a measure of the similarity or difference of dissimilar cultures. He notes that the construct has been applied to most business administration disciplines, and while it has been used to provide insight into a range of research questions from foreign expansion to subsidiary performance, its greatest impact has been in the area of FDI, citing the index compiled by Kogut and Singh (1988) from Hofstede (1980).

One of the core constructs in the theory of MNEs has been how companies transfer their FSAs across borders – the assumption being that the primary advantage that a firm brings to foreign markets is its possession of superior knowledge.

“Foreign direct investment is the transfer of an intermediate good, called knowledge, which embodies a firm’s advantage, whether it be the knowledge underlying technology, production, marketing or other activities.” (Kogut and Zander, 1993)

Elaborating, Kogut and Zander note that the characteristics of knowledge influence the ability to transfer it, and hence influence direct investment flows. A good deal of the research in knowledge transfer differentiates between tacit knowledge – that which is implicit and unwritten in the operation of the firm – and knowledge as a public good – which can be codified and methodically structured and taught and is thus easily (and in theory freely) transferred and hard to protect. Research shows that cross-border movement of tacit knowledge is possible but not easy and is assisted by reduced cultural distance and by formal and informal corporate mechanisms for integration. In an empirical study, Teece (1977) estimated that the costs of technology transfer ranged from 2% to 59% of total project costs, these costs arising from the efforts of codifying and teaching complex knowledge to users.

Buckley and Casson (1976) comment on the increased expenditure required where the personnel responsible for encoding and decoding the information have different backgrounds or operate in a different environment, thus introducing implicitly the concept of cultural distance. A more formal acknowledgement of the impact of cultural distance as applied to the theory of MNEs is found in Shenkar (2001), who sets out some of the limitations of CD thinking and attributes these to a series of illusions and false methodological assumptions that go largely unnoticed and which tend to distort empirical results.

## 4. APPLYING MNE CONSTRUCTS TO IS OFFSHORE MNEs

Offshore IS companies are relatively recent forms of MNE. They are different in several important respects to the international corporations researched in the past, from which MNE theories and constructs emerged.

First, offshore MNEs are primarily service organisations, yet most research on the MNE has focused on product-based firms (Boddeyn *et al*, 1986). Thus, some constructs and definitions may be inadequate. For example, the notion of the product life cycle in the definition of international industries (Bartlett and Ghoshal, 1987) is largely redundant for IS offshore MNEs.

Second, the notion of a home market, an essential reference point for much of the research on MNEs, is a nebulous concept in the world of the offshore IS MNE. For example, Tata Consulting Services (TCS) is headquartered in India, and the majority of its employees are there. However, India is a marginal market for Wipro, generating less than 10% of its revenues in 2005. Hedlund also makes this point, highlighting the emergence of a global marketplace:

“For commercial and practical purposes, the nations do not exist, and the relevant business arena becomes something like a big unified ‘home market’”. (Hedlund, 1986)

Third, the origins of pure play IS offshore MNEs are in marked contrast to the origins of many existing (traditional) MNEs, described by Hedlund:

“Almost all now existing firms have started on a national basis and only gradually developed international ties. Foreign business was initially only marginal, more so for companies from large nations than for those with small ‘home markets’.” (ibid)

This demands a rephrasing of much of the theory around expansionary drivers, imperatives for FDI and so on. Essentially, the primary intention of IS offshore MNEs is to take advantage of low costs of labour in offshore locations to win business in more developed markets. In this respect, the business intent of IS offshore MNEs can be described as unidirectional (mostly from east to west), unlike, for example, the business intent of a more traditional MNE such as Coca Cola™. The perspective of much MNE research takes as a starting point organisations whose objective is primarily to access new markets.

### Relevance of the internalisation construct

It must be noted at the outset that there are differences of opinion regarding the value of the internalisation construct. Buckley (1988) expounds the internalisation theory and explores the difficulties of testing the approach, particularly in measuring transaction costs. He notes that casual empiricism suggests that they are high (and particularly so in knowledge-intensive industries), but he is unable to answer how significant they are in relation to transport costs, production costs, marketing costs and so on. This is a key point, unanswered by later research, and one which has great relevance to the IS offshore industry. Buckley concludes that tests of MNE theory need to be more precise and rigorous. Despite the influence of transaction cost theory and internalisation on thinking relating to MNEs, Rugman and Verbeke (2003) note that it is often regarded as providing less insight than modern international management theory. They suggest that internalisation remains a powerful tool for analysing complex MNE organisations, a view opposed by Birkinshaw (2000) who sees transaction cost thinking as ‘not conducive to discussions of management behaviour’.

There is, however, a broader point relating to internalisation. Internalisation happens when transaction costs of conducting business across borders are high; when MNEs want to protect valuable knowledge (FSAs) across borders; and when MNEs want to use FSAs to win business in new markets. In the first instance, transaction costs in the offshore industry tend to be marginal when compared to production cost benefits. In the IS offshore industry, production costs comprise mainly the cost of the resources and infrastructure required to produce the services and products. These are typically much lower than

production costs in industrialised economies. Moreover, the transaction costs in this industry have fallen steeply over the past decade, largely due to greatly reduced cost of telecommunications and transport.

Second, offshore MNEs tend to perform ‘commodity’ IT activities for the most part, such as call centre operation, low-end computer programming and application maintenance. Although this is changing slowly, it can be argued that there are few FSAs embedded in such work.

Taken together, this would suggest that there are few incentives for non-IT firms to internalise offshore IS activities, and that this in turn would give rise to a more active external market for these services. This is exactly what is happening, and explains to some extent the rapid growth of offshore MNEs. In this respect the internalisation construct has some explanatory power, although the existence of ‘captive’ offshore IS organisations – wholly owned subsidiaries of traditional MNEs – provides evidence against the theory. More importantly, internalisation is not particularly helpful in predicting the behaviour and organisation of offshore IS MNEs, largely because of the reasons outlined above.

### **Relevance of the differentiated network MNE construct**

As offshore MNEs have matured, they have developed complex and sophisticated cross-border contractual arrangements with customers and between subsidiaries. Moreover, as competition in the industry intensifies, pure play MNEs and the western SIs are moving aggressively into the other’s traditional area of operation. Offshore firms are acquiring businesses in the USA and Europe, and western SIs are acquiring offshore IS businesses. Some are specialising in a particular industry; others in a particular function, such as business process outsourcing (BPO) of administrative activities.

A modified form of the differentiated network MNE is emerging, where the differentiation is less pronounced in terms of knowledge, and is defined primarily in terms of scale and cost. All centres need to deliver all services – the global sourcing argument – from a set of largely interchangeable locations. Some locations are more or less expensive, but all are capable of innovation, creation of FSAs and delivery of the full range of the MNE’s services.

The role of the subsidiary in this geocentric world is free of any connotation of dependence or subordination. Birkinshaw (2000) makes a similar point, noting that many subsidiaries have now developed or acquired so much knowledge and power that their managers sometimes can be viewed as free agents. This organisational form more closely resembles Hedlund’s description of the heterarchy, but with a greater degree of central control – in effect a co-ordinated heterarchy (Hedlund, 1986).

This decentralised federation demands well defined, clear and rigorously enforced global processes and standards to ensure consistent delivery of service and a strong sense of corporate identity. Accenture, an offshore MNE headquartered in the US, is a good example of such an organisation, with its common methodologies and consistent global brand.

### **Relevance of the Knowledge Transfer construct**

Knowledge transfers are now more complex than before. The unilateral or bilateral head-office-to-subsubsidiary flows have largely been replaced by a network of interconnected knowledge flows across subsidiaries, development centres, headquarters and externally with third parties – more typical of heterarchical information exchange than of hierarchical knowledge flows.

Much of the knowledge transfer is part of the operation of the business – for example, information related to client configurations or engagements. There is relatively less transfer of tacit knowledge – that which is implicit and unwritten in the operation of the firm – and more on the form of knowledge as a public good. This aligns with the view that offshore MNEs engage primarily in commodity IS work, activity of the type that lends itself to codification and structure. It is also less sensitive to cultural distance. What such knowledge transfer demands is a structured means of transmitting it, similar to Gartner’s global delivery model:

“...the optimum combination of processes, end-to-end methodologies and quality procedures, with high-quality skills and resources available internally or externally in requisite quantities

on a global basis. This enables organisations to maximize the quality of their solutions while minimizing the overall cost and delivery time of their IT services.” (Iyengar et al, 2005)

For example, Capgemini is a western IS offshore MNE with a presence in 30 countries. It has two large development sites in India, complemented by a network of smaller Accelerated Development Centres (ADCs) in various worldwide locations. Significant knowledge is transferred across development sites – both proprietary (tacit) knowledge relating to particular development techniques and toolsets, and public knowledge, such as open source development routines. A common global operating model is used to codify this knowledge transfer – the Rightshore™ Delivery methodology.

The existence of such methodologies for codifying and transmitting knowledge across disparate parts of an offshore MNE suggest that the construct of knowledge transfer remains very relevant.

## 5. CONCLUSIONS AND SCOPE FOR FURTHER RESEARCH

The answer to the original research question - whether selected theoretical constructs from current MNE theory are adequate in explaining the behaviour, organisation and management of offshore IS MNEs – is for the most part positive, although there are some qualifications.

### **Internalisation**

The constructs of internalisation and related transaction cost theory are capable of explaining how offshore MNEs work, for example in predicting when an alliance might be formed in preference to a subsidiary in a particular offshore location. It has less explanatory power in the realm of organisation and corporate structure – this is determined to a far greater extent by the particular configurations specific to the offshore industry. For example, the increasing demands by clients for onsite presence for at least part of the IS development cycle is more likely to determine the timing and nature of FDI than are considerations of transaction costs.

Further, although Buckley's (1988) point regarding difficulties in measuring transaction points remains valid, it is clear that the wide disparity between production and transaction costs (the primary rationale for offshoring IS activity) comprises an extreme instance in transaction cost theory. Thus, choice of location and entry mode will be dominated by considerations of production cost rather than transaction cost for as long as such wide disparities exist.

### **Differentiated network**

Viewpoints in the field of organisational theory range across a broad spectrum, and it would be surprising if some did not cast some light on the particular circumstances of the IS offshore MNE. One fundamental conclusion (not confined to IS offshore MNEs) is presented by Tavares and Pearce:

“The dominant conceptualisation of the MNE as a homogeneous and ‘unified’ entity is a misrepresentation and oversimplification of reality that may eventually lead to wrong and counterproductive policy conclusions and recommendations.” (Tavares & Pearce, 1999)

In other words, there is no ‘standard’ version of the MNE, and certainly the model of the hierarchically organised, product-centric multinational bears little resemblance to the service-oriented, networked offshore MNE. Although there is an imperative for the latter to operate in a unified way, with consistent and co-ordinated operational models, they are rarely homogenous, either in structure (from location to location) or in style. A second conclusion is drawn by Malnight (1996) who highlights a theme of dramatic changes in the competitive environment driving a move towards network-based organisations.

The construct of the differentiated network helps in explaining organisational aspects of the IS offshore MNE. Other constructs may prove more powerful, such as Hedlund's (1986) concept of the heterarchy. For example, one of Hedlund's conclusions is that heterarchical firms are more likely to evolve:

“...from contexts with a history of rather autonomous and entrepreneurial subsidiaries. ... In a larger picture, MNCs from newly modernising nations may stand an even better chance.” (Hedlund, 1986)

This is a particularly accurate prediction in the case of the modern IS offshore MNE.

### **Knowledge Transfer**

This construct - and the associated concept of cultural distance – retains great relevance for an industry in which success is predicated on intensive, multilateral knowledge flows across political and cultural boundaries. The literature on IS offshoring suggests that one of the greatest risks associated with the use of offshore development resources relates to communication among the various parties involved. This is a common risk in an IS development activity that is accentuated by distance and cultural difference. The

use of the existing constructs of knowledge transfer and cultural distance to explain and minimise this risk is valuable.

### **Areas for future research**

The offshore IS industry is relatively new, and the MNEs that dominate it still at an early stage of maturity. There is consequently much to research.

First, there is scope to examine empirically how the various constructs used in this study apply to IS offshore MNEs. This would demand an in-depth understanding of economics and international business. A particularly relevant programme of research would be to verify the assumption that production cost benefits greatly outweigh transaction costs.

Second, Boddewyn (1996) highlighted the historic emphasis on product MNEs. This suggests opportunities to research service multinationals, building on Boddewyn's work to identify new aspects of MNE theory.

Third, the concept of cultural distance has particular resonance in the business of offshore IS development. It would be valuable to study the impact of cultural distance as an enabling factor in offshore development projects, perhaps contrasting the cultural differences between offshore developers and onshore clients, and internally between offshore and onshore developers.

Fourth, constructs and research paradigms other than those identified in this study are found in MNE theory. There is an opportunity to assess the relevance of these to IS offshore MNEs; for example, viewing offshoring MNEs in India in the context of the concept of economic clusters (Porter, 1998).

Finally, many offshore IS MNEs have originated in non-industrialised economies. It would be instructive to expand on Hymer's (1960) theme of the impact on world development of the MNE with reference to the IS offshore industry, for example in India.

## 6. REFERENCES

- Bartlett, C.A. and Ghoshal, S., "Managing Across Borders: The Transnational Solution", Harvard Business School Press: Boston 1989
- Bartlett, C.A. and Ghoshal, S., "Managing Across Borders: New Organizational Responses", Sloan Management Review, Vol. 29, Issue 1, 1987, pp. 43 – 54
- Behrman, J.N., "Decision Criteria for Foreign Direct Investment in Latin America", New York: Council of the Americas, 1974
- Birkinshaw, J., "Entrepreneurship in the Global Firm", Sage: London, 2000
- Birkinshaw, J., and Hood, N., "Multinational Subsidiary Evolution: Capability and Charter Change in Foreign-owned Subsidiary Companies", Academy of Management Review, Vol. 23 Issue 4, 1998, pp. 773-795
- Boddewyn, J.J., Halbrich, M.B., and Perry, A.C., "Service Multinationals: Conceptualization, Measurement and Theory", Journal of International Business Studies, Vol. 17, No. 3, 1986, pp. 41-57.
- Buckley, P., "The Limits of Explanation: Testing the Internalization Theory of the Multinational Enterprise", Journal of International Business Studies, Vol. 19, No. 2, 1988, pp. 181 – 193
- Buckley, P. and Casson, M., "The Future of Multinational Enterprise", Macmillan and Co: London, 1976
- Carmel, E., and Agarwal, R., "Offshore Sourcing of IT Work", MIS Quarterly Executive Vol. 1 No. 2, June 2002
- Caves, R.E., "International corporations: the industrial economics of foreign investment", *Economica*, Vol. 38, 1971, pp. 1–27
- Coase, R.H., "The nature of the firm", *Economica*, Vol. 4, 1937, pp. 386–405
- Delmonte, A.J., and McCarthy, R.V., "Offshore Software Development: Is the Benefit Worth the Risk?", North Americas Conference on Information Systems, 2003, pp. 1607 – 1613
- Doh, P., "Offshore Outsourcing: Implications for International Business and Strategic Management Theory and Practice", Journal of Management Studies, Vol. 42, No. 3, pp. 695–704
- Doz, Y.L., and Prahalad, C.K., "Managing DMNCs: A Search for a new Paradigm", Strategic Management Journal, Vol. 12, Special Issue: Global Strategy, 1991, pp. 145 – 164
- Dubé, L., and Paré, G., "Global Virtual Teams", Communications of the ACM, Vol.44, No. 12, December 2001, pp. 71 – 73
- Dunning, J.H., "The determinants of international production", Oxford Economic Papers, Vol. 25, No. 3, pp. 289–336
- Farrell, D., "Offshoring: Value Creation through Economic Change", Journal of Management Studies, Vol. 42, No. 3, 2003, pp. 675–683
- Ghoshal, S., and Bartlett, C.A., "The Multinational Corporation as an Interorganizational Network", The Academy of Management Review, Vol.15, No. 4, 1990, pp. 603 – 625
- Gupta, A. K., and Govindarajan, V., "Knowledge flows within multinational corporations", Strategic Management Journal, Vol. 21, No. 4, 2000, pp. 473-496
- Hedlund, G., "The Hypermodern MNC - A Heterarchy?", Human Resource Management, Vol. 25, No.1, 1986, pp. 9 - 36
- Herbsleb, J., and Moitra, D., "Global Software Development", IEE Software, Vol. 18, No. 2, March/April 2001, pp. 16-20
- Hofstede, G., "Culture's consequences: International differences in work-related values", Beverley Hills: Sage Publications 1980
- Hymer, S., "The International Operations of National Firms: A Study of Direct Investment", MIT Press: Cambridge, MA, 1976 (reprint of Ph.D. thesis, Department of Economics, MIT, 1960)
- Iyengar, P., Karamouzis, F., Marriott, I., and Young, A., "Magic Quadrant for Offshore Application Services", Gartner Research, February 2006 (ID Number: G00137244)
- Khan, N., Currie, W.L., and Weerakkody, V., "Offshore Information Systems Outsourcing: Strategies and Scenarios", Proceedings of the 11th European Conference on Information Systems, 2003

- Kogut, B. and Singh, H., "The Effect of National Culture on the Choice of Entry Mode", *Journal of International Business Studies*, Vol. 19, No. 3, 1988, pp. 411-432
- Kogut, B., and Zander, U., "Knowledge of the Firm and the Evolutionary Theory of the Multinational Corporation", *Journal of International Business Studies*, Vol. 24, No. 4, 1993, pp. 625 – 645
- Levy, D.L., "Offshoring in the New Global Political Economy", *Journal of Management Studies*, Vol. 42, No. 3. pp. 685-693
- Malnight, T.W., "The Transition from Decentralized to Network-based MNC structures: an Evolutionary perspective", *Journal of International Business Studies*, Vol. 27, No. 1, 1996, pp. 43-65.
- Martin, X., and Salomon R., "Knowledge transfer capacity and its implications for the theory of the multinational corporation", *Journal of International Business Studies*, Vol. 34, 2003, pp. 356–373
- Mathrani, A., Viehland, D., and Parsons, D., "Dynamics of Offshore Software Development: The Outsourcers' Perspective", *International Conference on Knowledge Management in Asia Pacific*, November 2005
- McFarlan, F.W., "Portfolio approach to information systems", *Harvard Business Review*, Vol. 59 Issue 5, Sep/Oct 1981, pp. 142-150
- Perlmutter, H.V., "The Tortuous Evolution of the Multinational Corporation", *Columbia Journal of World Business*, Vol. 4, No. 1, 1969, pp. 9 – 18
- Porter, M. E., "Clusters and the New Economics of Competition", *Harvard Business Review*, November – December, 1998, pp. 77 – 90
- Prahalad, C.K. and Doz, Y.L., "A process model of strategic redirection in large complex firms: The case of Multinational Corporations", in A. Pettigrew (ed.), *The Management of Strategic Change*, Basil Blackwell, Oxford, 1987, pp. 63 – 83
- Strategic Management Journal*, Vol. 12, Special Issue: Global Strategy, 1991, pp. 145 – 164
- Rajkumar, T.M., and Mani, R.V.S., "Offshore Software Development – The view from Indian Suppliers", *Information Systems Management*, Spring 2001
- Rajkumar, T.M., and Dawley, D.L., "Problems and Issues in Offshore Development of Software", *Strategic Sourcing of Information Systems, Perspectives and Practices*, Wiley, 1998
- Ramarapu, N., Parzinger, M.J., and Lado, A.A., "Issues in Foreign Outsourcing: Focus on Applications Development and Support", *Information Systems Management*, Vol. 14, No.2, Spring 1997
- Ravichandran, R., and Ahmed, N.U., "Offshore Systems Development", *Information and Management* 24, 1993, pp. 33 – 40
- Ronstadt, R.C., "Research and development abroad by U.S. multinationals", New York, NY: Praeger Publishers, 1977
- Rugman, A.M., and Verbeke, A., "Extending the theory of the multinational enterprise: internalization and strategic management perspectives", *Journal of International Business Studies*, Vol. 34, 2003, pp. 125–137
- Shenkar, O., "Cultural Distance Revisited: Towards a More Rigorous Conceptualization and Measurement of Cultural Differences", *Journal of International Business Studies*, Vol. 32, No. 3, 2001, pp. 519-535
- Tallman, S., and Fladmoe-Lindquist, K., "Internationalization, Globalization, and Capability-Based Strategy", *California Management Review*, Vol. 45, No. 1, Fall 2002, pp. 116 – 135
- Tavares, A.T. and Pearce, R., "The Industrial Policy Implications of The Heterogeneity of Subsidiaries' Roles in a Multinational Network", *L'institute Discussion Paper 5*, Universities of Birmingham, Ferrara and Wisconsin-Milwaukee, 1999
- Teece, D., "Technology transfer by multinational firms: the resource costs of transferring technological know-how", *Economic Journal*, Vol. 87, 1977, pp. 242–261
- Tolentino, P. E., "Hierarchical Pyramids and Heterarchical Networks: Organisational Strategies and Structures of Multinational Corporations and its Impact on World Development", *Contributions to Political Economy*, Vol. 21, 2002, pp. 69-89
- Vernon, R., "International investment and international trade in the product cycle", *Quarterly Journal of Economics*, Vol. 80, 1966, pp. 190–207
- Williamson, O.E., "Transaction Cost Economics: The Governance of Contractual Relations", *Journal of Law and Economics*, Vol. 22, No. 2, Oct. 1979, pp. 233 – 261