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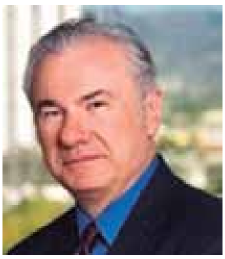

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Knowledge, Entrepreneurship, and Capabilities: Revising the Theory of the MNE*

Conocimiento, emprendimiento y capacidades: Revisando la teoría de la Empresa Multinacional

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1. INTRODUCTION

A fundamental academic question in economics is why the multinational enterprise (MNE) exists at all. In theory, everything that a multinational might do can be replicated by domestic firms linked through a network of global contracts. In practice, of course, we see a full range of cross-border activity, from arm's-length licensing through joint ventures to direct investment, conducted by relatively integrated business enterprises. In other words, there is greater reliance on internal organization than an abstract contract-based analysis might predict.

That is not to say that alliances and contractual relationships are not ubiquitous. To the contrary, they are exceedingly common. Indeed, cross-border networks have become more dense and complex over the past two decades as opportunities have become more global.

Meanwhile, organizational capabilities have become not only more widely dispersed but also more specialized. MNE specialization is enabled and required by cheaper transportation and telecommunications that enable direct access to global sources of goods and services. This specialization is coupled with the outsourcing of many "non-core" activities.

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EXECUTIVE SUMMARY

The paper begins by briefly presenting the “eclectic” perspective on the multinational enterprise (MNE), then shows how the addition of the concepts of entrepreneurship, knowledge management, and dynamic capabilities provides a more useful set of variables for theorizing about the MNE. The normative conclusion advanced is that entrepreneurial management, knowledge awareness, and strong dynamic capabilities are necessary to sustain superior MNE performance in fast-moving global environments.

RESUMEN DEL ARTÍCULO

El artículo comienza con una breve presentación de la perspectiva “ecléctica” de la empresa multinacional (MNE). Posteriormente se presentan conceptos adicionales como emprendimiento, gestión del conocimiento y capacidades dinámicas que proporcionan un conjunto de variables que sirver para construir teoría sobre la MNE. Las conclusiones avanzan que la gestión emprendedora, la constancia del conocimiento como recurso, y unas capacidades dinámicas fuertes son elementos necesarios para lograr resultados superiores sostenidos por parte de las MNE en entornos dinámicos y globalizados.

The typical MNE today displays common asset ownership across national borders embedded within a dense network of alliances. Put differently, the dominant MNE organizational model is a blend of cross-border integration and contracts.

The effective management of cross-border activity both inside and outside the firm requires an understanding of the essence—i.e., the essential functions—of the multinational enterprise. The performance of these functions involves entrepreneurial managers, knowledge creation, and dynamic capabilities—all concepts that are absent from most economic analysis, and even some business analyses, of the MNE.

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The paper begins by briefly reviewing the mainstream "eclectic paradigm" of the MNE. Important gaps in the paradigm are then discussed, including entrepreneurship, knowledge management, and capabilities. Some management implications of the capabilities-enhanced approach to the MNE are then discussed.

2. THE ECLECTIC (OLI) PARADIGM

One of the leading frameworks for explaining the activities of the multinational enterprise (MNE) is John Dunning's "eclectic paradigm" (Dunning, 1981, 1995). It is often described by the acronym OLI, which stands for three groups of factors: ownership, location, and internalization.

"Ownership" factors are features of the firm. Successful firms have unique assets that give them an advantage in their home country, and these assets may be advantageous in other countries as well.

The relevant assets will most likely be intangible, such as an internationally known brand or the capacity to rapidly develop and produce new products. Such assets need to be "built"—a slow process, but one which results in an asset that is hard for others to imitate.

Unlike many physical assets, some intangibles can be transferred (replicated) and applied in new contexts, such as a different country, without incurring all over again the costs of creating the asset. The classic example is a trade secret, the use of which in two countries rather than one does not require duplicating the research and development investment that went into its creation. However, technology transfer is generally not costless.

"Location" factors are features of the host or home country, such as the cost and skills of workers in particular locales. Differential learning places locations on different learning paths, producing peaks on today's "rugged" global industrial landscape, which is considered "flat" only at risk of missing crucial differences (Levinthal, 1997). Advantages that flow from locating activities in specific business environments are increasingly important to many MNEs (see, e.g., Cantwell and Mudambi, 2005).

Host country factors that might justify an initial direct investment cannot, however, generally provide a sustainable competitive advantage since they are equally accessible to other firms. Exceptions can occur in certain cases, such as when the enterprise has a privileged relationship with local government.

"Internalization" factors are those that pertain to firms operating in specific industries with distinct patterns of transaction costs. All markets involve transaction costs, which Williamson (1975) defines as the costs of organizing the economic system. This includes costs that result when one party, knowing important information that the other party does not, engages in ex post opportunism. The costs of such hazards are likely to be particularly high when transactions occur in thin markets between entities in different countries.

When a company goes abroad, it has the choice between investing directly to create a physical presence, contracting with a local firm by licensing its trademark and/or its technology, or some intermediate arrangement such as a joint venture. One criterion for the choice—the only criterion in some theories—is the minimization of transaction costs. When direct investment is chosen, the transaction is said to have been internalized (Buckley and Casson, 1976).

However, internalization can be motivated by reasons other than transaction costs. It may be easier and cheaper to transfer technology and capabilities internally not because of high transaction costs and contractual risks, but because it is in fact easier to transfer and deploy resources internally—especially when entrepreneurship and learning are significant activities required to complete the task at hand (Teece, 1976). The transfer of capabilities and the development of markets, require entrepreneurial organization. In our view, the choice to invest abroad (rather than partner) is not driven as much by the need to reduce contractual hazards as by the need to align incentives and pursue a common (shared) vision, thereby lowering technology transfer costs and helping to get organizational tasks completed.

KEY WORDS
Multinational enterprises, dynamic capabilities, entrepreneurship, intangible assets, knowledge management

PALABRAS CLAVE
Empresas multinacionales, capacidades dinámicas, emprendimiento, activos intangibles, dirección del conocimiento

Both explanations (contract-based and capability-based) for internalization are important. The capabilities branch, however, has received relatively little attention and is not usefully squeezed into a transaction cost framework (Teece,1982).

3. ENTREPRENEURSHIP AND MARKET CREATION

Entrepreneurship, which can refer either to the activity of founding a new company or of initiating new activities within an existing enterprise, is typically overlooked in discussion of MNEs. In fact, most economic theories of the firm, multinational or otherwise, make the implicit assumption that all opportunities are known and addressed. However, research suggests that the identification of opportunities, especially across borders, depends on both chance and skill. Addressing them is by no means straightforward either.

There are a number of subtly different definitions of entrepreneurship, but they generally involve two stages. First comes the identification of a demand that is unsatisfied. This may involve technology that has emerged from a speculative R&D program, or it may require technology that doesn't yet exist. The second stage is taking the steps needed to satisfy the demand. Thus, the entrepreneur (or entrepreneurial manager) is, in a sense, creating the future (Kirzner, 1985).

The very essence of cross-border entrepreneurial activity is that it creates—or at least shapes—markets abroad by identifying latent demand, leveraging resources wherever they may be located, and launching new products. Performing these tasks well requires charismatic, cross-cultural, and adaptive leadership, deep knowledge of local markets, and a clear understanding of the technical, physical, and human constraints at hand.

Cross-border activity can occur if entrepreneurs and entrepreneurial managers take new knowledge and help commercialize it at home and abroad. They learn about internal and external resources in multiple geographies, arbitrage when possible, and create them when necessary. Because the market for knowledge about new opportunities isn't well developed, entrepreneurs and managers must build organizational capabilities inside their firms to assist in the generation of this type of knowledge (Teece, 1981; Gans and Stern, 2010). It is by no means clear that an account of this kind is best squeezed into a transaction cost economics framework. The problems aren't primarily contractual. Rather, they are associated with identifying valuable capabilities developed in one market, which could be at home or abroad, and then deploying them globally.

In this framework, the "entrepreneur" need not be a single person. Instead, entrepreneurship, even in new ventures, can be thought of as a social process that emerges from the top management team and, to varying extents, from elsewhere in the organization (Foss et al., 2008). These processes can be replicated abroad to create (and capture) value.

Once an entrepreneurial firm sees the possibility of satisfying a latent demand or creating an entirely new market in a host country, the ownership, location, and internalization factors will determine whether the new business requires direct investment or a less resource-intense mode of entry. Entrepreneurship provides a more complete explanation for the activities of the MNE than does the eclectic paradigm (OLI) alone.

4. KNOWLEDGE CREATION AND MANAGEMENT

The eclectic paradigm coupled with entrepreneurship theory would appear to "explain" instances of foreign direct investment. They do not, however, fully explain the strength and coherence of the multinational enterprise on an ongoing basis. One key to understanding the long-run sustainability of the MNE is how it creates, utilizes, protects, and transfers knowledge.

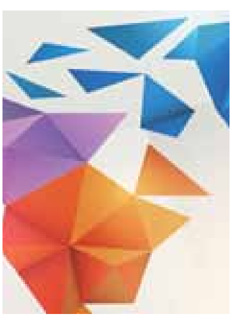
Early views of knowledge in the enterprise were very limited. During the height of managerial capitalism in the early- to mid-twentieth century, knowledge management advocates counseled recording and quantifying as much as possible. Beginning in the 1960s, attention was increasingly paid to the importance of R&D as a source of new opportunities, but this was seen as a largely distinct function (the R&D department).

Nonaka (1991) described knowledge creation as an ongoing process embedded throughout the enterprise. Subjective tacit knowledge held by individuals is externalized and shared. New knowledge, much of which may remain tacit, is socially created through the synthesis of different views.

In Nonaka's conception of the firm, knowledge keeps expanding through the socialization-externalization-combination-internalization (SECI) process. The process must be guided by the company's vision for what it wants to become and the products it wants to produce. This vision of the future must go beyond goals defined by financial metrics alone. Good leaders can accelerate the SECI process and make it more productive by creating a corporate identity that employees find attractive.

In the SECI process, individual knowledge is shared within a team that has taken the time to build trust. Together, the team develops "new perspectives created from shared tacit knowledge" (Nonaka, 1994: 25), which it then "crystallizes" into an output (e.g., a product concept). Upper management must then screen the output for consistency with corporate strategy and other standards.

Middle managers are the bridge that connects the visionary ideals of top management and the chaotic realities of front line workers. Middle managers bear responsibility for solving the tensions between things as they are and the changes required for top management's vision to be realized. The employees working on the middle manager's team are the actual creators of new knowledge (Nonaka, 1994).



This model, which Nonaka (1988) calls "middle-up-down management", puts middle managers in the most entrepreneurial role. The task of top management in this model is to challenge and inspire. It is then up to middle managers to lead teams whose members are drawn from different functional perspectives to engage in the give-and-take of knowledge creation, such as product development. The teams that they lead must be given autonomy to achieve their goals within the limitations of time-to-market and other requirements.

At the heart of the SECI process is the conversion of personal tacit knowledge to new, collectively constructed concepts. This is different from codification as conventionally understood, i.e., the simple documentation of personal knowledge.

Similarly, knowledge management must go beyond discrete facts that can be stored in databases or on intranets. Facts are information, but not necessarily knowledge.

Nonaka's conception of knowledge is deeply rooted in individual experience. Shards of knowledge cannot be isolated in a database to be later recombined into something useful. Individual knowledge, in order to be useful to the enterprise, must be captured as part of building a collaborative commitment to a shared vision, with databases playing a supporting role. At Seven-Eleven Japan, for instance, front-line employees are trained to build hypotheses about what customers at their store want, and their hypotheses can be sharpened by consulting historical data from an extensive internal system that contains not only point-of sale data and recommended product displays but also connects to company headquarters and to manufacturers (Nonaka and Toyama, 2007). The information in the database is a support for the knowledge of the employees.

5. DYNAMIC CAPABILITIES AND (SUSTAINABLE) MNE COMPETITIVE ADVANTAGE

The potential of the enterprise for knowledge creation and management takes us part way to understanding the MNE. The continued existence of the enterprise also requires commercial success. The dynamic capabilities framework in strategic management provides this final piece of the puzzle. Knowledge must be combined with good strategy and strong dynamic capabilities to capture value.

The concepts of organizational resources and capabilities (a type of resource) were developed in the strategic management literature during the 1980s. Dunning began the task of incorporating dynamic capabilities into the eclectic paradigm in some of the last work published before his untimely death (Dunning and Lundan, 2010). But his paradigm has little in the way of explanation for the origins of firm-level asset ownership and capability advantages, nor how to renew these advantages as the business environment evolves. The dynamic capabilities framework uses an integrative approach that encompasses entrepreneurship, ownership advantages, knowledge creation, and sustained advantage.

The foundations of dynamic capabilities can to some degree be traced back to Penrose (1959), who argued that a firm's resources were applicable to more than one line of business and could be realigned to help the firm expand and diversify. Penrosean insights laid the foundation for the Resource-Based View of the firm, which focuses on possessing and utilizing fungible resources that meet the VRIN criteria (Valuable, Rare, Inimitable, and Non-substitutable) as the main mechanism for the generation of profits.

However, the resources approach, like the eclectic paradigm, is weak in explaining how firms develop or acquire new capabilities and particularly how they adapt when circumstances change. The dynamic capabilities framework looks beyond the benefits of owning valuable resources and emphasizes a firm's capacity to deploy its resources, adjust them as circumstances require, and generate or acquire new ones when needed.

5.1. Ordinary capabilities

It is perhaps easiest to understand what dynamic capabilities are by juxtaposing them against ordinary capabilities. Ordinary capabilities are used by an enterprise to produce and sell a defined (and static) set of products and/or services. They include operational competences and the planning and coordination processes for activities such as optimizing task performance, choosing a human resources approach, and selecting a composition for the board of directors.

Ordinary capabilities are unlikely to provide a basis for long-run competitive advantage outside of undeveloped and emerging economies. Knowledge about optimizing administrative and operational activities is largely explicit, and ordinary capabilities can generally be calibrated against the best practices of other firms. In a mature industry like autos, for example, productivity in areas such as procurement, manufacturing, and wholesale is similar across firms, at least in the developed countries (Lutz, 2011).

In certain locations, a firm may prosper for a while with strong ordinary capabilities but weak dynamic capabilities. In practice, environments with low competition, such as countries where tariff barriers keep out strong foreign competitors, are good candidates. The challenge comes when there is rapid change due to technological progress or other sources of hyper-competition (D'Aveni et al., 2010). By definition, weak dynamic capabilities mean that the firm is unable to adapt well to a new business environment.

MNEs are generally good at transferring their management practices to all countries where they operate (Bloom et al., 2012), and ordinary capabilities at home may for a while be distinctive abroad. The early overseas success of McDonald's Corp. was in part due to its ability to transfer its considerable ordinary capabilities (Luo, 2000).

The rise and fall of Japan is perhaps in large part a capabilities story. Japanese firms rose to global dominance in many industries on the strength of their ordinary capabilities, developed by employing learning processes that resulted in operational excellence. They were generally able to transfer and adapt these capabilities for overseas production as needed. Over time, however, rivals of Japanese companies in autos, semiconductors, and other industries have not only learned to challenge Japanese quality and efficiency, they have also out-innovated Japan, particularly in the development of new products and business models. The large Japanese firms have proved unable to realign their activities in keeping with the shifting business environment, that is, they have proved to have weak dynamic capabilities.

5.2. Dynamic capabilities

Ordinary capabilities, as we have seen, are about doing things right. They involve efforts to optimize within certain fixed constraints. Dynamic capabilities, on the other hand, are about doing the "right" things. This requires assessing technological and business opportunities, forecasting the business environment, adjusting organizational design when necessary, and acting at the right time. The ability to deploy, or redeploy, resources in alignment with the necessary complementary assets is a key underpinning. The good judgment and deep wisdom of the top management team is another key to strong dynamic capabilities.

Dynamic capabilities are thus higher-order capabilities that help characterize how an organization develops strengths, extends them, synchronizes business models with the business environment, and/or shapes the business environment in its favor. They result from some combination of superior top management skills and organizational routines (Teece, 2007). The dynamic capabilities framework emphasizes the need for management to be able to continuously align people, processes, and assets to satisfy consumer desires and achieve strong financial performance. Strong dynamic capabilities in the service of good strategy can deliver long-term profitability and growth.

The dynamic capabilities perspective goes beyond a financial-statement view of the firm's assets to emphasize management's abilities to orchestrate resources both inside and outside the firm at home and abroad. External linkages that must be leveraged to carry out a plan are increasingly common in the global economy, including suppliers, strategic alliances, university researchers, and business ecosystems. The MNE must identify, establish access or control, and then coordinate all the complementary assets that are needed to deliver the company's products and services (Teece, 1986).

Unlike ordinary capabilities, dynamic capabilities are particularly difficult to transfer across borders because they are tacit and often embedded in a unique set of relationships and histories. Cultural differences will need to be accounted for since sensing new market opportunities requires capabilities in multiple geographies. This is not usefully thought of in transaction cost terms.

For purposes of operationalizing the framework, dynamic capabilities can be disaggregated into three clusters of processes and managerial activities conducted inside firms: (1) identification and assessment of opportunities at home and abroad (*sensing*), (2) mobilization of resources globally to address opportunities and to capture value from doing so (*seizing*), and (3) continued renewal (*transforming*). Sensing is the most entrepreneurial of the three clusters, whereas seizing is dominated by more basic managerial concerns. Transforming places a premium on leadership.

Sensing involves exploring technological possibilities, probing markets, listening to customers, and scanning the business environment. Entrepreneurial managers need to construct and test hypotheses about the market in order to identify unsatisfied demand. In the MNE context, it is critical that sensing activities are embedded throughout the company. Management must open channels that allow intelligence (not simply data) to flow from the farthest reaches of the organization toward the top management team to facilitate localization of the company's products and services. Starbucks, for example, has adapted its presentation in China, where coffee is less popular than in Western countries, by creating attractive spaces where people can hold informal business meetings and enjoy non-coffee beverages or China-specific sandwiches such as a "Hainan chicken and rice wrap" (Burkitt, 2012). Knowledge must also be able to flow laterally across subsidiaries.

Once opportunities are sensed, they can be seized. This requires the formulation of a strategy that sets a path forward. Strong dynamic capabilities enable the firm to flesh out the details around the new strategic intent and implement the strategic actions quickly and effectively by designing business models to satisfy customers, and securing access to the necessary capital and human resources. But strong dynamic capabilities can become worthless if they are tied to a poor or badly misjudged strategy.

Transformation of the enterprise is called for when internal and external circumstances shift. Transformation capabilities include selectively phasing out old products, renovating older facilities both domestically and globally, and changing business models, methods, and even organizational culture. Transformational capabilities are needed most obviously when radical new threats and opportunities are to be addressed. But they are also needed periodically to soften the rigidities that develop over time from asset accumulation and the development of standard operating procedures.

In fact, in established MNEs, sensing, seizing, and transforming are ongoing processes. The MNE may find itself emphasizing different clusters of capabilities in different geographic markets. For example, Yum Brands, the owner of fast-food brands KFC, Taco Bell, and Pizza Hut, has simultaneously engaged in rapid expansion (seizing) in China and in retrenchment and transformation in one of its established markets, the United Kingdom.

Transformation requires unusual leadership skills to help the organization deal effectively with path dependencies and other structural rigidities. Complementarities need to be managed to avoid creating major new problems when addressing old ones. Organizational rigidities make this process difficult; organizational transformations are accordingly risky. IBM is an example of a successful transformation, having changed from a hardware company into an "on-demand" services provider under outsider CEO Lou Gerstner from 1993 to 2002 (Harreld et al., 2007).

6. MANAGERIAL IMPLICATIONS FOR THE MNE

A robust "theory" of the MNE that encompasses entrepreneurialism, knowledge management, and, especially, capabilities has numerous implications for the management of these firms. Some applications of the framework will be discussed here. These include the decisions about entry into new markets, knowledge transfer, and the relationship between headquarters and subsidiaries. Indeed, it is suggested that there is a far broader array of issues in international management that can be understood from a capabilities perspective than from a pure transaction cost economics approach to the MNE.

When an MNE senses a new opportunity in a foreign market, it must first assess its own capabilities. Does it already possess the necessary capabilities? Does it have experience transferring capabilities to other contexts? Does it have ready access to local knowledge in the host country? Can it achieve meaningful replication abroad of its capabilities at home?

When speed is of the essence and/or certain capabilities are absent, a joint venture or alliance with a host country partner is likely to be preferred, provided the MNE's key advantages can be leveraged and protected within the relationship. When they are well managed, joint ventures and alliances can reduce financial outlays and improve the MNE's access to specialized local capabilities.

Strong dynamic capabilities are needed to transform the existing MNE resources into a suitable match with the host country environment and/or transform the host country market itself to build receptivity to the MNE's product offering. Transformation also comes into play in the creation of internal structures that establish cross-border control and two-way information flows. A plethora of cross-boundary organizational processes will need to be employed. A transaction cost approach has little to say about these activities.

Once the entry decision is made, knowledge transfers will be required. The initial transfers may include routines associated with efficient manufacturing of the company's products, personnel management, and other operational capabilities.

Unless the MNE has already replicated its systems of productive knowledge in other markets, the act of replication for even ordinary capabilities is likely to be costly (Teece, 1976). New learning may be required because the skills and know-how that the MNE uses to undergird its ordinary capabilities in one geographic context might not quite fit in another.

Not only are some capabilities (and the routines upon which they rest) difficult to replicate, but even understanding which elements (routines, skills, know-how) are relevant to a particular capability may not be straightforward. Some sources of a firm's advantage are so complex that the firm itself does not fully understand them (Lippman and Rumelt, 1982).

Once entry and initial knowledge transfer have been effectuated, the MNE must design the relationship between headquarters and subsidiary. The knowledge-conscious MNE allows considerable autonomy to region/country managers, with incentives that support local discovery and local learning. Subsidiary managers should be encouraged to generate entrepreneurial insights and intangibles adapted to local conditions. These can potentially later be transferred to the parent or adapted directly by other business units (e.g., Birkinshaw and Hood, 1998).

Knowledge creation can even be encouraged among front-line employees. Swedish construction firm Skanska, for example, has a competitive grant program that encourages managers and workers to propose new apps for use on the tablet computers that have been issued to workers in the field. Winning proposals, such as an app for leak detection, are then commissioned to an external developer and deployed in the field (Schectman, 2012).

The MNE's headquarters can enhance the firm's capabilities by promoting organizational learning, managing complementarities, and supporting technology transfer across divisions. Headquarters provides a guiding vision and culture, performs global asset orchestration, and ensures the availability of financial resources.

There is of course much more to managing the MNE. However most problems in international management will be illuminated by an awareness of the importance of entrepreneurial management, knowledge creation, and dynamic capabilities.

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NOTES

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