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# DOCUMENTOS DE OPINIÓN

**30.2018**

# Boards can help navigate technological disruption

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Skeptics are inclined to categorize much of corporate governance as an exercise in compliance and legal niceties that, at best, takes the time of talented board members and managers with little or no value provided to the corporation and, at worst, destroys value by distracting from important work and sidelining important corporate resources better used to survive in a competitive business environment. However, well executed corporate governance by way of the modern and savvy board of directors provides an important opportunity for businesses to better confront the critical existential challenge of the accelerating pace of technological disruption. This challenge must be confronted at many levels, but one of the most important vectors of attack is through the board's capacity to provide an environment that supports and sometimes even pushes or challenges management to more aggressively chart a course of adaptation and change so as to ensure the company has a dynamic strategic posture in response to technological disruption.

The rate and scope of change of disruptive technology is now generally acknowledged as so broad and fast moving that no industry or business model will be left untouched in the coming years. Unaddressed, companies across every industry are more likely than ever to be made irrelevant and to fail outright at the hands of nimble competitors, radically altered supply change dynamics, and rapidly evolving customer behaviors. None of this competitive pressure is particularly new to the industrial landscape. This is evidenced by the clear historical record that nearly every large, dominant, and profitable company is ultimately dethroned and made irrelevant by competitors or other economic and technological forces. Recent work by Professor Richard Foster at Yale University demonstrated that the average lifespan of a company listed on the S&P 500 index of leading US companies has decreased from 67 years in the 1920s to just 15 years as of 2012. Since that time, rates of change and the resulting "creative destruction" of operating enterprises has only accelerated. Indeed, though destructive competitive and technological forces are not a new story, the pace and far reach of those forces means that unresponsive companies (and boards) risk destruction in the short term and not, as was once the case, only in the medium to long term.

This reality has significant implications for boards. Though boards are not always well equipped to confront the complexities that arise when specific new technologies challenge long-standing strategies and business models, most board members have the experience and hard-earned judgment that can be deployed to help management develop better and more responsive strategy once the broad contours of the disruptions can be estimated and understood. Current technologies, including artificial intelligence, are now impacting every corner of business in ways that can present opportunities and challenges through surprising and non-obvious conduits of change. Boards, when enabled to ask the right questions using modern models that take into account the unusual impacts of certain technologies, can play a helpful role in navigating these challenges.

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This is true even when the specific technological trends may be very new because certain patterns of disruption share many common elements.

For example (and counterintuitively), sometimes the effort to reduce production costs without sufficient attention to the experience of the ultimate customer (lately known as "Design Thinking") can produce uncompetitive or ineffective results. This is made worse when emerging competitors are using certain technologies to improve customer satisfaction. In many industries, for example, the focus has historically emphasized reducing production costs so as to improve margins and/or reduce purchase prices to consumers to compete more effectively and gain or keep market share. But new technologies that enhance customer satisfaction and reduce the effort that customers must exert to enjoy the benefits of a product or service potentially turn this exclusive focus on production costs into a strategic misstep. This idea can be further understood through the use of a new model and framework called the Marginal Effective Cost of Consumption (or MECC). MECC is a way to predict how technology will shape industries across the full spectrum of company types including traditional industrial (such as agriculture), modern services (such as banking), and cutting-edge technological (such as information or communication technology).

This particular model helps boards frame technological innovation as a disruptive force that can reduce the "effective costs" of a given product of service that are not related to purchase price. An economist would describe the model as trying to capture the opportunity costs and risks (of dissatisfaction, surprise/loss outcomes, inconsistency) associated with consuming (or using) a given product. With this framing, car manufacturers have realized that producing a very low-cost car with lower operating costs might not beat the effective deployment of a more expensive car that can drive autonomously. The MECC model reveals that the marginal cost that matters most to mid-to-high income consumers is not the price of the car (or gas or insurance) but rather the "cost" of the time spent driving. In the hands of well-informed directors and senior managers, the MECC framework helps outline some of the unexpected contours of disruption by prompting non-traditional (and sometimes breakthrough) strategic thinking that focuses on why certain technologies disrupt traditional production or consumption patterns.

In short, when a board helps management to quantitatively characterize the full impacts of technology on the customer experience (rather than focusing on just the specific technology), it enables clearer strategic thinking, more nimble responses, and a more defensive posture in the face of disruptive technologies such as artificial intelligence, virtual and augmented reality, and robotics.