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Journal

Global Strategy Journal, 6(3)

ISSN

2042-5791

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Publication Date

2016-08-01

DOI

10.1002/gsj.1126

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The Dynamic Capabilities of Meta-Multinationals ¹

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For *Global Strategy Journal*, special topic forum on Developing the dynamic capabilities of global companies across levels and locations

This is the peer reviewed version of the following article: Lessard, D., Teece, D. J., & Leih, S. (2016). The Dynamic Capabilities of Meta-Multinationals. Global Strategy Journal, 6(3), 211-224, which has been published in final form at <http://dx.doi.org/10.1002/gsj.1126>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving.

Abstract:

Established theories of the multinational enterprise (MNE) were created for a different, less globally competitive world. Today's MNEs are moving toward the stateless ideal-type known as a meta-national. Because considerable central authority remains, we call the emerging model the meta-MNE and use the dynamic capabilities framework to analyze this phenomenon. Strong dynamic capabilities, including asset orchestration, are necessary both for the very existence of the meta-MNE and for its competitive advantage. We draw contrasts between the meta-MNE and the traditional, home-centric MNE. We consider the ways in which nations still matter and the policy implications of the emergence of the meta-MNE. We also discuss recent developments in China, which has greatly shaped the environment facing existing and future meta-MNEs.

¹ We wish to thank Greg Linden for helpful comments and other assistance.

The Dynamic Capabilities of Meta-Multinationals

I. INTRODUCTION

The multinational enterprise (MNE) is one of the world's most innovative organizational forms, morphing from the globe-spanning trade of the Dutch East India Company (founded in 1602) and the British East India Company (in 1603) through to today's sprawling networks of factories, offices, and research labs that connect cities and regions throughout the world. MNEs are the handmaiden of globalization and their stakeholders are amongst globalization's largest beneficiaries.

Today's MNEs are in fact getting closer and closer to yet a new organizational form, that of the metanational, which was first described by Yves Doz, Jose Santos, and Peter Williamson (2001). The metanational can be based anywhere, but is able to sense and mobilize knowledge from leading customers and, especially, from key industry-specific centers of innovation anywhere in the world.

Home/host country dichotomies live on, but the distinction should no longer be emphasized as strongly as in most theoretical frameworks. Knowledge and markets have become more widely dispersed and diversified, and the structures of the multinational business enterprise have responded in kind.

New firm-level economic relationships and governance structures require that we update and deepen our understanding of the MNE. Network structures and contractual relationships within and across networks and within and across space need to be better understood in terms of the interactions that they support, especially the types of resources involved.

The original conception of the metanational was couched largely in terms of technology or market knowledge. It is vital to extend this to the more general concept known as capabilities. When firms implant themselves in a particular location, they can mobilize more than just the know-how they find there; they can also develop locally competitive capabilities that may be transferable to other nodes in the firm's network.

The basis of the traditional conception of the MNE is some form of capability replication. A business model, product, or service is developed at home then produced abroad. As Teece and Pisano (1994) and Teece et al. (1997) point out, the ability to replicate capabilities across space is vitally important. Cross-border replication depends not only on what the MNE knows but also on local skills and what is known (or not known) there.

In today's quasi-meternational firm—which we call the “meta-MNE”—replication occurs in some locations, but there are many more nodes in the firm's network that are highly specific to local conditions. Thus a firm may open a “research lab” to localize a product, but at the same time it serves as a conduit to channel local market knowledge back to higher-level decision makers, who may be in the home country or who may be in a line of business headquarters located in yet a different country.

As corporate networks become more complex, more importance than ever is being assigned to the structuring and coordination of cross-border activity. The movement of knowledge and other resources through the network must be expertly orchestrated to avoid missed opportunities, or even total collapse. To do this well requires that the firm have strong dynamic capabilities.

In this paper we begin by reviewing several models of multinational business activity. We propose the meta-MNE as a hybrid concept that encompasses the complex integration and coordination to orchestrate activities across multiple (nation state) geographies. This involves the exercise of dynamic capabilities on a global basis. We compare the relevance of dynamic and other types of capabilities as a basis for competitive advantage, and then compare the dynamic capabilities of the home-centric MNE to those of the meta-MNE. The focus then turns to local factors, particularly the importance of local embeddedness and the options for policy makers. Another focus area is china, where MNEs have been very active in co-invention, and local firms themselves are beginning to invest in overseas research. A concluding section summarizes.

II. PRIOR LITERATURE

We begin by re-examining two models of MNE activity: the eclectic paradigm for investment and the CSA/FSA framework for strategy. We then briefly review the dynamic capabilities

framework as it applies to multinational activity and then the metanational model, which remains a largely unattainable archetype due to the managerial requirements and level of capabilities required. (Verbeke & Yuan, 2007).

a) The IB Literature

The international business (IB) literature has long recognized the critical role of both locations and firms in the creation and capture of economic value across countries. From the outset, firm-level and ecosystem/region-based advantages have been seen as highly interdependent, as opposed to two distinct sources of value (see, e.g., (Fayerweather 1969). Vernon's seminal product lifecycle theory included the characteristics of the home and host countries and the movement of technology from home to host over time (Vernon 1966).

The literature on the multinational enterprise has expanded dramatically since then. Here we will restrict our attention to two of the leading approaches.

First, Dunning's widely-used OLI paradigm defines the bases for the pattern and growth of investment by a multinational firm. These the firm's specific resources and capabilities (O factors), the resources and opportunities it faces in different locations (L factors), and the value of internalization to create and extract value when O and L factors interact (I factors) (Dunning 1988). This parsimonious framework, in which the elements have been redefined over time as real-world circumstances and economic theories evolved, continues to provide useful insight into our understanding of the MNE.

A second, complementary theory uses Rugman's classic matrix of country specific advantage (CSA) and firm specific advantage (FSA) that shape the strategic options of the MNE (Rugman 1981; Rugman and Verbeke 2001). This approach captures the firm-ecosystem environment as it was seen in much of the IB literature through the 1980s. The active part of the firm was the parent and the relevant CSAs, therefore, are those of the home country. Multinationality is largely about projection abroad from the base at home.

Over the years, our understanding of the interaction among locations and firms has grown more complex and more nuanced, with a sharper perspective on the sources of value associated with

each. For example, (A. M. Rugman and Verbeke 2001), following (Birkinshaw, Hood, and Jonsson 1998) and others, capture this firm-country interaction going beyond HQ-driven strategy to include global product mandates and subsidiary entrepreneurship. Dunning's paradigm also expanded to recognize emerging theories of firm-level advantages such as capabilities (Dunning and Lundan, 2010).

While they were reasonably well-suited to their original, somewhat narrow purposes, the Dunning and Rugman approaches have always suffered from certain limitations. First, neither has organizational or managerial elements that capture how internal structure affects investment choices and market outcomes. They also lack any explicit dynamic element to capture how countries and firm-level advantages evolve. MNEs possess some FSAs that allow them to “go global” profitably but they then derive further advantage from the fact that they are international and exposed to a wider range of opportunities (Kogut 1989).

Over time, they have become even less apt as descriptors of the way multinational firms cross borders and set strategy. In particular, the reliance on the core components of these models—firms and nations—has begun to suffer from the “fuzzy border problem” (Cantwell and Narula, 2001). Firms today are typically embedded in networks of strategic alliances and platform partnerships, making a constellation of firms the locus of advantage rather than any individual firm.

Also, the concept of location has expanded from that of a nation to include the region or cluster (e.g. Porter 2000; Tallman, Jenkins, and Pinch 2004). Distant regional ecosystems, e.g., Silicon Valley and Israel (Engel and del Palacio 2011), can be tightly linked organizationally through contracts, investment flows, and exchanges of technology and personnel. The formation of durable bonds is facilitated by the ease of international travel and communications.

Meanwhile, free trade agreements and other regional arrangements have eroded market-based country-level advantages even further. These advantages matter only when differential access to investment opportunities is permitted or allowed, which of course is still true in many jurisdictions. While they still provide the legal framework and rulebook for global activity, nations are less uniquely relevant in location decisions.

The two IB paradigms also fall short as theories of competitive advantage. The Dunning paradigm was never really intended to explain competitive outcomes; advantage was assumed to exist, and the paradigm was developed at a time when MNEs faced much weaker global competition than today's hypercompetition (D'Aveni, 1994).

The problem with the CSA-FSA framework as a theory of competitive advantage, meanwhile, is that country-specific advantages are often of little moment to firm level competition advantage. For instance, inexpensive skilled labor, to the extent that it can be accessed by all competitors, is not going to give domestic firms an advantage. Nor need a superior national system of innovation if foreign firms can locate inside (and take advantage of) the national system. Innovative clusters such as Silicon Valley are home to numerous foreign-owned subsidiaries seeking to find and exchange ideas that also eventually "migrate" to the parent company.

The benefits of national systems are to some extent available to all that chose to accept them as flows of personnel now move with relative ease across all economically relevant borders. Silicon Valley is home to many foreign-born entrepreneurs and engineers who find it desirable to develop ideas there and then often migrate to other locations.

Country advantages are accordingly no longer very compelling from a competitive advantage perspective. The competitive advantage of the MNE depends less on particular locations than on how (and how well) these are linked through the MNE's organization and strategy.

b) The Dynamic Capabilities Framework

An alternative framework to help explain cross-border activity that explicitly seeks to account for competitive outcomes is the dynamic capabilities framework developed within the strategic management literature. Although originally introduced without specific references to international issues, it has since been applied to the MNE (Augier and Teece, 2007; Pitelis and Teece, 2010; Teece, 2014). It provides the analytical framework to be used in this paper.

Dynamic capabilities were originally defined as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al., 1997, p.516). Firms with strong dynamic capabilities have good strategy and are flexible, agile, and resilient.

For practical purposes, it has proved useful to think of dynamic capabilities as falling generally into three categories, namely, the capacities to (1) sense opportunities and threats, (2) seize opportunities, and (3) periodically transform the business enterprise's intangible and tangible resources. Dynamic capabilities (DCs) are based in both managerial cognition and organizational routines. They reflect and embody the path dependent outcomes of the firm's unique history (Teece, 2012).

Dynamic capabilities are particularly relevant to the MNE context because they include asset orchestration, the ability to combine selected technologies, individuals and other resources in new products and processes regardless of location and across organizational boundaries. The asset orchestration function is an extremely entrepreneurial one, requiring top management to not just administer but to manage, with speed, and skill.

The global context increases the portfolio of assets available along with the opportunity by orchestrating them in a commercially meaningful manner. As a result, MNEs can have unique asset configurations that are unmatched by domestic-only rivals. For instance, U.S. firm W. L. Gore took innovations from its Japanese subsidiaries and deployed them internationally. The British company Pilkington glass wrote its license agreements so that technological improvements to the float process made by any licensee anywhere in the world could be used free of royalty by the parent and all licensee (Teece, 2000). While this didn't guarantee that all process improvements would be globally diffused, most were.

Second-order dynamic capabilities allow adjusting and recombine existing resources as well as developing new ones. Examples include new product development, expansion into new geographic markets, and the assignment of product mandates across regions. Lower-order capabilities are operational and other ordinary capabilities –e.g., the routine activities, administration, and basic governance that allow any organization to pursue a given production program, or defined set of activities, more or less efficiently. Strong ordinary capabilities are known as “best practices.”

Very good ordinary capabilities can be attained through imitation/copying and/or through engagement with third party experts (e.g., consultants). Even second-order capabilities, such as excellence in process improvement e.g. six sigma, can be emulated (Eisenhardt and Martin,

2000). By contrast, dynamic capabilities are firm-specific, complex, interdependent, and slow to develop. This makes them difficult or impossible for rivals to emulate, much less imitate, and makes strong DCs a basis for a durable competitive advantage.

Dynamic capabilities constitute part of the large and important category of intangible resources. Intangibles like DCs are potentially valuable because they are difficult to trade in most cases due to “fuzzy” property rights boundaries and their context-dependent value (Teece, 1981, 2015). The primary exception is codified knowledge for which rights have been defined by law, such as patents and trademarks. Most intangibles, such as trade secrets, are also generally difficult to transfer from one firm to another because their transfer often entails the transfer of people.

Finally, missing from the discussion so far is strategy. Dynamic capabilities, which guide the configuration and orchestration of corporate resources, must be harnessed in the service of a good strategy. A good strategy will diagnose the company’s global predicaments and opportunities, and guide the way forward. Strategic goals provide the vision that informs the exercise of all the firm’s capabilities.

c) The Metanational Concept

The classic MNE, based at home and spreading itself across the globe, is still the dominant model in IB. But as the “fuzzy borders” discussed above would suggest, changes are occurring that call for new models.

An important alternative has been proposed by Doz, Santos, and Williamson (2001). They call it the metanational.² It is an ideal type that does not yet exist, at least not fully. We find it a helpful

² Although the concept of “multi-home based multinational” proposed by Solvell and Zander, 1995; Solvell, 2003 is similar, this is a firm that basically has business units doing innovation in local clusters led by specific subsidiaries around the world (multiple centres of excellence or multiple home bases). It is not about bringing dispersed and differentiated knowledge, external and internal, from all over the world and combining it across local ecosystems for innovation using dynamic capabilities. Solvell and Zander (1995) are even clearer that the innovation occurs within each local diamond and not by orchestrating distinct elements of knowledge and resources drawn from around the world. Lessard and Amsden (1998) applied the infelicitous label “multi-local for global” to this phenomenon, which they defined as “interactively developing a product or process among the center and/or local units, taking advantage of differences in each location’s capabilities and the stimuli they face.”

representation and believe that it has in fact advanced in importance and relevance over the last decade. We believe that the concept requires and implicitly assumes that such firms possess strong dynamic capabilities.

The prefix meta, in the sense of beyond “beyond,” reflects that the strength of these companies is not just born from their home base but from multiple locales. Metanationals seek out and exploit the uniqueness of their home base (or local ecosystem) but are strongly linked to other ecosystems too.

This multi-homing, at least at the project level, potentially strengthens dynamic capabilities. Cross-border linkages give metanationals more scope to “sense” and to “seize” than would be the case if the firm was limited to leveraging a single home base. In the Doz et al. formulation, companies with linked (small) home bases (e.g., Nokia in Finland) were forced early on into a metanational modality more so than companies headquartered in big markets like the U.S.³

For Doz et al., building metanational advantage requires companies to extend their capabilities in sensing, mobilizing, and operations. There are considerable similarities in this formulation with the dynamic capability clusters of sensing, seizing and transforming. The (ideal-type) Doz et al. model is one in which sensing, seizing, and transforming take place in multiple distant locations linked by a magnet initiative or other attractor (such as a lead customer or product platform), creating new capabilities that are then projected to the rest of the world. At its core is the idea of innovating by orchestrating the dynamic interaction of differentiated knowledge sets that are dispersed around the world to create new combinations. This model, in which the guiding magnet activity can be centered in any of the firm’s locations, is in contrast to the much more common multinational that builds its capabilities at home and then projects them abroad. The metanational can also be contrasted with the transnational that relies on sensing and seizing by its subsidiaries. The metanational senses and seizes knowledge and resources from anywhere in the world and from a wide variety of different parties with which it interacts.

³ However, Nokia’s failure to base itself at least partly in the U.S. probably contributed to its demise, given that the U.S. leapfrogged Europe in mobile telephony hardware by refining the hybridization of cell phones and handheld computers.

As hinted at above, a successful metanational must, in our view, necessarily have strong dynamic capabilities. It must have sensing capabilities embedded throughout its global organization, be able to mobilize resources from inside and outside the enterprise and from multiple innovation ecosystems and match them to market needs, and it must have the organizational flexibility to respond rapidly to threats and opportunities wherever they arise.

Pure metanationals are (1) substantially, if not entirely, unshackled from their home base. Sensing and seizing requires that they are also (2) proficient at “identifying and accessing new competencies, innovative technologies, and lead market knowledge” and “integrating scattered capabilities and emerging opportunities” on a global basis (Doz, Santos & Williamson, 2003. P.162). For example, a metanational firm’s “seizing” challenge is in some part a challenge to identify and integrate complementary technologies.

The achievement of integration requires structure, tools and processes along with the entrepreneurial capacity in the top management team to assemble and unite these components in a manner that yields value to the consumer while retaining sufficient value so that the metanational can grow and prosper.

We find the metanational concept helpful. Metanationals are a subset of MNEs that have gone global in a deep manner, i.e., beyond the Vernon conceptualization of an international firm leveraging just its home base, to one of an enterprise leveraging multiple bases and innovation ecosystems.

There are few pure examples as yet. One might be GlaxoSmithKline plc (GSK) which has at least completely unshackled itself from its original home. Glaxo was founded in the 1850s as a general trading company in Bunnythorpe, New Zealand by Londoner Joseph Nathan. Its first product line (launched in 1904) was dried milk powder for infant formula. GSK has become a global pharmaceutical giant, largely through merger. Though now nominally based in London, it will position assets anywhere and everywhere to build competitive advantage. It’s operations in its country of origin are miniscule (today), and the location of its headquarters of the original Glaxo company is a distant memory. Mittal Steel is another such example

We call MNEs with at least some major metanational characteristics “meta MNEs.” These are firms that sense and seize across key locations opportunistically but also regularly, typically

through initiatives, and then follow through with transformation in most locations . Their combinatorial activities go beyond adaptation to a specific location, and become part of the firm's repertoire to be deployed in other locations including the home base (Lessard, Lucea, and Vives 2014). Because of the punctuated and focused aspect of their “meta” activities, they are much less complex than the ideal metanational, yet they achieve many of the same competitive benefits.

The difference between home-centric MNEs and meta-MNEs is not trivial. For example, Japan's firms have proved to be weak global competitors in recent years despite their well-established networks of global subsidiaries. As Japan's economy recedes in global importance, only those Japanese firms that are able to adopt a meta-MNE approach by empowering their subsidiaries to take more initiative will be able to regain lead roles.

Meta-MNEs need not be large. While the metanational is global in scope, in many industries today they can be quite small (while still being global). Indeed, many new ventures have for some time now become global very early in their history, if not from the start. Rapid globalization has been facilitated by the ability to outsource many ordinary capabilities, such as manufacturing and data center operations, to providers who can scale their services as rapidly as needed. However, the literature on these “born global” firms (e.g., Knight & Cavusgil, 2004) does not explicitly address whether the innovations and the underlying capabilities draw on multiple countries. In most start-ups, managerial resources are too scarce to have multiple nodes of equivalent influence in the company.

III. BECOMING META: MNEs IN TRANSITION

This section begins by analyzing the relevance of different types of capability for achieving competitive advantage. Dynamic capabilities are the most important, and we describe how they play out in the many existing home-centric MNEs before discussing the emergence of the more decentralized model that some firms, which we call meta-MNEs, are adopting.

a) Competitive Advantage in the Global Economy

As mentioned earlier, strong ordinary capabilities can provide some level of advantage, but will eventually need to be renewed. First, even in developed countries, best practices are not

uniformly distributed. Studies show considerable dispersion (heterogeneity) amongst firms in their productivity and not surprisingly, also in their profitability (Syverson, 2011). However, persistent heterogeneity in productivity amongst firms (Bloom and Van Reenen 2007) is not inconsistent with our view that ordinary capabilities are an unlikely source of sustainable competitive advantage (and associated superior financial returns). This is because numerous studies of competition show that in many circumstances strong rivalry amongst just a few firms will bring about competitive pricing (Klemperer 1992) and associated competitive returns, thereby vitiating competitive advantage. Meanwhile, the companies in developed economies operating below the efficiency frontier are likely to have low profitability and zero or negative growth.

This is the situation that exists today in the global automobile industry, where efficient ordinary capabilities are just the entry stakes. In the words of Bob Lutz, former vice chairman at General Motors:

Where the real work of making a car company successful suddenly turns complex, and where the winners are separated from the losers, is in the long-cycle product development process, where short-term day-to-day metrics and the tabulation of results are meaningless.⁴

It is true, of course, that ordinary capabilities are even less widespread in developing countries, especially where competition is weakened by government restrictions establishing various barriers and controls that create protected niches. Such conditions open up myriad opportunities for MNEs who can transfer best practices across national boundaries, and for local firms that have, or can develop, best practices.

Transfer of knowhow across borders is neither simple nor free. An early study by Teece (1976) demonstrated that US-based chemicals firms experienced varying degrees of success when transferring process technology abroad. Technology travelled smoothly and at low cost only if the firm already had considerable experience in operating the technology in a manufacturing, rather than a lab, setting. A near disaster because of large cost overruns could be expected if the

⁴ (Wall Street Journal, June 11, 2011)

first operating experience with the new technology was in another country from where it was developed.

All manner of ordinary capabilities can fail to transfer. Franchise concepts (e.g., Starbucks, McDonalds) seem to be reasonably portable, with variations to accommodate local preferences; yet when McDonalds entered the Russian market, it had to take complete control of the supply chain to achieve the necessary initial quantity and quality. When ordinary capabilities are completely lacking among local enterprises, a company used to managing a supply chain elsewhere may be forced to develop a vertically integrated structure abroad.

Uber and other new “sharing economy” firms are once again testing whether their home-based capabilities travel, whether they are relevant (to customers in other countries), appropriable (are they readily copied by locals or dependent on local complementors with entrenched positions), and transferable (are they allowed by local regulation, etc.).

b) Dynamic Capabilities in the Traditional MNE

As the discussion of ordinary capabilities suggests, traditional MNEs develop capabilities around activities in their home base, then diffuse them, perhaps in modified form, to new markets. Foreign subsidiaries may have more or less autonomy and technical capability. A typical example is Norway’s Statoil, which developed horizontal drilling at home as part of a public-private research initiative then applied it in North America. Another is CEMEX, which developed distribution methods, products and services for self-builders at home, culminating in the award-winning Patrimonio Hoy program aimed at bottom-of-the-pyramid housing, and then transferred these practices to other countries where it was relevant.

But for the MNE to evolve and remain competitive over time requires the exercise of dynamic capabilities, orchestrating multilateral technology flows within and beyond its network in metanational initiatives. Statoil, which had developed a variety of technologies and practices for eliminating flaring- the wasteful and highly polluting practice of burning the gas on-site- in response to strong regulation at home in Norway, co-developed (with GE) new technologies in Canada for capturing and using the natural gas byproduct of highly distributed production (Garcia, Lessard, and Singh 2014). CEMEX “sensed” an opportunity when it noted that its Spanish acquisition used petroleum coke as a fuel in their kilns, and quickly realized that this

low-cost alternative fuel was also available in Mexico and elsewhere. It demonstrated asset orchestration by sensing a technological opportunity in one part of its network and transferring it elsewhere. The ordinary capability around fuel use was developed further by investigating other industrial by-products for fuel potential and by investing in the science and engineering of combustion. Because of its orchestration and ongoing sensing, Cemex emerged as a leader in using alternative fuels (Lessard and Lucea 2009).

c) The Emerging Meta-MNE

As firms commit resources to various markets and clusters, they have the potential to become less decentralized and closer to the metanational ideal of a network of equivalent nodes in which a new initiative can arise and be coordinated from anywhere. That is not to say the firm would be a bossless holacracy; some centralized authority must remain to help allocate resources and ensure strategic coherence of major initiatives. Sensing and seizing routines are almost infinitely divisible so long as the MNE maintains strong dynamic capabilities to reintegrate the resulting knowledge where and when it is needed.

Without some overall central coordination at the corporate level, the benefits of internalization would be sacrificed, making the organization a conglomerate rather than a meta-MNE. In dynamic capabilities terms, the central authority is where overall strategy and asset orchestration are formulated, the sub-units are where co-invention and initiative formation occur. There will always be tension between centralization and decentralization, and the balance may need to shift over time. A quote from Indra Nooyi, CEO of Pepsi, shows one way in which this is true:

In the past, being decentralized was our strength, but also our weakness. It is a fine approach when the whole world is growing and life is peachy. But it doesn't work when things are volatile globally and you need coordination.⁵

It remains to be seen how far large and small firms will go down the meta-MNE path. A number of the examples featured in the original metanational volume (Doz et al., 2001)—Nokia, Acer, and STMicroelectronics—have not fared well in the intervening years against their more

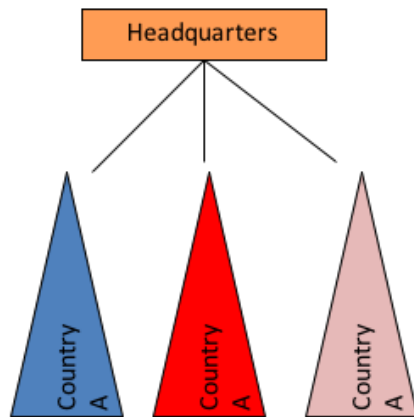
⁵(Ignatius 2015).

centralized rivals. The impressive success of centralized organizations such as Apple suggests that the advantages of the traditional MNE are far from irrelevant. Nevertheless, as the foreign subsidiaries of old-line firms improve their capabilities and as younger firms are born global, we believe that metanational characteristics will become more common in practice.

To be able to fully leverage its dynamic capabilities, the meta-MNE needs to be structured beyond the usual multidivisional (“M-form”) arrangements. As illustrated in Figure 1, this involves much more than just changing the org chart. Developing and applying DCs across countries requires a set of “related and supporting” organizational structures and processes. At the top, it requires an integrated executive team, ideally one where different members are located in different regions and thus possessing a greater variety of perspectives. It also requires integrated IT/information sharing platforms. The “cloud” of capabilities represents capabilities that can be accessed by units/managers throughout the firm whenever relevant.

Rather than comprising a set of national companies that are managed from the top like the M-form, the integrated MNE is connected across countries at multiple levels by both permanent structured routines and temporary project-based initiatives. These initiatives are what Doz et al. (2001) refer to as magnets. Cross-country teams are critical to making capabilities accessible throughout the firm (hence the analogy to cloud computing) through the networks and experiences of the individuals involved.

Traditional M-form Multinational Model



Integrated MNE

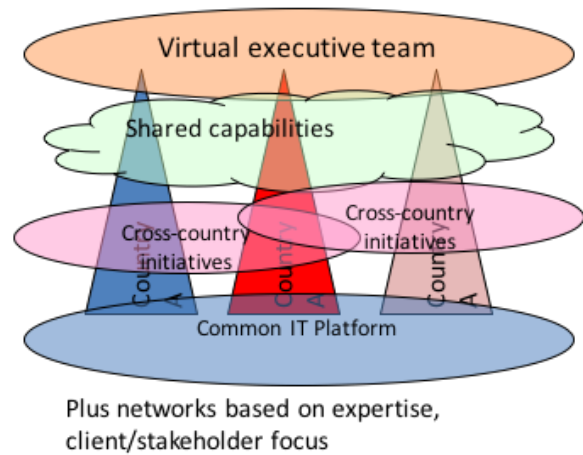


Figure 1: From the M-form to the Meta-form

The organization chart divisions can be by country, by product line, or some kind of matrix. Headquarters will assign divisions specific product mandates or other charters. These will fit the ordinary capabilities within the division and the ecosystems in which it operates. For example, in 2002 Swiss pharmaceutical giant Novartis announced the move of its global drug discovery headquarters to Massachusetts. In other cases, a mandate will sometimes serve as a “stretch” goal to help expand the firm’s capabilities or to employ slack resources (Galunic and Eisenhardt, 1996). This is typical of “centers of excellence,” where a subsidiary takes global responsibility for a specific activity or technology within the company (Frost, Birkinshaw, and Ensign, 2002).

What matters is that decentralized authority permits initiative to start low in the organization and that numerous “ports” are open to the outside world where partners can co-invent with organizational sub-units. Given that agility and flexibility are central in the dynamic capabilities framework, it is important that the firm’s organizational structures accommodate the deployment and if necessary redeployment of new products, processes, and business models.

While the concept of product mandates and their geographical assignment has a long history in the international business literature (e.g., A. M. Rugman 1983), the notion that their assignment is a dynamic capability is fairly new. Galunic and Eisenhardt (1996) found that mandate/charters, can be fluid and tradable. We interpret “tradable” here not in a strictly market sense, but in the

sense that management can move them around and, in doing so, create a certain amount of internal competition inside the meta-MNE. The orchestration of work among subsidiary nodes is not a one-time action.

Importantly, it is often the headquarters management team that senses and assigns new opportunities, based on signals received company-wide, often from front line units that are engaged in related but yet not connected aspects of the challenge or opportunity. Entrepreneurial management of the meta-MNE is not just about control and oversight, but about thinking creatively around new business opportunities. In other cases, of course, divisions aggressively seek new mandates and build capabilities with an eye toward expanding their scope of responsibilities and exploiting new opportunities.

IV. WHAT REMAINS OF “COUNTRY” FACTORS?

If MNEs are becoming less tied to their home countries, technologically and institutionally, then the question arises as to how “country” factors matter to the meta-MNE. For it is clear that they still do. The national level is where rules for employment, immigration, ownership, taxation, and other important parameters of commercial activity are set.

a) Local Embeddedness

Country factors are important for ordinary capabilities. The availability, quality and pricing of domestic resources, such as labor, can be an attractor of meta-MNE activity. But the MNE need not locate there. For instance, Apple relies on Foxconn in China to manufacture its iPhone. It doesn't need to own Foxconn to tap into those resources/capabilities. The foundations of its competitive advantage stem from having strong dynamic capabilities, valuable intangible resources, and the ability to orchestrate internal and external assets around the globe.

While accessing resources in a particular country may be straightforward in many instances, this is not everywhere the case, especially for science and technology. This is no small matter because access to technological resources in multiple regions is one of the chief characteristics of the meta-MNE. Technology and knowledge are not only inputs for the meta-MNE, organizations in these locations are potential partners for the co-invention process.

The U.S. system of innovation is relatively open. Firms of all nationalities that invest appropriate resources in the U.S. can participate. Many innovative ideas, especially in basic science, flow relatively freely even beyond its borders. Other countries adopt more restrictive controls on access to knowledge sources.

In systems that are more closed, successfully tapping into the country, particularly its innovation environment, could be a source of more lasting competitive advantage. As reflected in the concept of National Systems of Innovation (e.g., Nelson 1992; Freeman, 1995),⁶ nation states have distinct institutions and milieus that may be favorable (or unfavorable) to innovation. The U.S. milieu, for instance, is characterized by a good environment for new business formation, relatively easy access to venture capital, government funding of basic research, and strong research universities.

Co-creation activities need to take place in markets where there are advanced and ubiquitous engineering and management skills, and where there is good protection for intellectual property (IP). Absent the latter, the meta-MNE will find it challenging to capture value. China, for one, has been problematic in this regard because it has a poor track record of enforcing IP rights even as it trades market access by MNEs for transfers of technology. As China's own firms endeavor to be more competitive in advanced technology, the government faces increasing demands to improve enforcement of IP rights, but there is no guarantee that they will be enforced equally for local and foreign firms, because the legal and administrative system is also a work in progress.

Even when national systems of innovation are open for engagement with foreign firms, there are often complex issues and relationships that must be navigated to ensure success. Institutional and cultural idiosyncrasies require time to learn and master. Moreover, the foreign firm must locate adequate resources for the exchange of knowledge, its absorption, and its transmission to where in the company it will be most useful. This of course requires capabilities from the parent firm to design the right structures and incentives and then allocate the necessary resources.

In many cases, MNEs have not engaged deeply in the regional ecosystems in which they

compete. While this was not a problem in a world where MNEs offered the only desirable product alternatives, they now face homegrown rivals that are deeply embedded and adept at exploiting and shaping their own ecosystems (Santos and Williamson 2015). To succeed, meta-MNEs must localize more than in the past, when adapting existing products and hiring a few locals as managers was seen as adequate. Recently, for example, when Johnson & Johnson decided to raise its game in Africa, it did so by opening an office of its newly-created public health unit in South Africa. In addition to traditional MNE linkages with universities, the unit is charged with working with government, non-profits, and local firms to build capabilities for medical testing, local suppliers and last-mile distribution of medicine. In the words of CEO Jay Gorsky:

“Part of it is the right thing to do. Part of it is building those kinds of relationships, those kinds of capabilities that over the long term are going to result in a very significant market opportunity for us.”⁷

In short, access to a country’s tangible resources via investment or contracting may be sufficient for least-cost best practice, but it is access to (and participation within) local and regional ecosystems that is necessary to build competitive advantage. In particular, it is the participation within multiple NSIs that will define the supra-innovative meta-MNE. Access to global knowledge and innovation in conjunction with local innovators requires dynamic capabilities to generate sustainable competitive advantage.

b) Policy Implications

As companies become less dependent on a home-based headquarters, they are increasingly balancing the public policy environments of numerous countries. Correspondingly, there is likely to be less alignment between benefits to shareholders and benefits to the nominal “home” country. The concern is not new, as reflected in Robert Reich’s article “Who is US” (1990).

⁷ cited in J.D.Rockoff and B.McKay, “J&J Makes Renewed Push Into Africa,” WSJ.com, April 5, 2016.

The U.S. manufacturing “commons” may well have been depleted in recent decades by the collective, economically motivated decisions of countless firms. Even when some manufacturing activity returns the sector will never be the growth and employment engine it once was (Pisano and Shih, 2009). To lesser extents, Europe and Japan have also experienced “hollowing out” due to investment in and contracting for offshore manufacturing.

Any justification for treating local and foreign-owned industrial activities differently is rapidly receding. Policy makers need to provide an environment that supports entrepreneurialism and foreign investment alike. Many foreign investors have established at least as good a record as local firms for being good corporate citizens, because they recognize the value to be realized from developing not just a good reputation but also local embeddedness. But government has no reason to expect allegiance or faithfulness from entities whose very existence is based on their flexibility in orchestrating assets on a global basis.

The good news is that, as large firms adopt the meta-MNE model, they are more willing than ever to locate valuable advanced technological development resources in attractive locations. Policy success in pursuing this outcome requires that the locality first develop its own capabilities with appropriate skilled personnel, infrastructure, and quality of life. Tax incentives are unlikely to be a deciding factor. The necessary policy balance will be different in each locality, depending on the attractiveness of the surrounding market, the pre-existence of local industrial cluster, and the availability of supplies and services, and the potential for people and organizations embedded in that location to engage in “co-creation” with complementary regions..

V. THE CHINA FACTOR

One of the largest events in the global economy over the past quarter century has been the rapid emergence of China. It has become one of the most attractive markets for the meta-MNE, serving as both a potential partner and rival. Amid the momentous changes that China’s growth has wrought, it is easy to lose sight of the details of the relationships forming between China’s firms and universities and foreign-based MNEs. In this section we briefly review research that sheds light on these ties and the competition posed by the ambitions of Chinese firms that are beginning to invest abroad.

a) Cross-national Co-invention in China

As mentioned earlier, the essence of the meta-MNE is that its innovation process harnesses internal and external competencies/assets from multiple regions. In these collaborative networks, it can be difficult to discern how contributions are distributed.

China, however, is a special case. R&D investment there is in part driven by the availability of high skills at low cost coupled with an attractive market. But some of it is driven by the need to placate the demands of China's leadership for technology transfer. At least initially, some of the technological activities were less sophisticated and important to the parent than some press releases indicated, and parent firms generally held back critical intellectual property rather than exposing it to China's weak protections.

One recent study (Branstetter, Li, and Veloso, 2015) shed light on this area by combining quantitative analysis of co-invention patent data with qualitative interviews to better understand how this process was playing out in China and India. These are both important destinations for MNE R&D, with expenditure from 1997 to 2007 increasing 33-fold in China, to \$1.17 billion, and 16-fold in India, to \$382 million (*ibid.*, p.137).

The study's authors concluded that a significant fraction of Chinese and Indian research manpower "was being used to contribute to global research projects whose ultimate application will be in global markets, not just the local market" (*ibid.*, p.162). They also found, however, that the utilization of talent still depended importantly on the orchestration capabilities of MNEs: "In some organizations, it was explicitly acknowledged that the fundamental intellectual insights and structuring of the research agenda still came from the foreign side" (*ibid.*). Even when there was more local autonomy in setting the research agenda, "expatriate R&D managers and/or local staff" with extensive educational and work experiences abroad often maintained a key role in directing the R&D activities (*ibid.*). Thus not much has changed since a study more than more than 30 years earlier that also found that localizing products was the major source of parent-subsidiary co-invention (Mansfield, Teece, and Romeo, 1979).

Branstetter et al., however, found a fuzzy boundary between "reengineering for the local market" and "contributing to the global R&D agenda" because some engineers did both. MNEs with investments in India and China are leveraging more than their home base's R&D capabilities,

and the technological activities of the subsidiaries are likely to become more sophisticated over time as local engineering skills mature.

It is increasingly the case that the results of co-invention are transferred globally and do not just stay local. “Reverse innovation” (Immelt, Govindarajan, Trimble, 2009; Govindarajan and Trimble, 2012)—the reimagining of subsidiary-developed products for new and quite different markets—is consistent with the meta-MNE model. In the paradigmatic GE example, in which a simplified medical imaging product developed by subsidiaries in Asia was then introduced in the US, the developers “took knowledge nuggets from the existing high-end imaging systems and modified them. Reverse innovation is about where is the innovation first adopted, not where it is created.”⁸

b) Chinese MNEs are not (yet) metanationals

An increasing amount of China’s R&D occurs in locally-owned firms, and the best of these are projecting their footprints abroad through investment and acquisition. It is worth asking whether they are behaving as traditional, centralized MNEs or adopting a looser meta-MNE model. Ghemawat and Hout (2016) have provided insights into this question by recently contrasted western multinationals and younger Chinese multinationals. They found that Chinese companies have been slow to develop “upstream” skills at which Western multinationals excel, including developing deep knowledge of customer needs, software development, and global supply chain management. Without best practices in capabilities like these, Chinese companies have been uncompetitive in advanced capital goods such as industrial automation and generally stuck at the lower end of many high-tech markets. Chinese companies appear more focused on short-term goals, such as absorbing imported technologies, streamlining manufacturing, and creating lower-function, low-cost versions of designs developed elsewhere. As they note:

“Western multinationals tend to focus their energies “upstream”: on developing deep knowledge of customers’ technical needs, designing high-performing products that incorporate new technologies, and mastering software development and the efficient management of global supply chains. Those qualities have

⁸ Govindjara communication with the authors, March 3, 2016.

allowed Western companies to dominate the markets for nuclear power reactors, industrial automation systems, and jet aircraft. Chinese companies have been slow to develop upstream skills, which partly explains why their success in capital-goods and high-tech markets has been uneven and why it's unclear how soon they will be able to move from the lower end to the higher end of those sectors.”

In contrast:

“Chinese capabilities tend to be oriented “downstream”: absorbing imported technologies, simplifying manufacturing, and adapting advanced designs to more basic products at a lower cost. Such tinkering and innovation at the margins has proved hugely beneficial for businesses that rely on mature technologies, such as shipping containers and port equipment.”

And:

“As the head of a large Western aviation manufacturer remarked to us recently, it is one thing to reverse engineer the components of a jet engine and figure out how to make and sell them, but quite another to develop the knowledge and skills to make sure those components actually work together.”⁹

Ghemawat & Hout claim that Chinese firms are trying to play catch up. In other words, they have ordinary capabilities but not the dynamic capabilities that being a meta national would require.

MNEs based in emerging markets are often seen as highly competitive in other emerging markets because they are familiar with competition in a weak institutional environment and willing to tolerate thinner margins. However, there is no guarantee of success. As Bharti Airtel learned in Africa, its ability to shape its home ecosystem (sharing physical infrastructure with other carriers, outsourced IT, open sales of “minutes”) did not transfer smoothly to a new region (Khanna 2012).

Williamson (this issue) points out that some Chinese firms have developed rapid innovation capabilities based on customer feedback rather than reverse engineering. These firms have risen above their many domestic competitors, but barely a handful have had any success in overseas

markets. He finds that their capabilities are largely based on characteristics of the Chinese system. For the time being, the dynamic capabilities of China's leading firms are largely generated and exercised within China, and hence they are not yet meta-MNEs. While they have made many technology acquisitions overseas and are making significant progress in orchestrating innovation using what is, in effect a global R&D network, most of the combination and transforming is done in China, for the Chinese market (Williamson & Raman, 2011). This is, however, beginning to change. A small number of Chinese companies such as Haier (appliances) and Huawei (communications)¹⁰ have opened research centers in global innovation clusters, an important step toward creating a meta-MNE model with strong dynamic capabilities.

VI. CONCLUSIONS

Significant foreign investment by MNEs began with the development of natural resources in the late 19th century and early 20th century. This provided raw materials for the industrial period. The 20th century saw R&D-driven exports and foreign investment to support offshore manufacturing.

The 21st century MNE looks different again. In the first decade of the new century, the term metanational was coined to reflect the fact that (1) "home" and "abroad" have less meaning and (2) innovation is a multi-invention process with co-invention taking place in widely dispersed centers of innovation.

While the metanational is an ideal type, MNEs are moving part-way toward it, becoming what we call meta-MNEs. As discussed, these MNEs with metanational characteristics are an emerging phenomenon. Many of their activities are substantially (but not entirely) unshackled from their original home base. They source globally, employ open innovation, and orchestrate these resources to achieve competitive advantages. They are increasingly without strong national identity.

¹⁰ Huawei now has 18 R&D sites in 8 EU countries as well as India, Silicon Valley, Seattle, Canada, and 31 joint innovation centers with customers around the world.

Dynamic capabilities are at the heart of firms' global competitiveness, and this is especially true in the case of meta-MNEs. Their existence depends on asset orchestration, a core function in the dynamic capabilities framework. The meta-MNE's DCs—resident both in top management's skills and the systems embedded in the organization—are typically developed at home and then extended abroad, enabling sensing, seizing, and transforming across all regions in which the firm is actively engaged.

In mathematics, a duality translates concepts, theories or mathematical structures into other concepts, theories, or structures in a one-to-one fashion. They are paired concepts that mirror one another. In this regard, dynamic capabilities are the dual of the meta-MNE, and vice versa. Put simply, the whole concept of the meta-MNE rests on the dynamic capabilities of the organization and its management.

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