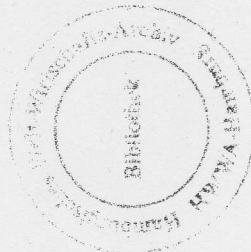


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The Multinational Enterprise and the Globalization of Knowledge

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With a Foreword by Edward M. Graham



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Globalization, Economic Geography and the Strategy of Multinational Enterprises

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Abstract

The intention of this chapter is to review the literature linking ownership and location strategies to economic geography and theories of globalization and to explore new areas of research. This chapter examines globalization in terms of conflicts between markets and economic management, and suggests that the differential pace of globalization across markets presents a number of challenges to policy makers in local, national and regional governments, and in international institutions. In examining the changing location and ownership strategies of MNEs, it shows that the increasingly sophisticated decision making of managers in MNEs is slicing the activities of firms more finely and in finding optimum locations for each closely defined activity, they are deepening the international division of labour. Ownership strategies, too, are becoming increasingly complex, leading to a control matrix that runs from wholly owned units via FDI through market relationships such as subcontracting, including joint ventures as options on subsequent decisions in a dynamic pattern. The input of lessons from economic geography is thus becoming more important in understanding the key developments in international business. The consequences of the globalization of production and consumption represent political challenges, and reaction against these changes has led to a questioning of the effects of global capitalism as well as to its moral basis. These four issues are closely intertwined and present a formidable research agenda to which the international business research community is uniquely fitted to respond.

Keywords

globalization; economic geography; strategy; multinational enterprises; location strategy

Introduction

The analysis in Buckley (2002) suggested that international business research succeeded when it focused on, in sequence, a number of big questions which arise from empirical developments in the world economy. The agenda is stalled because no such big question has currently been identified. This calls into question the separate existence of the subject area. This chapter suggests that the analysis of globalization, with a focus on economic geography, arising from the changing strategy and the external impact of multinational enterprises (MNEs) on the world economy, can be that 'big question'. Researchers also need to take on board challenges to global capitalism and to understand the roots of current discontent.

The intention of this chapter is to review the literature linking ownership and location strategies to economic geography and theories of globalization and to explore new areas of research. Thus, the chapter focuses on the relationship between the evolving strategies of MNEs, the changing economic geography of the world economy and globalization. The first section charts the conflicts between markets and government policies as markets integrate across national borders. Markets are globalized by the actions of MNEs. This is a deliberate process, but it is proceeding at a differential pace in different types of market. The drivers of this process – the location and ownership strategies of MNEs – are examined in the second section. These strategies revolve around the ability of MNEs to subdivide their activities more precisely and to place them in the optimal location. At the same time, more sophisticated and wider control strategies ranging from full ownership to market relationships are used to coordinate global activities. This, it is argued in the third section, makes economic geography more important than ever. Where an activity is placed it interacts with its immediate hinterland and this has profound consequences for changing economic power and development. Finally, the chapter examines protests against globalization that leads to the concluding research agenda.

Conflict of markets with national policies in the global economy

As Sideri (1997: 38) says, 'globalisation is essentially a process driven by economic forces. Its immediate causes are: the spatial reorganisation of production, international trade and the integration of financial markets.' It is not therefore uniform across economic space – 'the segmentation of

the manufacturing process into multiple partial operations which combined with the development of cheap transportation and communication networks, has brought the increasing division of production into separate stages carried out in different locations'. The strategies of multinational firms are therefore crucial to the causes and consequences of globalization.

We can examine globalization as a conflict between markets and management (policies). Figure 4.1 identifies three levels of markets – financial markets, markets in goods and services and labour markets. Each of these is moving at a different speed towards global integration. Financial markets are already very closely integrated internationally, so that no individual 'national capital markets' can have a sustainable independent existence. However, attempts at national regulation do persist (Laulajainen, 2000) and the role of localities in the financial markets still provides differentiation (Berg and Guisinger, 2001; Tickell, 2000). Despite this, it is legitimate for analytical purposes to hypothesize a single integrated global capital market. Regional economic integration (REI) is becoming increasingly effective in integrating goods and services markets at the regional level. The relationship between company strategy and policy-making within regional blocs such as the EU is a fascinating area for the development of new research streams (Chapman, 1999; Raines and Wishlade, 1999; see also Wood, 2003 on the Industrial Midwest of America). Labour markets, however, are functionally separate at the national level and here integration is largely resisted by national governments (Buckley et al., 2001).

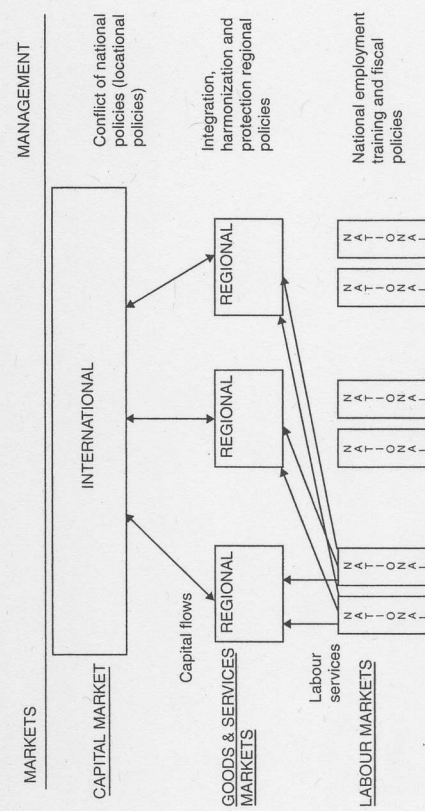


Figure 4.1 Internationalization of firms – conflict of markets

While the largest MNEs are already perfectly placed to exploit these differences in the international integration of markets (Buckley, 1997), REI offers both large and small firms the opportunity to enjoy the advantages of a large 'home' market, whether it is their native home or their adoptive home. The operation of international capital markets (which allow firms to drive their capital costs down to a minimum) has largely transcended policy on regional integration, although each region would hope to retain its own regional financial centre. It is primarily in the arena of the creation and fostering of regional goods and services markets that firms are enabled to exploit economies of scale across several countries, and that REI offers the most substantial size-of-country benefits. However, regional integration that encompasses countries with differentiated labour markets is becoming increasingly beneficial. This regional integration enables costs to be reduced by locating the labour-intensive stages of production in the cheaper labour economies within the integrated area. Firms that serve just one regional market, as well as those that serve several of the regional goods and services markets of the world through horizontally integrated foreign direct investment (FDI), are able to complement this with vertically integrated FDI in quality-differentiated labour markets. Vertical integration also reflects the spatial distribution of supplies of key inputs and raw materials. The MNE achieves advantages through both vertical and horizontal integration. Each strategy is promoted by the 'size-of-country benefits' of REI in goods and services markets, which reduce or eliminate artificial barriers to trade between the members. This maximizes the ability of firms to exploit intra-regional differences in factor abundance, including differentiated human capital.

At industry level, globalization can be shown to have an increasing impact. Gersbach (2002) defines globalization at the micro-level as 'the exposure of a productivity follower industry in one country to the productivity leader in another country' (p. 209). The transmission mechanisms of change across country borders are trade and FDI. Gersbach found a strong relationship between globalization and productivity differences with the most efficient producers. He concludes that globalization matters and that its influence spreads beyond a single region (e.g. Europe, North America).

More attention has been paid to vertical relationships (the supply chain). The differentiation of labour markets is most acute between advanced and less-developed countries that are typically not part of the same regional bloc. The managers of MNEs are increasingly able to segment their activities and to seek the optimal location for increasingly

specialized slivers of activity. This ability to separate and relocate stages of production has led to a boom in manufacturing in China and service activities (e.g. call centres) in India. MNEs are also increasingly able to coordinate these activities by means of a wide variety of mechanisms from wholly owned FDI through licensing and subcontracting to market relationships. The more precise use of location and ownership strategies by MNEs is the very essence of increasing globalization.

In parallel with the growth of the globalization of production, globalization of consumption has accelerated and it is perhaps this which has excited most opposition. The alleged globalization of tastes provokes nationalistic protectionist sentiments and is here analysed in terms of the balance of strategies within MNEs between 'local' and 'global' pressures on the firm.

The process of globalization is thus not only reorganizing power at world level but also at national and subnational levels (Alden, 1999; Dunning and Wallace, 1999; Graham, 2003; Mirza, 1998; Oxelheim et al., 2001; Peck and Durnin, 1999; Pike, 1999; Yeung, 2003). As domestic firms move part of their production to other countries, technology, knowledge and capital become more important than land, the traditional source of state power, and this redefines the function of the state (Rosecrance, 1996; Sideri, 1997). The loss of sovereignty to supranational regional institutions is more acceptable than to international institutions that are more remote. The EU is an example of such regional integration and governance (Bressand, 1990). Social programmes within the EU are enforcing major redistributions of revenue between the individual nations. The nation state as the possessor of the sense of identity is being replaced by subnations and internal regions as government is devolved.

A recent study by Subramanian and Lawrence (1999) found that national locations remained distinctive. Policy barriers at the borders, differences in local cultures in their widest sense and nature and geography contribute to distinctiveness. This, together with the ability of incumbents to keep outsiders at a disadvantage (Buckley et al., 2001) and the first entrant benefits of local firms, reinforces the differentiation of national economies. International competition remains imperfect and international price differences persist because arbitrage is costly. Domestic market conditions largely determine prices and wages. Multinational company affiliates remain firmly embedded in their local economy and such local firms identify closely with the national government. Subramanian and Lawrence (1999) conclude that national borders still matter. Borders continue to engender and to coincide with important discontinuities stemming from government policies, geography and

societal differences. The authors stress information discontinuities that coincide with national boundaries and so create search and deliberation problems for trading and manufacturing firms. These issues also account for the alleged 'home bias' of multinational firms. FDI is the key tool by which multinationals bridge cross-border discontinuities.

The two contrasting paradigms of a world made up of self-contained national economies and a 'borderless world' are incomplete and capture only part of a complex and subtle story. Lenway and Murtha (1994) examine the role of the state as a strategist along four dimensions: authority vs markets, communitarianism vs individualism, political vs economic objectives and equity vs efficiency. They state that international business scholarship 'places a benchmark value on efficient international markets and tends to regard states as causes of deviation from this ideal' (p. 530).

Globalization and corporate governance

Two key issues interact to provide governance issues arising from the globalization of business. The first is the existence of unpriced externalities. These impose costs (e.g. pollution) on the local economy and environment. The second is the remoteness of production and service activities from their ultimate owners or controllers (e.g. the shareholders). These two factors interact because the mechanism for correcting negative externalities becomes difficult to implement because of remoteness and lack of immediate responsibility.

Perceived difficulties of global governance in multinational firms are exacerbated by the current crises in governance of firms in the West. The shareholder return-driven environment which prevails today is very much the creature of the merger wave of the 1980s (Buckley and Ghauri, 2002). The feeling that corporations are outside social controls and that current forms of governance benefit only executives (and owners) rather than other stakeholders contribute to the concerns outlined in the previous section.

MNE-host country relations in middle-income countries have fully emerged onto the world stage, leaving behind a group of largely inert less developed countries that have so far been bypassed by globalization. Large, emerging countries, which contain significant middle-class markets, cheaper and well-educated labour and stabilizing political regimes (India, China, Brazil) are no longer seen just as new markets for old products (Pralad and Lieberthal, 1998) but as significant locations requiring reconfigurations of the economic geography of MNEs' operations. Not only do MNEs adapt products to local markets – but local markets also provide ideas for new global products (Murtha et al., 2001). Increasing

location 'tournaments' to attract FDI (Oxelheim and Ghauri, 2003), may have reduced the benefits to the host countries as have the increasing skill of the managers of MNEs in making their investments more 'footloose'. Corresponding skills on the part of host countries to make FDI 'sticky' are not developing at the same rate. Differences within developing countries may lead to divergence between those which can develop the velocity to catch up and those which will fall behind as the world economy becomes more interdependent.

Location and ownership strategies of multinational firms

The traditional MNE was a vertically, as well as horizontally, integrated firm. In consequence, each division of the firm was locked into linkages with other divisions of the same firm. As global competition intensified, there was growing recognition of the costs of integration of this kind. Commitment to a particular source of supply or demand of any product, intermediate good or service is relatively low cost in a high-growth scenario, since it is unlikely that any investment will need to be reversed. It is much more costly in a low-growth scenario, where production may need to be switched to a cheaper source of supply or sales diverted away from a depressed market. The desire for flexibility therefore discourages vertical integration – whether it is backward integration into production or forward integration into distribution. It is better to subcontract production and to franchise sales instead. The subcontracting of production is similar in principle to a 'putting out' arrangement, but differs in the sense that the subcontractor is now a firm rather than just a single worker.

Disintermediation and reintermediation

Disintegration was further encouraged by a low-trust atmosphere that developed in many firms. Fear of internal monopoly became rife as explained above. Production managers faced with falling demand wished that they did not have to sell all their output through a single sales manager. Sales managers resented the fact that they had to obtain all their supplies from the same small set of plants. Each manager doubted the competence of the others and ascribed loss of corporate competitiveness to selfishness and inefficiency elsewhere in the firm. Divisions aspired to be spun off so that they could deal with other business units instead. On the other hand, managers were wary of the risks that would be involved if they severed their links with other divisions altogether. The result is

that a much more complex strategy set faces decision-makers in multinational firms.

Strategy, e-commerce and networks

These changes are challenges for 'old economy' companies including the integration of online functions with existing brand and back office infrastructure. Business-to-business and building online links with suppliers and customers imply the redesign of business process networks. Smaller companies may find it easier to operate internationally because it is easier to reach customers, but there are still information problems, logistics and management control. Products still have to be delivered to customers. This is not just a matter of transport costs, but also regulatory differences between countries, cultural distance and other factors.

A natural way to cope with these pressures is to allow each division to deal with external business units, as well as internal ones. In terms of internalization theory, internal markets become 'open' rather than 'closed'. This provides divisional managers with an opportunity to bypass weak or incompetent sections of the company. It also provides a competitive discipline on internal transfer prices, preventing their manipulation for internal political ends and bringing them more into line with external prices. There are other advantages too. Opening up internal markets severs the link between the capacities operated at adjacent stages of production. The resulting opportunity to supply other firms facilitates the exploitation of scale economies because it permits the capacity of any individual plant to exceed internal demand. Conversely, it encourages the firm to buy in supplies from other firms that have installed capacity in excess of their own needs.

The alignment of internal prices with external prices increases the objectivity of profit measurement at the divisional level. This allows divisional managers to be rewarded by profit-related pay based on divisional profit rather than firm-wide profit. Management may even buy out part of the company. Alternatively, the firm may restructure by buying in a part of an independent firm. The net effect is the same in both cases. The firm becomes the hub of a network of interlocking joint ventures (Buckley and Casson, 1988, 1996). Each joint venture partner is responsible for the day-to-day management of the venture. The headquarters of the firm coordinates the links between the ventures. Internal trade is diverted away from the weaker ventures towards the stronger ones, thereby providing price and profit signals to which the weaker partners need to respond. Unlike a pure external market situation, the

partners are able to draw upon expertise at headquarters, which can in turn tap into expertise in other parts of the group.

A network does not have to be built around a single firm, of course. A network may consist of a group of independent firms instead (Ghani, 1999). Sometimes these firms are neighbours, as in the regional industrial clusters described by Best (1990), Porter (1990) and Rugman et al. (1995). Industrial districts, such as 'Toyota city', have been hailed as an Asian innovation in flexible management, although the practice has been common in Europe for centuries (Marshall, 1919). As tariffs and transport costs have fallen, networks have become more international and 'virtual'. This is demonstrated by the dramatic growth in intermediate product trade under long-term contracts. For example, an international trading company may operate a network of independent suppliers in different countries, substituting different sources of supply in response to both short-term exchange rate movements and long-term shifts in comparative advantage.

By establishing a network of joint ventures covering alternative technological trajectories, the firm can spread its costs while retaining a measure of proprietary control over new technologies. The advantage of joint ventures is further reinforced by technological convergence, for example, the integration of computers, telecommunications and photography. This favours the creation of networks of joint ventures based on complementary technologies, rather than on the substitute technologies described above (Cantwell, 1995). Joint ventures are important because they afford a number of real options (Trigeorgis, 1996) which can be taken up or dropped depending upon how the project turns out. The early phase of a joint venture provides important information that could not be obtained through investigation before the venture began. It affords an opportunity later on to buy more fully into a successful venture – an opportunity that is not available to those who have not taken any stake. It therefore provides greater flexibility than does either outright ownership or an alternative involving no equity stake (Buckley et al., 2002).

Global knowledge diffusion

As Buckley and Carter (2002) point out, problems in the global organization of MNEs are frequently presented as oppositions. Typical are global vs local, centralize vs decentralize, standardization vs adaptation and efficiency vs responsiveness. These issues are not independent of knowledge management. Global/local issues centre on the costs of managing knowledge flows and the combination of general 'company-wide'

seek optimal locations for raw materials, intermediate goods, services 'brain arbitrage' and assembly plants. They also seek entry and exit strategies for markets as they wax and wane over time. This is a suitably complex subject for detailed analysis.

Global/local operations

In the strategic decisions of multinational firms, there has always been a tension between the pressures to globalize and the need to stay local and to serve individual customers (Ghauri, 1992). The advantages of global operations are cost-based, maximizing economies of scale and reducing duplication, thus achieving efficiency. The advantages of localization are revenue based, allowing differentiation to reach all customer niches and achieving responsiveness. The tension can be summed up in the phrase 'the cost advantages of standardization vs the revenue advantages of adaptation' (Table 4.1).

Much of the strategy of the multinational firm can be explained by the attempts of management to reconcile these pressures (Devinney et al., 2000).

Over time, firms have (been advised to) switch their organization so as to balance these pressures – one example is the 'transnational' type of organization advocated by Bartlett and Ghoshal (1989). However, pressures in different industries push firms towards a strategic imperative (scale in electronics, local demand differences in consumer goods) and different functions require different balances of global/local orientation (finance, production, sales functions). The 'hub and spoke' model below is a key method of attempting to reconcile these conflicts. Global and local oppositions are shown in Table 4.1. Cultural differences are of great importance in determining the extent of this balance.

The globalization of markets has been a major factor in the growth of volatility (Buckley and Casson, 1998). A feature of many global markets is the use of regional production and distribution hubs, where several neighbouring countries are serviced from the same location. The regional hub,

Table 4.1 Global and local operation

Global	Local
Cost	Revenue
Efficiency	Responsiveness
Centralization	Decentralization
Standardization	Adaptation
	GLOCAL?

knowledge and separable, spatially fixed local-specific knowledge. Spatial questions are one part of dealing with knowledge-intensive organizations, but spatial issues are bound up with a whole set of temporal, organizational, strategic and process issues (Buckley and Carter, 2002: 46). As Murtha et al. (1998) show, strategy emerges from mindsets which are changing over time – global and local issues are capable of synthesis. The role of management knowledge is a crucial and under-researched phenomenon of globalization. Global management of knowledge does enable the separation of key activities that can therefore be managed in different ways. This has led to strategies of outsourcing, mass customization and deduplication of functions, which can be spatially separated, bundled and differentiated and consolidated, respectively. Murtha et al. (2001) examine the process of global knowledge creation and dissemination in a fascinating, detailed industry case study of the type that can be replicated and extended.

The goal of a modern sourcing strategy is to obtain the optimum combination of inputs from the variety of opportunities open in the global market. Normally, this will be geographically diverse and the means of procurement will be varied. Thus, both the location factor (where the inputs are acquired) and the internalization/externalization choice of means of procurement will vary with circumstances and will change over time. The ability of firms to 'mix and match' their sourcing strategy has been greatly enhanced by the use of the internet for procurement and the increasing use of 'outsourcing', whereby external offers can be compared to internal courses of supply, and the scope of the firm's internal activity adjusted accordingly. These strategies enable increased specialization and localization to enhance the division of labour globally and for individual firms to benefit from this by creating a global business network, which encompasses many locations for activities with mixed ownership/contracting modes of procurement. The reduced need for colocation locationally diversifies the firm's production base.

Similarly, the market servicing strategy comprises a mix of exporting, licensing/contracting and investment activities, again suggesting a mix of ownership and location strategies in different spatial and temporal circumstances. Here, too, different functions (more housing, distribution and advertising) can be either centrally and globally organized or differentially localized. Ownership too may be fully internal, joint venture/alliance or outsourced.

The interaction of the supply and demand side is yet to be fully studied, but it is safe to assume that large markets exercise a locational pull on inputs, and key input sources encourage local marketing. MNEs thus

like the IJV, can be understood as a strategy that offers superior flexibility. Just as an IJV offers a compromise ownership strategy, a regional hub offers a compromise location strategy. As the hub is nearer to each market than is the home location, it reduces transport costs, and offers better information capture too. Yet, because it is close to several markets, it avoids exclusive commitment to any one. If one market declines, production can be switched to other markets instead, provided the shocks affecting the national markets are independent (or less than perfectly correlated, at any rate) and the hub provide gains from diversification. These are real gains that only the firm can achieve, as opposed to the financial gains from unrelated product diversification, which have proved disappointing in the past because they are best exploited through the diversification of individual share portfolios instead.

Location and ownership strategies revisited: 'hub and spoke strategies'

The two strategies of IJV and hub can be combined (Figure 4.2). Since one (the IJV) is an ownership strategy and the other a location strategy, they can, if desired, be combined directly in an IJV production hub. Closer examination of the issues suggests that this is not normally the best approach, however. The model suggests that a combination of a wholly owned production hub supplying IJV distribution facilities in each national market is a better solution. A hub facility is too critical to

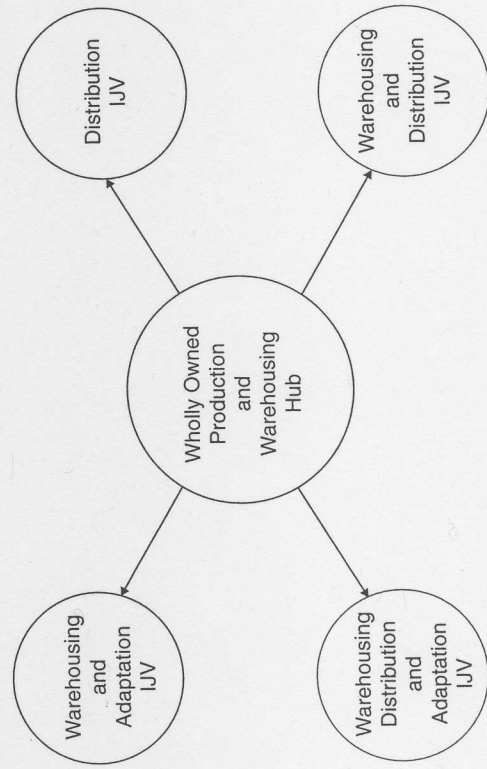


Figure 4.2 'Hub and spoke' strategies: an example

global strategy to allow a partner to become involved, because the damage they could do is far too great. Even with a wholly owned hub facility, the combination still affords considerable flexibility to divest or withdraw from any single market. The advantage of the combination is that when divesting, the distribution facility can be sold to the partner, while the production capacity can be diverted to markets elsewhere. These options for divestment are combined with useful options for expansion too. This example illustrates the crucial role that the concepts of flexibility and volatility play in analysing foreign market entry in the modern global economy. Without these concepts it is impossible to fully understand the rationale for IJVs and production hubs. It is also impossible to understand why these strategies have emerged at this particular historical juncture and not before.

Outsourcing and logistics

Many input functions are now viably outsourced – even human resource departments and procurement (*The Economist*, 2001a, b). Digital delivery of product is analogous on the output side. The danger is the loss of core competencies (outsourcing IT 'loses part of company's brain'). This development contributes to volatility and increases the mobility of activities internationally, as a great deal of outsourcing functions are competed for on a global basis. The policy of promoting linkages (forward as well as backward) followed by many agencies of national and local government needs to account for these changing decision-making parameters.

As is always the case, disintegration of established supply chains is followed by reintegration and consolidation. The trend to outsource (disinternalize) manufacturing by major multinationals led initially to subcontracting to independents – many of them located in South East Asia (and Mexico). Contract manufacturing (*The Economist*, 2000) has been growing by 20 per cent per year in the late 1990s and early part of this century. However, contract manufacturers are rapidly consolidating through mergers and are expected to reach an oligopolistic equilibrium, with around six firms dominating the global market. These firms are becoming supply chain managers, sometimes even organizing distribution and repair. These links between customers and suppliers are, of course, facilitated by the use of the Internet. Contract manufacturers, ensured of future contracts, are thus able to achieve economies of scale and to become more capital intensive, replacing unskilled labour by high-tech capital equipment. This trend is accelerated by the competitive imperative becoming speed-to-market, rather than cost. A linked supply of available factories in different national locations means that

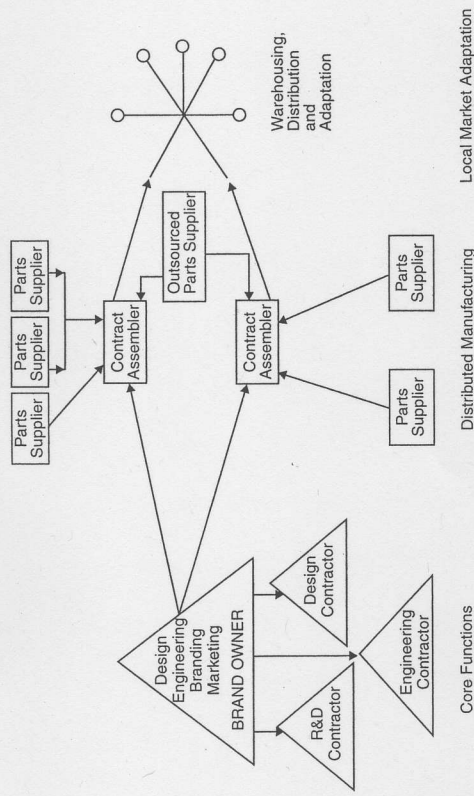


Figure 4.3 The global factory

and marketing while outsourcing large areas of production to parts suppliers, and they may well contract out final assembly. Thus 'built to order' products will be produced close to the final customer. Globalization implies location near the customer, not a single large-scale plant. It is the high fixed costs of existing factories which compel manufacturers to achieve large-scale production, and a reduction of fixed costs means that production can be more easily tailored to final demand.

Geography of globalization

Much has been made of the 'death of distance' (Cairncross, 1997) and 'the end of geography' by authors trumpeting the importance of the Internet and the ascendancy of virtual space over physical distance. Recent evidence, however, suggests that geography still matters. As Castells (2001: 209) says '... the internet backbone is global in its reach, but territorially uneven in its layout in terms of capacity'. The Internet is built on top of existing infrastructure and relies on fibre optic cables. The creation of data centres, 'web hotels' and 'server farms' has become conglomerated in key urban centres. Indeed, 49 of the servers for the top 100 websites are collocated in Exodus Communications, Santa Clara, Cal, USA (*The Economist*, 2001a, b). The storage of information has become more physically concentrated, not less, and economies of agglomeration, including the need for a reliable power source, are creating these server

the contract manufacturers can switch production lines between these units. Flexibility is achieved by moving these 'shell' factories between principals – entire production lines can be flown in from another location.

Vertical disintegration is thus accompanied by specialization. The principal concentrates on R&D, design and marketing, while the contract manufacturer provides a service to the global supplier. Companies with a strong manufacturing culture, and a commitment to a fixed location, may be out-competed by more agile 'virtual' firms owning no manufacturing facilities at all.

Mass customization is an important method of reconciling scale and differentiation (efficiency and responsiveness). An example is the textile industry where bespoke garments are ordered en masse from offshore sites with rapid delivery. This is associated with 'lean retailing' where distribution and design centres are linked to production centres by electronic means. Electronic ordering and automated distribution centres and inventory management systems linked to customers enable rapid response to customer needs. This combines information technology, speed and flexibility with low labour costs. So the custom-made vs bulk manufacture divide becomes fine. ('Cyber consumers expect to be able to customize everything.')

Deduplication of function becomes possible where electronic links allow single locations to service the whole firm's needs. Rather than a call centre for each division or country, a single one can serve all. There is also a tendency for reintegration of the supply chain from independents back to the major manufacturers or in specialist subcontracting firms as e-commerce matures.

The global factory

The above review suggests that the manufacturing system of the future will use 'distributed manufacturing' (*The Economist*, 2002) where products are more responsive to customer needs through flexible factories. In flexible factories, all plants within the system can make all the firms' product models and can switch between models very quickly by a combination of software and robots. The global factory will be the very antithesis of 'any colour as long as it's black'. It will have a single factory design for its distributed global plants and attention to staff training so that replication and perfect substitutability between plants is achieved. Customers will be able to dictate which parts, subassemblies or 'add-ons' they require in the final assembly and the distributed manufacturing function will reassemble (Figure 4.3), where production is pushed from the hub into the spoke. Brand owners will control design, engineering

farms, some of which come with their own power stations (ixGuardian is building the biggest one in Europe just outside London, *The Economist*, op. cit.). Sellers have a vested interest in determining the location of users of the Internet. The difference in laws and taxes governing these consumers is determined by geography, not network topology, and firms delivering goods ordered over the Internet stick with the old geographical (i.e. national) approach but are taking it online with 'geolocational services', largely using local postcodes. Web content can then be matched to the user's location. As national regulations still apply, particularly to goods such as pharmaceuticals and services, especially financial services, it is essential that companies stay within the law. So borders (national borders) are returning to the net.

Location thus becomes a search parameter for services. Filtering via precise targeting of customers (e.g. through mobile phones) is possible through satellite-based global positioning systems. *The Economist* concludes: 'The internet means that the distance between two points on the network is no longer terribly important. However, where those points are still matters very much. Distance is dying, but geography it seems is still alive and kicking' (p. 20).

Recently, technological advances have made it easier to argue for the link between geography and growth. Innovation has surged in developing links between places on the Internet and real-world locations – stitching together the virtual and physical worlds (*The Economist*, 2003). Geolocational services are being developed both to locate end-users and to find the Internet access point nearest to a particular location. Thus, suitably equipped laptops can access wireless Internet services close to a small base station (or 'hotspot'). Anyone in the locality can then avail themselves of these services. Mapping of base stations confirms that these are located in areas of highest economic activity. Again, virtual space reinforces existing spatial dispersion of activity, it does not substitute for them. Internet pages are becoming 'geocoded' or 'geotagged' to make geographical location explicit.

Deepening spatial division of labour

The evolving locational policies of MNEs have led to a deepening of the spatial division of labour. This interacts with changing ownership policies to produce radically new outcomes for the world economy (Ruigrok and Van Tulder, 1995). This section goes on to review three extant approaches to the deepening spatial division of labour (Dicken, 2003; Yeung, 2001) and then suggests future research developments.

Approach 1: The new international division of labour (NIDL)

The NIDL is not particularly new. It was foreshadowed by the analysis of Hymer (1972) who developed 'the law of uneven development'. Hymer envisaged a strict hierarchy in the world economy with 'higher order functions' (finance, design) being carried out in the advanced countries, with less-developed countries being relegated to the role of 'hewers of wood and drawers of water'. Probel et al. (1980) foresaw the increasingly disaggregated spatial nature of production under the control of MNEs. The increasing intensity of intra-firm trade (priced at internally determined transfer prices; Emmanuel and Mehatdi, 1994; Hirschleifer, 1986; Rugman and Eden, 1985; UNCTAD, 1999), which accounts for over half of world trade, is a concomitant of this fine spatial division. The ability of MNEs to create new specialized roles – largely corporate services – and to relocate them in favourable locations is a further innovation tracked by the NIDL approach.

Approach 2: Global commodity chains (GCCs)

Gereffi et al. (1994: 2) define GCCs as 'sets of inter-organisational networks clustered round one commodity of product, linking households, enterprises and states to one another within the world economy. These networks are situationally specific, socially constructed and locally integrated, underscoring the social embeddedness of economic organisation.' Buyer-driven chains are distinguished from producer-driven chains. Buyer-driven GCCs are dominated by large retailers and brand-name manufacturers or trading companies that organize decentralized production networks in developing countries for export. Typical industry settings include labour-intensive consumer goods industries organized by OEM (original equipment manufacturing) arrangements. Producer-driven GCCs are controlled by global oligopolies where TNCs control capital and knowledge-intensive production (Yeung, 2001). Empirical work on GCCs includes Dicken and Hassler (2000) and Gereffi (1999), while Jenkins (1987) applies this to development issues.

Approach 3: Regional networks

The role of regions and regional integration in the spatial organization of the world economy is clearly critical as was shown above. Considerable work has been undertaken on Asian production networks which unfortunately took a wrong turn with the 'flying geese model' where it was alleged that the leading goose (Japan) would pull others in the flock (the smaller economies of Asia) along in its slipstream. Not only is this an

inaccurate description of the way geese fly (different geese assume the leadership for different periods), it ignores vertical linkages across and between these economies and those of the rest of the world, it also overplays the benign effects of leadership and underplays power relationships (see Bernard and Ravenhill, 1995; Edgington and Hayet, 2000; Hart-Landsberg and Burkett, 1998; Hatch and Yamamura, 1996; Hill and Fujita, 1996; Tsui-Auch, 1999). There is a parallel here with the French 'filière' approach which has not permeated and influenced mainstream English language literature (Raikes et al., 2000).

However, regional networks in Asia are important both theoretically (Markusen and Venables, 2000) and empirically as well (for instance, Yeung (2001) on Singapore firms in South East Asia and Ghauri and Prasad (1995) on Asian networks).

Geographical analyses of globalization

The NIDL, global commodity chains and (regional) production networks all fit well with the international business research agenda. The progress of research in this area depends on inter-disciplinarity and connectivity.

Economic geography has a long history (Clark et al., 2000; Krugman, 1991, 2000) and is currently enjoying a renaissance (Scott, 2000). The importance of the new geography is attested to by the concern for 'the new geography of competition' for mobile investment (Raines, 2003) and the increasingly complex interplay between states, economic regional blocs such as the EU and subnational regions such as states in the USA and semi-autonomous regions such as Catalonia or Scotland (Oxelheim and Ghauri, 2003; Phelps and Alden, 1999; Phelps and Rains, 2003).

Economic geographers have made many significant contributions to the analysis of globalization that can, with profit, be noted by international business scholars. Regional integration and the division of world markets into trade and investment blocs have been extensively analysed by geographers (for summaries on Asia, North America and Europe see Abo, 2000; Holmes, 2000; and Amin, 2000). However, the incorporation of real geographical features such as climate, coastline, river transport, soil quality and terrain has perhaps been underplayed and this represents a real opportunity for future development. This links physical geography and economic development. A research agenda of this kind is proposed by Mellinger et al. (2000) and Buckley and Casson (1991) included 'geographical factors that influence entrepôt potential' in their analysis of factors in the long-run economic success of a nation (p. 33). The links between economic geography and development are also worthy of attention in the literature on 'spillovers' from MNEs to the local economy.

Many of these spillovers are enhanced by geographical proximity (in the formation of clusters of supporting industries, for instance) and this factor is not often explicitly included in the examination of spillovers.

Aspects of the strategy of MNEs can also be enhanced by a deeper understanding of spatial issues. Geographical models can illuminate strategic decisions both through the use of models (Storper, 2000) and empirically as well (Wrigley, 2000). Local labour markets, which are a key attraction for efficiency-seeking FDI, are also geographically configured and analysis here also benefits from the insights of economic geography (Hanson, 2000). As we have seen above, the strategy of MNEs cannot be fully comprehended without an understanding of the role of knowledge management including both its spatial and temporal aspects (Auderesh, 2000; Schoenberger, 2000). One of the most brilliant analyses of the management of knowledge across time and space was, of course, made by Raymond Vernon (1966) in his analysis of the product cycle. There is much here for international business researchers to build on.

One of the most celebrated analyses combining economics and geography in the analysis of national economic strategies is that of Michael Porter (1990, 2000), building on a previous synthesis of work with a strong spatial element in the analysis of competitive advantage (Porter, 1985). The essence of concentrations of mutually supportive industries – clusters or industrial districts – goes back to the work of Alfred Marshall (1919, 1930) who seized on the ability of firms in close proximity to capture the external economies which might otherwise not be appropriated (Asheim, 2000). There are close connections here with mainstream work in international business, notably John Dunning's OLI paradigm, with a focus on the L for location (Dunning, 1977, 1995, 2000). The ability of foreign MNEs to tap into local clusters and to create their own spatially distinct growth poles have long been major features of international business analyses of the dynamics of growth. Perhaps the most developed of this stream of analysis is its links with 'clusters of innovation' and 'national systems of innovation' (Cantwell, 1989). The geography of innovation is an area of great potential and one to which international business scholars will continue to contribute (Antonelli, 2000; Feldman, 2000; Lundvall and Maskell, 2000; Maskell, 2000).

The geographic sources of competitiveness of international firms have attracted sporadic attention (Birkinshaw and Hood, 2000; Dunning, 1996; Frost, 2001), particularly as regards creative subsidiaries, but have not, as yet, become a mainstream preoccupation of international business theory. However, attention to foreign (decentralized) R&D and patenting activity has been studied (Almeida, 1996; Belderbos, 2001; Cantwell,

1993; Cantwell and Janne, 2000; Dalton and Serapio, 1999; Jones and Davies, 2000; Pearce, 1999) as has the internationalization, geographic locational advantages and competitiveness of service firms (Dunning and McKaig-Berliner, 2002; Nachum, 1999).

Despite this considerable research progress in the economic geography of globalization, there are still areas of great opportunity for further development and innovation. One of these is the geography of culture (Thrift, 2000) where international business scholars drawing on their long tradition of work in this area (Hofstede, 1997, 1980; Ronen and Shenkar, 1985) have an unrivalled ability to contribute. The spatial boundaries of 'a culture' are of enormous practical and theoretical interest, particularly with regard to their alignment or non-alignment with national, linguistic and other frontiers (Braudel, 1995; Shenkar, 2001).

A second key area of potential development is the furtherance of the research agenda of the 'Janus face of globalization' and in particular its geographical aspects. Spatially, do the benefits of globalization accrue to the rich (capital exporting) countries or to the poor (host) countries (Eden and Lenway, 2001)? As MNEs became more sophisticated in exploiting the spatial division of labour by slicing their activities even more finely, the question of who benefits becomes more pressing and the answer more sophisticated. The countervailing power of NGOs also requires further analysis (Doh and Teegan, 2003).

Demographic changes and migration are two of the other under-researched phenomena in examining the deepening spatial division of labour. The comparative advantage of international business scholars has always been their ability to combine different approaches and to see the big picture. This type of creative connectivity is needed in pushing forward the frontiers of research on the geography of globalization and the role of MNEs.

Challenges to globalization

Market capitalism, as described above, has inherent global tendencies. These stem directly from the central role of trade in a market system. The tendency of trade to promote globalization can be seen in the empires of classical antiquity, as well as in the globalization that occurred in the Age of High Imperialism before the First World War (Prior, 2000). This age was the culmination of almost a millennium of incremental development, in which local markets became integrated into regional trading systems, and these trading systems were in turn integrated across continents as a consequence of trans-oceanic voyages of

discovery. This integration of markets is a defining characteristic of globalization.

Market capitalism also encourages the globalization of finance and promotes the mobility of labour. Large financial markets offer investors greater liquidity, and more competitive pricing of stocks and shares, combined with greater legal security. This leads to the agglomeration of economic power in major metropolitan centres where financial dealings predominate. Peripheral regions of the integrated economy are plundered for their raw materials, or farmed intensively to feed the urban areas, or relegated to unskilled labour-intensive work. This is simply the imperative of efficiency seeking in a world of constant change.

This discussion provides a suitable framework for examining some of the major complaints levelled at the World Trade Organization at their 1999 Seattle meeting. The substance of the complaints appears to be that:

- the progressive reduction of trade and investment barriers leads to loss of jobs;
- an accelerating pace of technological change leads to greater insecurity of jobs and to the end of the lifetime employment system;
- inadequate environmental standards lead to increases in pollution which are incompatible with sustainable development;
- greater income inequality emerges, both within countries and between them, creating new social and political divisions;
- destruction of local communities is caused by an extension of global linkages;
- cultural diversity is reduced, because culture is homogenized by standardization on modern Western values;
- national sovereignty is threatened, and the power of the state is undermined; and
- deregulation of industry and services leads to increased uncertainty, and to greater opportunities for stock-market speculation.

Little can be done to address some of these objections because they hit directly at the logic of the capitalist process (Rugman, 2000). For example, the dynamics of the market system mean that old jobs are destroyed at the same time that new jobs are created, and as this process accelerates, jobs become progressively more insecure. Many of these objections can be addressed fully only by changes which would dramatically reduce the long-run efficiency of the capitalist system. It is perfectly possible, for example, to insist that the metropolitan trading centres be deglomerated, thereby redistributing entrepreneurial profits to more peripheral

regions. However, the costs of transporting and distributing commodities would increase, and consumers as a whole would be worse off. Similar measures could be applied to deglomerate R&D from major clusters like Silicon Valley to a host of minor ones, but again there would be efficiency losses in terms of innovations forgone. Moreover, it is likely that plans for enforced deglomeration would quickly become distorted by local politics, so that any redistribution of income would mainly favour corrupt officials.

Indeed, contrary to the claims of the Seattle protestors, globalization confers important benefits. As Table 4.2 indicates, the opening up of trade frees domestic workers from the need to produce for subsistence and allows them to specialize, if they wish, on export production. Provided they work in a free society, they will switch to export production only if they perceive a benefit from doing so. There is little direct evidence that local producers are systematically duped into producing for export markets through selfish manipulation, although it is often alleged by critics of free trade that this is what local moneylenders and export merchants do.

While some of the objections are invalid, however, others have substance to them. The moral ambiguities of the capitalist system generate a range of problems connected with negative externalities of one sort or another. No set of market contracts can cover all of the issues involved in coordinating a complex global economic system – except at prohibitive transaction cost. It is wrong to suggest that nothing can or should be done about these problems. Consider, for example, the issue of financing mineral industries in developing countries. In a world where entrepreneurial greed was constrained by Protestant guilt, profits in resource-based industries would be voluntarily sacrificed to render development more sustainable. Bankers would think twice before lending large sums of money to inexperienced borrowers, such as the governments of less-developed countries. In a more secular society, issues of sustainability and manipulative lending practices can be addressed through statutory regulation, but this requires a high level of inter-governmental cooperation. The institutions of inter-governmental cooperation are often slow and bureaucratic, creating considerable impatience among activists awaiting a policy response. It is inherently wasteful to operate a capitalist system that encourages selfish profit-seeking behaviour, and to then establish a cumbersome inter-governmental bureaucracy to restrict it. Regulating profit seeking through self-restraint is, in principle, a much cheaper option, provided that the moral infrastructure is in place.

Secular ideologies provided an outlet for creative talents throughout much of the twentieth century, and their demise leaves a serious vacuum.

Source: Buckley and Casson (2001: 320).

Table 4.2 Winners and losers from the globalization of capitalism

Factor	Winners		Losers	
	Labour	Profit earners	Government	
Reductions in transport costs and tariffs for manufactured goods	Labour in newly industrializing countries	Owners of successful globalized firms or of the firms that supply them	Non-interventionist governments with strong respect for property rights	Reduced transport and communication costs give increased scope for international specialization and exploitation of agglomeration economies, providing firms with a wider choice of political regimes from which to operate
Facilitate international transfer of proprietary knowledge	Owners of firms that fail to globalize or of firms that are dependent on them	Interventionist governments with weak respect for property rights		

The protesters at Seattle were struggling to find a relevant language in which to express their discontent. Their demonstrations showed that they did not trust existing international institutions to make the changes that they believe are required. They sensed intuitively that there is a lack of restraint by those who hold economic power – namely by those who influence key decisions about future policy regimes in the global economy. In this sense their attitudes simply reflect the low-trust culture that modern capitalism has created.

Admittedly, many of their criticisms are not new – they echo the criticisms of international capitalism advanced by socialists in the past. Some of their claims may also be misguided. It was shown above, for example, that low-wage workers in developing countries can benefit substantially from global capitalism. However, there is always a tendency for people who are making a point to support their position with as many arguments as they can find – good as well as bad. Groups that wish to engage in collective action often have to promote an eclectic position in order to mobilize support as widely as possible.

The analysis in Buckley and Casson (2001a, b) suggests that the protesters' accusations of bad faith against modern capitalist enterprises may have substance. Some marketing techniques systematically probe for ignorance and lack of self-awareness among the consuming public. Popular brands are targeted at poor consumers, offering them subjective rewards, such as higher status, at a price they cannot afford to pay. Children and young people make easy targets, especially when advertisements can be skillfully designed to undermine parental veto power. When people find the time to relax, and reflect on their experience as consumers, their higher nature intuitively alerts them to the problem. However, they cannot easily articulate their feelings because they have been brought up to believe that they are rational all of the time. Even if the products they buy seem useless in retrospect, it has to be admitted that shopping for them seemed like fun at the time (see Frank, 1999). Shopping becomes an end in itself – exercising the impulse to buy being the immediate source of pleasure – and the product is just the excuse. Products have to be thrown away because otherwise storage space would limit indulgence in the shopping experience. On this view, it is when shopping palls, and the meaninglessness of the impulse to buy becomes obvious, that protests become attractive instead. People become angry when they finally have to face the fact that they have been systematically manipulated by the producers of the branded trivia of the modern capitalist system.

Moral arguments are rarely clearcut, however. Here is Lord Desai, no lover of capitalism:

globalisation is nothing but the resurgence of capitalism in the late 20th century. As FDI spreads to the poor countries of Asia, many of the people living there decide to quit their life of rural idiocy and join sweat shops in town. This may seem horrible to moralists of non-governmental organisations, but it is betterment for those making the decision to move. No doubt a concern for their rights in developed countries will price them out of their jobs. Thus does altruism of the rich often kill the poor by kindness. (Desai, 2003: 23)

However, it is not the poor who protest (in Seattle or elsewhere). The worry is that it is the beneficiaries of global capitalism who are its fiercest critics.

Conclusion – a research agenda

There are serious issues surrounding the notion of globalization. There are also some myths. Empirical evidence is often disassociated from polemical writings on the subject. There is a great opportunity in front of international business scholars to confront assertions about globalization with facts (or stylized facts).

This chapter has examined globalization in terms of conflicts between markets and economic management and suggested that the differential pace of globalization across markets presents a number of challenges to policy makers in local, national and regional governments and in international institutions. In examining the changing location and ownership strategies of MNEs, it has shown that the increasingly sophisticated decision making of managers in MNEs is slicing the activities of firms more finely and in finding optimum locations for each closely defined activity, they are deepening the international division of labour. Ownership strategies, too, are becoming increasingly complex, leading to a control matrix that runs from wholly owned units via FDI through market relationships such as subcontracting, including joint ventures, as options on subsequent decisions in a dynamic pattern. The input of lessons from economic geography is thus becoming more important in understanding the key developments in international business. The consequences of the globalization of production and consumption represent political challenges and reaction against

these changes has led to a questioning of the effects of global capitalism as well as to its moral basis.

These four issues are closely intertwined and present a formidable research agenda to which the international business research community is uniquely fitted to respond. This agenda can encompass work from the empirical to the theoretical. Empirical issues include: the careful mapping and spatial analysis of FDI flows, the spatial and temporal spread of MNEs, and the geographical determinants of strategy. The underplaying of physical geography (rivers, coastlines, climate, soil types) from explanations of FDI and MNE strategies needs to be corrected. The external effects of MNEs (linkages, spillovers) need to be more closely related to the analysis of strategy so that IB researchers can contribute more to the literature on development and underdevelopment.

Theoretical avenues include the full incorporation of spatial issues in the strategy of MNEs, the integration of the role of new institutions such as NGOs and fuller attention to the political implications of the activities and changing organization of MNEs. The management of space and time by MNEs should be in the forefront of the analysis of globalization.

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