



The multinational enterprise, capabilities, and digitalization: governance and growth with world disorder

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Abstract

This essay revisits my 2014 JIBS article about the potential for integrating international business internalization theory with a strategic management capabilities perspective. It recaps the capabilities framework with an emphasis on the learning required of emerging market multinationals and illustrates this with the case of Hyundai Motor Company's internationalization and growth. It also discusses two aspects of the global economy that have become more prominent since 2014 in shaping international business: geopolitical uncertainty and digitalization. A rise in geopolitical tensions appears to be rebalancing the relationships between multinationals and home/host governments. Digitalization facilitates international business; but it adds new vulnerabilities by (further) accelerating competition, enabling new rivals, and introducing systemic risks into digital supply chains. Implications for managers, board members, and international business scholars are drawn.

Keywords Business/government interaction · Capabilities and capability development · Digitalization · Emerging market multi-nationals · Hyundai Motor · Organizational learning

Introduction

Ten years ago, in “A Dynamic capabilities-based entrepreneurial theory of the multinational enterprise” (Teece, 2014a), I advanced a capabilities theory of the multinational enterprise (MNE) to both complement and challenge internalization and related theories. It was, indirectly, an effort to reposition (but not replace) Coase (1937)-inspired internalization theories of the MNE (e.g., those of Buckley and Casson, Dunning, Hennart, Rugman, and Williamson) to create more room (and provide more substance) behind Penrose- and Chandler-inspired perspectives. My hope was that, by doing so, the fields of international management, strategic management, entrepreneurship, and international business would come closer together. International business (IB) is a very eclectic field, so many capability-related elements

were already present; but there were few efforts to combine and integrate ideas and frameworks from each stream of research. I set out to try and perform that mission.

In this article, I will expand upon the capability framework, link it better to the existing literature, and illustrate some of my points through an examination of the remarkable capability building (and growth) story of Hyundai Motor Company. I accepted the JIBS Decade Award in Seoul, so illustrating some of my points through Hyundai Motor seems appropriate; but even if the award had been made in Berkeley, Beijing, or Blenheim, the Hyundai story is sufficiently compelling that it needs to be told (and in more detail than I can provide here).

With hindsight, my 2014 paper had some now-significant shortcomings. It did not look at the emerging digital platform economy or at bifurcating global governance (which I later addressed in Petricevic & Teece, 2019), so I will use this opportunity to supplement my original paper with a few comments on those issues.¹ I will begin, however, with a parsimonious summary of the key elements of the capabilities framework and an example of its application to emerging market MNEs.

¹ In Petricevic and Teece (2019), we juxtaposed a China-Russia-Iran-North Korea bloc against a Western bloc. There is arguably a third bloc composed of the rest of Asia and Africa. This third bloc sits somewhat opportunistically in the middle.

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The dynamic capabilities framework

The utility of the dynamic capabilities framework has been demonstrated in multiple fields, including strategic management, competition policy, and international business. At its core, the framework encapsulates the importance of creating and commercializing new technology (and other intangibles) likely to be of relevance to customers globally. It recognizes the pervasiveness of uncertainty (both technological and geopolitical) and the need for shaping the environment through public-private partnerships. It's able to address issues related to digital platforms (Teece, 2017), ecosystem governance (Foss, Schmidt, & Teece, 2023), and internal MNE governance (Lessard, Teece, & Leih, 2016). In this section, I will briefly review the key elements of the dynamic capabilities framework.

General

There is very little in internalization theory that invites one to probe deeply into the competitive advantage of the MNE, either at a point in time or over time. In Dunning's OLI framework, one of the three pillars is, of course, the firm's ownership of specific assets. Assets are often a reflection of capabilities, and vice versa. However, assets are a stock variable rather than a flow. Attention must be given to their nature and to how assets and capabilities change.

The linchpin for my own journey towards a capabilities framework (initially in the field of strategic management) is expressed in the following global conundrum I identified almost 30 years ago:

The global competitive battles in high-technology industries... have demonstrated the need for an expanded paradigm to understand how competitive advantage is achieved. Well-known companies... have followed a 'resource-based strategy' of accumulating valuable technology assets... However, this strategy is often not enough to support a significant competitive advantage. (Teece, Pisano, & Shuen, 1997: 515)

I developed a capability-based framework to try and expand the textbook paradigms of (global) competitive advantage. The capabilities framework respects basic principles from evolutionary and complexity economics and

strategic management while at the same time recognizing the role of technical knowhow, management (together with boards of directors), and strategy (Teece, 2019).

As my 2014 JIBS paper made clear, to assess the capabilities of a multinational firm, one must step outside of traditional (static) paradigms that rely on factors of production, resources, production functions, or transaction costs to recognize the importance of the choices managers make (and the circumstances surrounding them). These choices guide the organization to learn, to innovate, and to reconfigure in order to render resources more productive. Creating value results from research and investment oriented to solving, amidst uncertainty, customer problems and reducing frictions in the marketplace. Capturing value requires a business model that is fit for purpose, which means it's likely to require recalibration for various geographic markets.

Advantageous market positions can be created and maintained by superior capabilities, coupled with entrepreneurial action. This "capability prowess"—reflecting in part superior foresight, skill, and acumen—can be deployed across many markets and used to create new markets. No one can patent or monopolize organizational capabilities. However, capability prowess may not last long, absent continued adjustment and upgrading. A brief description of the types of capabilities is provided in the following sections and summarized in Table 1.

Ordinary (and superordinary) capabilities

Ordinary capabilities, which encompass operations, administration, and the regular governance of the firm's activities, allow multinational enterprises big and small to produce and sell domestically and globally a defined and slowly evolving set of products and services. They are embedded in some combination of personnel, equipment, processes, and oversight.

A firm's ordinary capabilities can support technical efficiency (and hence productivity) in performing a defined set of activities, regardless of how well- or ill-suited the resulting products and services are to the market's needs (Teece, 2007, 2014b). Production, order entry, quality control, performance measurement, and payroll execution are examples. The corresponding managerial modes include cost control and (static) optimization.

Table 1 A capabilities taxonomy

Type	Nature
Ordinary (Operational) Capabilities:	Doing things right (best practices)
Superordinary Capabilities:	Beyond best practice for particular specialized technological tasks/activities
Dynamic Capabilities:	Doing the right things and figuring out the next (big) thing.



The development of excellence with respect to ordinary capabilities, i.e., best practices, can lead an enterprise into competitive complacency. The single-minded pursuit of efficiency and productivity can compromise an organization's willingness and ability to effectuate change on a timely basis when market conditions change and/or new technological opportunities emerge.²

Some ordinary capabilities can become “superordinary” with the development of “signature” processes and designs that rest on the application or market-specific knowledge, together with specialized proprietary knowhow (Gratton & Ghoshal, 2005). Superordinary capabilities can allow a manufacturer to make, for example, extremely high-quality, fuel-efficient, and reliable internal combustion engine cars, machine tools, or analog switches. So long as market conditions remain favorable, such capabilities might help a particular firm stand out against rivals making outwardly similar products and earn better profits. But these productive capabilities do not ensure that the products manufactured will remain in high and growing demand.

Sometimes an MNE can redeploy its ordinary and superordinary capabilities to new applications and markets. For instance, Honda took its capabilities in small internal combustion engines from motor scooters into motor bikes and then into small cars and on into outboard motors for the boating industry. Apple went from the iPod to the iPhone and Apple Watch. Harley Davidson's unsuccessful foray into perfume and Intel's stumble with smartphone modems provide contrary examples of losses due not to technological failure but to poor managerial decisions that fail to recognize or underestimate capability gaps that must be filled. The calibration of opportunities, the redeployment of capabilities, and the filling of capability gaps require the application of dynamic capabilities.

Dynamic capabilities

Dynamic capabilities in an IB context have been defined as “the firm's ability to effectively and continuously build, bundle, mobilize, integrate, reconfigure, upgrade and protect critical resources, so as to address rapidly changing environments in geographically dispersed, yet internationally coordinated markets in which it competes” (Zahra, Petricevic, & Luo, 2022: 587). Doing ordinary things right (technical efficiency) is no substitute for doing the right things. The

latter requires strong dynamic capabilities. As John Chambers, former CEO of Cisco Systems observed, companies must be willing and ready to change from doing “the right thing too long” to “the next big thing” (Chambers, 2017). Of course, dynamic capabilities enable the pursuit of more modest opportunities, too.

Dynamic capabilities are also exercised to neutralize threats to a firm's current operations. This is particularly important in the global context, where there are deep uncertainties (Teece, Peteraf, & Leih, 2016). Sudden world events can necessitate radical organizational responses.

Uncertainty is not about risks that can be measured quantitatively. The current sources of uncertainty are many and varied, including technology (how will AI development play out?); geopolitics (how will US-China rivalry play out?); and regulations (how will the global trade regime evolve?). More generally, the complex interdependent systems that riddle the global economy can give rise to unexpected disruptions, as the world found out from the pandemic-induced supply chain crisis.

As Frank Knight (1921, p. 268) noted a century ago, “With uncertainty present, doing things, the actual execution of activity becomes in a real sense a secondary part of life; the primary problem or function is deciding *what to do* and *how to do it*”. Knight's dictum is tantamount to stating that, in today's deeply uncertain environment, MNE management must prioritize dynamic over ordinary (and superordinary) capabilities.

The key clusters of activities that constitute dynamic capabilities can be categorized as sensing, seizing, and transforming (Teece, 2007). These activities engage the entire organization, under the guidance of management and the board of directors. In the language of econometrics, one can think of sensing, seizing, and transforming as the “reduced form” version of a more complicated structural/systems model of enterprise performance. All firms engage in sensing, seizing, and transforming to some extent, but many are not very good at one or more of them; in such a case, their dynamic capabilities are weak. Stated differently, it's not dynamic capabilities that propel the best firms to success, it's strong dynamic capabilities.

“Sensing,” in the dynamic capabilities context, is the ability, under Knightian uncertainty, to either recognize opportunities in global markets before they are fully apparent or, in some cases, create new ones (Helfat & Peteraf, 2009). Dynamically capable management recognizes “signals” from near and far and will demonstrate over time an intuitive capability to make sense of the signals and identify effective product-development strategies (Teece, 1998).

“Seizing” this opportunity, in the dynamic capabilities framework, involves execution and the orchestration of corporate resources: tangible, intangible, and financial. In the MNE context, resource orchestration, known in the IB

² Henry Ford learned about the efficiency-innovation tradeoff the hard way. The Ford Motor Company used vertical integration to optimize the production process for the Model T. This worked well until the market shifted. Bringing a follow-on product, the Model A, to market was a long and arduous process that allowed General Motors to get ahead of Ford, a leadership position GM held for decades (Tedlow, 1988).



literature as redeployment, encompasses a spatial dimension, such as the extent to which interdependent but dispersed subunits with distinct local contexts are competing for attention, finance, etc. as well as cooperating within the MNE's network (Luo, 2005). Success in the new endeavor will also entail the astute design and implementation of business models, the gathering and processing of data, and the resetting of firm boundaries.

Effective seizing also requires managers to implement major and minor organizational “transformation” on a semi-continuous basis in pursuit of internal and external strategic alignment. Dynamically capable management will engage this effort in anticipation of environmental change rather than as a reaction.

Supporting these dynamic capabilities are repeatable organizational processes for alliance formation, new product development, and more. Eisenhardt and Martin (2000) confusingly also called these dynamic capabilities. I prefer to call them microfoundations (Teece, 2007) or lower-order dynamic capabilities. In common with the definition of dynamic capabilities, they allow the firm to reconfigure resources. But they are more like ordinary (or superordinary) capabilities in that they are not inherently forward-looking; they can be used to follow an existing trajectory incrementally rather than forging a new path. In other words, they are only valuable to the extent that excellence in sensing, seizing, and reconfiguring makes them so.

The evolution of firms and the development of capabilities are, to some extent, path dependent. This results from their basis in routines that change only slowly, at least when the competitive environment is stable. However, over-emphasizing the path dependence of routines downplays that their trajectory within the MNE can be altered by the entrepreneurial and leadership skills of a management team that senses the need for a change of direction (Teece, 2023). The success of such a change will depend in part on whether an earlier transformation inculcated an openness to change in the organization's culture (Teece, 2016).

Strong dynamic capabilities provide a firm foundation for making bold bets, but success is never guaranteed. In the complex global economy, where capable rivals are never far behind, even some well-founded bold bets will be losing ones.

To summarize, an MNE's strong dynamic capabilities enable prescient assessments of the business environment and of technological and market opportunities; high performance in new product and process development on a global scale; and the implementation of a change-oriented organizational culture. The corresponding managerial modes include asset orchestration, entrepreneurial agility, and forward-looking leadership. Firms that have strong dynamic capabilities generally have better competitive and financial

performance (e.g., Lovallo, Brown, Teece, & Bardolet, 2020).

Capability development and emerging market multinationals

It may be an iron rule of capabilities that they take time to construct and ingrain before they become useful. This section discusses capability development and its relevance for the management of emerging market MNEs, a category whose distinctions are still being classified and analyzed in the IB field (Buckley, Cavusgil, Elia, & Munjal, 2023) as well as in the management literature (Cui, Gao, Guo, & Ma, 2022). This is then applied in the analysis of a case study of Hyundai Motor.

Organizational learning

My 2014 JIBS paper was deficient in not focusing on capability development, alternatively known as capability evolution, capability growth, and capability maturation. Capability development can involve creating a new capability or enhancing an existing one. Although these processes are relevant to all MNEs as they grow and evolve, they are most visible in emerging market MNEs.

Capability development generally starts with managerial cognition that allows organizations to identify market opportunities and corresponding internal capability gaps (Helfat & Peteraf, 2003; Teece, 2019). Building the requisite organizational knowledge and resources involves the accumulation of tangible and intangible assets and the acquisition of skills, then engaging them in a process of organizational learning. As Pisano (2000: 129) notes, “Without learning, it is difficult to imagine from where a firm's unique skills and competences would come.” Relevant learning may also arise from tapping into the experience of others via both alliances (Inkpen & Dinur, 1998) and acquisitions (Karim & Mitchell, 2000).

Drawing on behavioral and cognitive traditions in organizational learning, Zollo and Winter (2002) identified categories that differ by the level of cognition effort and learning investment: semi-automatic learning (e.g., learning by doing) and deliberate learning (e.g., knowledge articulation and codification). They also distinguished between exploitative learning, building on existing resources, and explorative learning, which integrates new resources and alters old ways of doing business. Learning, in turn, can lead to the establishment of patterned routines among a set of actors within the organization (Nelson & Winter, 1982). Complementary routines of continual improvement and experimentation help foster differentiated superordinary capabilities, i.e., signature processes (Dosi, 1988). As mentioned in the previous



Table 2 Three roles of MNE managers

	Ordinary and superordinary capabilities	Dynamic capabilities	
	Operational role	Entrepreneurial role	Leadership role
Responsibilities	Planning and budgeting	Sensing and seizing	Propagating vision and values
Activities	Organizing and staffing	Orchestrating (and aligning) resources	Aligning people with strategy
Levers	Control and problem solving	Investing in R&D, developing new business models and alliances	Building culture and motivating people
Goals/Outcomes	Technical efficiency and predictable results	Unity of purpose, competitive advantage, and evolutionary fitness	

Source: Teece (2016)

section, routines, under the guidance of a firm's dynamic capabilities, may change discontinuously in response to one-off managerial decisions calculated to guide the renewal and adaptation of the firm's current capabilities to meet the requirements of a rapidly changing business environment (Teece, 2012).

A complementary approach to capability development comes from the knowledge-based view of the firm (e.g., Kogut & Zander, 1992; Nonaka, 1991), which sees individual and collective knowledge within the firm as the basis for creating, enhancing, and recombining organizational capabilities. Large-firm success depends in part on how well management can foster knowledge sharing and integration across different parts of the company to fully enable knowledge-building processes.

Emerging market MNEs and “springboarding”

In emerging economies, management capabilities tend to be in particularly short supply. In such a setting, it is critical that investments in new technologies and equipment not get ahead of the availability of management skills.

An understanding of management capabilities is particularly relevant for analyzing multinational firms, in which orchestrating assets across national borders presents special challenges. As firms evolve, it become more important to adopt a finer-grained view of management capabilities. For example, the skills to establish a foothold in a new regional market are distinct from those needed to fine-tune supply chains and develop supply control mechanisms across regional lines.

Management capabilities can be classified within one or more of three general roles that managers play, as shown in Table 2. Operational management focuses on the efficient execution of current plans through budgeting, staffing and so on. This skill set, which corresponds to what most business schools teach, drives the firm's ordinary capabilities.

Entrepreneurial management involves the ability to sense opportunities and shifts in the business environment, to coordinate the resources to exploit promising new avenues, and to develop plans to adapt the firm's business model.

These functions, which must be coordinated across all levels of larger organizations, are core elements of the dynamic capabilities of the firm.

Today's entrepreneurial managers must also perform these functions in an environment of deep uncertainty. The ability to do so separates the best from the rest. As Winston Churchill is claimed to have said, “true genius resides in the capacity for evaluation of uncertain, hazardous, and conflicting information”.³

Leadership is required for implementing the changes needed to keep the firm tuned to the needs and opportunities of the global business environment. Leadership skills are needed to get others in the organization to support a strategic vision and to want to help the organization to succeed. Leadership is another core element of a firm's dynamic capabilities.

The fundamental importance of managerial capabilities is underscored by China's economic development. China's growth story has dominated the global economy for the past quarter century, but it took time for its firms to reach escape velocity after the Chinese economy began to open in 1978. Because its factories had, in prior periods, been run in a non-market context, the government soon discovered that it needed to introduce formal management training to improve its firms' ordinary capabilities. From a handful of piloted MBA programs in 1991, China's business education grew over two decades to more than 200 programs with tens of thousands of students (Zhang, 2013). But just increasing the raw output from schools is not enough because it takes time both to develop high-quality management programs and for new graduates to gain practical experience. As growth progressed, China had no shortage of entrepreneurs, capital, or access to appropriate technology; yet its ability to grow was bounded by a scarcity of experienced technical and managerial talent (e.g., Caye et al., 2012; Lane & Pollner, 2008). Over time, that constraint fell away.

³ The original source of this quote, whether from Churchill or from anyone else, does not seem to have been identified.



China, of course, had major advantages for advancing its management capabilities, including a huge internal market that attracted foreign MNEs and many pro-business policies that supported learning by domestic firms. These advantages allowed enterprising Chinese firms not only to supply inputs to foreign MNEs but also to become MNEs themselves, primarily in Africa and elsewhere in Asia (Morck, Yeung, & Zhao, 2008).

The emergence of local suppliers to serve MNE subsidiaries in developing countries was one established development route. Local suppliers of components or services grew up around MNE factories, but the overall growth impact was limited. The local suppliers to these global value chains (GVCs) could hone their ordinary capabilities, but the key tacit knowledge of the MNE was generally elsewhere and inaccessible, which limited their learning and growth opportunities (Sturgeon & Linden, 2011). Opportunities for developing managerial leadership capabilities also depended, in part, of the nationality of the foreign investor leading the GVC, with Japanese firms being known for using their own expatriates in senior roles (e.g., Linden, 2000).

An alternate development path available to local firms with adequate capabilities was that of supplying finished goods. In this type of GVC, the local firm provides products for sale by a client MNE under the MNE's brand. For the local firm, the control over the manufacture and, over time, the design, of an entire product provided greater opportunities for learning and upgrading than component supply (Kim, 1997). Notable long-term successes of this type include Acer in Taiwan and Samsung in South Korea.

A more entrepreneurial approach to globalization is springboarding, in which an emerging market firm projects itself abroad in pursuit of technology, marketing, or manufacturing know-how (Luo & Tung, 2007). Springboarding can be thought of as a theory of capability development enabled/empowered by international investments in productive activities.

Chinese MNEs have been springboarding practitioners, investing in majority-owned joint ventures in advanced economies in part to facilitate the transfer of managerial capabilities to the Chinese firm, addressing the gap discussed earlier (Deng, 2009). The capability transfer implications of governance by majority-owned venture is a subtlety from a capabilities-based perspective that a purely internalization theory approach, looking separately at transaction cost economizing and at firm-specific advantage seeking, might miss (e.g., Verbeke & Kano, 2015).

Luo and Tung's (2018) upward spiral model of internationalization, which incorporates springboarding, fits very nicely into the capabilities framework. They identify three sets of capabilities that are particularly relevant for springboarding: amalgamation (which I call orchestration), ambidexterity, and adaptability. These are each a type of dynamic

capability, falling mainly into the Seizing category (while adaptability also involves Transforming). Also, implicitly, the identification of springboarding opportunities involves Sensing.

Li, Prashantham, Zhou and Zhou (2021) bring the springboarding analysis back to the different roles that managers play (Table 2). Their integration of springboarding with compositional firm growth (Luo & Child, 2015)—closely related to superordinary capabilities—grounds the entrepreneurial nature of capability acquisition with the more mundane (yet ever-important) operational requirements of MNE management.

The Hyundai Motor story: learning and dynamic capabilities at work

Accepting the JIBS decade award in Korea provided a platform to discuss a noteworthy case of forward-looking and determined capability accumulation and deployment by an emerging market firm: Hyundai Motor Company.⁴ All I can do here is sketch the company's advances (and occasional retreats) as its leadership, having sensed the opportunity to become a global competitor, guided Hyundai Motor through a decades-long process of capability accumulation, innovation, and overseas replication. I leave it to others to examine the inflection points on Hyundai's trajectory to tease out the paths not taken, the organizational structures realigned, and other details of Hyundai's dynamic capabilities at work.

Hyundai's founder, Chung Ju-yung, had started Hyundai Auto Service at the same time as Hyundai Engineering at the end World War Two, but abandoned auto repair during the Korean War in the 1950s. By the early 1960s, Hyundai was a mid-sized construction company, albeit an international one that had projects not only in South Korea but throughout Southeast Asia.

In 1967, Hyundai entered into an agreement with Ford to assemble cars from kits of Ford parts, marking the official launch of Hyundai Motor, with Chung Ju-Yung's younger brother as CEO (a role he held for 30 years). The brother, Chung Se-Yung, supported by the business group's patient capital, drove progress by establishing ambitious "stretch" goals in each phase of development. Over time, all the goals were achieved.

To acquire the ordinary capabilities for auto assembly, Hyundai relied on Ford and its suppliers to help train Hyundai engineers. The process was overseen by a taskforce Hyundai assembled from experienced engineers in its

⁴ The Hyundai Motor case is drawn from Kim (1998), Steers (1999), Wright, Suh, and Leggett (2009), Chung (2019), Jacobs (2022, 2023), Teece (2022a), and information at <https://www.hyundai.com>. For the sake of brevity, Hyundai's control of Kia following the 1997 Asian financial crisis is not discussed.



construction division and outside hires from the auto industry. In 1968, after a period of training for Korean workers in Australia, the Korean factory was in production, and the first car, a Ford Cortina, rolled off the assembly line. Initially, Ford staff filled technical and financial executive positions in a 50/50 joint venture until the JV was terminated in 1973.

The venture was not entirely successful because the Cortina was not robust enough for South Korea's undeveloped roads. Nevertheless, Hyundai Motor succeeded in learning from the experience.

Public policy played a critical supporting role. Hyundai's initial investment in auto assembly in 1962 benefited from a variety of tax breaks and other preferences. In 1973, the government demanded that Korean auto companies indigenize design capabilities and achieve 95% domestic content, making vertical integration into components an imperative. Preferential loans, tax concessions, and protection from imports were provided.

While the capabilities being developed were ordinary, Hyundai's success in acquiring them reflected top management's skill in sensing the opportunity, mobilizing resources to exploit it, and designing an organization that could learn and grow. Chung Ju-Yung, chairman of the Hyundai Group, was known as a risk-taker, and he welcomed the riskier road of building an own-brand business.

To produce a "Korean" car, Hyundai pursued a strategy of rapidly closing capability gaps. One tool was the licensing of technologies for car design and manufacture, particularly from Mitsubishi, for technology to produce the engine, transmissions, and rear axles. Partner firms and an array of international suppliers helped train Hyundai's engineers. Hyundai also hired a team of six European engineers under three-year contracts to manage design, production, and test.⁵ Production of the (partially) Hyundai-designed Pony began in 1976, and it proved successful in Korea. As it improved from year to year, it was also exported on a small scale.

Hyundai's next model, the Excel, was another subcompact. Hyundai again licensed much of the technology and design but took a bigger role in the engineering. The Excel began production in 1985, and the company, having sensed a niche opportunity at the bottom rung of the US market, launched a US distribution and marketing operation. The Excel sold well there and in other export markets but suffered a setback from damaging negative publicity over quality issues.

In 1984, Hyundai launched a large-scale R&D program to design its own engine, tripling its annual R&D outlay.

⁵ The key hire was George Turnbull the former managing director of British Leyland's Austin-Morris division. He, in turn, hired five other top British automobile engineers. The Hyundai Pony was based on the Morris Marina, a small sedan with styling by an Italian engineering firm.

After eight years of efforts and failed prototypes, the company finally perfected an engine that outperformed Japanese engines in the same class. Hyundai, through its sustained investment of resources, had gone from imitation to innovation, filling a major capability gap needed to realize its founder's vision.

Meanwhile, the company, pursuing a springboarding strategy to break out of its EMNE limitations, set up R&D offices in the US and in Europe. These investments allowed Hyundai to sense and absorb existing and emerging technologies in order to improve its product quality and understand global trends. Its worldwide R&D staff more than quadrupled from 1982 to 1992.

Hyundai succeeded in designing its next car, including a new higher-performance engine, without further licensing. The Hyundai Accent launched in 1994, and versions were sold around the world. In 2008, the Accent was named "most dependable subcompact car" by the North American consumer research firm J.D. Power. Today, Hyundai Motor fields a wide product range, all internally designed, including a luxury brand, Genesis, that was launched in 2015.

Hyundai is now perhaps the most vertically integrated car manufacturer in the world, including its own integrated steel works, unique in the industry. It has the world's largest automobile manufacturing center in Ulsan, South Korea, with an annual production capacity of 1.6 million units. In scale and integration, Ulsan today is reminiscent of Henry Ford's River Rouge facility in Michigan in the early decades of the twentieth century.

Multinationality has proved a key strength for Hyundai Motor, both in its ability to develop the requisite capabilities and the success it has enjoyed from exercising them. Roughly two-thirds of Hyundai's production capacity is currently outside South Korea, with the oldest of its current overseas factories having opened in 1997 in Turkey. Table 3 shows the location, vintage, and current capacity of Hyundai's overseas factories, representing its development as an overseas investor. The most recent entry is a soon-to-be-completed "Metaplant" in the US state of Georgia. This new \$7.6 billion complex in Georgia will manufacture EVs, hybrids, and batteries.

Its first major overseas investment, in a greenfield Canadian plant in 1985, was driven by tariff considerations. This was before the company had consolidated its internal capability base and proved overly ambitious, attempting a higher degree of automation than it used in Korea and relying on inexperienced Korean suppliers as a cost-saving measure. The Canadian operation's output suffered from quality problems, and Hyundai chose to close the plant in 1993. Around that time, Hyundai entered a series of assembly joint ventures in the developing economies of Africa and Asia.

The company's next major overseas investment after the Canadian setback was an assembly joint venture with a



Table 3 Hyundai motor overseas factories

Plant name	Opened	Annual capacity
Hyundai Assan Otomotiv (Turkey)	1997	230,000
Hyundai Motor India	1998	680,000
Beijing Hyundai Motor Company	2002	1,250,000
Hyundai Motor Manufacturing Alabama	2005	399,500
Hyundai Motor Manufacturing Czech	2008	300,000
Hyundai Motor Manufacturing Rus (Russia)	2010	200,000
Hyundai Thanh Cong Manufacturing Vietnam	2011	170,000
Hyundai Motor Brasil	2012	180,000
Hyundai Motor Manufacturing Indonesia	2021	150,000
Hyundai Motor Group Innovation Center in Singapore	2022	30,000
Hyundai Motor Group Metaplant America	2024	300,000

Hyundai's capacity in Korea is approximately 1,770,000 vehicles, about 31% of its global capacity

Source: https://en.wikipedia.org/wiki/List_of_Hyundai_Motor_Company_manufacturing_facilities, accessed August 2024

local business group in Turkey, which was seen as a regional base for exports to European Union destinations. The plant, which broke ground in 1995, was not initially successful, but Hyundai persisted. The plant is still in production and has quadrupled its capacity since its inception.

As it looked for opportunities to accelerate its globalization, Hyundai took a more considered approach to the site selection and business model. It chose to create a wholly owned subsidiary in India for vertically integrated production, overseen from Korea by an Office of Overseas Production Technologies that centralized Hyundai's accumulated knowledge of overseas operations. The operation took advantage of low labor costs by (initially) relying less on automation than in its Korean factories. Hyundai also designed a vehicle specifically for India's demanding road conditions and climate. The Indian operation proved successful and the plant, along with its relocated suppliers, became a regional export base.

Soon after investing in India, Hyundai followed a similar (successful) path in China, starting production at a factory in the Beijing area in 2002. It again designed a vehicle to appeal to local consumers and launched a dealer network across the vast country, with 180 Hyundai dealerships by 2004.

Its next overseas factory opened in the US state of Alabama. Like its original Canadian venture, this one was driven by pressure over trade because its imports to the US had proved so successful. It built an advanced, flexible, and highly automated production system, drawing on expertise it had developed in its Korean factories. One lesson it drew from its successes in India and China was the design of localized models for the US market. Hyundai's success in the North American region, which accounted for one quarter of its global unit sales in 2023, helped propel it to a place among the top five auto manufacturers globally.

As shown in Table 3, Hyundai continued to regularly open overseas factories in different parts of the world for another ten years before slowing down and deepening its existing investments. Its success in these investments reflects the development of a strategic replication capabilities (Winter & Szulanski, 2001), born of rapid learning from its early mistakes and the honing of a process that was replicable while still flexible enough to respond to local circumstances. Hyundai's dynamic capabilities were needed to sense the country-specific opportunities and determine the best way to seize them, while transforming its ecosystem by embracing a mix of Korean and local suppliers.

As discussed earlier, managers are an important feature of dynamic capabilities because they must find creative paths forward and then execute upon them (Teece, 2012). To illustrate this, Hyundai can continue to serve as a case in point, using Jose Muñoz, Hyundai Motor's current CEO, as the focus.

Muñoz joined Hyundai in 2019, after more than two decades as a global auto industry executive. By then, Hyundai had made significant strides in quality, technology, and brand image. However, it still had ample room for improvement, particularly in terms of its internal alignment across business units and with its dealer network. Moreover, financial performance in the US was lackluster.

Munoz remedied these shortcomings in a remarkably short period of time, bringing about both transformation and improved financial performance.⁶ He undertook the process of improving alignment across Hyundai's semiautonomous units through a series of incremental steps. His

⁶ Typically, smart transformation requires absorbing short-term costs to enable long-term profits. Muñoz somehow pulled off transformation with profits.



overall strategy was to ensure they were all sharing the same vision and understood how each unit's activities affected other parts of the company. He was also able to increase the tempo at which decisions were made and actions taken. While Munoz saw the complete picture, he also has high emotional intelligence (a combination of self-awareness, empathy, and social skills) and understood that “you have to bring the team along. Make them a part of the success.”

Bringing about the strategic alignment of the dealer network and Hyundai's brand was more challenging. Hyundai's dealerships reflected the legacy of the company's low-price image, not its recently introduced luxury Genesis vehicles and other radically improved, stylish, and innovative lower-end models. Yet US dealers possess certain protections under US law, making change difficult. To move toward a cooperative outcome, Munoz launched incentive programs to encourage investment in the desired upgrades and, in some cases, to build new standalone Genesis dealerships. This reflected his assessment that the marketplace needed fewer and better Hyundai dealerships to align with Hyundai's enhanced brand. Muñoz not only reconceived Hyundai across North, Central and South America, he did so, as noted, while delivering dramatically improved financial performance and growth. The ultimate forms of the future Hyundai and Genesis networks are still taking shape, but for now, it follows a hybrid strategy rather than the dedicated luxury dealer network that Toyota uses for its Lexus brand.

The highly competitive North America market is now perhaps Hyundai's greatest success story. In 2019, the year Muñoz was hired, Hyundai ranked seventh or eighth (depending on source) by sales. Since then, it has risen steadily to become the third largest seller in the US market.

Hyundai's growth and expansion cannot be understood without the lens of a capabilities framework. “Internalization” theory will only take one a very short distance towards understanding Hyundai's global expansion. Firm-specific assets had to first be built before OLI is even relevant. Likewise, transaction costs have little to do with Hyundai's vertical integration strategy. Domestic content regulation, a relatively closed market, strong learned capabilities, focused exporting, and managerial leadership are omitted variables in many standard IB toolkits. The Hyundai story cannot be very well understood without a capabilities framework.

The success of Hyundai's capability development reflects the strong dynamic capabilities that began with the entrepreneurial vision of its founder, Chung Ju-Yung, the son of a poor Korean farmer. He saw the opportunity for a low-end auto entrant and correctly assessed Hyundai's available industrial skills and its missing automotive know-how. Then he moved to seize the opportunity with a series of alliances and short-term hires that would fill the gaps. Chung's descendants have continued to lead the company (as well as some of its affiliates and suppliers) and to drive its ongoing

transformations. Its current executive chair, Chung Eui-sun, is a grandson of the founder. He continues the forward-looking sensing that has contributed to Hyundai's success. When he became group chair in 2020, he placed his stamp on the company by giving a higher profile to R&D, committing to an electric-specific platform (instead of putting batteries into internal combustion designs), and promoting people under 50 to executive roles—considered a bold move in South Korea (Mitchell, 2023). He also initiated development of a robotaxi service (Motional), launched an electric air taxi company (Supernal), and acquired a controlling stake in a leading robotics firm, Boston Dynamics, for about \$880 million as part of an overarching vision to make the business group a Smart Mobility Solution Provider. His ability to assemble an executive team with highly capable leaders like COO (now CEO) Jose Muñoz, discussed earlier, is another asset for the company.

Hyundai Motor's leadership can be seen to have developed dynamic capabilities for recognizing and exploiting opportunities, adapting to crises,⁷ and orchestrating assets across a global network. These capabilities will continue to be needed to face an array of challenges, of which China is the biggest. In China, Hyundai faces very strong competition from domestic automobile firms, but non-market forces are also at work. Hyundai's China sales, which had been declining slowly in the 2010s, fell by more than 20% after Korea accepted US anti-missile systems in 2017 and have trended lower since then (along with those of most other foreign-owned car makers) as China's tensions with the West continue to mount. This demonstrates how geopolitical factors can upset any MNE's operations and sales strategy. A response will likely require collaboration with governments as well as strong capabilities for corporate diplomacy (Henisz, 2016). Even with superlative efforts on Hyundai's part, however, the spreading geopolitical conflict, to which I turn next, may undermine its growth trajectory.

The new geopolitics of the MNE in an uncertain global economy

The essence of my 2014 JIBS paper was a claim that the field of international business had relied a bit too much on transaction cost economics and internalization theories. While I had myself championed the latter, I later came to see that it needed to be part of a broader (dynamic) capabilities framework suited to the contemporary global economy.

⁷ Hyundai Motor was one of the healthier affiliates within the heavily indebted Hyundai business group in the wake of the Asian financial crisis of 1997, although, as an auto company, it was a far cry from the top-tier status it can now claim.



In other words, there was scope for international business to be integrated with global strategic management.

I am pleased to see that some IB scholars have taken up the challenge. Narula and Verbeke (2015), for example, identified dynamic capabilities as a force that guides the rejuvenation of the firm-specific advantages (FSAs) of internalization theory. FSAs are similar conceptually to the broad category of “capabilities”, within which dynamic capabilities are different in kind from the rest. In 2022, JIBS devoted an entire issue to articles considering dynamic capabilities in an IB context, featuring an introduction that analyzed the potential benefits of the exercise (Zahra et al., 2022).

In this section, I consider two key facets of the contemporary global economy from a capabilities perspective. First is the fact that MNEs face deepening uncertainty across a number of issue areas, particularly from geopolitical shifts. Second is the changing nature of relations between MNEs and nation-states.

Uncertainty and the MNE

Uncertainty is generally defined as a lack of knowledge about the future. With true uncertainty (as opposed to risk), MNEs are unable assign probabilities to possible futures. Arrow described uncertainty as meaning

that we do not have a complete description of the world which we fully believe to be true. Instead, we consider the world to be in one or another of a range of states. Each state of the world is a description which is complete for all relevant purposes. Our uncertainty consists in not knowing which state is the true one. (Arrow, 1974, pp.33-34)

Executives are accustomed to dealing with a particular source of uncertainty, namely, the unpredictability of other economic actors’ behaviors. Koopmans (1957) called this “secondary uncertainty” (as opposed to the primary uncertainty hinging on the lack of knowledge about future states of nature). The secondary uncertainty that arises

from one decision maker having no way of finding out the concurrent decisions and plans made by others (or merely knowing suitable aggregate measures of such decisions or plans), is quantitatively at least as important as the primary uncertainty arising from random acts of nature and unpredictable changes in consumers’ preferences. (Koopmans, 1957, pp.162-163)

In 2014, technological uncertainty was present, but geopolitical uncertainty was barely mentioned. The US-and-EU-led system of global governance—launched in 1945 and strengthened over subsequent decades—seemed secure; and the behavior of major nation-states was, to a rough approximation, reasonably rules-compliant. Hyundai’s international

production network was created during that golden era of globalization.

While the global system was shaken up in the wake of China’s entry into the WTO and its tremendous growth, the system has been pushed to the breaking point by the accession of Xi Jinping to the summit of Chinese power in 2012 and the subsequent belligerent turn in China’s foreign policy (Schell, 2020). China has thrown massive resources behind efforts to make a new, multipolar world order to its liking, in part by attempting to assemble a globe-spanning, de-dollarized, China-led trade bloc (Economy, 2024).

Strong dynamic capabilities are needed by MNEs (and nation-states) to navigate these changes in the global economy. Hyundai was well positioned and had the right leaders to take advantage of policy shifts in the United States, but its recent struggles in the China market reflect the challenges that many MNEs are currently facing.

We now live in a world where deep uncertainty is the norm. Uncertainties due to technological change and digitalization are now amplified by geopolitical uncertainties. A failure to encompass this reality in making decisions can be disastrous. As Nobel laureate Ken Arrow once noted, “Vast ills have followed a belief in certainty, whether [about] historical inevitability, grand diplomatic designs or extreme views on economic policy. When developing policy... caution is needed because we cannot predict the consequences” (Arrow, 1992: 46). Internalization and other theories of the MNE rely far too much on certainty.

Technological uncertainty has deepened due to the rise of artificial intelligence (AI). The capabilities of AI have been evolving at a rapid clip, causing firms to reevaluate plans for staffing, investment, product development, and more even as the relevant knowhow proves to be a moving target.

Climate uncertainty also looms large. From 1980 to 1983, the US experienced 14 climate events (droughts, floods, etc.) that cost at least one billion dollars (inflation adjusted). From 2020 to 2023, the US was hit by 88 such events (NOAA, 2024). Moreover, the resilience of many systems around the world, such as electric grids and transport networks, will be put to the test as average temperatures continue to climb.

Industrial policy is another source of uncertainty. For decades it was mainly China that engaged in heavy subsidies and various market barriers. Starting with limited initiatives by the Trump administration, the US has adopted a string of tariffs and, later on, subsidies for green technologies, semiconductors, and more, leading other advanced countries to follow suit to varying degrees.

Uncertainty also characterizes the path of global governance. China’s industrial policies and intellectual property predation were inconsistent with the spirit, and in some cases even the letter, of World Trade Organization agreements. This was tolerated while China developed and seemed to embrace openness. In time, however, China’s stretching of



the rules triggered a loosening of US commitment to an open free trade system. Since 2017, the US has unilaterally hamstrung the WTO's binding dispute resolution system by vetoing appointments to the WTO Appellate Body. As of this writing, all seven Appellate Body seats are empty (Allen, 2024). Meanwhile, China has pursued bilateral and regional trade deals, causing trade and investment regimes to become more fragmented. China's severe pandemic lockdown and the resulting supply chain chaos also spurred a rethink of old investment patterns, leading to a partial deglobalization that has yet to play out. The breakdown of the global trading system into blocs against a backdrop of rising tensions has even raised the prospect of a major war. The vacation from history is clearly at an end.

In short, deep uncertainty is the unavoidable reality for MNE executives, and, as noted earlier, it changes what they should prioritize. Making the right investments for the future is critical; and what will be "right" tomorrow is harder to discern than ever. Entrepreneurial executives will opt for smart, bold bets (Burkhard, Sirén, Essen van, Grichnik, & Shepherd, 2023).

Optimizing current activities for efficiency is likely less valuable since there is no benefit to being very good at delivering the "wrong" products and services. Having the lowest-cost supply chain is no longer sufficient unless it is also robust. Best practices, due to their inherent replicability, are generally insufficient by themselves to ensure a firm's success and survival, except in weak competitive environments (which are still ubiquitous in less-developed countries).⁸

The MNE and the nation-state: who's in charge?

In 1971, Ray Vernon, a leading IB scholar of the 70s and 80s, summarized how he saw the world in the title of his book: "Sovereignty at Bay" (Vernon, 1971). Thirty years later, Stephen Kobrin argued, in "Sovereignty @ Bay" (Kobrin, 2001), that hyperglobalization had infringed national sovereignty to an even greater degree. The nation-state, however, remains in a commanding position. Sovereignty has increasingly been reasserted in the wake of the chaos of the pandemic-induced global supply chain debacle. Today, MNEs are at bay more than nation-states.

That is not to say that MNEs cannot wield influence on a large scale. Some have revenue larger than the GDP of smaller nation-states. But, in nearly all cases, their power can only be exercised indirectly, if at all. It certainly falls short of the standard set by the early global trading companies.

⁸ Much of the knowledge behind ordinary capabilities, including best practices, can be secured through consultants or through a modest investment in training (Bloom et al., 2013). Although considerable variance will persist, enough rivals (in open markets) will achieve best practice to drive down price-cost margins.

Compare the British East India Company (in the period 1600–1874) to Google or Amazon or Space X or Apple today. The British East India Company (EIC) was founded in 1600 in the reign of Elizabeth I and dissolved (by Act of the British Parliament) in 1874. Chartered by the Crown to trade in South Asia, its owners were wealthy merchants, aristocrats, and other investors. Besides trading, the EIC was able to tax the local citizens in territories under its control to pay for its army and administrative costs. Officials and administrators (what today we would think of as management) were well paid. The EIC's thousands of clerks prospered as well (Ruggeri, 2016). One fringe benefit was that EIC employees were allowed to trade for their own accounts.

The EIC had effective control of a large part of the Indian subcontinent and went on to colonize (for Britain) large parts of South East Asia and Hong Kong. At one point in time, the EIC had 260,000 soldiers—twice the size of the British Army at that time. The EIC's troops helped keep traders from other nation-states at bay, giving it effective monopoly for the territories in which it operated (Cartwright, 2022b).

The EIC was primarily a trading company, but it also owned sizable factories for manufacturing textiles (Cartwright, 2022a). Products traded included cotton, indigo, dye, sugars and spices, salt, tea, slaves, and opium. The EIC's charter gave it exclusive trading rights with respect to the UK (Roos, 2020). The company devolved authority to the local managers and enjoyed limited oversight from the British government—at least until the 19th-century opium wars, which led to threats by Chinese forces against British citizens.

Needless to say, no MNE today has an army, navy, or air force under its independent control. US MNEs march to the beat of their stockholders; European MNEs do much the same, with employees having a formal voice in some jurisdictions. Japanese, South Korean, and Taiwanese are somewhat less shareholder-driven, while China's MNEs are subject to the whims of the Chinese Communist Party. In China, even prominent executives sometimes vanish without any explanation (Wong, 2023).⁹

In the American model, sometimes large individual shareholders (often founders) play an outsized role which has implications for the foreign policies of nation-states. Google founders Page and Brin decided not to do business in China because of their commitment at the time to "do no

⁹ Most famously, Jack Ma, founder of Alibaba, which became China's largest e-commerce firm, all but disappeared from public life at the end of 2020 after Chinese regulations pulled the plug on the listing of Alibaba affiliate Ant (Financial) Group. He exited Alibaba's board and remained outside China, keeping a very low profile, for more than a year before returning. He remains Alibaba's largest shareholder but exercises no formal control.



evil.” China was demanding surveillance and control that the Google founders considered unacceptable. US multinationals are basically free to make their own decisions on such matters, absent export controls, sanctions, or embargoes.

Similarly, Elon Musk, responding to a request from the Ukraine government, was able to rapidly deploy SpaceX’s Starlink internet satellite services to help Ukraine’s leadership and troops maintain connectivity after Russia’s invasion in 2022, while denying Russian forces the same service. However, six months into the conflict, Musk reportedly refused to extend Starlink to support an attack on Russian naval forces in Sevastopol, Crimea, for fear that it might provoke a nuclear response (Jordan, 2023). These critical decisions were made by one CEO independently; SpaceX was not under any government contract to support Ukraine.¹⁰

But, for the most part, firms are subject to the rules of the state where they are headquartered and, to a lesser extent by the rules of other nation-states. Today, the US has comprehensive sanctions against Cuba, Iran, North Korea, Russia, Syria, and Russian-occupied Ukraine. The European Union and many western countries have honored these sanctions, but some, e.g., UAE and India, have not. The compliance costs and risks to corporations from non-compliance with sanctions and export controls are considerable, although enforcement has not been very public as of today, in part because there is high compliance by most firms in the US, Europe, Japan and South Korea. At a minimum, governments, especially a firm’s home government, remain critical stakeholders whose preferences must be taken into account in MNE decision making.

In practice, there can be a mutual dependence. The corporation depends on its home government for its legitimation while the government can rely on the corporation to help it implement policies. Thus, financial sanctions involve cutting off a country from SWIFT (Society for Worldwide Interbank Financial Telecommunication), a bank-owned cooperative that handles a large share of the world’s high-value cross-border payments. A SWIFT ban effectively isolates a country from most of the world’s financial systems, not only crippling lending, but preventing large and small transactions alike. Targeted countries can find ways around sanctions, but it comes at a cost.

To succeed in today’s world, MNE leadership needs to be not just entrepreneurial but also diplomatic. This is not merely a matter of negotiating with host countries, but also of forming coalitions with home and other governments. Moreover, the goal may be to shape, as much as to apply, the rules of global governance.

The digitalized MNE

Another feature of the global economy that should have been considered in my 2014 article is digitalization. Companies were already developing cloud strategies for their data storage needs, but the term “digital transformation” had garnered little currency. The ability of large Internet firms to affect global events (e.g., the Arab Spring) was just becoming apparent.

While digitalization could simply be included under the rubric of “capabilities,” it is worthy of some separate consideration. Digital platforms, for example, change the nature of business, and of international business in particular, lowering transaction costs in multiple ways. Companies find it easier than ever to employ high-skilled workers who may never enter a company office—a change accelerated by the covid pandemic. Payments across borders have also been simplified (despite growing bank regulation requiring rigorous Know Your Client protocols).

Digitalization lowers the entry barriers to cross-border business for many tangible products. Flows of services from intangible assets and data are, of course, greatly amplified. Moreover, consumers are now empowered by having access to platforms such as Amazon International Shopping.

The same digital capabilities that allow large MNEs to be more agile and efficient are also helping to spawn mini-MNEs. Whether born digital or leveraging platforms such as Alibaba, Amazon, and eBay to help sell physical goods, startups have an easier time servicing a global customer base and can appear less foreign. Providers of specialist goods and services can connect, construct, and engage with suppliers and customers on a global basis.

The digitalized world economy has made the platform-based Big Tech companies from the US and China even more formidable. Sometimes aligned and sometimes not aligned with the interests of their home countries, these companies—including Google (owned by Alphabet), Facebook (owned by Meta), Amazon, TikTok (owned by China’s ByteDance), and Chinese e-commerce giants Alibaba, Temu, and Shein—have direct and indirect geopolitical impacts.¹¹ These firms are able to leverage their platforms and spread their presence into new industries. However, their very dominance increases the likelihood of nation-state pushback.

The availability of real-time financial and operations monitoring on a global basis greatly simplifies the coordination and control of the MNE and its network, although overreliance on standardization may have downsides (Zeng,

¹⁰ The US Department of Defense eventually began reimbursing SpaceX for the satellite terminals and services it was providing in Ukraine.

¹¹ Interestingly, there are no European Big Tech companies, reflecting in part the weakness of infrastructure for entrepreneurial capitalism in Europe.



Grøgaard, & Björkman, 2023). The resulting flood of digital information provides important but chaotic signals for the sensing element of dynamic capabilities, too. This, in turn, requires new capabilities to process vast amounts of heterogeneous data.

A related point is that firm-level data processing and analysis capabilities mediate digitalization. Proprietary data is a valuable asset only to the extent that capabilities are available internally or externally to analyze it and make the results available wherever they are needed. Fleury, Fleury, Oliveira and Leao (2024) provide a capability-based model which links the multiple process areas (organization design, people management, etc.) that must be adapted to enable the MNE to engage in effective digitally enabled decision-making and ecosystem integration.

Greater reliance on digital infrastructure brings vulnerabilities. As MNEs digitalized, hackers globalized. Ransomware, which can be launched from anywhere in the world, has become a plague forcing management and boards to develop greater cyber expertise. Other unintentional crises can affect digital infrastructure, such as the CrowdStrike software update disaster in July 2024, which impacted airlines, border crossings, and health services across multiple jurisdictions in the US, the EU, the UK and beyond.¹² Digitalization requires new levels of systems thinking. With complex systems, emergent behaviors (unintended consequences) and “surprises” are likely. These represent an extra source of vulnerability for digitalized MNEs which suggests the need for specialized skills and rearrangements of the management team.

The implications of these developments for the theory of the MNE haven't been fully thought through by MNE scholars, although constructive efforts have been provided by Banalieva and Dhanaraj (2019), Buckley and Casson (2021), Hennart (2024), Luo (2021), and Verbeke and Hutzschenreuter (2021). Clearly, location (the L in OLI) is impacted. But the emergence of a deeply interconnected global economy also increases the interdependencies and vulnerabilities in ways that may augment or undermine other elements in the theory. At a practical level, broad avenues of crisis propagation have opened up, requiring MNE managers to wield expertise, maintain peripheral awareness, and engineer resilience.

¹² EU competition regulators were the fundamental cause of the CrowdStrike incident as they had forced Microsoft to open the Windows kernel, creating security vulnerabilities.

Conclusion and further implications for management and scholarship

I will end by repeating the call in my 2014 paper for a serious rethink of our textbook theories of the MNE. Its major contribution was to highlight the importance of technological and organizational capabilities, which has been expanded on in this paper to encompass capability development and deployment. I encourage IB scholars to analyze the forces and processes behind the dynamic reallocation of resources within MNEs in response to geopolitical tensions and other stressors.

In this paper, I've also highlighted the importance of digitalization and broken global governance. These two new factors have equally profound implications for theory building within a capabilities framework. I hope the brief analysis above will stimulate others to take up the task.

The era of unbounded globalization based on comparative advantage and cost efficiencies is over. Escalating geopolitical tensions and the compression of time and space in the digital economy affect MNEs everywhere. Companies and countries need to adjust to the new, still-emerging economic order; and scholars need to incorporate these new issues into their research. For IB scholars, this means looking to other disciplines, such as international relations, for applicable geopolitical insights (Han, Lukoianove, Zhao, & Liu, 2024).

Systemic competition from China has sharpened since President Xi came to power (Teece, 2022b). Surveys show that businesses with major operations in China are increasingly concerned about the danger of unilateral action that can crater their business, whether as an act of retaliation or to support domestic Chinese competitors (Bradsher & Stevenson, 2023).

MNE managers and boards of directors need to be thinking geopolitically (Teece, Gupta, & Rosenberg, 2023). Many MNEs have begun to de-risk their operations, becoming less dependent on single-source suppliers, particularly those in China, partly at the urging of Western governments (Farrell and Newman, 2023). Yet China still offers an enormous single market and manufacturing capabilities that few other countries can match.

As political leaders push for more market interventions, MNE leaders must engage more actively with their governments to help them do so in a business-compatible manner. They can, for example, explain the specific consequences on their business from tariffs and other trade barriers. This is particularly important at a time when the global trade regime is being rethought and new blocs are taking shape (Dadush & Prost, 2023).

For their part, policymakers must provide incentives as well as mandates for corporations to pursue goals beyond economic efficiency, while maintaining incentives to



innovate and compete in global marketplaces. They should collaborate with businesses to analyze the impact of their policies on competitiveness.

President Xi's vision of a multipolar world in which Chinese values of security and economic development dominate is the most serious negative development looming on the horizon of international business. For MNEs, this situation demands a heightened level of preparedness. The war in Ukraine is a leading indicator of the kind of negative surprises one can expect. President Xi, in speeches given in Chinese and only recently translated into English, appears to believe that war with the West is inevitable (Pottinger et al., 2022). War would be tragic and would place unimaginable demands on the dynamic capabilities of MNEs and their executives.

I believe that technological and economic leadership and resilience in democratic societies are a great deterrent. MNE management and boards have a critical role to create and maintain them, in concert with democratic governments.

Scholars have quite a significant challenge. Geopolitics is more salient at a time when the very natures of the firm and of competition are changing. The tech sector, with a distinctive form of competition, is now more important than primary industries and manufacturing. The dominant models of trade, investment, and location decisions—and of the MNE itself—were created with reference to a different set of criteria. It's time for further renewal of our frameworks, theories, and models to help us deepen our understanding of global business.

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