

Marketing and the multinational: extending internalisation theory

Peter J. Buckley · Mark Casson

Received: 1 November 2010 / Accepted: 10 December 2010 / Published online: 7 January 2011
© Academy of Marketing Science 2010

Abstract Introducing marketing explicitly into the internalisation theory of the multinational enterprise considerably extends the power of the theory. In particular, it enables a comparison of marketing-led and technology-led multinationals and highlights the benefits of collaboration between them. It facilitates the analysis of outsourcing, and in particular of R&D. It highlights the importance to marketing-led firms of owning product rather than facilities. The analysis addresses key issues relating to “hollow firms”, “flagship firms” and the “global factory”.

Keywords Marketing · Multinational · Internalisation · Entrepreneurship · Systems · Knowledge

Introduction

The literature on international marketing and the literature on the economics of the multinational enterprise (MNE) are largely separate (Buckley 2002). While international management scholars have made selective use of MNE theory, MNE scholars have made very little use of marketing theory. It is mainly writers on the organisation and culture of MNEs that have drawn upon marketing theory—notably the Uppsala school (Johanson and Vahlne 1977, 2010).

Bridging the gap between the economic theory of the MNE and marketing theory would have significant advantages for both subjects. The applicability of MNE theory would be extended, and its predictive implication for international marketing would be refined (Varadarajan 2010). This paper is intended as a step in this direction.

The project is not an easy one, however. The two literatures differ in fundamental respects, and bridging the gap requires a re-think by MNE scholars. Marketing literature tends to be practitioner oriented—although papers are often conceptual in nature, they usually draw out implications for management (Paliwoda and Ryans 2008). By contrast, economics literature on the MNE usually abstracts from practical issues and develops policy implications for governments and regulators instead. Economic models emphasise contingency: the optimal solution depends upon a wide range of contingent factors; by contrast, marketing models often suggest that there is one best way of doing things, or at least that the number of relevant contingencies is small.

Perhaps the most fundamental difference, however, is that economists specify their assumptions with a view to simplifying their models, while marketing scholars prefer assumptions that are realistic (Buckley and Casson 1993). Economists emphasise rigour at the expense of realism; they abstract from the factors they find most difficult to analyse, and marketing has suffered badly from this bias. In most economic theories of the MNE, marketing is treated as just one of a number of knowledge-based activities undertaken by the firm (Forsgren 2007). The most important of these activities is assumed to be R&D. It is then postulated that whatever is true of R&D is true of marketing too. This side-steps the factors that make marketing difficult to analyse—in particular the subjective nature of the knowledge used and the plurality and diversity

M. Casson (✉)
Centre for Institutional Performance, School of Economics,
University of Reading,
PO Box 218, Reading RG6 6AA, UK
e-mail: m.c.casson@reading.ac.uk

P. J. Buckley
Centre for International Business Studies, University of Leeds,
Leeds, UK

of the sources from which it is obtained. This paper rejects this over-simplification and offers a more realistic economic theory. This theory distinguishes between technology-led firms and marketing-led firms, and it has important implications for policy-makers and practitioners alike.

The strategy adopted in this paper is to extend the internalisation theory of the MNE to encompass marketing as well as R&D. Internalisation theory has been chosen because it is a purely economic theory of the MNE. Although it embraces insights from other social sciences, it incorporates these insights into an explicit economic framework. There are other theories that are even more encompassing, such as Dunning's eclectic theory (Dunning 1977) and the resource-based theory of the firm, (Barney 1991; Foss 1997), but these are best regarded as multi-disciplinary frameworks instead. Neither embraces the core assumptions of equilibrium between optimising agents that characterise conventional economics. Although internalisation theory is also unconventional in some respects, because of its emphasis on transactions costs and knowledge flows, it has always remained conventional in the behavioural assumptions on which it is based. Thus if the gap between economics and marketing can be bridged using internalisation theory, then it can be bridged using other theories too.

In order to extend internalisation theory it is necessary to begin by reviewing its present state of development. The basic principles of internalisation theory are set out in the next section, using an international supply chain as an example; a variant of internalisation that is particularly relevant to marketing-led firms is discussed in the following section. The significance of knowledge-based resources is examined in the next three sections. Because knowledge is a global public good it can, in principle, be shared across supply chains serving different markets. This leads to the classic view of the knowledge-intensive MNE as a firm that internalises knowledge flow. The fourth section compares and contrasts technological knowledge and marketing knowledge in the context of a supply chain serving a single national market. The fifth section explains how the analysis can be generalised to the more complex case of multiple supply chains in a multi-country world. The sixth and seventh sections illustrate the coordination of multiple supply chains and examine the links between marketing, supply chains, and the phenomenon of the "hollow firm".

The conclusions are summarised in the final section, which develops the distinction between technology-led firms and marketing-led firms. The former derive their profits mainly from technological knowledge and the latter from marketing knowledge. Because the two types of firm have different configurations of knowledge flow and are regulated by different systems of property rights, their internalisation decisions will be different too. Theory

suggests, for example, that a marketing-led firm will be more inclined than a technology-led firm to subcontract R&D; conversely, marketing-led firms will be less inclined to subcontract their marketing function than will technology-led firms. These differences will in turn be reflected in different spatial boundaries for the firms. Marketing-led firms, it is also suggested, will be more inclined than technology-intensive firms to base their headquarters in major metropolitan centres where culture and media industries are based. This result has implications for the characteristics of the countries in which marketing-led MNEs base their headquarters. More widely, it suggests that the agglomeration of MNE headquarters as a whole may be better explained by the demands of their marketing activities, i.e., a mutual attraction to cosmopolitan centres, than by the demands of their research activities, i.e., a desire to participate with other MNEs in localised scientific communities.

Internalisation theory and the systems view of international business

The global systems view of inter-dependent facilities

Internalisation theory is a formal economic theory of international business, based on the seminal work of Ronald Coase (1937). It focuses on alternative contractual arrangements and explains the choice of the arrangements made to coordinate different types of economic activity. It has proved extremely useful in analysing where the boundaries of firms are drawn (McManus 1975). This issue is highly relevant to the MNE, since it is the interplay between the boundaries of the firm, in terms of the activities it controls, and the boundaries of the political states in which these activities are located, that determines the degree of multinationality of the firm. This section summarises modern internalisation theory in a non-technical manner.

The full potential of internalisation theory is exploited by adopting a systems view of the global economy, as set out, for example, in Buckley and Casson (1998a, b). According to this view, the global economy is a closed economic system. Unlike national and regional economies, it does not interact with other economies of a similar type—it is complete within itself.

The focus of internalisation theory is not a particular firm, but rather an industry. A given industry can draw resources away from other industries at a constant opportunity cost, which varies according to the nature of the resource and the location from which it is procured (Buckley and Casson 1976).

For the purposes of modelling the MNE, a global industry may be thought of as a collection of facilities

linked by flows of goods and services. Each facility has a location, and each location is in a particular country (Klein 1989). The types of facilities typically identified include production plants, distribution centres and R&D laboratories. Later sections of this paper introduce marketing centres too. These facilities, together with the linkages between them, make up the production system (Buckley and Hashai 2004).

Customers also operate facilities. Customers are usually identified as household consumers, although they could be institutions such as central or local government instead. Customers are served by supply chains. The facility at the end of each supply chain is the customer's own facility. Supply chains comprise a range of facilities. Supply chains can be international, with different facilities located in different countries. Each country has its own supply chain. Supply chains may share certain facilities, however, as explained below.

Simple supply chains comprise only production and distribution facilities, and they are purely sequential (as illustrated in Fig. 1). In practice, of course, many stages of production occur in parallel; in the production of multi-component goods, for example, there may be sequential tiers of parallel production. Parallel production is a complicating factor, however, and since it does not fundamentally change the model, this paper focuses on the sequential case.

The concept of coordination—within facilities and between facilities

Conventional economics tends to emphasise the role of facilities—production plants in particular (Scherer 1975). The productivity of a plant is regarded as key to the performance of the firm that owns it. Many firms that coordinate supply chains, however, do not own the plants that they coordinate—they simply own the flows of product between them; the plants are owned by independent subcontractors to whom the firm “puts out” work (Hinterhuber

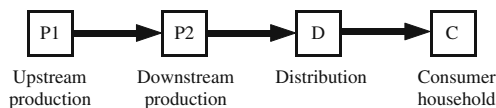


Fig. 1 Basic supply chain for a differentiated product supplied to a national market. *Note:* The square boxes denote facilities. Because production and distribution facilities normally operate on a scale sufficient to meet the needs of multiple consumers, the consumer in this diagram is best regarded as a representative consumer drawn from a population of consumers rather than just a single individual. The horizontal black line denotes product flow, and the arrow indicates the direction of flow. P1 and P2 are linked by semi-processed product flow; P2 and D by wholesale product shipped from factory to warehouse or retail unit; and D and C by finished product delivered to (or collected by) the final customer

2002). In this case it is the efficiency of the linkages that is crucial to the performance of the firm. By highlighting the role of both facilities and linkages, internalisation theory offers a more balanced view of economic performance than conventional theory.

Facilities within the production system typically comprise stocks of assets, including employees (human capital), plant, machinery and buildings (fixed capital) and inventories and work in progress (circulating capital). The coordination of these assets within the facility, i.e., *intra-plant coordination*, is typically carried out by a manager who reports to the owner of the plant. The manager gives orders to the employees, allocating them to particular tasks that they carry out as a team.

Facilities within a supply chain are inter-dependent. *Inter-plant coordination* ensures that the output of each facility is harmonised with the input requirements of the other facilities that it supplies, and vice versa (Cooper and Ellram 1993; Fugate et al. 2006). Inter-plant coordination is the focus of internalisation theory; it is the coordination of flows between inter-dependent facilities located in different countries that is the hallmark of MNE operations.

Facilities also need to coordinate their procurement of factors of production, including labour, land and finance. However, these activities are excluded from the simple version of internalisation theory presented here.

Alternative approaches to coordination: the internalisation option

Inter-plant flows can be coordinated in different ways. In a state-controlled economy they will normally be coordinated by central planning, but in a private enterprise economy they will normally be coordinated by markets instead. Markets typically involve the exchange of property rights at a negotiated price. Prices are negotiated between the owners of the facilities involved. Production facilities are owned by firms on behalf of their shareholders; these shareholders are ultimately responsible for the coordination of the firm's facilities, even though they may delegate implementation to managerial employees. The relationship between owners and their facilities is illustrated in Fig. 2. Each plant has an owner who directs the operation of their facility. The owners also communicate with each other in order to coordinate inter-plant flows (Andersen and Narus 1990).

Markets can be internalised. If the same firm owns two inter-dependent facilities, then it can control the flow of goods and services between them in much the same way as would a central planner. This does not necessarily mean that the price mechanism is totally suppressed, however, nor that coordination is achieved by imposing output targets on the facilities. It is possible for the firm to establish

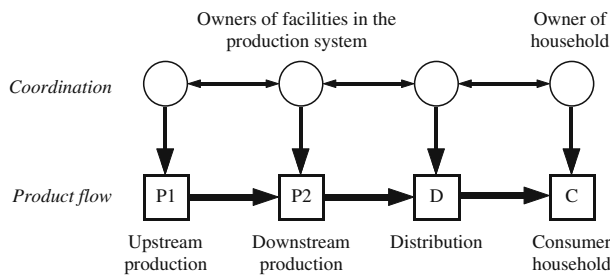


Fig. 2 Coordination of a national market supply chain through direct negotiation between owners, without intermediation. *Note:* The circles represent the owners of facilities. It is assumed that the owners are firms, although some of these firms may be controlled by a single individual who is the dominant shareholder. Firms own facilities in the production sector and individuals or families own households. The thin lines represent information flows. The vertical lines represent communication between owners and employees involving intra-plant coordination. The horizontal lines represent communication between the owners of adjacent facilities in the supply chain; these effect intra-plant coordination through negotiations over price and quantity and the subsequent enforcement of contracts. The single large arrow on the vertical lines represents the direction of authority from owner to employee. The two-small arrows on the horizontal line represent the two-way flow of information between independent owners, as exemplified by negotiation

shadow prices—notional prices at which internal transactions take place. Local managers can then set the quantities they demand and supply internally in order to maximise their notional profits. If the prices are set correctly then the managers can optimise the internal product flow using their local knowledge.

Internalisation is illustrated in Fig. 3. It presents an example of vertical integration in which the upstream and downstream plants have a common owner. Internalisation can support many different configurations of supply chain ownership, however; downstream production could be integrated with distribution, for example, or all three activities—upstream and downstream production and distribution—could be integrated.

Internalisation is usually analysed in the context of facilities that are directly linked, but in some cases facilities with common owners may be linked only indirectly. A case of this type is illustrated in Fig. 4. Upstream production and

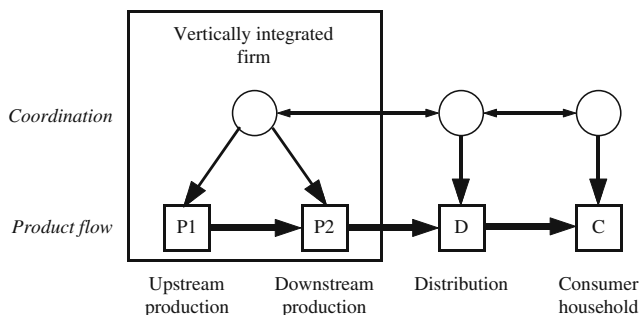


Fig. 3 A simple of example of internalisation involving the vertical integration of production

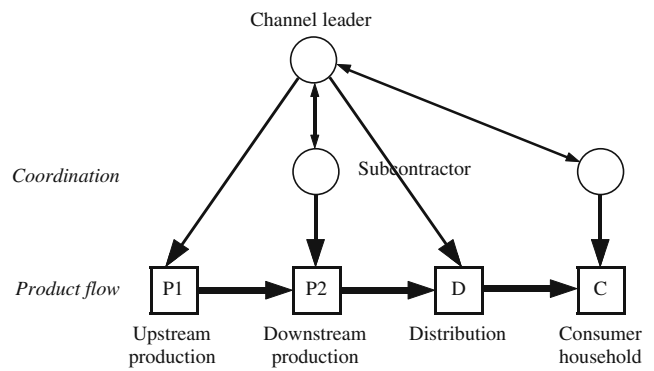


Fig. 4 Subcontracting of production. *Note:* The ‘channel leader’ owns both P1 and D, whilst the subcontractor owns P2. It can be seen that subcontracting partially ‘hollows out’ the channel leader’s operations. The figure illustrates the case where the subcontractor owns the semi-processed product to which it adds value. Under ‘labour only’ subcontracting, however, the channel leader would retain ownership of the product throughout, and simply pay the subcontractor a fee for the work done (see Figs. 5, 10, 11)

distribution are under common ownership, but downstream production is not. The downstream producer is supplied with inputs by the same firm to which it supplies its output. In principle, therefore, the downstream firm’s margin can be squeezed so that all the economic rent from the supply chain accrues to the upstream firm instead. Thus the upstream firm extracts all the economic rent from the supply chain even though it does not own all the facilities.

Internalisation: clarifications and qualifications

Internalisation is normally confined to the production sector. It is not normally possible to integrate production with consumption because firms cannot take over private households. While households can, in principle, take over production—using the “do it yourself” principle—the optimal scale of most production units exceeds the optimal scale of consumption units, and so this arrangement is not viable. Where the consumption unit is large, however—e.g., an institution or government department—then backward integration into consumption may be viable.

It is a mistake to suppose that the external market which the internal market replaces is necessarily a conventional spot market in which contracts for immediate delivery are negotiated. Long-terms contracts may be used instead, and each party may have the option of buying outstanding contracts back (MacNeil 1978). The contracts may contain built in insurance, by allowing the price or quantity of future deliveries to vary in response to stipulated contingencies. Thus external markets, just like internal markets, can be organised in different ways. Internalisation theory compares the best internal method of coordination with the best external one in order to determine whether internalisation is the best overall strategy or not.

To operationalise internalisation it is appropriate to take a broad view of ownership. Many firms do not own outright the facilities that they use. They hire or lease equipment, rent land and buildings, and employ labour. The key point in internalisation is not that all the assets used by the firm are owned outright, but simply that all the shares in its subsidiaries are owned outright by the internaliser, so that it can appropriate all the profit that they generate.

What is best from a private point of view is not necessarily best from a public point of view. Decisions made by private firms will reflect shareholders' interests. Internalisation theory assumes that shareholders are motivated by profit maximisation. They respond to fiscal incentives that may be set by governments at sub-optimal levels. Whilst internalisation can mitigate the costs of enforcing contracts in external markets, it can exacerbate other problems; e.g., weak international fiscal harmonisation may create perverse incentives to internalise for tax-avoidance reasons. Only if private and social costs and benefits coincide will internalisation necessarily support a socially optimal outcome.

Integrated subcontracting: an alternative to internalisation

Internalisation is not the only way of improving supply chain coordination. Another way of achieving the same result is integrated subcontracting. Under this arrangement, the firm owns the product but not the facilities in which it is processed. These facilities are owned by independent firms that act as subcontractors. Each subcontractor agrees to carry out a given amount of work on the intermediate product passing through its hands. It is usually paid on a piecework basis, according to the amount of output of the specified quality that is produced, although it may sometimes be paid on an input basis, with the output price being set on a cost-plus basis. A firm that controls an entire supply chain using subcontracting is described as a "channel leader" (Dwyer and Welsh 1985; Little 1970). Reliance on subcontracting, licensing and other contractual arrangements is a hallmark of the "hollow firm" (Achrol 1991).

Because the channel leader owns none of the processing facilities, it is not a direct investor in the usual meaning of that term. On the other hand, its ownership of the product and its ability to influence contractual terms means that it may possess almost as much power over its suppliers as if it did own the facilities. A situation of this type is illustrated in Fig. 5. Each stage of processing in the chain has an independent owner, but all these owners contract with the same firm. Each linkage between adjacent stages is not coordinated by direct communication between the owners

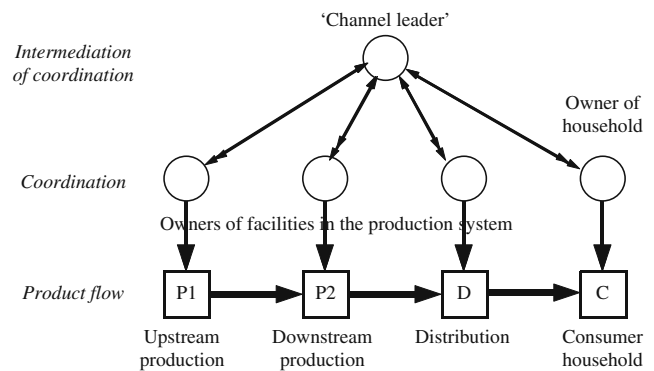


Fig. 5 Coordination of a national market supply chain by a specialist intermediary that owns the product in the chain. *Note:* The double arrow on the thin sloping lines signifies subcontracting, in which the channel leader delegates production to an independent owner of a plant but retains ownership of the product processed in that plant. The direction of the arrow indicates the direction of control over the product. The contract negotiated between the channel leader and a plant owner restricts the discretion of the plant owner in order to safeguard the channel leader's interest in the product. The product flow between the plants is coordinated by the channel leader, since he 'internalises' the ownership of the product (though not the plants)

involved, as in Fig. 2, but rather by indirect communication through the channel leader. This communication involves separate communications between the channel leader and each of the suppliers. These communications are harmonised by the leader so that adjacent activities operate on compatible scales and the overall cost of the chain in producing a given quantity of finished output is minimised.

This process of integrated subcontracting resembles the method of employment commonly adopted within a plant. Within a plant individual workers do not contract directly with each other by buying and selling semi-processed products amongst themselves. Instead the owner of the plant arranges for a manager to hire various workers and allocate them to specific jobs. These workers are then paid by either time, effort, or the piece—i.e., by the amount of output they produce. Within the supply chain, individual plants are treated in the same way as individual workers within a plant, being allocated specific types of work and being remunerated along similar lines.

Compared to internalisation, integrated subcontracting has the advantage that the channel leader does not need to finance the facility in which production takes place, nor does he need to take responsibility for intra-plant coordination. Thus if intra-plant coordination requires local knowledge, a local firm can be recruited to supply it. In some cases plants may require highly specialised equipment with a capacity far greater than the channel leader's output. Integrated subcontracting the plant to be fully utilised by undertaking additional work without the channel leader taking responsibility for it. Because the channel leader does not own the plants, however, his ability to oversee

production is limited; as a result, quality control may be compromised, and the risk of losing trade secrets is increased.

Knowledge flows

Another important innovation effected by MNE scholars was to introduce knowledge flows into internalisation theory. Knowledge has a two-fold significance for the MNE. It affords significant economies of internalisation, and it can be applied to many different national markets. This implies that knowledge-intensive firms will tend to own facilities in different countries in order to serve different markets, and this is a major stimulus to the creation of MNEs (Rugman 1982).

From an economic point of view, the key feature of knowledge is that it is a public good. This means that it can be shared. Unlike the ordinary products that flow through the supply chain, knowledge used in one market can be also be used in other markets without any cost to the original market. There may be costs of transferring the knowledge, but these are attributable to the new market, and not to the sacrifice of knowledge in other markets.

In simple accounts of the MNE it is sometimes assumed that all knowledge is proprietary. This need not be the case, however. Some of the knowledge used as an input to R&D may be acquired freely from the scientific community. Such public knowledge is even more important where marketing is concerned. Marketing relies heavily on freely available local knowledge. It may be costly to collect this knowledge, but there is no charge to be paid to the originator for access to it. It is only the output of knowledge from R&D that is proprietary.

The role of knowledge in a supply chain is illustrated in Fig. 6. It shows an R&D laboratory, R, that generates an intangible flow of proprietary knowledge. According to the figure, the knowledge flow links R&D to downstream production, but in general knowledge could be linked to upstream production, and to distribution as well. The flow is shown as two-way, because of the feedback of knowledge from production to R&D. This can be used to generate continuous enhancement in the firm’s knowledge base, and a continuous improvement in the quality of the product and its production process.

The pattern of knowledge flow associated with marketing is rather different, however. (Casson 1985). Figure 7 illustrates the flows of knowledge associated with pure marketing activity. Because conventional MNE theory tends to emphasise (and perhaps exaggerate) the importance of technology, it fails to recognise that MNE operations can develop without any input of proprietary technology at all. This is because information costs create a barrier to trade, and

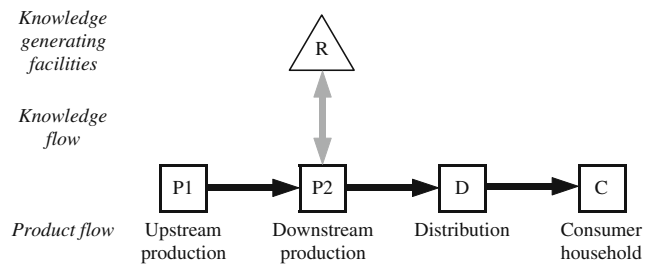


Fig. 6 The role of proprietary technology in a national supply chain. *Note:* The triangle R represents an R&D laboratory. The grey line represents the flow of knowledge between research, R, and production, P. This is a two-way flow, comprising technology developed in the laboratory flowing to P, and feedback from P for the improvement of the technology in R. While the technology can often be patented, the feedback cannot. Both flows have commercial value. Because knowledge is a public good whose spread is difficult to control, it can easily diffuse to imitators and rivals. The resulting competition in the exploitation of the knowledge will undermine its value to the originator. This creates a strong incentive to internalise the knowledge flow. If the knowledge were offered for sale to licensees, the potential buyers might learn the knowledge from the specification, and hence be unwilling to pay for it because they already knew it. On the other hand, if the originator withholds key information from prospective buyers, the buyers may undervalue it and so the originator receives less than the knowledge is really worth. The figure assumes for simplicity that proprietary technology is used only at stage P2, although it could in principle be used in P1 and D. This refinement would complicate the subsequent diagrams quite considerably, however

marketing activity can help to overcome them. This is not the passive sort of marketing activity that is often suggested in MNE theory, where an existing product is advertised to consumers, but rather an innovative process where new products are developed in response to needs that have just arisen or have not been recognised before (Hult 2003).

The rationale for innovative marketing of this kind is that when information is costly to collect, individual customers may have difficulty making contact with suppliers, and vice versa. Individual customers may not have the time or resources to incur the cost of searching out producers and, conversely, producers may find searching for customers a distraction from the business of production. Information obtained through direct observation is inherently localised, whilst second-hand information is often embedded in social networks that are difficult for outsiders to access. Differences in language and customs may exacerbate these problems. Under such conditions, an individual with strong social networks, who has a good command of languages and who travels widely may be in a good position to plug the information gaps that inhibit trade. Such individuals may specialise in marketing activity, and establish firms for this purpose. They collect information that others are too busy to collect, in order to identify opportunities for trade that can be exploited by their firms.

Marketers can extract profit from their superior information in two main ways. One is to charge their customers

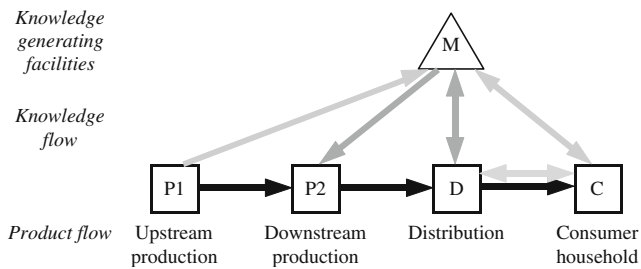


Fig. 7 Role of marketing in a national supply chain. *Note:* The triangle M represents a marketing facility. As in the previous figure, grey lines represents the flow of knowledge. A distinction is drawn between proprietary knowledge, represented by dark grey, and public knowledge, represented by light grey. Public knowledge is knowledge that anyone can obtain, provided they know where to find it and are willing to incur the cost of collecting it. Unlike proprietary knowledge, the originators of the knowledge do not keep it secret because they are not aware of its commercial significance. Commercial value is created from public knowledge at M. Market research identifies customer needs at C, whilst research on procurement identifies suitable raw materials at P1 that could be used to meet these needs. The relevant flows of information are indicated in the figure by the two pale grey arms connecting C and P1 to M. This synthesises information on demand and supply, making it possible to formulate the specification of a product that can be produced at P2 using raw materials from P1. The product is improved using feedback from customers. Much of this feedback is collected at distribution, e.g. consumer complaints, warranty claims, etc. The information is processed at D and fed back to M as proprietary information. The product may be advertised to customers, both through display at D and through media advertising organised by M. This involves flows of public information from D and M to C. It would be possible to introduce additional information flows to achieve greater realism (e.g. from P2 to M) but this would complicate the analysis unduly

a brokerage fee, but far more common—and of greatest relevance to the MNE—is to act as a re-seller. Instead of introducing the buyers and seller to each other, the re-seller actually keeps them apart. He buys from the seller, and resells to the buyer, earning a margin from the mark-up on the price. After deducting his costs he can appropriate a profit. By keeping the buyer and seller in the dark, he can prevent them “cutting him out”, and thereby continue to earn a margin on repeat trades. The entry of rival marketers is the main threat to his profit, as competition will drive down the margin until everyone earns just a normal profit.

It is not sufficient, however, for a marketer to understand just the demand for the product, he also needs to know that the product can be supplied at an acceptable price. Demand information must therefore be combined with supply information. This is illustrated in Fig. 7, where the marketer, M, synthesises information not only from customers and but also from upstream suppliers.

A distribution facility can be a useful adjunct to a resale strategy. If the supplier delivers to the distribution facility and the customer collects from it, then the consumer and producer do not meet except by chance. This prevents them cutting out the marketer, and from knowing the size of the

mark-up he is making. Furthermore, a distribution facility is a useful place at which to display and promote the product, to make a final check on product quality, and to collect information on customer complaints. This proprietary information can then be fed back to marketing, as illustrated in the figure.

In some cases a synthesis of information may simply indicate an opportunity for arbitrage, in which the marketer buys “cheap” from upstream production, P1, and sells “dear” to the customer, C. In other cases, however, the marketer needs to do much more than re-sell. For example, he may need to transform the raw material into a product more appealing to the customer. Demand information may indicate that customers would like the product to be processed and packaged before they take delivery, requiring an additional stage of production, P2, as indicated in the figure. The marketer therefore needs to communicate the requisite product specification to producer concerned. Unlike the public knowledge collected by the marketer in order to identify the profit opportunity, this product specification constitutes proprietary knowledge that the marketer will wish to protect against imitators. In this respect the proprietary information resembles the technological information discussed above, which was also information passed to P2. But where as this technical information was generated in the laboratory, the marketing information is generated from a synthesis of public information. The collection of information therefore requires a different location strategy, and linked to this may be a different ownership strategy, as discussed in more detail below.

Location is not the only influence on ownership strategy where marketing is concerned, however. Marketing knowledge is difficult to protect against imitation because, unlike technology, there is no patent system. The marketer cannot protect his idea for arbitrage, and he may not be able to patent his design for a novel product either unless it incorporates new technology. These problems enhance the incentive to internalise, by encouraging marketers to exploit their superior knowledge for themselves.

Marketers do not always focus on contact-making, however. They can also facilitate trade by using their reputation to build trust. (Buckley and Casson 1988; Porter and Livesay 1971). Once contacts have been made, buyer and seller must negotiate a price. Delivery must then take place, and the contract must be enforced by law if default occurs. Contact making does not normally encourage dishonesty, since follow-up communication may break down if names, addresses or telephone numbers are disguised. But negotiation and enforcement create incentives for deceit, and so transactions may well break down at a later stage. A marketer with a reputation for integrity can resolve this problem—and once again re-selling is the appropriate strategy.

If the buyer and seller do not trust each other, but both trust the re-seller, then the re-seller can organise a trade even if he trusts neither of them too. He can require the buyer to deliver in advance of payment, and the seller to pay in advance of delivery, so that the transaction goes through. He obtains an interest free loan from the lags in the transaction, and can charge a margin for his services too. Moreover, a reputation for integrity may be hard for competitors to match, and so, in the absence of patent protection, he may be able to use his reputation to instil customer loyalty. This will act as a barrier to entry and make repeat transactions secure. The reputation may be strengthened by creating a brand identity and protecting this identity by a trademark.

Given that marketers may be involved in developing new products, or improving existing ones, it is only natural they may be drawn into R&D. In conventional MNE theory, R&D is often portrayed as a relatively autonomous process that commercialises new scientific discoveries, but in practice it often involves responding to new marketing opportunities instead. In a marketing-led firm it is the marketing knowledge that generates the potential rents, and R&D is simply an activity designed to iron out technical difficulties in product design. While the marketing information is unique, the scientific and engineering skills in R&D required may be generic, and available on a competitive basis. This is particularly true of near-market development as opposed to basic scientific research.

The link between marketing and R&D within this context is illustrated in Fig. 8. The figure illustrates the case of a marketing-led firm that relegates R&D to a supporting role. Having synthesised information on demand and supply from C and P1, the marketer, M, passes on the product specification they have devised to the laboratory R. The mandate for the laboratory is to develop a product that

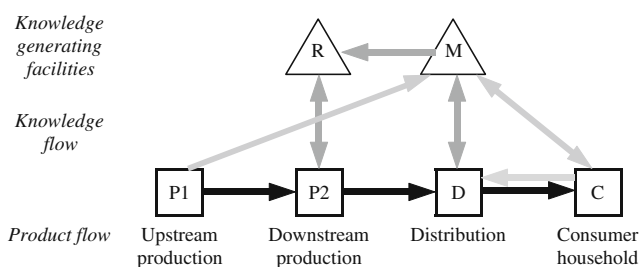


Fig. 8 Marketing-led R&D in a national supply chain. *Note:* This figure integrates Figs. 6 and 7. The key is a link between M and R, in which M arranges for R to develop a product to meet the customer needs they have identified. This involves a flow of knowledge regarding a new product opportunity. This is flow of proprietary knowledge from M to R, as indicated by the horizontal grey line in the figure. It is also possible to have a research-led firm which supplies knowledge from R to M about possible commercial applications of a new technology. Much IB theory implicitly uses the model of the research-led firm, whilst this paper emphasises the marketing-led firm instead. Note that in this marketing led view of the firm, R&D ‘intermediates’ the flow of knowledge from M to P2

meets or exceeds the specification. Cost is crucial: the product must be cheap to produce, and the cost of developing the product in the first place must be low as well. Once development is completed, the knowledge is transferred to production, P2, and experience is then fed back. Meanwhile, the marketer advertises the product to C.

Integrating internalisation theory and location theory

A multi-country world

So far the emphasis has been on a single national supply chain. This follows a tradition in MNE studies of focusing on a representative market in order to analyse the “market entry decision” or the “market servicing strategy” (Hennart 1988). While this approach is acceptable as an initial simplification, a full analysis of the global business system must involve a multi-country world. The remainder of this paper discusses such a world, focusing on a two-country case. While the limitations of a two-country model are obvious, there is still a great deal of insight to be gained from it, as most of the effects observed in three- or four-country models are simply refinements of effects that can already be discerned in the two-country case.

The model must be sufficiently general to encompass both technology-led MNEs and marketing-led MNEs as special cases. The model therefore includes both an R&D facility and a marketing facility. In view of the public good nature of knowledge, it is assumed that the outputs of these facilities are shared across both countries.

The location and ownership of facilities

A great advantage of internalisation theory is that it is easy to synthesise with other theories—in particular with theories of location. Relevant theories of location include comparative advantage theory, Heckscher-Ohlin factor-intensity theory, and “new economic geography” theories that emphasise economies of scale and transport costs (Krugman 1991). These theories explain the location of the facilities within the global system, whilst internalisation theory explains their ownership (Markusen 2002). The synthesis between internalisation theories and location theories was pioneered by MNE theory.

It is often convenient to analyse the ownership of facilities conditional on their location, since the location of facilities in relation to each other (e.g., their distance apart) is a major influence on coordination costs, and hence on the optimal configuration of ownership. It is, however, a mistake to take the location of facilities as entirely exogenous, as the costs of coordination may vary between different spatial configurations of facilities. As a result, the

ownership of facilities can also influence their location. Strictly speaking, ownership and location are simultaneously determined by the interplay of production costs and coordination costs. In the interest of simplicity, however, this paper analyses ownership conditional on location and ignores the fact that location may to some degree depend upon ownership. A comprehensive algebraic model is necessary to analyse fully the interdependence between ownership and location, and this lies beyond the scope of the present paper.

The role of headquarters

The synthesis of internalisation theory and location theory raises an important issue—namely whether the headquarters offices from which corporate owners operate are to be considered as facilities in their own right. It is often assumed that in the absence of internalisation, production facilities would be locally owned, and that therefore it is unnecessary to distinguish a headquarters from the facility it controls. Under internalisation, however, a common headquarters cannot be adjacent to every facility it controls unless, exceptionally, all the facilities are co-located—in which case the integrated firm will not be an MNE. An MNE may locate its headquarters at an intermediate point, close to all production facilities but coincident with none; because of its independent location, such a facility needs to be distinguished from ordinary production facilities. Even in the absence of internalisation, headquarters may be remote from the facilities they control; in politically unstable countries, for example, local facilities are often headquartered in politically powerful neighbouring countries, which can be relied upon to intervene if ownership rights are threatened. From an internalisation theory perspective, therefore, a headquarters is a facility in its own right—albeit a specialised facility that handles the information flows required for the coordination of the facility, or facilities, it controls. The location of headquarters is particularly important where marketing activities are concerned, as explained in more detail below.

Cost structure

The location and ownership of facilities govern the costs of supply chain operations. There are four main types of cost, and each type of cost varies according to location (see Table 1). The first pair of costs, shown in the top row, relates to resource flows, and the second pair to the coordination of these flows.

Resource flows include both product flows and knowledge flows. Their costs are familiar from standard economic theory and require little comment. Cost variations between facilities of the same type mainly reflect geographical variations in factor endowments, whilst cost variations between linkages of the same type reflect product

characteristics (e.g., perishability, and size and weight in relation to value) and three key distance metrics:

- Geographical distance (transport costs, time in transit);
- Political distance (tariffs and non-tariff barriers; insecure international property rights);
- Cultural distance (differences in language, ancestry, basic values and beliefs).

Cultural distance is particularly important where knowledge flows are concerned. (Buckley et al. 2008).

While resource costs are the main influence on the location of production and distribution facilities, coordination costs are the main influence on their ownership. Intra-plant coordination costs depend mainly on the location of the owner. Foreign control of a plant incurs a “cost of managing from a distance”, and a “cost of doing business abroad”, which depends mainly on political distance.

The costs of inter-plant coordination depend upon the political distance between the countries in which the owners reside and the reputations of the owners with each other (whether they trust each other or not). A major benefit of internalisation is that when ownership is unified the owners are (by definition) co-located and trustworthy. Thus risks of default (particularly with regard to quality) are eliminated. The magnitude of the internalisation benefit depends mainly on the nature of the product; relevant product characteristics include natural variability in quality, the difficulty of detecting defects through superficial inspection, and the difficulty of synchronising product delivery and payment. The benefits of integrated subcontracting depend on similar factors, but vary according to these factors in a somewhat different way.

Internalisation and integrated subcontracting are not always beneficial, however. Internalisation can be costly when there are costs of being locked in to an internal source of supply or demand and so unable to trade with competitors, while integrated subcontracting is inappropriate when the technology possessed by the channel leader is embodied in equipment employed in processing plants.

Profit-maximising supply chain configuration

As noted above, formal modelling of a global business system lies outside the scope of this paper. Nevertheless, it is useful to summarise how such a model works, in order to justify the rigour claimed for this analysis. A simple model of system optimisation can be based on three key assumptions.

- The quantity demanded by customers in each country is fixed; in each market there is a given number of consumers who are interested in purchasing the product, each of whom demands the same amount of the product, and is willing to pay up to the same maximum price (the reservation price).

Table 1 Classification of costs in the international business system

Type of flow		
Facility	Linkage	
Resource flow	<p>Operational cost of a facility Cost of factor inputs: labour (especially skilled labour), land and capital</p> <p><i>Varies with the nature of the product, the production technology used, and the location of the facility</i></p>	<p>Operational cost of a linkage Cost of transport and the communication of knowledge, tariffs, non-tariff barriers, etc.</p> <p><i>Varies with the nature of the product, the transport and communications technologies used, and with the locations of origin and destination facilities; affected by geographical, political and cultural distance</i></p>
Coordination (information flow)	<p>Intra-plant coordination cost Cost of factor inputs to headquarters: labour (especially professional labour), land and capital</p> <p><i>Varies with the nature of the product and with the location of headquarters, and with the relation between the location of the headquarters and the location of the plant; strongly affected by political relations between the headquarters location and the plant location</i></p>	<p>Inter-plant coordination cost Costs of negotiating and enforcing contracts in external markets, and administering coordination in internal markets</p> <p><i>Varies with the nature of the product and with the locations of the headquarters of origin and destination facilities; affected by geographical, political and cultural distance, and by internalisation economies</i></p>

- All facilities and linkages operate under constant return to scale and therefore incur a constant unit cost.
- There is a single source of monopoly rent in the system, which may be associated with a novel proprietary technology or a unique synthesis of marketing information (see below). The system is designed so as to maximise the rent extracted by the owner of the relevant resource.

The second of these conditions is the most important. With constant returns, it makes no difference whether supply chains serving different national markets share facilities or not, and so each supply chain can be optimised independently of the others. It may or may not pay for certain supply chains to share the same location for certain stages of production or distribution; if they do so then they may share the same facility, but as the costs of the facility will increase pro rata it does not matter what they decide to do. Under these conditions the profit-maximising supply chain configuration for a given national market can be determined simply by adding up the relevant costs for each conceivable supply chain configuration and picking the one with the lowest cost.

A simple method of identifying the optimal system configuration is to first identify all the possible permutations of facility location, and then to consider the ownership options associated with each of them. With N countries and M stages of production and distribution there are N^M permutations in a single national supply chain. For each permutation there are also N^M ownership permutations relating to each facility, because each facility can be owned by a firm based in any location. There is a similar number of permutations relating to the ownership of the product processed in the facility. Thus there are $K = N^{3M}$ possibilities to be evaluated. Thus if

there are two countries and three stages of production and distribution (as in Fig. 1) then there are $2^9 = 512$ permutations to be considered. In an N -country world there are N such supply chains, each of which can be independently optimised, and so K must be scaled up further by N . In addition, there will be a marketing facility and an R&D facility, each of which can, in principle, be located in any country and owned by a firm based in any country. The optimisation of individual national supply chains is conditional upon the ownership and location of these shared facilities, and so K must be scaled up again—this time by a factor N^4 . As a result, there are $N^{3M + 5}$ possibilities to be investigated altogether. The solution is readily computable provided that N and M are not too large. In the schematic analysis presented below, $N=2$ and $M=3$.

The configuration of ownership in the global economy, with special reference to marketing-led firms

A multi-country model of the kind set out above can predict the entire structure of the global business system. It predicts the emergence of an MNE as a rational response to the coordination requirements of a particular international division of labour. This division of labour involves location choices for R&D and marketing facilities and for the production and distribution facilities involved in each supply chain.

Figure 9 illustrates one possible configuration of the global system in a two-country world of the kind assumed above. The figure basically extends the representation of a single supply chain in Fig. 8 to a two-country world. The supply chain for country 1 is shown in the top of the figure

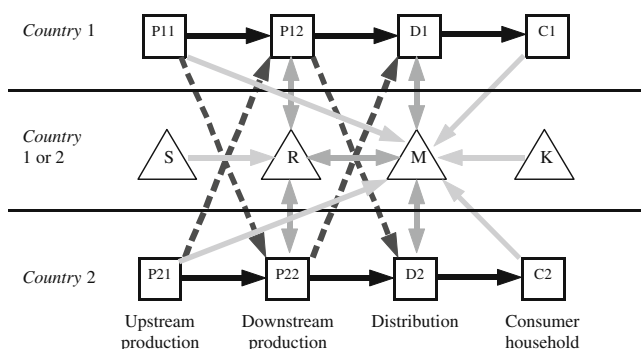


Fig. 9 Resource flows in a two-country world with marketing and R&D. *Note:* This figure generalises Fig. 8 to a two-country world. Thick black lines, as before, indicate product flows through the supply chains. Solid black lines correspond to purely domestic supply chains serving each market. Broken black lines indicate potential linkages in international supply chains linking facilities in the same supply chain but in different countries. In contrast to Fig. 8, there is a two-way flow of knowledge between R and M. The thin horizontal lines represent national boundaries. The area between the lines represents locations that could be in either country. The figure also introduces two public sources of knowledge: the science base, S, that is used in R, and general knowledge, K, including psychological insights into customer needs, that is used in M. R relies only on S (apart from feedback from production), while M relies not only on K but on a range of local knowledge fed back from C1, C2, P11 and P12. The role of K is to help M to synthesise and interpret this knowledge from dispersed local sources. As a firm internationalises, the range of inputs to M increases steadily (in terms of number and geographical dispersion), whilst the range of inputs to R remains small

and the supply chain for country 2 at the bottom. The key features are:

- Both supply chains are supported by a single R&D facility and a single marketing facility, as illustrated by the triangles R, M, between the lines in the middle of the figure; R is connected by the two-way flows of knowledge to both P12 and P22, whilst M is connected by two-ways flows to D1 and D2.
- In contrast to Fig. 8, where knowledge flows only from marketing to R&D, there is now a two-way flow of knowledge between marketing and R&D. This is because Fig. 8 portrayed a marketing-led firm, whilst Fig. 9 portrays a firm that may be either marketing-led or technology-led. In a technology-led firm, marketing basically intermediates the flow of knowledge between R and D1, D2, whilst in a marketing-led firm R&D intermediates the flow of knowledge between M and P12, P22.
- To highlight the distinction between the sourcing of knowledge inputs to marketing and R&D, the figure identifies two generic sources of knowledge. R&D draws upon the science base S, whilst marketing draws upon the general knowledge base, K. Within K, however, certain types of knowledge are particularly significant—e.g., psychological insights into consumers' subconscious

needs, cognitive processes, etc. Whilst R&D is sourced mainly from S, supplemented by feedback from P11, P12, M is sourced not only from K but also from C1 and C2, supplemented by feedback from D1, D2. Thus the knowledge used by M is sourced more diversely, and the information obtained is more local; whilst S reflects the knowledge base of a cosmopolitan scientific community, C1 and C2 reflect the culturally-specific preferences of local consumers. Whilst R can, if necessary, be located close to specific university where leading specialists work, M cannot be so easily located close to a single source. M is more appropriately located at a communications hub where information from different localised sources can be synthesised.

- In the interests of simplicity, the figure illustrates a particular configuration of the global system in which each country is sourced using a purely domestic supply chain. The potential for international trade in intermediate products cannot be overlooked, however. The main offshoring options are illustrated by the dashed lines in the figure, which indicate potential international flows. The figure assumes, however, that distribution is always local, although this is not, of course, always the case.

The main contribution of internalisation theory is to predict the boundaries of firms within the global system, with special reference to MNEs. As noted earlier, it is often useful to analyse internalisation conditional on the location of facilities. Using this approach, Fig. 10 illustrates a common configuration of ownership associated with the configuration of location shown in Fig. 9. The ownership of a facility is indicated by a circle, following the conventions established in Figs. 2, 3, 4 and 5. The figure illustrates the case of an MNE that undertakes both marketing and R&D.

The fact that both marketing and R&D are undertaken by the same firm is a source of ambiguity in naïve models that do not distinguish properly between the two. The co-location of R&D and marketing encourages co-ownership and vice versa. It is possible, however, that marketing and R&D are co-located simply because they are both attracted to the same location—R&D by universities as access points to the science base, and marketing by the existence of a cultural and media hub. Whilst proximity may be desired in order to promote knowledge transfer between R and M, and to facilitate their internalisation, theory shows that such considerations may not be decisive. Whilst in some cases internalisation drives location, in many cases it is the other way around.

The figure illustrates both similarities and differences in the supply chain strategies pursued in the firm's home and foreign markets. Both supply chains are purely domestic, and both outsource upstream production. This may reflect

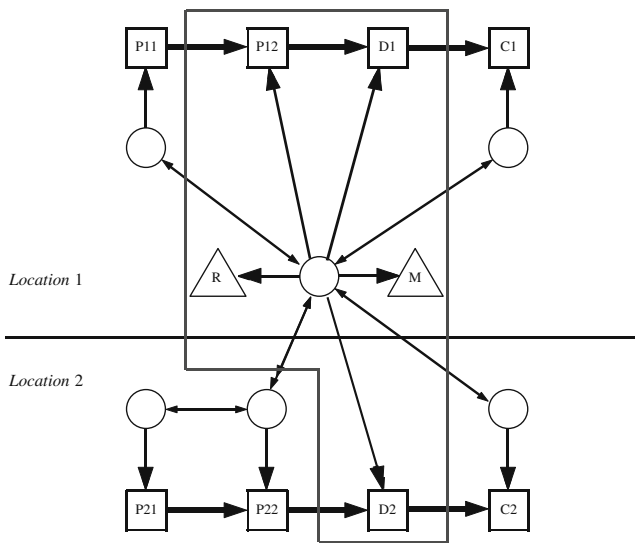


Fig. 10 A conventional two-country configuration of ownership and location with a marketing emphasis. *Note:* In this figure flows of knowledge are suppressed in the interests of simplicity. The emphasis is on the pattern of ownership that supports a given configuration of resource flows. The figure illustrates a case where both national markets are served by location production, and R&D and marketing are both located in country 1. The example of ownership structure presented is one that is well adapted to this location pattern. A single MNE is responsible for both marketing and R&D (*i.e.* the link between marketing and R&D is internalised). The boundaries of the firm are indicated by the box. Links with customers are key, but supplies of raw materials are not (*e.g.* because they are in highly elastic supply at competitive prices). In both countries, therefore, raw materials are procured from independent suppliers, but distribution is owned by the firm. This allows the firm to maintain rigorous quality control, fix and monitor prices, and capture customer feedback. Production is internalised in the firm’s home country but out-sourced to a subcontractor overseas. This subcontractor procures his own raw materials, but cannot sell his output direct to customers. The subcontractor has better knowledge of local production conditions than the MNE and is considered reasonably trustworthy (so that the costs of enforcing his contract are modest). The system comprises four independent firms: the MNE, two local raw material suppliers, and one subcontractor

the characteristics of the intermediate products in the industry concerned; *e.g.*, raw material may be bulky (and hence costly to import) and may be readily available at a competitive price (hence no need for internalisation). Distribution is also similar in both countries; it is localised and internalised. This reflects the strategic importance of distribution to a marketing-led firm. Internalisation of distribution enhances quality control, provided insights into buying behaviour, and facilitates fine-tuning of point-of-sale advertising and pricing strategy.

There are differences between countries in downstream production strategy, however; it is internalised in the home country but subcontracted overseas. The overseas producer is allowed to purchase his inputs freely (P21 communicates with P22 and not with M). On the other hand, the MNE owns the product that he produces from the raw materials

because he is using the technology supplied to him for this purpose (thus communication between P22 and D2 is via M and not direct).

The degree of MNE control exercised in this example is higher at the downstream stage than at the upstream stage, and this is characteristic of a marketing-led firm. Knowledge-based rents from marketing are generally extracted at the point of sale to the customer, and so the owner of marketing knowledge must therefore have control at this point. Unlike a technology-led firm, they cannot extract rents at the point of production by charging licence fees.

It must be emphasised the internalisation theory predicts not only the boundaries of the MNE, but also the total number of firms in the system. It also predicts the boundaries of all the other firms, even those that are not MNEs. The figure identifies four firms altogether: the MNE, the independent upstream producers in each country, and the overseas subcontractor. It is the MNE that takes the key decisions, however, because it controls the key resource—marketing knowledge. It is the efficient exploitation of this resource that creates a role for the other firms.

Offshoring and outsourcing: hollow firms, flagship firms and the global factory

The configuration of the global system presented in the previous section is a very traditional one. The MNE generates all its own knowledge, which is exploited mainly (though not exclusively) through internalisation. An emphasis on marketing rather than technology merely encourages the firm to outsource parts of the production process—particularly upstream or overseas (Kotabe and Mol 2006).

After the oil price shock of the 1970s, however, different configurations began to emerge. In their drive to reduce costs, MNEs explored alternative contractual arrangements and new off-shore production locations. Tariff reductions, lower transport and communication costs and the spread of international standards promoted this trend, and thereby created the modern global economy. One of these new configurations is illustrated in Fig. 11. It has been selected deliberately as a contrast to the traditional configuration in Fig. 10. International comparative advantage has a big impact on location. Country 1 is a high-wage country well endowed with scientists and professional managers, and possessing good communication, whilst country 2 is a low-wage country with abundant labour, cheap land and energy and good transport links. The figure focuses on an engineering industry producing a standardised consumer product. Research and marketing are both concentrated in country 1. Components from country 1 are exported to country 2 for assembly, and some of the finished product is then exported back to country 1.

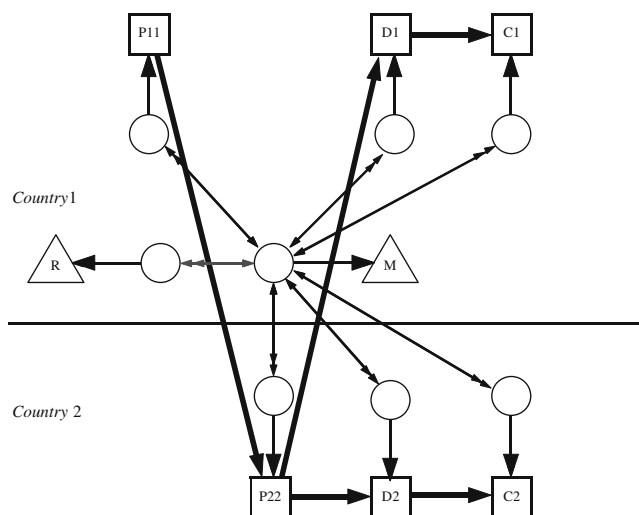


Fig. 11 Off-shoring and out-sourcing by a ‘hollow firm’: the role of integrated international subcontracting. *Note:* This figure illustrates an extreme example of a hollow firm. The only facility that it owns is M, where market research is carried out. Crucially, however, M is also a contractual hub. As a result, the hollow firm exerts considerable influence as an international channel leader through its negotiations with independent suppliers and distributors in the two countries. It is a specialist intermediary: it coordinates an international division of labour in which both countries are sourced from an export platform, P22, based in country 2, which uses raw materials imported from P11 in country 1. The raw material supplier, P11, the export producer, P22, and the distributors in each country, D1, D2, are all independent firms. Crucially, however, they do not negotiate with each other. Each negotiates with the intermediary instead. The intermediary keeps each ‘in the dark’ about the others so that they cannot get access to the marketing knowledge that underpins the intermediary’s strategy. The intermediary uses the terms of the contracts, and not the ownership of facilities, to appropriate rent. The hollow firm also out-sources R&D to an independently-owned laboratory (perhaps at a university). It uses its marketing knowledge to specify its requirements, and uses the contract to specify the deliverables it requires—i.e. a reliable high-quality product. There are six firms involved in this international division of labour, each of which operates a single separate facility: P11, P22, D1, D2, R and M

Marketing knowledge is embodied in a global product design (Wills et al. 1991). The knowledge is synthesised from market research in both countries. R&D has a subservient role: to convert the marketing-driven specification into a product that is cheap to mass produce. To exploit the marketing knowledge effectively, the marketing-led firm needs to control the entire chain between upstream component producer and the consumer as it passes through downstream assembly and distribution. But the marketing firm may nevertheless be reluctant to own production and distribution facilities.

- In a volatile global environment the firm may need the flexibility to switch production locations and to rationalise its distribution centres as circumstances change; ownership of facilities (especially customised facilities) may reduce this flexibility.

- The firm may be concerned about being held to ransom by militant unionised workers, or even lazy local managers; if they believe that the firm is locked into their location employees may threaten to disrupt production in order to bargain for a share of the marketing rents. The firm may wish to avoid the ownership of factories and warehouses on the grounds that it is perceived as difficult to reverse.
- By avoiding property ownership the firm can minimise capital requirements, and also the risk of expropriation in politically unstable locations. Where the task of global supply chain coordination is very demanding, avoiding the local responsibilities associated with ownership also allows the management of the firm to concentrate on coordination instead.

The figure illustrates the limiting case in which the desire for control, coupled with aversion to the ownership of property, leads the firm to coordinate supply chains exclusively through subcontracting. In each supply chain the firm owns the product throughout, from components produced in P11 to the product distributed through D1 and D2, but owns none of the facilities involved. Because the firm controls the product flow, it can implement quality control at each stage. It can control costs by playing off rival subcontractors against each other at each location, and awarding contracts to those who tender the lowest price.

Even R&D is outsourced under this scenario. Product development may be put out to tender; if the owner of the marketing facility is concerned about the leakage of confidential information involved in this process then they may limit invitations to a small number of reputable laboratories—in particular university laboratories, and others that are in a weak position to commercialise any knowledge that they might be able to steal.

This arrangement corresponds to a comprehensive application of the principle of integrated subcontracting set out in the third section of this paper. The owner of the marketing knowledge acts as channel leader. The channel leader is not an MNE, however. Nevertheless, the channel leader has global influence because it is the hub of all the contracts in the global system, and owns the product throughout. Thus the channel leader uses contracts and product ownership, rather than property ownership, to extract knowledge-based rents from the global system.

Firms that rely heavily on purchasing inputs at arm’s length and subcontracting multiple stages of production are often described as “hollow firms”. When these firms are heavily involved in marketing—as they usually are—they are sometimes described as “flagship firms” as well (Rugman and D’Cruz 2000). The set of operations coordinated by a hollow firm or a flagship firm is, in turn, often described as a “global factory” (Buckley 2007). It is a mistake, however, to

suggest that the emergence of hollow firms and flagship firms is an entirely novel phenomenon. While the contrast with the traditional form of MNE is very clear, and their growing importance in the 1980s is clearly evident, the global system has to some extent merely reinvented earlier forms.

The global factory is not a new phenomenon. An international division of labour, supported by extensive trade, was characteristic of the Roman Empire (Andreu 1999). Medieval guilds of merchant adventurers acted as flagship firms in the fourteenth century, particular in the wool and textile trades (Thrupp 1948). Textile industries have used integrated subcontracting for centuries, referring to it as the “putting out system” (Allen 2009; Gregory 1982). Other industries, such as construction and book publishing, used the same system, although because of the nature of these industries the operations tended to be national rather than international (Bailyn 1955). Many of the chartered trading companies founded in Western Europe in the seventeenth century were hollowed out from the start (Mukherjee 1974; Pinkerton 1932; Willan 1956). Throughout the eighteenth and nineteenth century international trade within the British Empire was coordinated by trading firms, many of which had overseas offices, but local purchasing and subcontracting was very much the norm for coordinating overseas production. In the nineteenth century “putting out” was embraced by the engineering industries. The modern global economy merely continues this tradition. The distinguishing feature of the modern system is the prominence of brands, the scale of production and trade, the number of different countries involved in the international division of labour, and the sophistication of the contractual arrangements used to coordinate it (Da Silva Lopes and Casson 2007).

Conclusions and implications for future research

This paper has shown that marketing activity can be incorporated into the economic theory of the MNE and has explained how this can be done. Although existing theories of the MNE refer to marketing, they usually treat it as an adjunct to R&D. This paper has shown that marketing is much more than this. Whilst R&D provides knowledge as to how products can be produced, marketing provides knowledge of how much customers will be willing to pay for them. It is by gaining knowledge of the intensity of demand, and of where this demand is located, that marketing indicates what type of R&D is likely to be worthwhile.

However ingenious they may be, many advances in basic science are not worth commercialising because there is no demand for the products that can be generated from

them. Marketing can discriminate between technologies that are worth commercialising and those that are not. More precisely, it discriminates between technologies whose commercialisation would be timely, and those whose commercialisation would be premature. They may be premature because the product will prove too costly for consumers until either supply bottlenecks have been overcome or incomes have risen, or because consumption requires complementary products which are not yet available.

The paper encompasses two opposing views and reconciles them within a broader framework:

- Marketing is simply an adjunct to R&D. Marketing can be identified with advertising and distribution. Advertising provides a linkage between R&D and the consumer, while distribution can capture feedback from customers (e.g., sales resistance or complaints from dissatisfied users) and pass this on to R&D. While marketing may help to refine the design of the product as it matures, it is technology alone that governs the origination of the product.
- Marketing plays the key role in new product development by building up knowledge of customer needs and identifying needs that are not fulfilled by existing products. It assesses the number of potential customers and their willingness to pay in order to determine whether a viable market exists—either for a high-price niche product or a low-price mass-market product (or for the potential to convert one into the other). R&D, by contrast, is less creative and more routine; it involves the application of well-established scientific principles to solve certain technical problems in product design. The skills it requires are specialised, but not unique, and can be obtained through competitive procurement.

The first view has dominated the economic theory of the MNE and, as a result, many marketing-led firms have been misclassified as technology-led, simply because they carry out a small amount of R&D. The R&D performed by marketing-led firms is often near-market product development and is not the major source of the rents appropriated by them. These rents derive instead knowledge of customer requirements obtained through market research.

There are significant differences in the nature of the knowledge flows involving marketing and R&D. This is not just a question of the types of knowledge involved, but also the way in which the networks of knowledge flow are configured. Local sources of knowledge are more important to marketing than they are to R&D, and feedbacks of knowledge from other activities are often more important too. Only certain sorts of marketing knowledge—e.g., the fundamental psychology of consumption decisions, and its application to particular types of product—are global

knowledge in the sense that they apply across all locations. Most marketing knowledge is more location-specific; it relates to local customs and cultures, and to local economic and environmental conditions. As a result, it is difficult to share across supply chains serving different markets. Thus while generic marketing knowledge resembles technology in being a public good, location-specific marketing knowledge is different. Although it can be shared across related supply chains serving the same location, it cannot be shared across supply chains serving different locations.

A marketing-led firm will be more inclined than a technology-led firm to subcontract R&D; conversely, marketing-led firms will be less inclined to subcontract their marketing function than will technology-led firms. These differences will in turn be reflected in different spatial boundaries for the firms. Marketing-led firms will be more inclined than technology-intensive firms to base their headquarters in major metropolitan centres where culture and media industries are based. This result has implications for the characteristics of the countries in which marketing-led MNEs base their headquarters. More widely, it suggests that the agglomeration of MNE headquarters as a whole may be better explained by the demands of their marketing activities, i.e., a mutual attraction to cosmopolitan centres, than by the demands of their research activities, i.e., a desire to participate with other MNEs in localised scientific communities.

An emphasis on marketing helps to explain the phenomena of hollow firms and flagship firms. Hollow firms and flagship firms both outsource production, and they sometimes even outsource R&D as well. A preoccupation with technology as a source of a firm's rents has encouraged some scholars to view outsourcing as anomalous, as it externalises the crucial link between production and R&D. In response to this perceived anomaly, it has been claimed that certain firms possess special advantages in outsourcing which encourage them to engage in such activities. From the perspective of internalisation theory, however, the outsourcing of production is a perfectly natural strategy for a marketing-led firm. Outsourcing avoids the costs of facility ownership and allows the firm to solicit competitive bids from competitive suppliers rather than be hostage to an internal source of supply.

Flagship firms operate global marketing platforms and global distribution systems synthesise their knowledge of different locations to serve customers in many different countries. Unlike technology-led firms, which protect their intellectual property through patents or trade secrecy, flagship firms protect their intellectual property through registered trademarks associated with their brands and also by the high cost to rivals of replicating their global distribution platforms. Because flagship firms can protect their key knowledge-based assets in this way, they do not

have the same need to invoke patent protection as well. Nevertheless patents may be a useful additional protection in cases where the other forms of protection are relatively weak, and so flagship firms may undertake a small amount of research for defensive purposes. In particular, they may undertake R&D to pre-empt competitors who are trying to invent around patents utilised in the firms established products.

Most firms need to draw, to some degree, upon both technological and marketing knowledge. Technological knowledge applied without marketing knowledge is unlikely to generate popular user-friendly products, however ingenious they may be. Conversely, marketing knowledge exploited without technological knowledge may cause premature obsolescence, as the firm offers poor quality products which can be readily improved by competitor firms with technological capability.

Future research should focus more on the benefits of collaboration between marketing-led firms and technology-led firms. When marketing-led firms that are weak in technology subcontract their R&D, this provides an opportunity for technology-led firms to develop as specialist subcontractors. Skills in conducting research under contract can form a knowledge base from which international research services firms may develop.

Conversely, technology-led firms that are weak in marketing may find it difficult to develop a route to market. Lacking local knowledge overseas, they may be unable to identify potential licensees in every market where they wish to produce. Under these circumstances there is a scope for a marketing-led firm to buy up global licences from such firms and sub-license production, acting as an intellectual property re-seller. The re-seller may even develop a global brand linked to a range of products for which it holds licenses; it can then franchise this brand to local distributors, and employ these distributors to supply a route to market for local licensees.

Another issue that merits further investigation is the link between marketing and regionalism—i.e., MNE operations that are less than global, and are confined to regions (e.g., Europe, Asia) instead. The localised nature of marketing knowledge and the spatial dispersion of relevant sources of knowledge may help to explain the regionalism of some MNEs. If technology-led firms can sell their products on technology alone, then the universality of technology suggests that their markets will be global. If marketing MNEs, by contrast, sell on product design rather than technological excellence, and design is culturally specific, then it will be costly to engineer a design that appeals to all cultures. Hence marketing-led MNEs may be more regional and less global than their technology-led counterparts.

There is an alternative view, however, that is suggested by the analysis in this paper. This view asserts that all products sell on design, and that the role of technology is

essentially to implement design rather than to dictate it. In this view, marketing-led firms are likely to be global because they will accommodate cultural diversity into their designs from the outset. Some technology-led firms, by contrast, may lack marketing skills. They embody their technology in a design embedded in local culture, and are therefore unable to sell in culturally distant markets. This suggests that technology-led firms may be more regional and less global than marketing-led firms. Regionalism represents the impact of cultural diversity on firms that cannot easily cope with it. Which of these views is correct is largely an empirical question to be resolved by further research.

Employing the approach adopted in this paper, the natural solution to the “regionalism problem” is once again to foster collaboration between technology-led and marketing-led firms. Technology-led firms that lack marketing skills should license their technology to marketing-led firms that lack scientific skills, and an efficient global economy should stimulate the emergence of technology resellers that perform this role. As a result, technology-led firms will be able to globalise their product markets indirectly through the distribution channels of the marketing-led firms

Internalisation theory is in a good position to develop this research agenda because it is fundamentally a theory of the global business system as a whole rather than a theory as about a single firm. The analysis in this paper has focused on special cases in which there is, at most, one MNE within the global system. The theory can, however, accommodate any number of MNEs, each of which can specialise in some particular type of activity within the system. Modelling collaboration between technology-led MNEs and marketing-led MNEs is therefore the next logical step for the theory to take.

Acknowledgements We are grateful to Tomas Hult and four anonymous referees for helpful comments on how to improve this paper. We are also grateful to the two Janets for help with the presentation of the paper.

References

- Achrol, R. (1991). Evolution of the marketing organization: new forms for turbulent environments. *Journal of Marketing*, *55*, 77–93.
- Allen, R. C. (2009). *The British industrial revolution in global perspective*. Cambridge: Cambridge University Press.
- Andersen, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working relationships. *Journal of Marketing*, *54*, 42–58.
- Andreau, J. (1999). *Banking and business in the Roman world*. Cambridge: Cambridge University Press.
- Bailyn, B. (1955). *The New England merchants in the seventeenth century*. Cambridge: Harvard University Press.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*, 469–481.
- Buckley, P. J. (2002). International business versus international marketing. *International Marketing Review*, *19*, 16–20.
- Buckley, P. J. (2007). The strategy of multinational enterprises in the light of the rise of China. *Scandinavian Journal of Management*, *23*, 107–126.
- Buckley, P. J., & Casson, M. (1976). *The future of the multinational enterprise*. London: Macmillan.
- Buckley, P. J., & Casson, M. (1988). A theory of cooperation in international business. In F. Contractor & P. Lorange (Eds.), *Cooperative strategies in international business*. Lexington: Lexington Books, D C Heath & Co.
- Buckley, P. J., & Casson, M. (1993). Economics as an imperialist social science. *Human Relations*, *46*, 1035–52.
- Buckley, P. J., & Casson, M. (1998a). Models of the multinational enterprise. *Journal of International Business Studies*, *29*, 21–44.
- Buckley, P. J., & Casson, M. (1998b). Analysing foreign market entry strategies: extending the internalisation approach. *Journal of International Business Studies*, *29*, 539–61.
- Buckley, P. J., & Hashai, N. (2004). A global system view of firm boundaries. *Journal of International Business Studies*, *35*, 33–45.
- Buckley, P. J., Chapman, M., Clegg, J., & Gajewska-De Mattos, H. (2008). Close neighbours and distant friends—perceptions of cultural distance. *International Business Review*, *17*, 217–234.
- Casson, M. (1985). Multinationals and intermediate product trade. In P. J. Buckley & M. Casson (Eds.), *The economic analysis of the multinational enterprise* (pp. 144–171). London: Macmillan.
- Coase, R. H. (1937). The nature of the firm. *Economica*, *4*, 386–405.
- Cooper, M. C., & Ellram, L. M. (1993). Characteristics of supply chain management and the implication for purchasing and logistics strategy. *International Journal of Logistics Management*, *4*, 13–24.
- Da Silva Lopes, T., & Casson, M. (2007). Entrepreneurship and the development of global brands. *Business History Review*, *81*, 651–680.
- Dunning, J. H. (1977). Trade, location of economic activity and the multinational enterprise. In B. Ohlin, P. Hesselborn, & P. Wijkman (Eds.), *The international allocation of economic activity* (pp. 395–418). London: Macmillan.
- Dwyer, F. R., & Welsh, M. A. (1985). Environmental relationships of the internal political economy of marketing channels. *Journal of Marketing Research*, *22*, 397–414.
- Forsgren, M. (2007). *A multifarious creature—six tales of the multinational firm*. Uppsala: Uppsala University Press.
- Foss, N. J. (1997). *Resources, firms and strategies*. Oxford: Oxford University Press.
- Fugate, B., Sahin, F., & Mentzer, J. T. (2006). Supply chain management coordination mechanisms. *Journal of Business Logistics*, *27*, 129–162.
- Gregory, D. (1982). *Regional transformation and industrial revolution: a geography of the Yorkshire Woollen industry*. Minneapolis: University of Minnesota Press.
- Hennart, J. F. (1988). A transaction cost theory of equity joint ventures. *Strategic Management Journal*, *9*, 361–374.
- Hinterhuber, A. (2002). Value chain orchestration in action and the case of the global agrochemical industry. *Long Range Planning*, *35*, 615–635.
- Hult, G. T. M. (2003). A research agenda for the nexus of product development and supply chain management processes. *Journal of Product Innovation Management*, *20*, 427–428.
- Johanson, J., & Vahlne, J.-E. (1977). The internationalisation process of the firm: a model of knowledge development and increasing foreign commitments. *Journal of International Business Studies*, *10*, 23–32.
- Johanson, J., & Vahlne, J.-E. (2010). Markets as networks: implications for strategy-making. *Journal of the Academy of Marketing Science*. doi:10.1007/s11747-010-235-0.

- Klein, S. (1989). A transaction cost explanation of vertical control in international markets. *Journal of the Academy of Marketing Science*, 17, 253–260.
- Kotabe, M., & Mol, M. J. (Eds.). (2006). *Global supply chain management (2 volumes)*. Cheltenham: Edward Elgar.
- Krugman, P. R. (1991). *Geography and trade*. Cambridge: MIT.
- Little, E. W. (1970). The marketing channel: who should lead this extra-corporate organization? *Journal of Marketing*, 34, 31–38.
- Macneil, I. R. (1978). Contracts: Adjustment of long-term economic relations under classical, neoclassical and relational contract law. *Northwestern University Law Review*, 72, 854–906.
- Markusen, J. R. (2002). *Multinational firms and the theory of international trade*. Cambridge: MIT.
- McManus, J. (1975). The cost of alternative economic organizations. *Canadian Journal of Economics*, 8, 334–350.
- Mukherjee, R. (1974). *The rise and fall of the East India company*. London: Monthly Review.
- Paliwoda, S. J., & Ryans, J. K., Jr. (2008). *International marketing: Modern and classic papers (3 volumes)*. Cheltenham: Edward Elgar.
- Pinkerton, R. E. (1932). *Hudson's Bay company*. London: Thornton Butterworth.
- Porter, G., & Livesay, H. C. (1971). *Merchants and manufacturers: Studies in the changing structure of nineteenth-century marketing*. Baltimore: Johns Hopkins.
- Rugman, A. M. (Ed.). (1982). *Inside the multinationals*. London: Croom Helm.
- Rugman, A. M., & D'Cruz, J. (2000). *Multinationals as flagship firms: Regional business networks*. Oxford: Oxford University Press.
- Scherer, F. M. (1975). *The economics of multi-plant operation*. Cambridge: Harvard University Press.
- Thrupp, S. L. (1948). *The merchant class of Medieval London*. Ann Arbor: University of Michigan Press.
- Varadarajan, R. (2010). Strategic marketing and marketing strategy: domain, definition, fundamental issues and foundational premises. *Journal of the Academy of Marketing Science*, 38, 119–140.
- Willan, T. S. (1956). *The early history of the Russia company 1553–1603*. Manchester: Manchester University Press.
- Wills, J., Samli, A. C., & Jacobs, L. (1991). Developing global products and marketing strategies: a construct and research agenda. *Journal of the Academy of Marketing Science*, 19, 1–10.