

**DIGITALIZATION AND ITS STRATEGIC IMPLICATIONS
FOR THE MULTINATIONAL ENTERPRISE: THE
CHANGING LANDSCAPE OF COMPETITION AND HOW TO
COPE WITH IT**

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We have a diverse set of descriptions referred to as the “fourth industrial revolution” (Schwab, 2017), Industry 4.0 (Strange & Zucchella, 2017), or the “digital” (UNCTAD, 2018) or “new economy” (Bolwijn et al., 2018), indicating that there is a seismic shift under way. Due to digital transformation arising from the combined effect of several digital technologies including IoT, 5G, cloud, blockchain, Big Data and Artificial Intelligence, companies today are being transformed, and for many, this transformation comes in ways that they have not experienced before. This may mean that firms entering new markets with digital technologies may be less dependent on mediators and be able to control the delivery of their products or services, whilst new entrants are likely to gain advantages from exploiting digital platforms. Our chapter lays out how the classic principles of international competitive strategy are transformed in today's markets due to digitalization and provides suggestions in terms of how firms, and particularly MNEs, can respond to these transformations.

INTRODUCTION

Technological and digital innovation has often been credited with having significant strategic implications for firms by shifting the competitive landscape and changing the market dynamics in an industry (Porter, 1985). Irrespective of whether they operate in international, domestic or global market contexts, firms are confronted by digitally savvy customers with complex demands, while at the same time, facing rising threats of digital disruptions from new entrants into their respective industries. This trend is evidenced by The International Data Corporation (IDC) report that firms are updating their business models by making significant investments in technologies that enable digital transformation

amounting to an estimated \$5.9 trillion over the years 2018 to 2021. The same report predicts that by 2020, at least 55 per cent of organizations will be digitally defined, transforming markets and reimagining the future through new business models, products, and services.

Digitalization is likely to significantly alter the ways of doing business not only for start-ups but also established firms in a wide range of industries. Indeed, even large, multinational firms operating in traditional and/or heavy-manufacturing industries are not immune to these changes: Disney (U.S.), for instance, issues wristbands donned with radio-frequency-identification technology which customers can use as a substitute for credit cards, tickets, and keys. Similarly, McGraw-Hill (U.S.) has evolved its digital technology to mould its printed materials into personalised learning experiences. At the risk of cannibalising its own brand, Qantas Airways (Australia) established a lower-fare airline that employs intensive use of digital technology in booking, app-based loyalty programs, automated check-ins and baggage service. Intuit (U.S.), fearing that fintech start-ups would start taking away some of its market share, acquired new digital assets to expand beyond its existing small business and tax products, in an effort to reach digitally adept consumers who preferred using apps to face-to-face or verbal exchanges while managing their financial assets. Telefónica (Spain) too sensed its own vulnerability and launched an independent start-up that involved online community-based digital forums to resolve customer queries. Last but not least, Nike (U.S.) uses digital technologies to reach its customers all around the world and their exercise routines through integrated chip technology that it places in its products. All of these vignettes are indicative of a significant change in the way that businesses operate across different industries and markets.

For multinational firms, digital disruption brings to the foreground particular issues such as the necessity for interorganizational collaboration and openness (Chesbrough, 2003; Whittington et al., 2011; Hautz et al., 2017), the emergence and diffusion of networks (Ghoshal & Bartlett, 1990; Zander, 2002), the increase in creation, exchange and complexity of knowledge (Foss & Pedersen, 2004), the invention and adoption of new manufacturing technologies (Laplume et al., 2016), as well as the advent of new business models leading to a “(digital) platform” or a “network economy” (Ozcan & Eisenhardt, 2009; Gawer & Cusumano, 2008; Kenney & Zysman, 2016).

While the majority of digitalization efforts bring the benefit of widening operations to involve new national contexts, MNEs will need to weigh these benefits with a set of challenges. On the one hand, many firms that participate in the digital economy have benefited from the absence of government regulation or hybrid governance structures (Tulder et al., 2018). The “era of digital exceptionalism, in which online platforms have been inhabiting a parallel legal universe where they are not legally responsible, either for what their users do or for the harm that their services can cause in the real world” (The Economist, 2017 cited in Tulder et al., 2018). On the other hand, they are increasingly having to cope with new regulatory challenges, antitrust laws, industrial and trade policies. Platform companies such as Airbnb are under pressure to adopt local safety regulations that often match those in traditional hotels; while Uber is compelled to implement minimum wage restrictions in some of the countries in

which it operates. Google has recently been fined a record historical antitrust penalty of €4.3 billion in July 2018 by the European Commission for abusing its dominant (network) position to discriminate against rivals. In the 2018 UK parliamentary committee report, social media companies such as Facebook and Twitter are accused of “undermining democracy” through systematic manipulation and use of public and private information for financial gain (Tulder et al., 2018; Hazelhurst & Brouthers, 2018). Digitalization, therefore, is fueling a new “breed” of MNEs (e.g., Brouthers et al., 2016) and international business models (Baden-Fuller & Haefliger, 2013).

In this new world, firms entering markets with digital technologies are less likely to be dependent on mediators within value chains and will potentially have the freedom to exercise choice and control over delivery systems for their products and services (Bakos, 1998; Gellman, 1996; Katz & Gartner, 1988). Also, new entrants with digital technologies are likely to be able to employ advantages from platforms in the form of coordination, organization, and increased momentum (Nambisan, 2017; Thomas et al., 2014; Yoo et al., 2012; Zittrain, 2006). As creators, complementors, or consumers, firms are increasingly finding themselves as part of digital platforms such as Apple and its iOS system or its ‘app’ ecosystem, Alphabet’s Google Play or its Android ecosystem, or Amazon Marketplace.

New technologies can disrupt existing markets by causing vertical disintegration, as seen in the personal computer (PC) market at the turn of the second millennium (Baldwin & Clark, 2000; Gawer & Cusumano, 2002), and lead to the emergence of co-opetitive ecosystems where the old and the new interact (Jacobides & Winter, 2005). Gawer & Phillips (2013) show how Intel became a platform leader when the market transitioned from a supply chain to a platform business model. More recently, research by Ozcan et al. (2019) illustrates how the UK market entry of innovative financial technology (fintech) firms gave rise to challenger banks that provided customers with a digital marketplace where these customers could shop for financial services from various fintech complementors while domestic banks mostly struggled to leave their existing products behind to switch to a digital platform business model. In sum, digitalization is changing the competitive landscape in a plethora of industries and for a wide range of firms from local start-ups to global conglomerates. These changes have the potential to make what we know about business strategy and competition obsolete.

This chapter lays out how the classic principles of competitive strategy are transformed in today's markets due to digitalization and provides suggestions in terms of how MNEs can respond to these transformations. We build on some of the new research challenges proposed in Chapter 5, particularly with regards to the changing nature of competitive and cooperative relationships between firms. Thus, we start by outlining the key contextual changes associated with digitalization, namely, increasing demand for internal and external connectivity, a need for improved understanding of consumer preferences and developing capability to address these, and increasing interdependence and convergence within and across industries. Following these contextual changes to the competitive landscape, we suggest that firms pursue strategies that are: (1) collaborative; (2) additive; and (3) open. In doing so, we draw on a diverse set of contemporary and historical examples from mobile gaming,

financial technologies to Uber and Airbnb, focusing predominantly on the transformation of industries due to technology, and the implications of technology-related advancements on strategic thinking. Our chapter draws on a wide variety of studies conducted in various sectors, all of which emphasise the ever-increasing need for viewing industries in terms of platforms and networks, employing strategic manoeuvres that are adaptive to this new competitive landscape, and going one step further by being proactive in shaping it.

KEY CHANGES ASSOCIATED WITH DIGITALIZATION

IDC predicts that by 2022, over sixty per cent of global GDP will stem from digitised businesses arising in every industry from digitally enhanced offerings, operations, and relationships. Digitalization has already brought a significant impact on business activities ranging from distribution, services, access and participation (Kulesz, 2017). Digital transformation might influence the evolution of institutions, and existing institutions might shape, in turn, how digital technologies diffuse and evolve (Lanzolla et al., 2018).

Above all, however, digital technologies are likely to dramatically alter organizational forms and firm strategy, causing disruption (Brynjolfsson et al., 1994; Sia et al., 2016). These changes are likely to be quite pervasive among MNEs and global firms as these are faced with fundamental and varying external uncertainties at the global scale (Mullner & Filatotchev, 2018) and need to adapt to immense changes due to the advent of new information and communication technologies (Hazlehurst & Brouthers, 2018). They will have to rethink strategic choices regarding locations, internationalization processes and entry mode (Hazlehurst & Brouthers, 2018), undertake integrated approaches to various functional areas of management that are influenced by new stakeholders and subsequently configure strategies to cope with these uncertainties (Mullner & Filatotchev, 2018). In particular, MNEs will have to integrate a plethora of new practices such as P2P communication and crowd-based dynamics and technologies such as artificial intelligence and blockchain into their strategy and organization (Mullner & Filatotchev, 2018).

It is thus imperative for international business strategy scholars to understand these potentially dramatic consequences of digitalization, and relevant responses, for all firms, including MNEs, as they are expected to have great impact on the global economy (Tulder et al., 2018). To address these issues, we first introduce two key themes that have become relevant with regards to digitalization: (1) connectivity and advances in data analysis capability, and (2) interdependence and convergence.

Connectivity and data analysis capability

The most evident theme to arise as a characteristic of new business models associated with digitalization is connectivity - both inside and outside the firm. Internally, systems that support mobile and disperse workforces are becoming imperative for businesses. Riedl & Woolley (2017) found that remote teams

- characteristic in multinational firms - communicate in bursts and that organisations that exchange messages quickly during periods of high activity perform much better than those whose conversations involve long lag times between responses. Similar observations exist for organizations with strong external connectivity. A study by Yankee Group found that 96 per cent of customers prefer to shop at stores or companies that offer free Wi-Fi and 64 per cent of people have chosen a restaurant based on free Wi-Fi availability.

The second characteristic of new business models associated with digitalization is an ever-increasing reliance on data analysis capabilities. Refined proficiency in data analysis allows organizations to understand customer behaviour better, and, as a result, construct better offers and responses. This is particularly relevant for some MNEs as they operate in a wide range of host country locations where better understanding of consumer behaviour can lead to faster local adaptation strategies, or reduced dependence on a local partner. IDC predicts that by 2022, 30 per cent of enterprises will be engaged in conversational speech technology for customer engagement and by 2024, AI-enabled user interfaces and process automation will replace one-third of today's screen-based apps, making the optimal analysis and management of data imperative for organisational success.

Case in example: Disruption in banking

A striking real-life example of disruption in the face of *connectivity* and *data analysis* is from the banking sector. In their recent study on the UK and European banking sector, Ozcan et al. (2019) have studied how incumbent banks in these regions face major disruption due to a specific regulation that favors those players that can provide connectivity and superior data analysis.

The Open Banking regulation in the UK and the Revised Payment Systems Directive (PSD2) in the European Union (EU), which came into effect simultaneously in 2018, enable third party payment institutions to access consumer bank accounts. The purpose of enabling access to consumer accounts which are mostly held by incumbent banks, is to allow analysis of relevant data and offer customers better and cheaper services. Since these regulations came into effect, banks such as Atom (UK), Monzo (UK), N26 (Germany) and Starling (UK) have entered the EU and UK markets. These new entrants, also called challenger or neo banks, competed with domestic banks along *connectivity* and *data analysis*. First, their offerings allowed customers to connect all their current, savings, mortgage, and other accounts from different banks, and even across countries in one platform. This connectivity across different products allowed the customers to have much better oversight over their finances and improve their decision-making. Second, having access to customers' data across different banks meant that the data could be used for improved analysis, advice and products offered in a more tailored manner to customers. Customers could, in turn, obtain benefits such as cheaper loans and higher savings based on these new players' superior data analysis capabilities.

As Ozcan et al. (2019) show in their recent analysis, incumbent banks' business model was significantly disrupted by these new entrants as incumbent banks did not have the technical capabilities and a platform / holistic mindset to compete in this new way. Despite operating in international markets themselves, many of the established market players even struggled to connect a customer's accounts with their own bank across different European markets. In fact, an independent PWC report also found that 30 per cent of revenues of incumbent banks may be lost by 2020 due to the digital disruption trends illustrated above.

Interdependence and convergence

Another key aspect of digitalization is the rise of *interdependence* and *convergence*. Interdependence relates to the dependence between two or more firms in order to make or sell their products or services; whereas convergence explains how traditionally separate businesses come together around new products and services. Interdependence, which denotes that individual innovations do not 'stand alone,' but are instead embedded in a network of interdependent technologies (Adner, 2017; Adner & Kapoor, 2010), has been the subject of many studies. For example, Adner & Kapoor (2016) studied the evolution of the semiconductor lithography industry as it evolved through ten technology generations in multiple national contexts and found that the introduction of new technologies was delayed when complements were lacking. Interdependence broadens the scope of technologies and changes that may affect a firm (Pierce, 2009; Hannah & Eisenhardt, 2018). Afuah (2000) studied 23 computer workstation manufacturers around the transition from complex instruction set computing (CISC) to reduced instruction set computing (RISC) chipset technology and found that manufacturers' performance suffered even when it was their suppliers that were disrupted. In line with these findings, Pierce (2009) observed that design changes made by upstream automobile manufacturers triggered subsequent shakeouts in downstream automobile lessors. Overall, this suggests that within interdependent industries, changes and technologies that transcend national contexts directly affect complementors and these may, in fact, be strategically material for an MNE.

An important type of interdependence that is critical, but often not easy to anticipate, is when products emerge at the intersection of previously separate industries. An IBM study published in 2016 revealed that two thirds of global chief marketing officers (CMOs) saw industry convergence as their greatest business challenge, and 60 per cent expected more competition to come from companies outside of their sector (IBM, 2016). Digital transformation presents CMOs with unique organisational initiatives, but also poses pressures for understanding a much wider purview of industries, actors, and relationships. Well-known examples of convergence are autonomous vehicles - bringing together technology MNEs such as Apple (U.S.) and Google (U.S.) with multinational automobile and component manufacturers such as Honda (Japan), Bosch (Germany) and Delphi (UK) - or the marriage of consumer electronics and healthcare technologies in digital exercise-trackers to create portable health

devices like Fitbit and Garmin. The example below illustrates the hazards of failing to recognise the emergence of new markets between traditionally separate industries.

Case in example: Emergence of mobile payments

Ozcan & Santos (2015) studied a case of convergence involving the financial industry and mobile communications that resulted in the emergence of mobile payment services. The authors found that the technology that enabled mobile payments, Near Field Communications (NFC), was available since the late 90's, but this did not lead to commercialization. Their longitudinal study shows that the delay in commercialization was due to a lack of agreement around what the new market should look like. The authors observed that, despite their interdependence, multinationals (i.e. banks and telcos) that had dominant positions in their traditionally separate global industries were unable to agree on a market architecture. Due to their extant dominance in their respective industries, banks and telcos struggled in recognising that this convergence between traditionally separate industries required a reshuffling of power dynamics and prior beliefs, i.e. about who owned the customer and whose security standards should be adopted.

The authors also observed that once the market was blocked due to the lack of agreement between global banks and telcos, some local mobile payments solutions emerged, e.g. in Kenya where the banks were not prominent, or in Japan, where banks and telcos belonged to the same holding company, effectively solving the interdependence problem. However, these local solutions could not get adopted widely as global banks and telcos had 'moved on,' investing in alternative products in the rest of the world, such as contactless bank cards and smart phones without payment capability. In the end, it was not the banks or telcos, but Apple and other technology giants that jumpstarted the mobile payments service from 2014 onwards. Today, Apple, Google, Alibaba, and other technology firms still have the lion's share in mobile payments.

One of the ways in which firms experience convergence across industries and national contexts is through the emergence of platforms. In the last few decades, we have seen the emergence of platform business models that move away from the traditional vertical integration of the firm (also known as the pipeline business model) and introduce a flatter, more inclusive and innovation-centric approach to value creation (Gawer, 2009). Central to this model is a platform that often "uses technology to connect people, organizations and resources in an interactive ecosystem in which amazing amounts of value can be created and exchanged" (Parker et al., 2016). This organizational formation can facilitate value-creating interactions amongst consumers (demand-side) and external producers (supply-side), and produce a multi-sided market to provide complementary services and co-create value (Rochet & Tirole, 2006; Zhu & Iansiti, 2012).

Platforms are known to not only reduce transaction costs (Munger, 2015), but also foster innovation

as they combine the knowledge and the perspectives of various internal and external parties to create more innovative and personalized products (Baldwin & Clark, 2000; Baldwin & Woodard, 2009; Gawer, 2009, 2014). Due to these advantages, platforms have become central to many industries and markets such as e-commerce (e.g. Amazon and eBay), social media (e.g. Facebook and Twitter), video games (e.g. Xbox and PlayStation), PC and mobile operating systems (e.g. Google Android and Apple iOS) together with peer-to-peer sharing (e.g. Uber and Airbnb). Table 1 provides a simple comparison of new entrants versus incumbents across a number of industries to illustrate the prominence of platforms in our lives today and provide an indication of their ability to disrupt industries and compete with MNEs at a global scale (see Table 1).

Table 1

The rise of digital platforms across different industries has significantly changed the nature of global competition. According to Teece (2018), in platform-based ecosystems, competition can take place in one of the following three forms. First, it may be between two platforms such as between Apple's iOS and Google's Android operating systems. Second, competition could take place between a platform and its partners, like in the case of Microsoft capturing value from browsers, streaming media, and instant messaging applications on its Windows operating system. Third, competition can be among complementors, each seeking a position within a platform-based ecosystem, as in the case of any two mobile apps, each targeting the same set of consumers. We will discuss the basic rules of platform management in more detail in the next section.

Thus far, we have shown that digital disruption has brought, and will continue to bring, significant changes to the ways in which firms operate. Firms will experience increased pressure to not only invest in technologies that allow connectivity, but also be ready to actively take part in two-way communications with their consumers. Furthermore, investment in ways to collect, analyse and interpret vast quantities of data, as well as conceptualise their tasks and workforce in the context of AI and machine learning will become imperative. Last but not least, firms will be dealing with shifting industry boundaries, the challenges of working with platforms, and increasing susceptibility to new entrants enabled by digital technologies. These changes may take varying forms and occur at different speeds depending also on the institutional environments in which MNE's operate, complicating the matter. In the next section, we outline three strategies for such firms facing digital disruption; these are (1) collaborative strategies, (2) additive strategies, and (3) open strategies.

STRATEGY IN THE DIGITAL AGE

Collaborative strategies

We propose following collaborative strategies for MNEs as a means for dealing with increasing levels of interdependence and convergence due to digitalization. Interdependence emphasizes *collaboration* with other firms and is one of the most critical issues in today's competitive global environment. The most well-known type of interfirm collaborations is alliances, which can be defined as "arrangements between firms involving the exchange, sharing, or co-development of products, technologies or services" (Gulati, 1998). Alliances are known to improve a firm's strategic position in nascent markets in various ways. First, they can reduce supply uncertainty by enabling firms to share R&D and production costs in a nascent market (Adner & Kapoor, 2010; Miner et al., 1990; Ohmae, 1989; Powell et al., 2005; Van de Ven & Polley, 1992). In addition, alliances can help firms reduce demand uncertainty by jointly create narratives and collective identities to help the adoption of the new products and services (Gurses & Ozcan, 2015). They can also reduce demand uncertainty by simply serving as signals for the legitimacy and size of the market entered (Eisenhardt & Schoonhoven, 1996; Ozcan & Eisenhardt, 2009).

The importance of alliances is amplified for firms operating in fast-changing technology markets where resource needs are in flux. However, collaborating does not just refer to formal alliances, it also means being aware and actively working with *complementors*. As Yoffie & Kwak (2006) point out, most companies benefit from complementors - other firms independently making products or services that increase the value of a firm's offering to mutual customers. For example, digital camera makers rely on manufacturers of affordable home photo printers to sell more cameras. Also, collaborating with complementors can lead to innovation. For example, Ansari & Munir (2008) found that incumbent telephone companies in the UK co-opted mobile challengers such as Virgin Mobile by licensing their complementary assets (e.g., access to spectrum) to the challengers. Similarly, Gomes-Casseres (1996) studied the early personal digital assistant (PDA) market and found that firms were able to use alliances as probes to experiment with different technologies and thus hedge against uncertainty. Finally, Gawer & Henderson (2007) traced Intel's history over 14 years and observed that the firm was able to introduce novel technologies by integrating into the (related) markets of complementors in order to reduce the need to coordinate with them. Thinking of interdependence and complementors is even more critical for start-ups with limited resources and no market recognition, as detailed in our case below.

Case in example: Early collaborations in mobile gaming

In an empirical study, Ozcan & Eisenhardt (2009) illustrated that nascent markets are a great time to approach complementors. In fact, approaching potential partners early in the emergence of a market increases the likelihood of firms building a strong ecosystem. During this period, high market ambiguity and low competition work in favour of smaller firms. These favourable circumstances especially benefit entrepreneurial ventures, which would normally lose out to the competition in gaining valuable face time with prominent firms. Since most organisations lack a clear vision of what the new market will look like, start-up founders can take advantage of this by meeting with potential partners and then promoting and selling a vision of the future in which both parties play central roles. Then, through frequent interactions while working together, executives can strengthen these relationships before market competition intensifies.

The authors give the example of mobile gaming start-up Starclick and large telco Verizon Wireless. During the emergence of the wireless gaming industry, no one had a clear understanding of the industry architecture. Starclick executives began by talking with several firms and promoting their own vision for the industry, terming it the “market ecosystem.” Their vision relied on strong collaboration between carriers, platform developers and publishers, not handset makers, to develop the industry. When Starclick approached Verizon Wireless (U.S.) with this idea, Verizon was intrigued, because such a partnership would enable them to enhance their own position. Verizon needed good games to sell game-capable phones, because a gaming platform alone was not interesting; and Starclick could bring good games to the table. Starclick’s blueprint defined the partners’ subsequent interactions. Because of this strong, early tie between Starclick and Verizon, game-capable phones, embedded with a few starter games from Starclick, flooded the market in the Christmas of 2012, following Verizon’s “Buy 1 Get 1 Free” promotions. Starclick gained exceptional marketing and co-development opportunities from Verizon and consequently other telcos. It remained the number one US mobile games publisher until it was sold for a record amount to Electronic Arts in 2005. Verizon remained the market leader and received significant revenue from game-capable phones and mobile game downloads until the mobile content market was disrupted by Apple in 2008.

Beyond the evident challenges that alliance partners face associated with cultural and language barriers (discussed in detail in previous IB works), collaboration with other firms such as complementors can sometimes be tricky, even in the absence of such distances. We emphasize that firms in different market segments are unlikely to share the same incentives or views with respect to whether or how the new technology should be developed. For example, Casadesus-Masanell & Yoffie (2007) demonstrate that even in the case of perfect complementarity between Microsoft (U.S.) and Intel (U.S.), Microsoft always prefers to delay the implementation of new technologies relative to Intel, due to its ability to

attain revenues from product updates. Similarly, studying the emergence and subsequent failure of the Symbian platform, Tee & Ozcan (2019) illustrated that despite their interdependence regarding R&D, handset manufacturers' divergent views of key characteristics of a smartphone (i.e. touchscreen, keyboard, or stylus pen) severely hampered their ability to jumpstart the smartphone market and, as a result, placed Apple in a significantly advantageous position. These findings show that understanding the economic incentives and cognitive priorities of complementors and partners is critical in reaching mutually beneficial outcomes in a timely manner.

A particular type of interdependence that deserves special attention and specific management skills is due to the advent of digital platforms. As we outlined in the previous section, digital platforms are associated with disruption across many industries and changes in ways that competition unfolds. Based on extant research, there are certain fundamental elements that aspiring or existing platform providers will need to consider. First, organisations need to think very carefully about how to populate the platform. Platform leaders must strive to establish a business model and set of relationships that are mutually beneficial for platform participants. In the platform literature, this is known as the “chicken and egg problem” where the platform leader needs to cultivate one side of the platform (i.e. consumers) in order to attract the other side (i.e. suppliers) (Gawer & Cusumano, 2014). If successful, this leads to a momentum and subsequently to network effects between the platform and its complementary products or services. This momentum, in turn, may erect barriers to entry for potential platform competitors and allow new markets to develop around only this platform – hence, the chicken-and-egg “problem.” Researchers have suggested various solutions to this conundrum: Parker & Van Alstyne (2005) and Rochet & Tirole (2003, 2006) suggest that platform owners can resolve this problem by subsidizing or seeding complementors through adequate pricing or other financial incentives. In addition, Parker et al. (2016), discuss various “pull” and “push” strategies to kickstart the platform. They recommend that organizations can create a particular value proposition to a particular subset of potential users and subsequently, transform the business by attracting a wider audience on both sides (see also Gawer & Cusumano, 2008). Another strategy is to “piggyback” onto another firm’s existing user-base (or platform) and recruit third-party developers to populate the complementor side (see Parker et al., 2016).

The second most significant issue that firms operating in platforms need to take into consideration is ensuring effective integration and communication of players. Firms can maintain a central position in the ecosystem through investing in infrastructure and innovating their core functions. This also involves having the right modular architecture and providing easy to use APIs with detailed documentation, community and access. Think of a physical platform like a shopping mall. The selling point is to create a “one-stop shop” for all customers’ shopping needs. This includes being able to search through the products and services easily but also having comfortable access close to amenities such as food, parking and entertainment. Therefore, in addition to the core product, the place needs to be able to house value-added services and make them easily accessible to consumers. In a similar fashion, the more accessible and integrated the services are on a platform, the easier it is to use. Maximizing

interactions is what will bring competitive advantage and profitability to platforms in the medium to long term. Finally, platform owners need to establish clear rules and immediate resolutions. Uncertainty regarding liabilities can damage the reputation of a platform and discourage consumers from undertaking transactions (Zachariadis and Ozcan, 2017).

In sum, collaborative strategies offer organizations means for managing increasing levels of interdependence and convergence – a main outcome of digitalization. In the next section, we introduce additive strategies as a broader and complementary form of response to changes associated with digitalization.

Additive strategies

In addition to thinking of formal and informal collaborations with partners and complementors, considering the larger socio-political ecosystem around the firm is critical in the age of digitalization, particularly for multinational firms. Organisations operating internationally are now compelled to consider implementing organisational changes across countries they operate in; designing mechanisms that enable standardization; adopting intellectual property rights protection in multi-country contexts; and understanding the institutional conditions fostering individual and local creativity in potentially diverse national contexts (Mowery, 2009). For these multinational firms, *additive strategies* offer a useful framework. Recently pioneered by Dorobantu et al. (2017), additive strategies involve complementing existing stakeholders in the environment, which may include competitors, consumers, legislators and regulators all with potentially conflicting interests, characteristics and requirements.

Additive strategies take the core idea of collaboration and amplify it to the larger ecosystem of stakeholders. For instance, in their study of the emergence of pay cable TV, Gurses & Ozcan (2015) found that when cable TV providers emerged in the 1940s, they emphasized providing cable services as an extension of regular TV channels to rural areas that could not receive over-the-air signals. This initial additive strategy allowed them to grow without resistance from incumbents or regulators for over a decade. As the authors illustrate, additive strategies can be particularly useful when a new technology is subject to regulation upon market entry. Providing positive externalities to the stakeholders in the larger ecosystem can help the firm in shaping a positive institutional environment that can lead to regulatory and socio-political legitimacy of its products and services.

Dorobantu et al. (2017) also point out that firms may pursue an additive approach by proactively sharing value with other stakeholders with the expectation of being rewarded for doing so in the future. Proactiveness can, in fact, be a critical component of additive strategies, as the relevant stakeholders may not even be aware of the firm's products and services or its relevance to them. A good example of this is comparing Airbnb and Uber in terms of their entry into the UK, as illustrated below.

Case in example: Airbnb versus Uber in the UK

Comparing Airbnb and Uber's market entry strategies across different countries, Uzunca et al. (2018) give the example of Airbnb's international strategy as a successful employment of additive strategy. For instance, Airbnb officially entered the UK markets in early 2012. Interviews with the Airbnb UK community manager revealed how the platform prides itself on entering new markets through "collaboration and communication with local authorities and community." As part of its strategy, Airbnb created multiple community and public-related positions in its UK headquarters. Among these positions were global and country community managers, a public relations manager, and a head of policy. In London, Airbnb worked hand-in-hand with the municipality from the beginning by providing them information about the growth of tourism in London's outer boroughs to help spread the economic benefits across the city. It also worked with local fire departments to improve fire safety in homes and neighbourhoods, particularly in poorer ones. The company framed these relational and additive strategies as "giving back to the community." Half a decade later, Airbnb's ecosystem building strategy paid off. In 2015, Airbnb negotiated a more favourable deal with the City of London in comparison with Amsterdam, which allowed residents to rent their rooms or homes for up to 90 days per year and earn up to £7,500 without having to file taxes. This negotiation helped Airbnb grow exponentially from 1 million guests in 2015 to 8.4 million in 2018.

Uzunca et al. (2018) compared Airbnb's internationalization efforts to Uber and found that Uber has mostly followed an aggressive strategy in foreign market entry, focusing on populating its platform with drivers and users, but with virtually no attention to the larger ecosystem in the country. This strategy backfired with Transport for London announcing in 2017 that Uber's license would not be renewed. Following this decision, Uber embarked on a corporate overhaul and introduced free insurance for drivers in London and limited their operating hours. It opened a 24/7 customer helpline and promised to start reporting serious incidents to the police department. The changes, which were bolstered by a major public relations campaign and an apology from CEO Dara Khosrowshahi, earned Uber a 15-month extension of its license in London.

As apparent in the above example, an additive strategy is particularly important when multinational firms' products and services are subject to different types and levels of regulation across countries. A country-by-country additive approach can play a key role in establishing a favourable institutional environment for new products and services that require regulatory approval.

Open strategy

Digitalization is characterised by platforms, ecosystems and open/user innovation (Altman & Tushman, 2017) made up of external individuals, organizations, and communities aimed at creating value through interactions (Gawer & Phillips, 2013). As we emphasised in our two former sections, due to digitalization, firms in general, and MNEs, in particular, are increasingly moving to more distributed and networked forms (Benkler, 2007). In this new global context, we have explained why and how collaborative and additive strategies are becoming essential for (global) competition.

Our third suggestion for organizations is therefore a framework that embraces new forms of business that are associated with greater openness. These new business forms enable firms to interact with, and involve, internal and external constituents such as employees, customers, shareholders, and other stakeholders. Platforms and ecosystems, which are examples of innovative business forms enabled by digitalization, can lead firms to simultaneously manage closed and open ways of conducting business (Altman & Tushman, 2017). Business models enabled through digitalization “bring forth opportunities and challenges related to openness, engagement, interdependence and co-opetition as they revolve around interactions between firms and other parties outside their boundaries” (Altman & Tushman, 2017).

Openness has recently become a key feature in governance (Almirall et al., 2014; Tihanyi et al., 2014; Kube et al., 2015; Dutt et al., 2017; Mergel, 2015) and innovation (Dahlander & Gann, 2010; Chesbrough & Bogers, 2014; Randhawa et al., 2016). Achieved through transparency and/or involvement (Whittington et al., 2011; Hautz et al., 2017), openness has recently become a recognisable theme in strategy literature (Matzler et al., 2014; Alexy et al., 2018; Birkinshaw, 2017) and implemented by multinational firms that are at the heart of digital transformation, varying from profit-based (i.e. IBM) to non-profit organisations (i.e. Wikimedia and Creative Commons).

The main reason for a need in increased openness is that platforms and similar business strategies involve a great deal of interactions between firms and their internal and external constituents and managing them effectively is key for performance (Boudreau & Jeppesen, 2015; Cennamo & Santalo, 2013; Gawer & Phillips, 2013). We suggest *open strategy* (Whittington et al., 2011; Hautz et al., 2017) as a framework that can assist firms in including and being transparent towards their potentially diverse and widespread sets of internal and external stakeholders. We posit that strategic openness as an organizational response to digital transformation can take two forms: (1) inclusion and (2) transparency. These two strategic responses to digital transformation are detailed below.

Regarding *inclusion*, open strategy can benefit firms not only in terms of integrating a diverse set of needs but also with regards to the pace of strategy (large MNEs are often considered to be particularly slow in implementing changes to their strategies). The breadth of digital means that strategizing today needs to move beyond Chief Strategy Officers, top management teams and boards of directors. The pace of change driven by digitalization requires reflection on the frequency with which firms review

their international business strategies and set new directions for the near future. Annual reviews of strategy can seldom keep pace with the demands introduced by digitalization. Strategic reviews are likely to take place in significantly shorter, more compressed timeframes. In parallel, there are likely to be changes that require real-time refinements or more significant changes associated with strategy. Digitalization is also likely to introduce a plethora of issues stemming from complex competitive environments, invisible consumers and diverse stakeholder environments. Through open strategy practices involving internal and external constituents, firms can address these issues through consulting with each other, identifying areas of improvement and inclusion of stakeholders in strategic planning and implementation. For MNEs that operate in a large number of geographic locations, digitalization has made the implementation of an open strategy possible. We present IBM as an example for inclusion in open strategy.

Case in example: IBM

Whittington (2019) gives examples of open strategy practices from past to present in *Opening Strategy*. A prominent example among multinational firms is IBM which not only introduced inclusion in open strategy but also still implements it. IBM has pioneered the implementation of inclusion in open strategy through WorldJam (or, commonly referred to as ‘jamming sessions’). Initiated in 2001, WorldJam was introduced by IBM’s CEO as an event that would unfold over three consecutive days. Over three days, IBM employees from around the world used the company’s intranet to post over 52,000 contributing comments about a select number of top-priority strategic issues within the company. Since then, IBM has carried out jamming sessions related to its strategic priorities (i.e. InnovationJam, ValueJam etc.) with varying time intervals and increasing participation. These sessions are open to over 150,000 IBM employees located in over 100 countries, business partners, and clients (from nearly 80 companies). One of these jamming sessions, InnovationJam – carried out in 2010 - was recognised as the force behind creating 10 new businesses within IBM, generating nearly \$700 million in revenues in less than five years.

The second aspect of open strategy – *transparency* - can help firms cope with the informational challenges associated with digitalization. The abundance of electronically available data, made possible through digitalization, often fails to translate into useful information in the absence of significant investment into understanding, analysing and interpreting data. Open strategy is not about making information available but rather about engaging with stakeholders in ways that will assist them in evaluating strategic moves. Open strategy enables transparency of strategy through, for instance, corporate disclosures. Targeted communications regarding strategy empower organisational constituents to overcome information asymmetries and hold decision makers responsible for the direction of and spending within the firm, thereby reducing mismanagement of resources and leading,

ultimately, to superior performance (Cowen & Marcel, 2011; Shipilov et al., 2010; Zhang & Wiersema, 2009). While firms attempt to find ways to adapt to digital disruption, transparency through open strategy can lead to improvements in coordination (Mack & Szulanski, 2017), help external audiences make sense of organizational activities (Baptista et al., 2017) and assist organizations in combating negative consequences tied to uncertainty and information asymmetry (Whittington et al., 2016; Yakis-Douglas et al., 2017). The case below highlights the potential consequences of lack of transparency in strategy practices.

Case in example: Uber's 'closed' strategy

In 12 May 2019, Uber filed for an Initial Public Offering (IPO). Uber's listing was undeniably the year's highest profile and all eyes were on the taxi hailing app. However, not only was the market capitalisation nearly 40 per cent lower than estimated, Uber's stock fell 11 per cent by the end of the second day, leaving the company's share price nearly 18 per cent below its initial IPO price. Analysts following the company suggested that the cold reception by investors was due to the scepticism of public investors regarding the ride-hailing company's business model.

Uber's IPO experience, described as 'catastrophic' by analysts, highlights the importance of opening strategy to investors and analysts, especially for organizations implementing what the *Financial Times* referred to as 'untested business models.' Indeed, uniqueness in strategy can be beneficial for competition, but not for market performance. Untested business models such as platforms can be associated with big unknowns for investors and this, in turn, can lead to significant disadvantages for listed companies implementing these novel strategies. For listed companies undertaking unique strategies or organizations dealing with circumstances characterised with information asymmetry, there is empirical evidence that opening strategy to investors, analysts, and specialist media can help share price reactions. For instance, Whittington et al. (2016) analysed share price reactions to over 1500 strategy presentations and found that sharing long-term strategic plans with investors and analysts boosted share prices up by nearly five per cent, especially when the circumstances of the companies were likely to drive shareholders to insecurity regarding the future direction of the firm (for instance, like the appointment of a new CEO).

Similarly, Yakis-Douglas et al. (2017) found that for firms which undertake unknown or novel strategies, the likelihood of successfully completing merger and acquisition deals was higher if they took the time and made the effort to carry out voluntary, public disclosures of their strategy. In Uber's case, the company may be suffering from a discount that markets apply to the unknown or it may be the case that investors are unconvinced about the future cash flow of the company. Either way, Uber would benefit from opening its strategy to investors and analysts through public disclosures and generating convincing narratives of their long-term strategy.

Unlike marketing, strategy does not benefit naturally from the increase of digital data. And yet, changes in the form that data takes have raised expectations from internal and external stakeholders about pursuing similar benefits in strategy. Open strategy helps manage these expectations by increasing visibility in inputs and outputs of strategy such as the choice and details of strategic analyses (Matzler et al., 2014 Tackx & Verdin, 2014) or the way strategy is described in statements and why these statements are constructed the way they are (Tackx & Verdin, 2014). Open strategy can apply to different stages of the strategy process. Table 2 includes some examples of open strategy.

Table 2

CONCLUDING REMARKS

In this chapter, we have shown that while digital technologies can provide instantaneous, low-cost, and customised ways of connecting MNEs to their customers, this increased volume of connectivity implies managing these interactions, making sense of a large volume of data and responding to the demands of customers, now set rather high thanks to enabling technologies. In addition to the increased levels of connectivity and the accompanying demand for improved ways of understanding the data that is generated, digitalization brings a great degree of interdependence and convergence in the form of platform technologies and ecosystems. Firms need to be astutely aware of the types of competition arising from other platforms, the platform itself, its partners and complementors. While fighting off potential competition from these different fronts, in a variety of host locations, firms also need to better understand the ecosystem they operate in and be proactive in shaping it. For a multinational firm, this ecosystem includes home and host market institutional actors who will play a key role in the manner in which the effects of technological changes will unfold and who will be those who most benefit from digitalization.

In order to address these challenges, we proposed that firms can implement *collaborative*, *additive* and *open strategies* to adapt to more distributed and networked forms that involve a plethora of internal and external constituents. We suggested that firms can form alliances, investigate ways of complementing existing stakeholders in the environment such as their competitors, consumers, legislators and regulators, as well as become more engaged in practices that enable inclusion of, and transparency towards, their internal and external stakeholders.

Table 3

In addition, we invite future research to pay attention to a set of key strategic changes/challenges associated with digitalization, which we summarize in Table 3 above. This (non-exhaustive) list includes questions around how MNEs may be able to develop the capabilities and knowledge to successfully coordinate, integrate and align distinctive and potentially conflicting strategies while implementing additive and collaborative strategies. This aligns with the ideas proposed in Chapter 21 on the pressure MNEs face to globally integrate their activities, whilst at the same time, localizing their strategies and practices to the requirements of differing host markets. The ability to orchestrate external stakeholders and keep them satisfied is likely to provide MNEs with much needed regulatory and socio-political legitimacy. Regulators and other key institutional actors may respond differently to changes in digital technologies, which, in turn, will complicate MNEs' efforts to maintain institutional legitimacy in different host markets, and emphasize the benefits of adopting additive strategies upon market entry. Finally, and perhaps most importantly, future research should investigate the required changes in the organizational structure of MNEs for them to get the most out of their adoption of collaborative, additive, and open strategies to face the digital age.

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Table 1 - Incumbents and new entrants

Firm	Year Founded	Employees	Market Cap (2016)
BMW	1916	116,000	\$53B
UBER	2009	7,000	\$60B
MARRIOTT	1927	200,000	\$17B
AIRBNB	2008	5,000	\$21B
WALT DISNEY	1923	185,000	\$165B
FACEBOOK	2004	12,691	\$315B
KODAK	1888	145,000	\$30B
INSTAGRAM	2010	13	\$1B

(acquisition in 2012)

Source: Parker and Van Alstyne (2016)

Table 2 - Examples of open strategy

Examples of open strategy	Dimensions of transparency	Studies
Access to project results by outside constituents	External	Appleyard & Chesbrough (2017)
Widened access to content and information	External	Baptista, Wilson, Galliers & Bynghall (2017)
Making explicit the details underlying idea generation for future strategic direction	External	Dobusch & Muller-Seitz (2015)
Broadcasting (communicating relevant information)	External	Gegenhuber & Dobusch (2017)
Dialogue about strategy through wiki	External	Heracleous, Gößwein, Beaudette (2017)
Discussing strategic matters through shared mailing lists and open skype calls	Internal and External	Luedicke, Husemann, Furnari, Ladstaetter (2017)
Visibility of the strategy formulation process; combining participatory and inclusive practices	Internal	Mack & Szulanski (2017)
Increased visibility in inputs and outputs of strategy	Internal	Matzler, Füller, Hutter, Hautz, & Stieger (2014)
Making the strategy implementation process more explicit	Authors discuss the “inclusion scope” as internal versus external	Matzler, Füller, Koch, Hautz, & Hutter (2014)
Challenging organizational control over strategy process and related communication through social media	External	Plesner & Gulbrandsen (2015)
Sharing the results of open strategy initiative through letters written by top management	Internal	Stieger, Matzler, Chatterjee, Ladstaetter-Fussenegger (2012)
Details of strategic analyses; explanations of why strategy statements are constructed the way they are	Internal	Tackx & Verdin (2014)
Strategy presentations	External	Whittington, Yakis-Douglas, Ahn (2016)
Interim news events during M&A deals	External	Yakis-Douglas, Angwin, Ahn, Meadows (2017)

Source: Ohlson & Yakis-Douglas (2019)

Table 3 - Strategic changes in the context of digitalization

Strategic changes in the context of digitalization	Future research agendas
Digitalization requires additive and collaborative strategies.	<p>How can firms develop the capacity to act as aggregators?</p> <p>How can global or multinational firms develop the capability and knowledge to successfully coordinate, integrate, and align distinctive and potentially conflicting strategies while implementing additive and collaborative strategies?</p>
Digitalization has given rise to platform businesses and other new business models.	<p>How can platform businesses ensure smooth interactions among their users?</p> <p>Are there any ‘best practices’ that strategy scholars can provide in terms of how platform companies can generate value?</p> <p>What defines competitive advantage of these platform business models from an international and/or global view and how is this different to what we already know about MNEs or conglomerates?</p>
Digitalization and the new business models that it gives rise to are associated with geographically dispersed organizational structures and manufacturing systems.	<p>What are the new kinds of organizational structures that are born out of necessity to respond to high dispersion?</p> <p>What unique strategic chances have materialized for organizations based in emerging markets due to expanding value chains?</p> <p>How can new technologies such as cloud computing and distributed work platforms shape global supply chains?</p>
Digitalization brings with it an increased importance of ecosystem participation.	<p>How can organizational leaders successfully orchestrate networks?</p> <p>What new forms of governance do organizations need to adopt in order to manage potential cross-border collaborations and partnerships?</p> <p>Is the success of an enterprise sustainable in the absence of the dominant firm that is at the heart of the network?</p>
Digitalization is associated with changes, challenges, threats and opportunities not only in competitive but also economic, technological, and social environments.	<p>How can regulators, public institutions and judicial bodies respond to the demands associated with these changes?</p>
Digitalization brings about transformations in industry structures.	<p>What role do digital technologies play in the transformation of traditional industries, emergence of new industries, or the convergence of the two?</p> <p>What do changes in industry structures imply for global start-ups and international ventures?</p>
Digitalization brings about non-linear change within organizations’ institutional contexts that is difficult to plan for.	<p>How can organizations undertake smooth transitions within and between different institutional and regulatory contexts?</p>
Digitalization is associated with new and flexible production technologies that transcend beyond borders.	<p>How can organizations build flexibilities associated with responses to changing political regulations or international treaties?</p>

	How does digitalization influence national employment, domestic competition, or country-specific regulations regarding employment and production practices?
Digitalization is associated with potential regulatory voids and loopholes from manufacturing to finance.	<p>How can organizations cope with regulatory voids and loopholes?</p> <p>Does digitalization bring with it the need for new forms of national or regional regulations?</p>

Author biographies

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Basak Yakis-Douglas is a Senior Lecturer (Associate Professor) in International Business Strategy at King's Business School and an Associate Fellow at Saïd Business School, University of Oxford. Her research explores open forms of strategy and transparency in contexts that vary from public institutions to those characterised with digital disruption. Her research has been published in prominent refereed journals such as *Strategic Management Journal* and practitioner journals such as *Harvard Business Review* and *Perspectives* and mentioned in public media such as *Forbes*, *Sky News*, *BBC Radio 4*, *Telegraph*, and *Money Week*.