Peter Buckley argued back in 2002 that the field of international business (IB) had successfully solved the puzzle of why multinational enterprises (MNEs) exist and why they take the forms they do, and proposed a new list of research questions for the next millennium. My reaction was, and still is, “not so fast!”

While we do have sophisticated theories of the MNE, too many researchers still cling to theories that cannot satisfactorily explain some types of foreign direct investments (FDIs), in particular some undertaken by Japanese MNEs.

Take Dunning’s OLI paradigm, the most widely accepted theory of the MNE (Dunning & Lundan, 2008). An MNE is an organization that coordinates transborder activities through employment contracts, as opposed to through market transactions. The OLI paradigm provides an intuitive list of the conditions necessary and sufficient for the existence of such a firm. It states that to be an MNE a firm must have ownership, location, and internalization advantages. Ownership advantages, also called firm-specific advantages (FSAs), are based on intangibles, new products and processes and strong brand names. They allow MNEs to offset the higher costs they are likely to incur in foreign countries and hence to successfully compete with local firms. But having FSAs is not a sufficient condition for being an MNE, i.e. for operating with employees abroad, because a firm can exploit its
FSAs by incorporating them into products at home and exporting them to the foreign country. A second condition is therefore that a firm must find it more desirable to serve foreign customers by locating production in that foreign country than by exporting from home. This occurs when the foreign country has location advantages, also called country-specific advantages, or CSAs. CSAs consist of all the factors (natural resources, factors of production, customers, and local institutions) that favor production in a foreign country. A third condition for the existence of MNEs is that, given that a foreign location is preferred, the firm finds it more efficient to exploit its FSA by producing there through its employees than by selling or renting its FSAs to foreign firms (for example by licensing them). In other words, there must be internalization advantages, i.e. imperfections in markets for FSAs.

The OLI model thus posits that having ownership advantages (FSAs) is a sine-qua-non condition for being an MNE. As Guillen and Garcia-Canal (2009: 34) put it, “no firm-specific capabilities, no multinationals”. But if that were true, how does one then explain knowledge-seeking investments, such as the recent spate of acquisitions of Japanese, European, and North American high technology firms by emerging market multinationals? These firms invest abroad to obtain FSAs, not to exploit them. It is difficult to reconcile that with a theory that posits that having FSAs is a necessary condition for expanding abroad. In fact, knowledge-seeking investments belong to the more general category of resource-seeking investments, alongside backward vertical integration into commodities and raw materials and forward vertical integration into distribution. Resource-seeking investments are not explained by OLI theory since they are not based on the exploitation of FSAs, the investors having often little or no specific expertise in the subsidiary’s operations, the main motivation being the assurance of safe supplies

In OLI, the third condition for MNEs is that firms must exploit their FSAs internally (the I advantage). Internalization is preferred because it provides a superior method of FSA exploitation, and avoids the misappropriation that would result if MNEs used contracts or joint ventures (Rugman, 1981: 42). To safeguard FSAs, OLI implies that the most efficient ownership structure is the wholly-owned subsidiary (WOS), unless political risk makes that solution too risky (Anderson and Gatignon, 1986). This prediction seems at odds with the widespread use of less-than-full equity stakes by MNEs, even in countries with low political risk, such as the United States. Between 1952 and 1980, Japanese firms took 694 stakes in US manufacturing subsidiaries, but only 35.5% of them were full ones

The transaction cost (TC) theory of the MNE (Hennart, 1982; 2010)
provides a more general explanation of why MNEs exist, and can account for a much wider range of FDIs. The starting point is the existence of potential or actual interdependences between parties located in different countries: one party may have a product or service useful to another, or both could achieve together what they cannot separately. Organizing such interdependences yields potential gains, but also incurs costs. The parties need to be informed about the gains and to agree on their division, and there must be some way to enforce what is agreed upon. The price system and hierarchy are two generic methods to perform these three tasks. The price system works through measurement of outputs, and hierarchy through monitoring and rewarding behavior. Because there are fundamental differences in the way the price system and hierarchy work, the net gains generated by organizing a given interdependence will vary with the method used to organize it. Firms use mostly hierarchical methods. TC theory identifies the characteristics of interdependencies that determine whether they should be organized on markets or within firms. Hence the TC theory of the MNE posits that there are two necessary and sufficient conditions for an interdependence to be organized within an MNE: (1) an internalization condition, i.e. the benefit of organizing an interdependence must be higher than its costs, and higher using employment contracts than using the price system; and (2) a location condition, i.e. locating production in the foreign country must be more efficient than at home.

TC theory posits that MNEs arise when organizing international interdependences through employment contracts is more efficient than doing it on the market. This way of looking at the conditions for the emergence of MNEs makes it easy to understand why firms may expand abroad even when they do not have FSAs. For instance, tacit knowledge has been shown to be difficult to license. This explains why, as predicted by OLI theory, firms eager to exploit tacit knowledge in foreign countries find it efficient to do it internally, but it also explains why firms eager to access tacit knowledge also have to do it internally, either by acquiring a firm that holds it or by setting up greenfield R&D facilities abroad. Likewise imperfections in the markets for intermediate inputs explain why downstream processors may integrate upstream, but also why upstream producers may integrate downstream. The TC theory of the MNE thus explains why a firm does not need O-advantages (FSAs) to be an MNE.

While OLI theory provides an intuitive explanation for most US investments abroad, it seems less able to explain other types of FDI, for example early Japanese FDI in the US. Such investments were mostly through minority stakes and joint ventures (JVs). This is explained in
part by the important role played by Japanese trading companies, a role difficult to explain by OLI, but that fits well within a TC framework.

Being relatively small in size and lacking language and cross-cultural skills, many Japanese exporters have used trading companies (sogo shosha) to handle their foreign imports and exports. When the United States started to put barriers on Japanese imports of raw materials such as seafood and forest products and exports of finished products such as textiles and steel, the sogo shosha were faced with a threat to their trading business. Their answer was to orchestrate the establishment of foreign production subsidiaries. For example, in seafood the gradual exclusion of Japanese fishing from US coastal waters after the war forced Japanese trading companies to set up inshore production plants such as North Pacific Processors, a 50-50 fish canning JV between Marubeni and a US fishing firm. In textiles and steel, the sogo shosha partnered with Japanese manufacturers to set up US-based plants to bypass rising US trade barriers. Examples are General Knits of California, a three-way JV between Itochu (59%), Kawabo (20%) and Tokai Senko (20%) to dye and finish knitted goods, and Auburn Steel, a steel minimill JV between Ataka (60%) and Kyoei steel (40%). The sogo shosha also took minority stakes in potential US high-tech exporters to Japan such as Qantel, a manufacturer of small business computers, in which Itochu took in 1969 a 19% stake.

As Hennart and Kryda (1988) show, the logic behind these investments is better explained by a TC model than by OLI. Trading companies did not invest to exploit FSAs but instead to safeguard their existing trading relationships and to develop new ones. Their stake in US-based plants served as a commitment of support for the venture, and as a guarantee to continue to handle its business. Minority stakes also helped to develop new potential customers which might have had difficulty finding long-term financing elsewhere. Because the goal of their equity stakes was not to safeguard the exploitation of their FSAs but instead to tie in customers, sogo shosha took as little equity as needed. Stakes were often short-lived: in some cases the ventures went bust, in others the sogo shosha were able to sell their stakes back to their Japanese and US JV partners while still safeguarding their trading rights—as in the case of Mitsui’s 45% stake in Alumax sold back to Amax and replaced by a long-term contract (Roehl, 1988). This pattern of small, short-lived equity stakes is totally different from the one predicted by OLI.

Does it matter if IB researchers use an incomplete theory of the MNE like OLI? Yes, because it leads them to draw misleading conclusions--like the one that emerging market firms will not engage into FDIs because they do not possess FSAs. It also causes them to
waste resources in empirical dead-ends, for instance the quest for an empirical relationship between multinationality and performance. A more complete theory of the MNE exists.

1 To address this problem, Dunning added to intangible-based ownership advantages a new category of ownership advantages which he called ‘transactional advantages’. These arose from the multinationality of a company. But this is a tautological explanation, since the only way we know a firm has ‘transactional advantages’ is from the fact it has internalized transactions.

2 A full stake (a WOS) is defined by an ownership stake of 95 to 100%. All data in this piece are from the author’s database of early postwar Japanese investments in US manufacturing.

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1. The Market Dilemma in Emerging Countries

The idea of “reverse innovation,” previously not just unconsidered but also counter to all expectations, now finds itself being widely discussed? The reason lies in the expected expansion of the economies of emerging markets, seen as the drivers of 21st century economic growth, and the accompanying development of new products and technological approaches. Most advanced countries businesses already engage in the development of products for emerging countries, and the corresponding establishment of R&D operation aimed at these countries. However, most of these efforts have been focused on introducing low cost products selected from the line of products available in developed markets, and not on products developed within the local market. The sales, production, and tuning of products is similarly limited to minor adjustments of existing products. However, this type of BOP (Bottom of Pyramid) strategy, where middle-of-the-range (and below) products already accepted by developed markets are introduced to emerging markets, has failed to achieve significant market penetration.

Emerging markets were basically seen as little more than a minor addition to the developed ones, and not allocate the significant management resources for new one. This is due to the fact that due to the fierce competition between businesses in the developing countries markets, there was a limit to the amount of effort that could be diverted to the comparatively less-skilled emerging markets. It was under this limit that companies from developing countries markets first entered emerging markets. While they may have initially had a technological advantage, they soon saw their market share being capture by competitors from the emerging markets. This battle is known as the “Dilemma of Emerging Market Strategy,” or the “The Innovator’s Dilemma.” For example, Honda, a world leader in motorcycles, was quick to enter the emerging Chinese market. However, with their products soon copied and reproduced more cheaply by local companies, Honda found itself suffering and unable to capture significant market share.

So how are companies to achieve growth in the important and growing emerging markets while simultaneously dealing with the
realities of cheap products and increasing catch up skill within emerging markets? G.E. CEO Jeff Immelt, declaring that GE would have no future without engaging in development in the emerging markets, decided that a completely new approach to R&D would be taken in countries like China and India. The subsequent development of handheld electrocardiograph devices and low-priced portable PC based ultrasound machines show one possible answer to the dilemma.

2. Reverse Innovation from the view of CSR

CSR and Emerging Markets

Let’s now take a look at reverse innovation from the view of CSR. CSR (Corporate Social Responsibility) deals with, as the name suggests, the social responsibility and contributions of corporations to society. In Japan, social responsibility became a pressing issue with the 1960s “pollution problem,” the early 1970s “panic buying” and “reluctant sale” issues of trading companies, and the various scandal which arose after the collapse of the economic bubble in the 1990s. Since the 90s, staff misconduct has become an issue which leads to doubt about a company’s basic business conduct ability. In Japan, 2003 is widely hailed as the year in which CSR was born. This birth should be seen as something fundamentally different than the demands for social responsibility brought about by the aforementioned problems. Before 2003, CSR was simply seen as a part of a company’s operation, whereas the CSR being discussed now is seen as the core business operation that a company must engage in its entirety. Looking at this responsibility as it applies to emerging markets, we can see that, from the view of CSR the various responsibilities exist for Japanese companies. In this regard, while we may expect rapid economic development in the emerging markets, development left in its present situation will lead to numerous societal issues, including global warming, global resource depletion, issues of social inequality caused by increasing disparity in wealth distribution brought about by market competition, and labor issues.

It is within this environment that companies are considering what it is they should do, and that their core strategies are being questioned. CSR until now has largely been just a single, responsive part of a company. But now the need for active CSR that is integrated into a corporate strategy has become clear. M. Porter, well-known corporate author, and his colleague M. Kramer, wrote on the importance of developing strategic CSR that goes above and beyond simple responsive CSR (Harvard Business Review 2002, Dec.).
article’s argument can be used to explain why BOP businesses operating in emerging markets should adopt comprehensive CSR strategies to address societal problems.

The BOP market, envisioned as a pyramid, occupies the bottom layer of income distribution (figure 1). In “The Next 4 Billion,” (2007) World Resource Institute & International Finance Corporation estimates that 72% of the world’s population (approx. 4 billion) has annual incomes of less than $3000, the MOP (Middle of Pyramid) layer above is comprised of approximated 14 billion people, and the TOP (Top of the Pyramid) layer consists of a mere 1.75 billion people. Even if individual annual income is less than $3000, this means that the BOP market is a $5 trillion market that easily matches Japan’s GDP. Though Japanese companies have traditionally only targeted the top and part of the middle, they can be expected to start to develop new opportunities targeting the middle in its entirety.

Figure 1 World Population & Annual Income, Market Size


Business in Emerging Markets

From the view of CSR, what can we expect of businesses in emerging and BOP markets? In emerging markets, rapid economic growth can lead to a wide range of problems, including environmental destruction, pollution due to factory construction, Co2 emissions due to car use in cities, and other problems related in population growth (such as housing, food, medical, energy, and education). Though multinational corporations have already entered into numerous corporate strategies in the developing emerging markets, the focus is now shifting to looking at how their business can contribute to addressing these societal problems. GE’s development of handheld electrocardiograph devices and low-priced portable PC based ultrasound machines served to address a medical issue by making

"CSR until now has largely been just a single, responsive part of a company. But now the need for active CSR that is integrated into a corporate strategy has become clear."
devices that were accessible to lower income levels. Thanks to GE’s work, numerous lives have been saved, and a thriving example of a truly CSR-driven business employing numerous people over a broad area was born.

Examples of this kind of CSR-driven business development within emerging markets can also be seen in some Japanese companies. For example, Yakult has made “protecting the health of all the world’s people” a goal of its business, including in developing foreign markets. Started in 1963, Yakult’s home product delivery by its Yakult Ladies contributed to Japanese society both in terms of preserving health and in creating employment opportunities for women. Bangladesh’s Grameen Danone Foods (a joint venture between Grameen Bank and Dutch food and beverage maker Danone) made use of this exact model in having its low-priced, highly nutritious yogurt sold by Grameen Ladies. AJINOMOTO, wanting to improve the nutritional situation in developing countries, joined with JICA and UNICEF to bring its flagship product Aji No Moto to emerging markets. Another example, Osaka’s Poly Glu, focused on providing clean and safe drinking water in Bangladesh through the developed of water purification chemicals. Sumitomo Chemical’s bug repellent “Olycef Net,” which is seen as a highly effective method of combating malaria, has seen large purchases from the WHO and UNICEF to be distributed free-of-charge to the poor in developing countries.

3. The Meaning of Reverse

Multinational companies’ investment in R&D in emerging markets is, it goes without saying, one way to match R&D to local needs. But, it can also serve as a source of new products and ideas for the parent company in its home country. This is the definition of “reverse innovation,” where ideas and products developed in emerging markets find themselves imported to advanced industrial economies. While reverse innovation became a topic of much discussion thanks to the successful example of GE, there are two ways to look at the issue.

The first is where new products and skills are born from the R&D of companies original from the emerging markets they serve. One example of this would be India’s Tata Motors, which has produced $3,000 Nano car, and developed solar panels and electric bicycles in China. The emerging markets have an urgent need for products which address a range of pressing issues. These include low-cost medical devices, carbon capture (products to reduce Co2
emissions), solar and wind power, biofuels, distributed power generation, water purification, electric vehicles, and ultra-low-cost housing, among others. Given that “necessity is the mother of invention,” it would not be surprising to see developing countries lead the development of technology in these areas. On the national level, this gives one reason for the development of products in emerging markets which have are able to hold their own and take on the markets of developed nations. If we look at America and Japan, America was responsible for a large amount of innovation at the start of the 20th century. However, this technology found its way to Japan, where innovation led to the birth of products able to compete in the developed markets. The auto industry is but one example. America’s development and discovery of new products and skills is known as “product innovation,” while Japan’s development of more efficient processes is known as “process innovation.”

It seems fair to say that Japan’s excellent “process innovation” was, in fact, just another example of reverse innovation flowing to developed countries. The second way to look at the issue can be seen in the GE example, where a multinational corporation’s R&D success overseas found itself being imported back into the home country. However, GE’s initial goal was not to aim for re-importable advances, but to increase its competitiveness in the local market. As stated above in The Dilemma Facing Markets in Emerging Countries, they adopted a completely new approach to overcome the obstacles they faced.

It evolved the local growth team (LGT) model, which is based on five critical principles:
1. Shift power to where the growth is
2. Build new offering from the ground up
3. Build LGTs from the ground up, new companies
4. Customize objectives, targets, and metrics

For a global R&D strategy to facilitate innovation in emerging markets, numerous, numerous restructurings must be made, including: reallocating resources between headquarters and the local office, creating an environment that promotes research that is both unhindered and cooperative, and an incentive system that promotes said research. Compared to America and Europe, Japanese companies seem to have opened numerous research bases in emerging markets. However, in actuality, much of the real research activity remains definitively in Japan. Even is the research in emerging markets does not lead to a specific product, the very process can lead to a variety of discoveries, innovations, and, as a result, patents. One example of this
can be seen in the patents held by foreign investment firms in China. Looking at patents held by western and Japanese companies in the early 2000s in China, the involvement of locally formed companies is minimal. However, by the latter half of the decade, the involvement of locally formed western companies has risen sharply compared to continued minimal involvement by Japanese offshoots. Numerous American patents reference the work of domestic Chinese universities and companies, displaying an ability to work within the local innovation system. If this represents success, than Japanese companies are failing in comparison.

In order to achieve a broad range of innovations, it is necessary to harness each location’s unique qualities, something which cannot occur if R&D remains centered in Japan. This is an example of the Japanese business trait of “self-sufficiency”. While it is certainly beneficial to make use of one’s own resources, focusing too much on this one point leads to an inability to implement a management style that makes use of other resources, such as open networks. Developing innovation in emerging markets calls for rapid cooperation with local universities, research institutions, and industry.

4. In Conclusion

This article looked at “reverse innovation” as it relates to globalized R&D, calls for new ways to look at the global market. Peter Gammeltoft clarified six motives as following, Innovation-driven motives is like Reverse innovation

Until now, the path of R&D and products aimed at the emerging market was decided by the top of the BOP pyramid: the high income class. However, in today’s rapidly developing economies, future growth and development will come from the middle and lower layers of the pyramid. These demographics call for products that carry a low price, are portable, and are easy to operate. However, this rapid growth has also led to an increase in societal issues. There are many issues that advanced global companies can address from a strategic CSR standpoint. They include issues of health, medical, environment, water pollution, energy, food, housing, and emissions in cities. In order to address these issues, R&D at the local level cannot simply be limited to localizing already developed products. A new style of approaching the R&D problem was looked at with the example of GE and medical products in China and India. Looking at emerging markets, the fact that advanced corporations in the developed world hold the management skills and resources necessary to engage in R&D is not likely to change soon.
Figure 2 Ratio of Patents of Foreign Companies in China


Figure 3 Motives for internationalising R&D

<table>
<thead>
<tr>
<th>Motive</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Market-driven</td>
<td>Exploit existing company-specific assets more widely; motivated by market size and proximity; support local sales, closeness to key customer; improve responsiveness in terms of both speed and relevance</td>
</tr>
<tr>
<td>Production-driven</td>
<td>Supporting local manufacturing operations Technology-driven</td>
</tr>
<tr>
<td>Technology-driven</td>
<td>Tapping into foreign S&amp;T resources; technology monitoring (especially competitor analysis); acquire/monitor local expertise, knowledge and technologies</td>
</tr>
<tr>
<td>Innovation-driven</td>
<td>Generating new company-specific assets; attaining a faster and more varied flow of new ideas, products and processes; capitalise on locative specific advantages through an international division of labour between R&amp;D labs</td>
</tr>
<tr>
<td>Cost-driven</td>
<td>Exploiting factor cost differentials</td>
</tr>
<tr>
<td>Policy-driven</td>
<td>National regulatory requirements or incentives, tax differentia monitor and exploitation of regulations and technical standards</td>
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Source: Gammeltoft, P. (2010) “Internationalization of R&D”

However, products must be designed for their markets. This paper looked at how, as the developed world reaches a plateau and begins to age, major growth will come from the emerging markets. In order to develop products suited to this market, a globalized R&D strategy which focuses on securing the necessary human resources becomes necessary, and here the emerging markets provide an answer. Developing global human resources is seen as a pressing issue for Japanese companies. Here too is an area where the development and use of researchers and talent in the emerging market is surely necessary.
References


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