

# McKinsey Quarterly

2014 Number 3

**Tom Peters**

tomorrow's organization

**Lou Gerstner**

corporate reinvention

**Robert Solow**

prospects for growth

# Management

The next 50 years

**Erik Brynjolfsson**

exponential innovation

**Ratan Tata**

disruption and survival

**Beth Axelrod**

elevating women

50<sup>th</sup> anniversary issue

Copyright © 2014  
McKinsey & Company.  
All rights reserved.

Published since 1964  
by McKinsey & Company,  
55 East 52nd Street,  
New York, New York 10022.

Cover illustration commissioned  
from Eiko Ojala.

*McKinsey Quarterly* meets  
the Forest Stewardship  
Council (FSC) chain-of-  
custody standards.

The paper used in the  
*Quarterly* is certified as being  
produced in an environ-  
mentally responsible, socially  
beneficial, and economi-  
cally viable way.

Printed in the United States  
of America.

This Quarter

Almost a year ago, the *McKinsey Quarterly* editors asked me and several of my predecessors for advice: how should we mark the *Quarterly's* 50th anniversary in 2014? We were unanimous in our view that reaching this landmark was something to celebrate, but that the fitting way to do so, given the *Quarterly's* mission of helping to define the senior-management agenda, was to look forward rather than back. How better to mark 50 years of thought leadership than with a compelling vision of the future of management? This collection reflects our aspiration to do just that, and it's organized around seven themes:

**New management intuition.** My colleagues in the McKinsey Global Institute (MGI) and the firm's Strategy Practice recently joined together to describe the crucial forces—rapid growth in emerging markets, technological disruption, aging populations—that will reshape the management environment in the years ahead. Their key contention is that much of our hard-won intuition is less useful than it has been in the past, which means leaders must overhaul how they set strategy, engage with technology, manage the workforce, and combat organizational inertia. Then, in a series of quick-hit articles based on fresh analysis, McKinsey experts in the automotive, banking, infrastructure, insurance, petrochemical, and pharmaceutical sectors illustrate the impact of those forces on the industries they know best.

**Next frontiers for strategy.** Earlier this year, several of my colleagues in McKinsey's Strategy Practice held a unique gathering with a select group of academic and corporate strategy leaders. Their goal: to explore the future needs of strategists, the extent to which business schools and McKinsey are set to satisfy those needs, and the opportunities for collaboration among these diverse groups. Excerpts of the discussion are included here, as are further reflections by three of the participants, including Fred Gluck, a former managing director of McKinsey and the founder of our Strategy Practice. If there's one simple takeaway, it's that crafting strategy is an inherently messy endeavor. As the world moves faster, practitioners need to pay more attention than ever to mastering strategy's social side, moving from frameworks to insightful synthesis, and matching the capabilities of the organization with its strategic thrusts.

**Artificial intelligence and leadership.** Erik Brynjolfsson and Andrew McAfee's new book, *The Second Machine Age*, has made a major splash this year, with good reason: the world of artificial intelligence and "machine learning" they describe holds enormous implications for most of the world's people—including senior executives. Here, we highlight reflections from Brynjolfsson, McAfee, and others on the impact that "thinking" machines could have on top management's roles. McKinsey's Martin Dewhurst and Paul Willmott, leaders of our practices focused on organizational effectiveness and digitization, respectively, conclude that in such a world, the "softer" side of management may grow in importance because it's the least replicable by algorithms and artificial intelligence.

**The evolution of the organization.** That theme recurs in an interview with McKinsey alumnus Tom Peters, who has made the realization of human potential in organizations, large and small, his life's work. Suzanne Heywood and her McKinsey colleagues Wouter Aghina and Aaron De Smet also look ahead in an essay about the relentless geographic expansion of global organizations, the tech-enabled connectivity that's surging in parallel, and the ways cutting-edge organizational processes can help companies cope. If organizations hope to compete effectively in this new world, they will also need greater numbers of talented women, who are still dramatically underrepresented in top management. Beth Axelrod, a McKinsey alumna and now the head of human resources

for eBay Inc., describes how her company has tried to address this difficult challenge.

**Reflections on corporate longevity.** Another alumnus, legendary IBM CEO Lou Gerstner, joins forces here with former McKinsey managing director Ian Davis, and with Ratan Tata and Marcus Wallenberg, to offer some observations on long-lived companies. Are they desirable in a world where creative destruction is generating extraordinary innovation? If so, under what circumstances? How can leaders boost the odds of survival, and what pitfalls should they avoid? While there are no definitive answers to such questions, the wisdom of these long-time leaders is about as good as it gets for would-be builders of enduring organizations.

**Productivity and the future of growth.** For roughly half of the 50 years the *Quarterly* has been helping to set the senior-management agenda, the McKinsey Global Institute has been informing decision making by business and policy leaders through its unique, management-oriented approach to economic issues. MGI got its start studying labor productivity, and it returns to that topic here, with an article on how productivity advances can offset the impact of aging populations on the size of the workforce in large parts of the world. Nobel laureate Robert Solow, an academic adviser to MGI for much of its history, also weighs in. So do McKinsey's John Dowdy and London School of Economics professor John Van Reenen, who have been studying productivity at the front lines of global companies for more than a decade. The upshot: demography need not be destiny. The actions of managers, executives, and employees will decisively influence the future of growth.

**Capitalism for the long term.** This topic is of great personal interest to me, and the subject of two *Harvard Business Review* articles I've written in recent years. Capitalism has produced extraordinary advances in prosperity, but it has also come under attack since the financial crisis as income inequality has risen and questions have intensified about the efficiency of the markets underpinning it. Solutions involve a complex group of stakeholders, including boards, top management, and investors. Unilever CEO Paul Polman is an outspoken proponent of expanding the corporate mission beyond the creation of shareholder value, a theme he elaborates here. McKinsey alumnus Eric Beinhocker and

his coauthor Nick Hanauer go further, proposing a redefinition of capitalism as the generation of new solutions to human problems.

Although these themes are important, it is impossible to capture in a single collection of articles all that matters about the future of management. Fortunately, thanks to digital distribution, we have not had to try. In February of this year, for example, our website featured a major package on the road ahead for lean manufacturing, and we have more articles in the works. If you're reading this essay on the McKinsey Insights app, you will find some of that content alongside the articles and themes described here. Regardless of how you engage with this body of work, we hope it helps you wrestle with the tough questions—about where the world and your company have been, how they're changing, and what lies ahead—that are so central to effective leadership. ◦



**Dominic Barton**

Global Managing Director,  
McKinsey & Company

---

50  
Q



## Features

**The new management environment****12** Management intuition for the *next 50 years*

Richard Dobbs, Sree Ramaswamy, Elizabeth Stephenson,  
and S. Patrick Viguerie

The collision of technological disruption, rapid emerging-markets growth, and widespread aging is upending long-held assumptions that underpin strategy setting, decision making, and management.

**25** Industry dynamics in an age of inflection

How breaking trends will impact the chemical, life insurance, banking, pharmaceutical, automotive, and infrastructure sectors

**Next frontiers for strategy****38** What strategists need: A meeting of the minds

A unique gathering of strategists from academia, leading companies, and McKinsey debates the state of the discipline, with an emphasis on opportunities for innovation in a changing world.

**52** Synthesis, capabilities, and overlooked insights:  
Next frontiers for strategists

The founder of McKinsey's Strategy Practice, a London Business School professor, and a chief strategist turned professor describe pain points and possibilities for strategists on the leading edge.

**Leading in the era of brilliant machines****66** Artificial intelligence meets the C-suite

Technology is getting smarter, faster. Are you? Experts including the authors of *The Second Machine Age*, Andrew McAfee and Erik Brynjolfsson, examine the impact that "thinking" machines may have on top-management roles.

**76** Manager and machine: The new leadership equation

Martin Dewhurst and Paul Willmott

As artificial intelligence takes hold, what will it take to be an effective executive?

## The evolving organization

### 88 Tom Peters on leading the 21st-century organization

Thirty years after leaving McKinsey, the prolific author returns to discuss tomorrow's management challenges and the keys to organizational change and transformative leadership in any age.

### 97 The past and future of global organizations

Wouter Aghina, Aaron De Smet, and Suzanne Heywood

After more than 50 years of trying, the search for an ideal model of the global organization remains elusive. But intriguing new experiments are under way.

### 107 Realizing the power of talented women

Michelle Angier and Beth Axelrod

In 2010, eBay embarked on a journey to bring more women into its top ranks. It found that commitment, measurement, and culture outweigh a business case and HR policies.

## Thriving over the long haul

### 118 Reflections on corporate longevity

Ian Davis

McKinsey's former managing director explores the phenomenon of long-lived companies and the values and practices they share.

### 123 Lou Gerstner on corporate reinvention and values

The former IBM CEO offers his thoughts on the principles and strategies that sustain a company in the long run.

### 130 The power of enduring companies

In separate commentaries, Ratan Tata and Marcus Wallenberg both argue that creative destruction can be taken too far.



## Productivity and the future of growth

### 136 A productivity perspective on the future of growth

James Manyika, Jaana Remes, and Jonathan Woetzel

If demography is destiny, global growth is headed for a slowdown. History, however, suggests that productivity could ride to the rescue.

### 147 Why management matters for productivity

John Dowdy and John Van Reenen

While government policy will play a key role, the actions of managers and their organizations will decisively influence the realization of global productivity potential in the years ahead.

### 151 Prospects for growth: An interview with Robert Solow

The economist who won a Nobel Prize for advancing our understanding of technology looks at the past and future of productivity-led growth.

## The future of capitalism

### 160 Redefining capitalism

Eric Beinhocker and Nick Hanauer

Despite its ability to generate prosperity, capitalism is under attack. By shaking up our long-held assumptions about how and why the system works, we can improve it.

### 170 Business, society, and the future of capitalism

Paul Polman

Unilever chief executive Paul Polman explains why capitalism must evolve, his company's efforts to change, and how business leaders are critical to solving intractable problems.

### 84 Picture This

IT transformation since the 1960s

### 176 Extra Point

A richer world

# McKinsey Quarterly

## **McKinsey Quarterly editors**

Frank Comes, *Executive editor*  
Tim Dickson, *Executive editor*  
Thomas Fleming, *Executive editor*  
Holly Lawson, *Editorial associate*  
Allen P. Webb, *Editor in chief*

## **Contributing editors**

Michael T. Boruso  
Lang Davison

## **Design and data visualization**

Elliot Cravitz, *Design director*  
Mary Reddy, *Data visualization editor*

## **Editorial operations**

Nicole Adams, *Managing editor*  
Andrew Cha, *Web production administrator*  
Roger Draper, *Copy chief*  
Drew Holzfeind, *Assistant managing editor*  
Heloisa Nogueira, *Editorial assistant*

## **Distribution**

Devin A. Brown, *Social media and syndication*  
Debra Petritsch, *Logistics*

## **McKinsey Quarterly China**

Glenn Leibowitz, *Editor*  
Lin Lin, *Managing editor*  
Rebecca Zhang, *Assistant managing editor*

## **How to change your mailing address**

### **McKinsey clients and other subscribers**

updates@support.mckinsey.com

## **McKinsey alumni**

alumni\_relations@mckinsey.com

## **How to contact the Quarterly**

### **E-mail customer service**

info@support.mckinsey.com

### **To request permission to republish an article**

reprints@mckinsey.com

### **To submit an article proposal**

editorial\_submissions@mckinsey.com

## **Digital offerings**

### **Websites**

mckinsey.com/insights  
mckinsey.com/quarterly  
mckinseychina.com/insights-publications

### **Download the McKinsey Insights app on the Apple App Store and the Google Play store**

<http://bit.ly/McKInsightsApp>  
<http://bit.ly/McKAppGoogle>

### **Download digital editions of McKinsey Quarterly**

On the McKinsey Insights app and from our website: [http://www.mckinsey.com/insights/mckinsey\\_quarterly/digital\\_newsstand](http://www.mckinsey.com/insights/mckinsey_quarterly/digital_newsstand)

### **Audio and video podcasts on iTunes**

audio: <http://bit.ly/mckinseyitunesaudio>  
video: <http://bit.ly/mckinseyitunesvideo>

### **Follow us on Twitter**

@McKQuarterly

### **Connect with us on LinkedIn**

[linkedin.com/company/mckinsey-amp-company](https://www.linkedin.com/company/mckinsey-amp-company)

### **Join the McKinsey Quarterly community on Facebook**

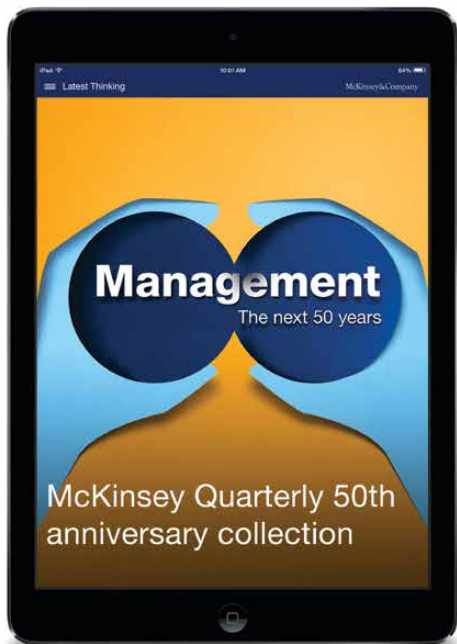
[facebook.com/mckinseyquarterly](https://www.facebook.com/mckinseyquarterly)

### **Watch us on YouTube**

[youtube.com/mckinsey](https://www.youtube.com/mckinsey)

Enjoy digital access to this *Quarterly* anniversary edition on the

# McKinsey Insights app for iPad® and Android®



## Our latest thinking. Anytime. Anywhere.

### Available on iPad

Fully optimized for iOS 7, McKinsey Insights for iPad provides greater personalization, including customizable navigation and a “Recommended for you” feature, as well as additional video and social-media links, including Twitter posts from McKinsey thought leaders.

### Available on Android

McKinsey Insights for Android retains all of the critical elements of the original McKinsey Insights app for iPad, such as access to the latest articles, video, and other content from across our industry and functional practices, the McKinsey Global Institute, and *McKinsey Quarterly*.







The new

# management

environment

How can you lead amid disorienting change? Start by understanding the forces that are colliding—and how they're playing out in a wide range of industries.

**12**  
**Management**  
**intuition for the**  
**next 50 years**

Richard Dobbs, Sree Ramaswamy, Elizabeth Stephenson, and S. Patrick Viguerie

**25**  
**Industry dynamics**  
**in an age of**  
**inflection**

How breaking trends will impact the chemical, life insurance, banking, pharmaceutical, automotive, and infrastructure sectors



# Management intuition for the *next 50 years*

**Richard Dobbs, Sree Ramaswamy, Elizabeth Stephenson,  
and S. Patrick Viguerie**

The collision of technological disruption, rapid emerging-markets growth, and widespread aging is upending long-held assumptions that underpin strategy setting, decision making, and management.

**Intuition forms over time.** When McKinsey began publishing the *Quarterly*, in 1964, a new management environment was just beginning to take shape. On April 7 of that year, IBM announced the System/360 mainframe, a product with breakthrough flexibility and capability. Then on October 10, the opening ceremonies of the Tokyo Olympic Games, the first in history to be telecast via satellite around the planet, underscored Japan's growing economic strength. Finally, on December 31, the last new member of the baby-boom generation was born.

Fifty years later, the forces symbolized by these three disconnected events are almost unrecognizable. Technology and connectivity have disrupted industries and transformed the lives of billions. The world's economic center of gravity has continued shifting from West to East, with China taking center stage as a growth story. The baby boomers have begun retiring, and we now talk of a demographic drag, not a dividend, in much of the developed world and China.

We stand today on the precipice of much bigger shifts in each of these areas, with extraordinary implications for global leaders. In the years ahead, acceleration in the scope, scale, and economic impact of technology will usher in a new age of artificial intelligence, consumer gadgetry, instant communication, and boundless information while shaking up business in unimaginable ways. At the same time, the shifting locus of economic activity and dynamism, to emerging

markets and to cities within those markets, will give rise to a new class of global competitors. Growth in emerging markets will occur in tandem with the rapid aging of the world's population—first in the West and later in the emerging markets themselves—that in turn will create a massive set of economic strains.

Any one of these shifts, on its own, would be among the largest economic forces the global economy has ever seen. As they collide, they will produce change so significant that much of the management intuition that has served us in the past will become irrelevant. The formative experiences for many of today's senior executives came as these forces were starting to gain steam. The world ahead will be less benign, with more discontinuity and volatility and with long-term charts no longer looking like smooth upward curves, long-held assumptions giving way, and seemingly powerful business models becoming upended. In this article, which brings together years of research by the McKinsey Global Institute (MGI) and McKinsey's Strategy Practice,<sup>1</sup> we strive to paint a picture of the road ahead, how it differs from the one we've been on, and what those differences mean for senior executives as they chart a path for the years to come.

## **Forces at work**

In an article of this length, we can only scratch the surface of the massive forces at work.<sup>2</sup> Nonetheless, even a brief look at three of the most important factors—emerging-markets growth, disruptive technology, and aging populations—is a useful reminder of the magnitude of change under way.

### **Dynamism in emerging markets**

Emerging markets are going through the simultaneous industrial and urban revolutions that began in the 18th century in England and in the 19th century in the rest of today's developed world. In 2009, for the first time in more than 200 years, emerging markets contributed

<sup>1</sup> For more, see Peter Bisson, Elizabeth Stephenson, and S. Patrick Viguierie, "Global forces: An introduction," *McKinsey Quarterly*, June 2010; and Yuval Atsmon, Peter Child, Richard Dobbs, and Laxman Narasimhan, "Winning the \$30 trillion decathlon: Going for gold in emerging markets," *McKinsey Quarterly*, August 2012, both available on [mckinsey.com](http://mckinsey.com).

<sup>2</sup> Next year, the McKinsey Global Institute will publish *Trend Break*, a book-length treatment of the issues in this article and related shifts under way in the global economy.

more to global economic growth than developed ones did. By 2025, emerging markets will have been the world's prime growth engine for more than 15 years, China will be home to more large companies than either the United States or Europe, and more than 45 percent of the companies on Fortune's Global 500 list of major international players will hail from emerging markets—versus just 5 percent in the year 2000.

The new wave of emerging-market companies now sweeping across the world economy is not the first. In the 1970s and 1980s, many US and European incumbents were caught unaware by the swift rise of Japanese companies that set a high bar for productivity and innovation. More recently, South Korean companies such as Hyundai and Samsung have shaken up the leading ranks of high-value-added industries from automobiles to personal electronics. The difference today is that new competitors are coming from many countries across the world and in numbers that far outpace those of past decades. This new wave will be far tougher on some established multinationals. The shift in the weight of the global economy toward emerging markets, and the emergence of nearly two billion consumers who for the first time will have incomes sufficient to support significant discretionary spending, should create a new breed of powerful companies whose global expansion will take place on the back of strong positions in their home markets.

Within those markets, the locus of economic activity is also shifting, particularly in China (Exhibit 1). The global urban population is growing by 65 million a year, and nearly half of global GDP growth between 2010 and 2025 will come from 440 cities in emerging markets. Ninety-five percent of them are small and medium-sized cities that many executives haven't heard of and couldn't point to on a map: not Mumbai, Dubai, or Shanghai, of course, but Tianjin (China) and Porto Alegre (Brazil) and Kumasi (Ghana), among many others. Hsinchu, in northern Taiwan, is already the fourth-largest advanced-electronics and high-tech hub in the China region. In Brazil, the state of Santa Catarina, halfway between São Paulo and the Uruguayan border, has become a regional hub for electronics and vehicle manufacturing, hosting billion-dollar companies such as WEG Indústrias.

Exhibit 1

**Previously unknown cities are becoming significant economic players in many emerging markets, particularly China.**

**Global top 200 cities in China, in terms of projected 2025 GDP**

- New entrants into global top 200
- Already in 2010 global top 200

**By 2025, will exceed nominal 2010 GDP of ...**

- Los Angeles (\$731 billion)
- Singapore (\$222 billion)
- Bogotá (\$84 billion)



Source: McKinsey Global Institute analysis

**Technology and connectivity**

From the mechanization of the Industrial Revolution to the computer-driven revolution that we are living through now, technological innovation has always underpinned economic change and disrupted the way we do things. But today is different—because we are in the “second half of the chessboard.” The phrase comes from the story told by Ray Kurzweil, futurist and director of engineering at Google, about the inventor of chess and the Chinese emperor. The inventor asked to be paid in rice: a single grain on the first square, two on the second square, four on the third, and so on. For the first half of the chessboard, the inventor was given spoons of rice, then bowls, and then barrels. The situation changed dramatically from there. According to one version of the story, the cost of the second half of

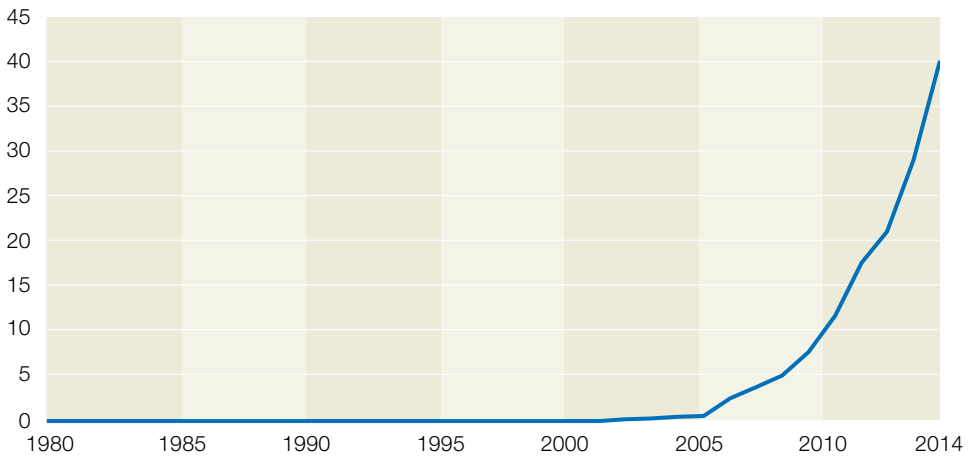
the chessboard bankrupted the emperor as the continued doublings ultimately required 18 million-trillion grains of rice, enough to cover twice the surface area of the Earth. Similarly, the continuation of Moore’s law means that the next 18 months or so will bring a doubling of all the advances in computational power and speed we’ve experienced from the birth of the transistor until today. And then it will happen again. We’re accustomed to seeing Moore’s law plotted on a logarithmic scale, which makes all this doubling look smooth. But we don’t buy computers logarithmically. As power increases, prices decrease, devices proliferate, and IT penetration deepens, aggregate computing capacity surges at an eye-popping rate: we estimate the world added roughly 5 exaflops of computing capacity in 2008 (at a cost of about \$800 billion), more than 20 in 2012 (to the tune of just under \$1 trillion), and is headed for roughly 40 this year (Exhibit 2).

These extraordinary advances in capacity, power, and speed are fueling the rise of artificial intelligence, reshaping global

Exhibit 2

**Businesses and consumers will add roughly 40 exaflops of computing capacity in 2014, up from 5 in 2008 and less than 1 in 2005.**

**Annual additions to global business and consumer computing power, exaflops<sup>1</sup>**



<sup>1</sup> An exaflop is 1 quintillion (10 to the 18th power) floating-point operations per second.  
 Source: William D. Nordhaus, “Two centuries of progress in computing,” *Journal of Economic History*, 2007, Volume 67, Number 1, pp. 128–59; IDC; US Bureau of Economic Analysis; McKinsey analysis



manufacturing,<sup>3</sup> and turbocharging advances in connectivity. Global flows of data, finance, talent, and trade are poised to triple in the decade ahead, from levels that already represent a massive leap forward.<sup>4</sup> For example, less than 3 percent of the world's population had a mobile phone and less than 1 percent was on the Internet 20 years ago. Today, more than two-thirds of the world's population has access to a mobile phone, and one-third of it can communicate on the Internet. As information flows continue to grow, and new waves of disruptive technology emerge, the old mind-set that technology is primarily a tool for cutting costs and boosting productivity will be replaced. Our new intuition must recognize that businesses can start and gain scale with stunning speed while using little capital, that value is shifting between sectors, that entrepreneurs and start-ups often have new advantages over large established businesses, that the life cycle of companies is shortening, and that decision making has never had to be so rapid fire.<sup>5</sup>

### Aging populations

Simultaneously, fertility is falling and the world's population is graying dramatically (Exhibit 3). Aging has been evident in developed economies for some time, with Japan and Russia seeing their populations decline. But the demographic deficit is now spreading to China and will then sweep across Latin America. For the first time in human history, the planet's population could plateau in most of the world and shrink in countries such as South Korea, Italy, and Germany.

Thirty years ago, only a few countries had fertility rates considerably below those needed to replace each generation (approximately 2.1 children per woman), comprising only a small share of the global population. But by 2013, about 60 percent of all people lived in such countries.<sup>6</sup> This is a sea change. Germany's Federal Statistical Office expects that by 2060 the country's population will shrink by up to

<sup>3</sup> See Katy George, Sree Ramaswamy, and Lou Rassey, "Next-shoring: A CEO's guide," *McKinsey Quarterly*, January 2014, mckinsey.com.

<sup>4</sup> For more, see *Global flows in a digital age: How trade, finance, people, and data connect the world economy*, McKinsey Global Institute, April 2014, on mckinsey.com.

<sup>5</sup> See Martin Hirt and Paul Willmott, "Strategic principles for competing in the digital age," *McKinsey Quarterly*, May 2014, mckinsey.com.

<sup>6</sup> Michael S. Teitelbaum and Jay Winter, "Low fertility rates—Just a phase?," *YaleGlobal Online*, July 9, 2013, yaleglobal.yale.edu.

one-fifth and that the number of people of working age will fall to 36 million (from roughly 50 million in 2009). Thanks to rigorous enforcement of the one-child policy, the size of China’s core, working-age population probably peaked in 2012. In Thailand, the fertility rate has fallen from 6.1 in 1960 to 1.4 in 2012. These trends have profound consequences. Without a boost in productivity, a smaller workforce will mean lower consumption and constrain the rate of economic growth. (For more on these dynamics, see “A productivity perspective on the future of growth,” on page 136.)

### The great collision

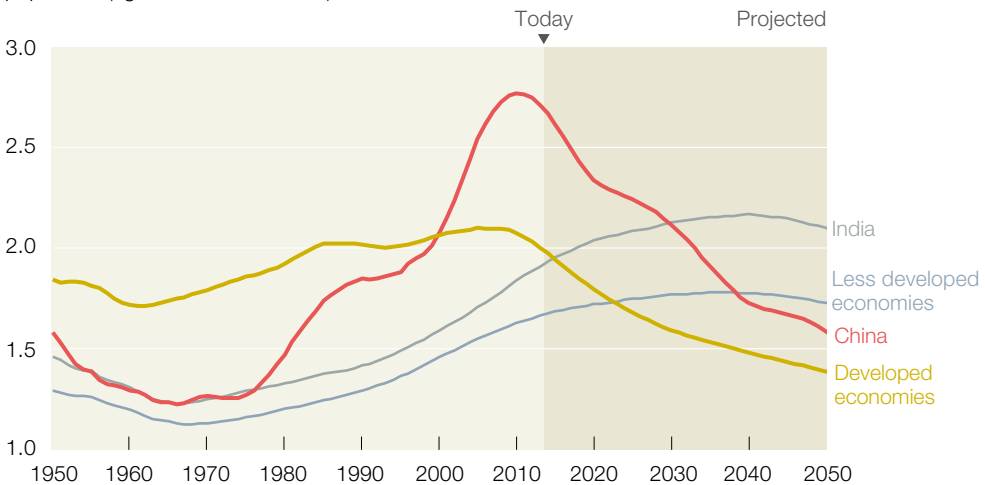
Declaring an inflection point, particularly when the underlying forces at work have been operating for some time, is a major claim. What justifies it, we believe, isn’t just the growing pace and scale of these forces, but the ways in which they are coming together to change the dynamics we are accustomed to experiencing on both the demand and the supply side of the global economy.

Exhibit 3

#### Aging populations in much of the developed world and China will create long-term growth headwinds.

##### Number of workers per dependent,

ratio of working-age population (aged 15–64) to dependent population (aged 0–14 and over 65)



Source: United Nations population statistics; McKinsey analysis

On the demand side, since the 1990s we've been enjoying a virtuous cycle of export-led emerging-market growth that created jobs, raised incomes, and generated enormous opportunities in those markets, while also reducing prices for goods in developed ones and enabling faster consumption growth in the West. For example, in the United States, real prices for nonpetroleum imports fell more than 30 percent between the early 1990s and today. As emerging markets get richer, it will be harder for them to play the low-cost-labor arbitrage game, making it critical for local consumers to emerge as growth drivers in place of ever-rising exports to developed markets. It will also be harder for Western consumers to continue enjoying *de facto* gains in living standards resulting from ever-falling import prices. As all this happens, trade between emerging markets, already on the rise, should continue growing in importance.

On the supply side, we've been operating for many years on a two-track productivity model, with developed markets continually pushing forward and emerging markets playing catch-up. Emerging markets are still less productive than developed ones, and those with capital-intensive catch-up models will find them difficult to maintain as their economies become more consumer and service oriented. As anyone who has seen row after row of empty brand-new high-rise apartments in overbuilt Chinese fringe cities can attest, the transition from investment-led growth is unlikely to be smooth, even for countries like China with explicit policies aimed at shifting to more consumer- and service-oriented economies. On the other hand, digitization and mobile technologies should provide a platform for product and service innovation, as we are already seeing in Africa, where 15 percent of transactions are carried out via mobile banking (versus 5 percent in developed markets), and in China, where Alibaba has proved that consumer online markets can take on unprecedented scope and scale.

How these interdependencies in supply and demand will play out is far from clear. We've modeled optimistic and pessimistic global GDP scenarios for a decade from now. They diverge by more than \$17 trillion,<sup>7</sup> a spread approaching the size of current US GDP. Variables at play include the pace and extent of the shift to emerging-market consumers as the critical global growth engine, the adjustment of developed markets to a world where they can no longer draft

<sup>7</sup> In 2013 dollars.

off the combined benefits of low-cost imports and low-cost capital enabled by emerging markets, and the emergence of new productivity solutions as developed and emerging markets alike try to advance the frontier in response to their demographic and other growth challenges.

It's likely that different regions, countries, and individuals will have different fates, depending on the strength and flexibility of their institutions and policies. Indeed, we're already seeing this in portions of Southern and Eastern Europe that remain mired in recession and debt and in the United States, where some local governments are on the verge of failure as their economic bases can't keep up with the needs of their aging populations. Similarly, as aging boosts the importance of productivity-led growth in many emerging markets, progress will be uneven because many known productivity solutions depend on effective regulatory regimes and market mechanisms that are far from standard in emerging markets.

Given the multiple stresses that are occurring at once in the global economy, we should not expect uniform success—but neither should we become too pessimistic. The massive pressures created by the dynamism of emerging markets, technological change, and rapid aging will help stimulate the next era of innovation and growth in a variety of areas. They will include the more productive natural-resource use that will be necessary to support the world's growing global consuming class, the more efficient use of capital, and the more creative management of talent.

## **Management implications**

Emerging on the winning side in this increasingly volatile world will depend on how fully leaders recognize the magnitude—and the permanence—of the coming changes and how quickly they alter long-established intuitions.

### **Setting strategic direction**

McKinsey research suggests that about two-thirds of a company's growth is determined by the momentum—the underlying growth, inflation, income, and spending power—of the markets where it competes. Harnessing market momentum in the years ahead will

require covering more geographies, more industries, and more types of competitors, prospective partners, and value-chain participants—as well as more governmental and nongovernmental stakeholders. Rather than thinking of a primary national market broken into three to five value segments, tomorrow’s strategist must comprehend a world where offerings may vary by city within a country, as well as by distribution channel and demographic segment, with aging and income inequality necessitating increasingly diverse approaches. All this will place a premium on agility: both to “zoom out” in the development of a coherent global approach and to “zoom in” on extremely granular product or market segments.

The importance of anticipating and reacting aggressively to discontinuities also is rising dramatically in our increasingly volatile world. That means monitoring trends, engaging in regular scenario-planning exercises, war-gaming the effects of potential disruptions—and responding rapidly when competitive conditions shift. For example, few of the traditional mobile-phone manufacturers protected themselves against Apple’s disruption via the iPhone. Samsung, however, managed to turn that revolution into an opportunity to rise dramatically in the mobile-phone league tables.

Finally, the strategist increasingly needs to think in multiple time frames. These include a company’s immediate tactics and ongoing improvements to counteract new competitive threats, market selection and emphasis given current capabilities and competitive positions, investments to enhance capabilities within the current strategic construct and to enable entry into adjacent markets, and, for the longest term, the selection and pursuit of new, long-lived capabilities. The latter point is worthy of emphasis—advances in technology and the interconnectedness of geographic and product markets make the half-life of “normal” competitive advantages very short indeed. This puts a premium on the selection and development of difficult-to-replicate capabilities. (For more, see “Making capabilities strategic,” on page 59.)

### **Building new management muscle**

It will be increasingly difficult for senior leaders to establish or implement effective strategies unless they remake themselves in the image of the technologically advanced, demographically complex, geographically diverse world in which we will all be operating.



**Everyone a technologist.** Technology is no longer simply a budget line or operational issue—it is an enabler of virtually every strategy. Executives need to think about how specific technologies are likely to affect every part of the business and be completely fluent about how to use data and technology. There is a strong argument for having a chief digital officer who oversees technology as a strategic issue, as well as a chief information officer, who has tended to be in charge of the nuts and bolts of the technology the company uses. Technological opportunities abound, but so do threats, including cybersecurity risks, which will become the concern of a broader group of executives as digitization touches every aspect of corporate life.

**Managing the new workforce.** Technology is increasingly supplanting workers, and the pace of IT innovation is transforming what constitutes work as well as how, when, and where we work. MGI research suggests that as many as 140 million full-time knowledge workers could be displaced globally by smart machines—at the same time aging workforces are becoming commonplace and labor shortages are emerging for pockets of technical expertise. New priorities in this environment include ensuring that companies are using machine intelligence in innovative ways to change and reinvent work, building the next-generation skills they need to drive the future’s tech-led business models, and upskilling and retraining workers whose day-to-day activities are amenable to automation but whose institutional knowledge is valuable. (For more on artificial intelligence, see “Manager and machine: The new leadership equation,” on page 76.)

For workers with more replicable skills, there’s a danger of doing less well than their parents—which will create social stresses and challenge managers trying to energize the entire workforce, including employees dissatisfied about falling behind. Developed and emerging markets will experience different flavors of these issues, making the people side of the equation particularly challenging for geographically dispersed organizations. (For more, see “The past and future of global organizations,” on page 97.)

**Rethinking resources.** The convergence of IT and materials science is spawning a surge in innovation that will dramatically change when, where, and how we use natural resources. In their new book *Resource Revolution*, our colleague Matt Rogers and his coauthor,

McKinsey alumnus Stefan Heck, argue that combining information technology, nanoscale materials science, and biology with industrial technology will yield substantial resource-productivity increases. Taken together, those improvements represent an extraordinary wealth-creation opportunity and will be the key to achieving high-productivity economic growth in the developing world to support billions of new members of the global middle class. Capturing these resource-technology opportunities will require new management approaches, such as substitution (replacing costly, clunky, or scarce materials with less scarce, cheaper, and higher-performing ones), optimization (embedding software in resource-intensive industries to improve, dramatically, how companies produce and use scarce resources), and virtualization (moving processes out of the physical world).<sup>8</sup>

### Breaking inertia

Change is hard. Social scientists and behavioral economists find that we human beings are biased toward the status quo and resist changing our assumptions and approaches even in the face of the evidence. In 1988, William Samuelson and Richard Zeckhauser, economists at Boston University and Harvard, respectively, highlighted a case in which the West German government needed to relocate a small town to mine the lignite that lay beneath. The authorities suggested many options for planning the new town, but its citizens chose a plan that looked “extraordinarily like the serpentine layout of the old town—a layout that had evolved over centuries without (conscious) rhyme or reason.”<sup>9</sup>

Businesses suffer from a surprising degree of inertia in their decisions about how to back up strategies with hard cash to make them come to fruition. Research by our colleagues showed that between 1990 and 2010, US companies almost always allocated resources on the basis of past, rather than future, opportunities. Even during the global recession of 2009, this passive behavior persisted. Yet the most active companies in resource allocation achieved an average of 30 percent higher total returns to shareholders annually compared with the least

<sup>8</sup> For more, see Stefan Heck and Matt Rogers, “Are you ready for the resource revolution?,” *McKinsey Quarterly*, March 2014, [mckinsey.com](http://mckinsey.com).

<sup>9</sup> See William Samuelson and Richard Zeckhauser, “Status quo bias in decision making,” *Journal of Risk and Uncertainty*, 1988, Volume 1, Issue 1.

active.<sup>10</sup> The period ahead should raise the rewards for moving with agility and speed as digitization blurs boundaries between industries and competition in emerging markets heats up.

It would be easy, though, for organizations and leaders to become frozen by the magnitude of the changes under way or to tackle them on the basis of outdated intuition. Taking the long view may help. In 1930, the great British economist John Maynard Keynes boldly predicted that 100 years on, the standard of living in progressive countries would be four to eight times higher. As it turned out, the upper end of his optimistic expectation turned out to be closer to the truth. Those who understand the depth, breadth, and radical nature of the change *and opportunity* that's on the way will be best able to reset their intuitions accordingly, shape this new world, and thrive. ○

<sup>10</sup> See Stephen Hall, Dan Lovallo, and Reinier Musters, "How to put your money where your strategy is," *McKinsey Quarterly*, March 2012; and Mladen Fruk, Stephen Hall, and Devesh Mittal, "Never let a good crisis go to waste," *McKinsey Quarterly*, October 2013, both available on mckinsey.com.

*The authors would like to acknowledge the contributions of Ezra Greenberg, Chip Hughes, James Manyika, Catherine Tilley, and Jonathan Woetzel to this article.*

**Richard Dobbs** is a director of the McKinsey Global Institute, where **Sree Ramaswamy** is a senior fellow; **Elizabeth Stephenson** is a principal in McKinsey's Southern California office; and **Patrick Viguerie** is a director in the Atlanta office.



# Industry dynamics in an age of inflection

## 26 **Climbing the curve quickly in petrochemicals**

Consumption takes off fast in emerging markets. One reason? Plastics.

## 30 **Confronting change fatigue in the pharmaceutical industry**

A decade of restructuring and transformation efforts has taken a toll on organizational health.

## 27 **An open road for life insurance**

Purchases of life insurance surge at a relatively high income threshold.

## 32 **Building cars with less capital**

New research suggests that Western players, especially those in Europe, have something to learn from their counterparts in Asia.

## 28 **Viewing banking opportunities through different lenses**

Surging numbers of middle-class borrowers in emerging markets are a big factor in banking's growth, but there's also plenty of potential in the upper reaches.

## 34 **A dose of innovation to ease infrastructure strains?**

A huge spending tab looms. The financial pressures will prompt nations to think creatively about their needs.

## Chemicals

# Climbing the curve quickly in petrochemicals

Scott Andre, Vanessa Chan, and Ezra Greenberg

Consumption takes off fast in emerging markets. One reason? Plastics.

In emerging markets, rapid growth often begins when consumer incomes reach a threshold that can vary considerably across different products and industries. Petrochemical sales rise most rapidly as GDP per capita approaches \$10,000. This relatively low level reflects the fact that less expensive consumer goods and the early stages of industrialization significantly raise levels of plastics

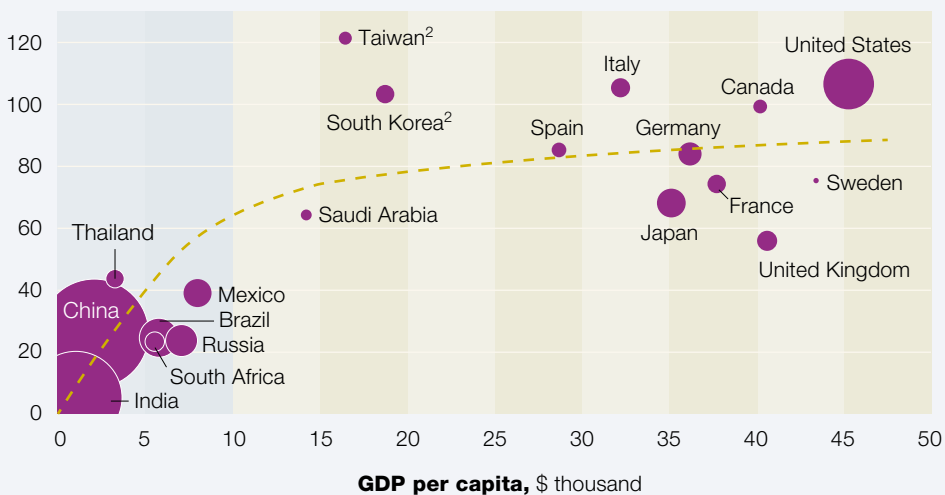
use (and thus petrochemical sales) as markets start developing. Over the next decade, 60 percent of petrochemical demand will flow from emerging markets, including China. ○

**Scott Andre** is a master expert in McKinsey's Houston office, **Vanessa Chan** is a principal in the Philadelphia office, and **Ezra Greenberg** is a senior expert in the Stamford office.

**The growth potential of petrochemicals reflects an increase in per capita consumption—especially of plastics—in developing economies.**

**Consumption of plastics,<sup>1</sup> in 2012, kg per capita**

Size of population, million  
○ 50  
○ 300



<sup>1</sup> Includes expanded polystyrene, high-density polyethylene, low-density polyethylene, linear low-density polyethylene, polyethylene terephthalate resins, polypropylene, polystyrene, and polyvinyl chloride.

<sup>2</sup> South Korea and Taiwan are net exporters, which explains their high consumption at lower GDP per capita.


Life insurance

# An open road for life insurance

**Vivek Agrawal, Guillaume de Gantès, and Pete Walker**

Purchases of life insurance surge at a relatively high income threshold.

The inflection point for market takeoff in life insurance is relatively high: sales rarely surge until GDP per capita reaches about \$30,000. Higher income levels, particularly when reinforced by cultural preferences for locking in financial security, correlate strongly with insurance-market penetration. As emerging markets get richer over the next decade, they will fuel more than

80 percent of life insurance companies' global growth. 

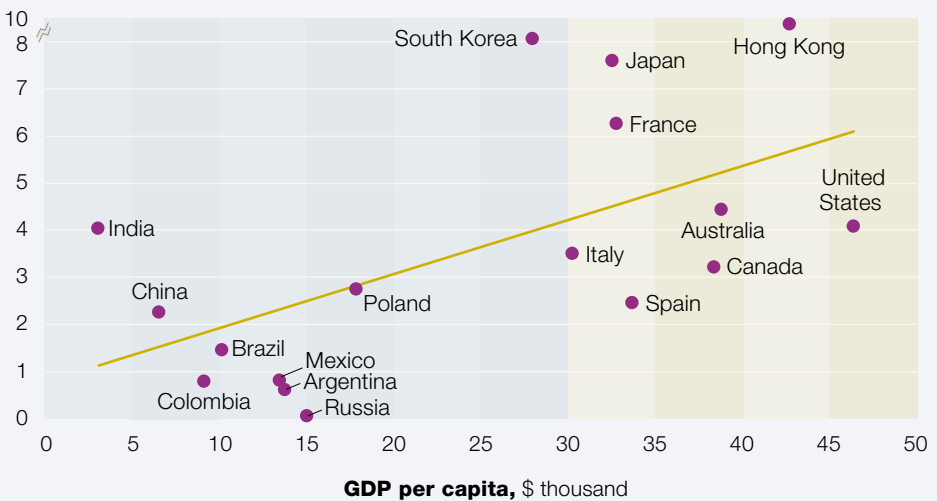
**Vivek Agrawal** is a director in McKinsey's Tokyo office, **Guillaume de Gantès** is a principal in the Jakarta office, and **Pete Walker** is a director in the New York office.

For more on our research, see "Life journey: Winning in the life-insurance market," March 2014, on [mckinsey.com](http://mckinsey.com).



**While far from deterministic, GDP per capita above \$30,000 seems to correlate with higher life-insurance penetration.**

**Life-insurance penetration,**  
gross written premiums as share of GDP, %



Source: Swiss Re; CIA World Factbook; McKinsey analysis



## Banking

# Viewing banking opportunities through different lenses

**Jay Datesh, Miklos Dietz, and Attila Kincses**

Surging numbers of middle-class borrowers in emerging markets are a big factor in banking's growth, but there's also plenty of potential in the upper reaches.

Despite the potential in emerging markets, they are by no means the only lucrative growth opportunity. As our analysis of global banking's revenue pools shows, zooming in on finer-grained segments and product areas can reveal lucrative pockets in developed markets as well (exhibit). To be sure, between now and 2020, about 70 percent of the growth in the mass-market customer segment should come from emerging markets, including currently unbanked populations. But more than 60 percent of the growth in the affluent and high-net-worth segments (households with more than \$100,000 in financial assets) will remain in developed markets.

And the picture gets richer with a closer look. In the United States, for example, 85 percent of the revenue generated by the upper segment comes principally from wealth management and investments, and only 15 percent from lending. By contrast, in the mass segment,

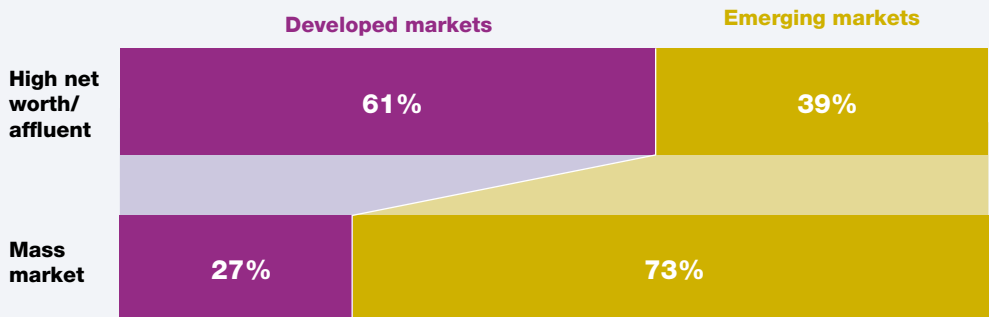
lending accounts for 60 percent of revenues, with the remainder flowing largely from transactions and from credit- and debit-card payments.

In all markets, a sharper geographical lens will be needed. Consider that in China, which unlike many emerging markets has swelling opportunities at the top of the market, 50 percent of growth in the high-net-worth and affluent segments is expected to come from the top 25 cities by GDP. Collectively, they represent 10 percent of the two segments' global growth potential. In the United States, one-third of all growth in those segments is expected to come from just three large states: California, New York, and Texas. The amount attributable to the growth in those states will be larger than all of India's retail banking revenue in 2013. ○

**Jay Datesh** and **Attila Kincses** are consultants in McKinsey's Budapest office, where **Miklos Dietz** is a director.

**Between now and 2020, growth in mass-market revenues will come largely from emerging economies but developed economies will account for much of the growth in affluent segments.**

**Absolute retail-banking revenue growth (after risk), 2013–20, % of total**



**United States**

~**50%** of developed high-net-worth/affluent markets, where ...

...**33%** of growth will come from 3 states: **California, New York, and Texas**

**China**

**55%** of emerging high-net-worth/affluent markets, where ...

...**50%** of growth will come from China's **top 25 cities by GDP**

China also represents **25%** of the emerging mass market

Source: Analysis of data provided by McKinsey Panorama (a McKinsey Solution)

## Pharmaceuticals

# Confronting change fatigue in the pharmaceutical industry

**Gayane Gyurjyan, Ioana Parsons, and Shail Thaker**

A decade of restructuring and transformation efforts has taken a toll on organizational health.

What are the organizational implications of a rapidly changing external environment? For clues, consider the pharmaceutical industry, which has been under stress for several years. Increased governmental pricing scrutiny has been one source; another has been the expiration of lucrative product patents. At the same time, digital and mobile technologies have altered relationships with physicians and patients, and the need to tap into new markets has increased organizational complexity.

The industry has responded with restructuring, acquisitions to fill product pipelines, and cost-containment efforts. But our research suggests that change fatigue has set in. We surveyed nearly 20,000 pharmaceutical employees at 22 companies between 2006 and 2013 and compared their responses with those of nonpharmaceutical workers on the dimensions measured by McKinsey's Organizational Health Index (OHI). According to this analysis, the health of pharmaceutical companies deteriorated after 2011, and by 2013 the industry ranked below the average of other global ones on most dimensions (exhibit).<sup>1</sup>

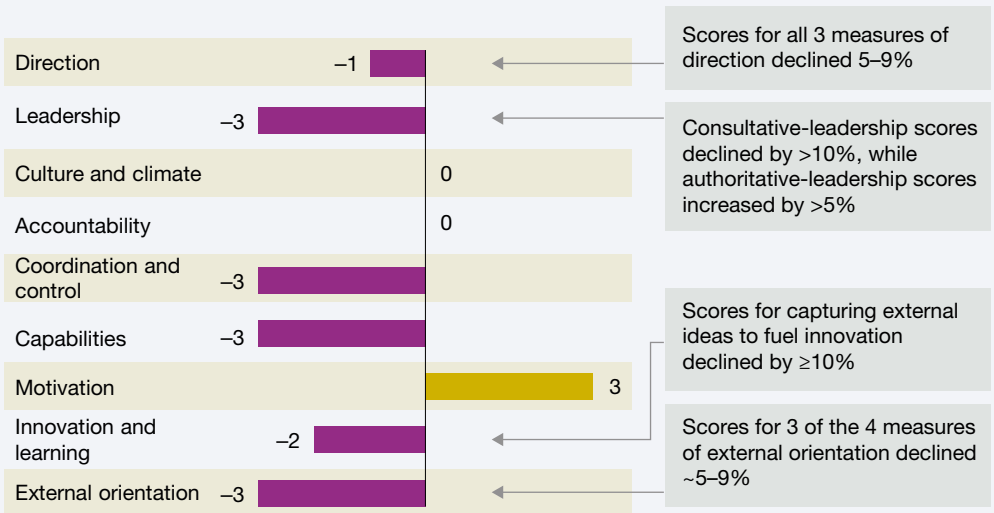
Our data suggest that many pharmaceutical workers crave clearer direction as they try to cope with rapid change. Another finding is that executives may be overemphasizing near-term goals through leadership styles that are increasingly authoritative and less consultative. The distraction of restructuring also seems to be hurting the ability of pharmaceutical companies to absorb new external ideas, as well as their relationships with key stakeholders, such as governments, patients, and physicians. If the pharmaceutical sector is a canary in the coal mine, many industries may need an organizational reset during the years ahead. ○

<sup>1</sup> The Organizational Health Index database used in our analysis comprises 22 industries and measures 37 management practices that contribute to nine organizational outcomes. No pharma company (when scores were averaged) was in the top quartile and, significantly, industry health diminished across six of the nine measures.

**Gayane Gyurjyan** is a consultant in McKinsey's London office, where **Ioana Parsons** is an associate principal and **Shail Thaker** is a principal.

**Measures of organizational health in the pharmaceutical industry have worsened since 2011 – and pharma ranks below the average of other global industries on most dimensions.**

**Difference in score between pharma sample and global average**



Source: McKinsey’s Organizational Health Index database comprising 22 industries, 700 organizations, and 1.5 million data points; 2006-13 survey of ~20,000 pharmaceutical employees



For the complete findings, see “A health check for Pharma: Overcoming change fatigue in the pharmaceutical industry,” on [mckinsey.com](http://mckinsey.com).

## Automotive

# Building cars with less capital

**Andreas Behrendt, Malte Marwede, and Raymond Wittmann**

New research suggests that Western players, especially those in Europe, have something to learn from their counterparts in Asia.

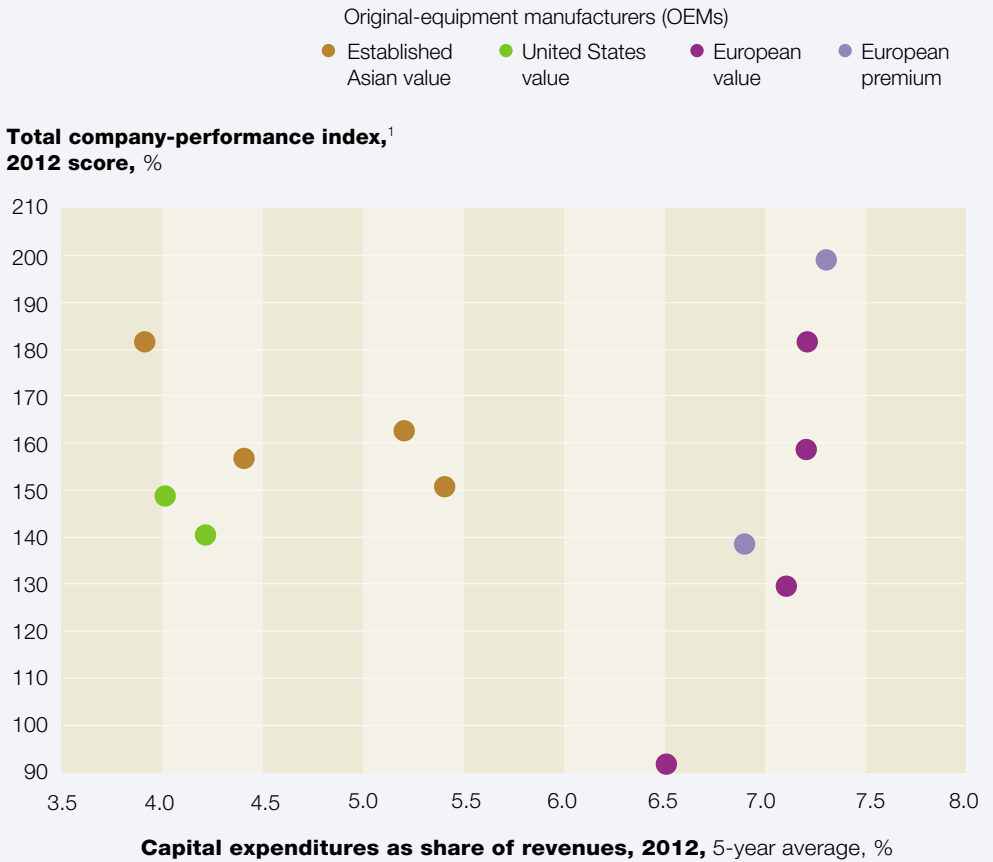
As the world's economic center of gravity shifts toward emerging markets, it will become increasingly common for Western companies to look east in search of innovative business approaches. A case in point is the global auto industry, where our research suggests that several Asian players are employing an intriguingly successful capital-light model: their average ratio of capital expenditures to revenues was 30 percent lower than that of their counterparts in Europe during the five-year period that ended in 2012 (exhibit). The European players' higher ratios left them less agile and more at the mercy of cash constraints that coincide with economic shocks—an important concern for all companies in cyclical industries.

This isn't just a case of successful European luxury players relying on more capital-intensive business models: value-oriented European OEMs also are less capital efficient than some of

their North American counterparts. Reasons for the advantage of Asian players include outsourcing more of their operations and maintaining simpler product portfolios. If value-oriented European OEMs followed suit, our analysis suggests, they could reduce their capital expenditures by roughly €30 billion over the next five years. ○

**Andreas Behrendt** is an associate principal in McKinsey's Cologne office, **Malte Marwede** is a consultant in the Hamburg office, and **Raymond Wittmann** is a principal in the Munich office.

**Some carmakers achieve superior performance despite low capital expenditures.**



<sup>1</sup> Based on total labor productivity and total capital productivity.  
Source: McKinsey analysis



## Infrastructure

# A dose of innovation to ease infrastructure strains?

**Nicklas Garemo, Jan Mischke, and Jonathan Woetzel**

A huge spending tab looms. The financial pressures will prompt nations to think creatively about their needs.

As the global economy undergoes a series of transitions and strains in the years ahead, innovation will emerge in some unexpected places. Consider the case of infrastructure. Our analysis of historical and projected spending allows us to look directly at looming stresses in the form of dual financial pressures: the total spending needed to support the massive scale of maintenance, renewal, and new investment, as well as the degree of change this spending represents relative to GDP (exhibit).<sup>1</sup>

The United States, which has long neglected its infrastructure and faces a massive absolute and relative tab, is one place where pressures for innovation are building. Latin America and India, which have underinvested in the type of cutting-edge infrastructure required to support projected growth, will also need to think creatively. Both have to step up financing by more than two percentage points relative to GDP and to increase their total spending sharply (by factors of four and six, respectively). These challenged countries will need to dream up new ways to curb spending, boost financing, and counteract bottlenecks in planning and execution.

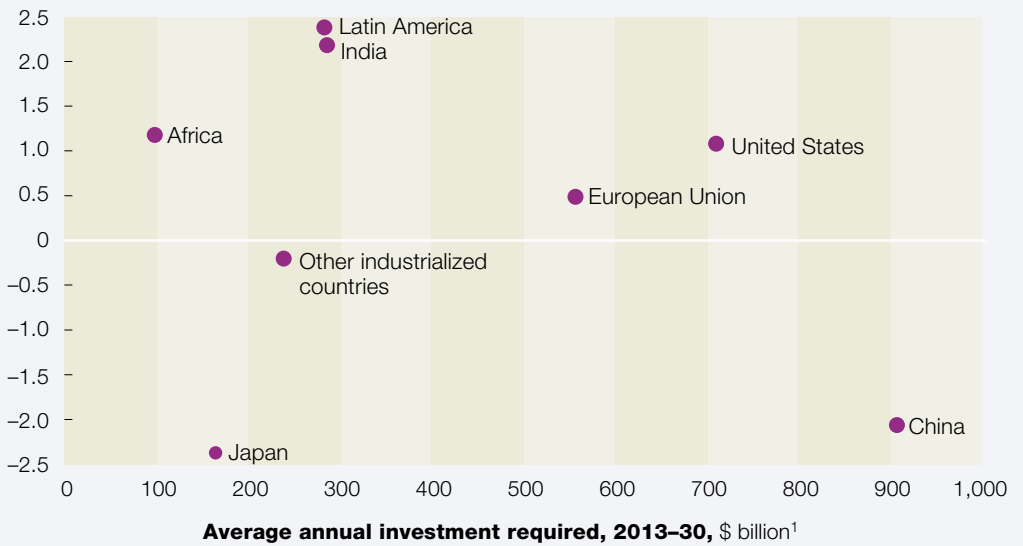
By contrast, while China's total needs are huge, its aggressive spending in recent years has exceeded the level required to support growth going forward and is probably unsustainable. That's also true in Japan. Overall, we estimate that countries could reduce required spending by as much as 40 percent by seeking out innovative approaches that build on global best practices such as selecting projects more thoughtfully, streamlining their delivery, and using existing infrastructure more productively. ○

<sup>1</sup> To project the level of infrastructure investment needed to cover depreciation and sustain future GDP growth, we analyzed historic infrastructure investments for more than 80 countries over two decades and infrastructure-stock levels as a share of GDP for different development stages. For more, see *Infrastructure productivity: How to save \$1 trillion a year*, McKinsey Global Institute, January 2013; and Yougang Chen, Stefan Matzinger, and Jonathan Woetzel, "Chinese infrastructure: The big picture," *McKinsey Quarterly*, June 2013, both available on mckinsey.com.

**Nicklas Garemo** is a director in McKinsey's Abu Dhabi office; **Jan Mischke** is a senior fellow of the McKinsey Global Institute, where **Jonathan Woetzel** is a director.

**Both the massive scale of infrastructure investment needed and the degree of change in required spending relative to GDP diverge significantly across countries.**

**Change in required investment, 2013–30 vs 1992–2011,<sup>1</sup>**  
 % of GDP



<sup>1</sup> Specifically, investment in transport, power, water, and telecommunication; measured in constant 2010 dollars.  
 Source: McKinsey Global Institute analysis

# Next frontiers for **strategy**

Over the last 50 years, the field of strategy has moved from infancy to maturity. What comes next? In this section, a group of experts—including the founder of McKinsey’s Strategy Practice Fred Gluck, five current or former chief strategy officers, and five business-school professors—charts the way ahead.

**38**

**What strategists need:** A meeting of the minds

**52**

**Synthesis, capabilities, and overlooked insights:** Next frontiers for strategists

Perspectives from  
Fred Gluck,  
Michael G. Jacobides,  
and Dan Simpson







# What strategists need:

## A meeting of the minds

A unique gathering of strategists from academia, leading companies, and McKinsey debates the state of the discipline, with an emphasis on opportunities for innovation in a changing world.

**Over the last 50 years,** the theory and practice of business strategy have taken a variety of twists and turns. In the 1960s, strategy was equated largely with corporate planning; in the 1970s, the emphasis switched to diversification and portfolio planning. The focus shifted to the economics of industry attractiveness and value chains in the 1980s, and the 1990s were characterized by a concern with core competencies. More recently, practitioners and academics alike have been grappling with the impact on strategy of rapid market and technological change, growing external risk, and the advent of big data.

What comes next? How relevant are existing frameworks and tools to the needs of leaders seeking to develop and implement winning strategies? And what should be the relative contributions of academics and practitioners to the evolution of the field? In March of this year, *McKinsey Quarterly* convened a unique group of experts (see sidebar “When theory met practice”), who brought competing and complementary perspectives to bear on these and related issues. What emerged was the sense of a field in flux, with enormous opportunities to generate fresh insights in a changing world, as well as some unfinished business to ensure that the human realities of strategic decision making receive sufficient emphasis.

Here are highlights of the discussion, moderated by *McKinsey Quarterly*'s Allen Webb, among five practitioners, five business-school professors, and five current or former leaders of McKinsey's Strategy Practice, including Fred Gluck, its founder.

## Where have all the frameworks gone?

Professor Pankaj Ghemawat (IESE)

At the millennium, I wrote a piece on new management paradigms, which I referred to as Eureka and BOHICA. The latter term was popularized in business circles by John Micklethwait and Adrian Wooldridge at the *Economist* and stands for “bend over, here it comes again.” The reason for writing it was that there seemed to be a profusion of ideas about strategy that were new or at least claimed to be new. This situation seems to have changed drastically. For example, the management writer Richard Pascale supplied an amusing chart on the ebbs, flows, and residual impact of business ideas and fads for my original piece—but when I contacted him recently, he told me he had stopped updating the series a few years ago because activity had dropped off. Is that true and, if so, is it a matter for concern?

Professor Michael G. Jacobides (London Business School)

Yes, I think we may need new tools or frameworks. When the environment changes profoundly, the maps with which we navigate it may need to shift as well. For instance, from telco to health-care to computers, sector boundaries are changing or dissolving, and new business models are redefining the competitive landscape. So tools such as Michael Porter’s five forces, created for a more stable, more easily definable world, don’t just lose their relevance—they become actively misleading.

Strategy tools are abstractions from reality that illuminate and identify some features and causal relations while simplifying or omitting others. So their usefulness depends on context, and their effectiveness changes with time. Consider, for instance, the financial crisis. Regulators were caught by surprise in 2008 because they failed to understand how much the financial sector had been transformed from a set of integrated institutions into a host of co-specialized firms that have divergent business models and are linked through the capital markets. Only now are we slowly updating our mental map of the sector and the tools we use to analyze it.

That said, I’d strike a slightly more optimistic note; I believe there’s scope to help people organize and categorize information without having their heads explode. And as a strategy professor, I can’t think



# When theory met practice

A who's who of participants at the *Quarterly's* strategy workshop on March 20, 2014, in McKinsey's London office

## **Julian Birkinshaw**

Professor and chair of the Strategy and Entrepreneurship Area, London Business School

## **Michael Birshan**

Principal, McKinsey (London office), and leader of the firm's Strategy and Corporate Finance Practice hubs in the United Kingdom and Ireland

## **Laurence Capron**

Professor of strategy and director of the M&A and corporate strategy executive-education programme, INSEAD

## **Pankaj Ghemawat**

Anselmo Rubiralta Professor of Global Strategy, IESE

## **Fred Gluck**

Managing director emeritus, McKinsey, and founder of the firm's Strategy Practice

## **Robert Grant**

Professor of strategic management, Bocconi School of Management

## **Michael G. Jacobides**

Sir Donald Gordon Chair of Entrepreneurship and Innovation, London Business School

## **Conor Kehoe**

Director, McKinsey (London office), and a leader of the firm's Strategy and Private Equity Practices

## **Sudeep Maitra**

Director of group strategy, Centrica

## **Matt McEvoy**

Senior vice president of strategy and new business development, Burberry

## **Mark Reckitt**

President, Smiths Interconnect, and group strategy director, Smiths Group (through March 2014)

## **Dan Simpson**

Executive-in-residence at the Haas School of Business, University of California, Berkeley; vice president in charge of strategy and planning (1989–2003) and served in the office of the chairman (2004–13), Clorox

## **Sven Smit**

Director, McKinsey (Amsterdam office), coauthor of *The Granularity of Growth*, and global knowledge leader of the Strategy Practice for many years

## **Patrick Viguerie**

Director, McKinsey (Atlanta office), coauthor of *The Granularity of Growth*, and head of the Strategy Practice in North America for many years

## **Mark Wilson**

Vice president of corporate strategy, Unilever

of anything better than saying, “Let’s rethink these frameworks together with people who use them in their professional practice, and revise the strategy canon.”

**Professor Robert Grant (Bocconi School of Management)**

I disagree with the notion that the world is changing and that this has somehow made our established strategy tools obsolete. Most changes in the business environment have been in degree rather than kind: the speedier diffusion of technology, the growing intensity of competition as a result of internationalization, increased concern over business’s social and environmental responsibilities. Most of the core concepts and frameworks of strategy have not been devalued by change. A.G. Lafley and Roger Martin’s recent book, *Playing to Win*,<sup>1</sup> builds upon the traditional notions that superior performance results from selecting attractive markets and establishing a competitive advantage within them.

What’s changed is not so much the environment as our empirical and theoretical knowledge about strategy. Our understanding of the experience curve has been augmented by deeper insights into the determinants of organizational learning. Our analysis of competition extends well beyond Porter’s five-forces framework, to recognize the role of complements, network externalities, and platforms. Our understanding of the benefits of strategic flexibility has been transformed by the analysis of real options. A major problem is that the theoretical and empirical research in strategy has moved so quickly, and over such a broad front, that its distillation into intuitive concepts and frameworks applicable to strategy-making processes of firms has lagged far behind.

**Sven Smit (McKinsey)**

I don’t think the supply side of frameworks has dried up. The analysis of data at a granular level—for example, in relation to the 600 cities McKinsey has identified as driving more than 60 percent of the world’s growth—is inspiring a massive amount of work in companies on how to execute a strategy.<sup>2</sup> The framework is now those 600 cities, not a simplified 2x2 matrix. Where are they? What

<sup>1</sup> A.G. Lafley and Roger L. Martin, *Playing to Win: How Strategy Really Works*, Boston, MA: Harvard Business Review Press, 2013.

<sup>2</sup> For more, see the full McKinsey Global Institute report, *Urban world: Cities and the rise of the consuming class*, June 2012, on [mckinsey.com](http://mckinsey.com).

are their names? How do you assess them? What's the S-curve effect of the demand for sugar or coffee or yogurt in Chengdu, China?

**Professor Michael G. Jacobides (London Business School)**

I'd agree that there is a lot of good work on tendencies that matter to organizations—urbanization, globalization, particular technologies from 3-D printing to big data—and on their impact. Much of it has been done by the McKinsey Global Institute and published in the *Quarterly*. And this is where consultants (as opposed to academics) add value—not so much by providing information per se, which will increasingly become a commodity, as by identifying the important dimensions within the morass of data we now have at our fingertips. Yet this skill isn't quite a framework or a tool. My view is that we need both the consultant- or firm-driven focus on “themes” and better frameworks, not only to teach strategy, but also to help executives rethink what they do, perhaps by helping to improve their judgment, to frame difficult problems, or to deal with individual or organizational biases. We should ask ourselves what types of frameworks can work best.

**Professor Laurence Capron (INSEAD)**

I see most excitement on the faces of my MBA and executive MBA students when they are presented with frameworks that enable them to generate different options and discuss a way forward. The value curve is one example, the Haspeslagh and Jemison matrix<sup>3</sup> on postmerger integration another.

## **From frameworks to synthesis**

**Sudeep Maitra (Centrica)**

Before Centrica announced a new strategy in the beginning of 2013, we did consider scenarios, one of which had greater regulatory and political intervention in the UK energy sector. But in practice, there's probably no framework or strategy tool that can prepare you for the industry being in the center of a highly charged political and public debate, which has played out in 2014.

<sup>3</sup> A model created by Philippe Haspeslagh and David Jemison for selecting the appropriate integration approach, based on two criteria: strategic interdependence and organizational autonomy.

**Sven Smit (McKinsey)**

Very few traditional frameworks, even scenario planning, were built for “black swan” events, which many companies now face every ten years or so. And a lot of frameworks are still presented in very qualitative terms. What’s different today is the availability of data, which means you can research the frameworks’ empirical validity.

**Mark Wilson (Unilever)**

I agree. From my perspective in a global company, new strategy thinking—frameworks and so on—seems to emerge mainly from books, which makes it seem more of a literary than a scientific process. What people in my position want to know is which techniques are scientifically proven, so we can discard the rest.

The issue is also how to spread good ones to very busy executives in the businesses—and then get the executives to use them. One reason our frameworks often seem out of date is that managers persevere to the point of desperation with the familiar things they learned 10, 20, or 30 years ago, perhaps mixed with what they’ve come across in more recent management training or what they’ve read in the literature. The trigger point for adopting new thinking in an organization often comes when you have worn out the old stuff and it clearly doesn’t work anymore or when business performance has slumped.

**Professor Julian Birkinshaw (London Business School)**

As academics, we have incentives to come up with new ideas. But when you’re trying to write an article, you can’t just say, “I’ve got this bright idea.” You need evidence, and it’s almost always the case that the actual innovator is a company. The balanced scorecard is a great example. Bob Kaplan didn’t invent the balanced scorecard. He saw it happening in Analog Devices, but he was the one who “branded” it, put a great wrapper around it, and said, “This is how it works.” So we’re all complicit in the creation of new ideas. Companies call consultants and academics when things aren’t going well, and the academics want to pick up on the stuff that companies are doing.

**Sven Smit (McKinsey)**

The trouble is that when these methods derive from one or even a handful of companies, the empirical validity is zero. There is a halo effect. What might have worked at Analog Devices might not

work in other industries and might not even be the core reason Analog Devices was great.

#### Sudeep Maitra (Centrica)

I agree that strategy tools are only effective if they provide executives with a way to get a comprehensive view of their company in the context of industry as a whole. You can go to an oil-and-gas conference and get an oil-and-gas perspective. Then, you go to another conference and see things from a supply-chain angle. There are competing frameworks that overlap and it's often confusing. It is quite important to have effective frameworks that pull together these different views into a comprehensive picture.

#### Fred Gluck (McKinsey)

We've talked about frameworks in the context of analysis, but my test is whether they are useful for synthesis. If not, what's the process for getting a good synthesis? That's where the strategies come from. A strategy is not the obverse of an analysis. It usually comes from some creative insight. I think the real opportunity in strategy development is on the synthesis side—figuring out how to deal with a faster-changing environment. I like to characterize strategy as coming from three places: strategic planning, strategic thinking, and opportunistic decision making. My prejudice is that most of it comes from strategic thinking and opportunistic decision making. Something happens out there; you see it and you act faster. The strategic-planning process can deteriorate into an exercise of applying techniques and frameworks.

## What do companies want from strategy?

#### Mark Reckitt (Smiths Group)

I run a division within Smiths, and that division is a collection of small businesses, with an average turnover of around £50 million. We use incredibly simple 2x2 matrices to explain the structure or segment of an industry in sufficient detail that people can understand what customers they want to get close to and who their competitors are.

What our businesses are after is insight. Multi-industrial companies report at a pretty high level, so it's very difficult to find out exactly

what our competitors are doing at the microlevel. Most of all, we need to hear the voice of the customer and what he or she is prepared to pay for. That will enable us to develop a product we can make money out of over five or ten years or whatever the length of the product cycle might be.

We also need ways to assess our competencies objectively. Time and time again, I come across people who claim they have the greatest insight into their particular sector. Actually, it turns out that they know more about the engineering or the science in that sector than most people, but they don't look beyond their own cubicle or research lab.

The final thing we too often lack is something to help distinguish between the cyclical and the structural shifts that go on in an industry. In any year, we hear about four or five different things that are happening. Some will only be very short-term changes; others will be almost permanent. The question is which are which. (For more on this and other critical needs identified by participants, see sidebar “Help wanted! Seven needs for today's strategist.”)

#### Dan Simpson (Clorox)

I agree with Mark that assessing competencies objectively is always a challenge, though we did some work at Clorox to try to address that.<sup>4</sup> One of the toughest strategy challenges is still the creation of options—creating them is the black box of strategy. It's easy to write “diverge” on the strategy-process map, but it's darned difficult to create truly innovative strategy options.

Oddly enough—and it just may be a function of Clorox's proximity to Silicon Valley—the better tools for creating options don't seem to come from strategy but rather from product innovation. Recently, design-thinking methodologies made popular by Stanford's Institute of Design, IDEO,<sup>5</sup> and others have been significantly changing product innovation. I at least wonder if the key principles of reframing the market, customer empathy, and rapid prototyping can be used to improve the creation of options in strategy.

<sup>4</sup> See Simpson's essay on clarifying capabilities in “Synthesis, capabilities, and overlooked insights: Next frontiers for strategists,” on page 59.

<sup>5</sup> For more on IDEO's approach, see “Making the emotional case for change: An interview with Chip Heath,” *McKinsey Quarterly*, March 2010, [mckinsey.com](http://mckinsey.com).

## Help wanted!

### Seven needs identified by workshop participants for today's strategist

- 1** Techniques for identifying structural versus cyclical changes in the external environment
- 2** Techniques for spotting and harnessing cross-functional capabilities that a company has and may be able to leverage for competitive advantage
- 3** Tools for stimulating the creation of options, particularly where change is occurring rapidly and the scope for strategic action is shifting
- 4** Tools for stimulating the understanding of forces that are truly dynamic, with multiple second-, third-, and fourth-order effects
- 5** Proven tools for improving strategy processes, breaking inertia, and jolting conventional thinking
- 6** Techniques for generating and harnessing insights from big data about customers, competitors, and suppliers
- 7** Techniques for identifying and focusing the top team's attention on new or poorly understood risks—before it is too late

Framing questions is the other tough challenge, and it's one of the most important yet underappreciated parts of strategy development. Questions are the lens by which problems are defined and addressed. Generating great answers to bad questions is all too common and not all that helpful in strategy.

The other reason framing questions is critical is that, while analysis is very important, developing strategies is ultimately a people-centric process fueled by conversation. Each player brings his or her experiences and biases to the table, and the job of crafting a



strategy is to navigate those in a way that is productive. The key is the good questions, and any advice on how to improve questions would be really helpful.

#### Mark Wilson (Unilever)

What's also important are methods that challenge organizational inertia—notably inertia in the form of senior leaders who naturally tend to protect their own share of resources, as well as reward systems that have a momentum of their own. External stimuli, including pressure from the consumer and competitors, help to shift thinking, and any tool that makes you stop and think is useful. In business, we can move too quickly from problem to solution, without spending enough time on the diagnosis.

In very large networked organizations like my own, there is huge value attached to the discipline of implementation. We employ a lot of bright people who have specific implementation roles to play, but because of this we don't always reward them for thinking creatively.

If it's really true that the strategy community is currently focused more on producing insights than new techniques, that's probably a good thing. It's incredibly valuable to have insights coming from outside to jolt your thinking. Most executives are still surprisingly ill informed about what goes on outside the walls of their own businesses.

#### Sudeep Maitra (Centrica)

For me one of the most important things is a set of dynamic tools to deal with, or at least understand, uncertainty. I want to be able to paint the landscape while keeping options open—allocating resources over time and moving them around as events unfold. You can't do resource allocation or capability building without an indication of the way ahead.

I also need an evidence-based view of how the customer might evolve in the future. People are stuck between focus groups on the one hand and the Steve Jobs approach (“I will know what customers need before they know it themselves”) on the other. The Jobs way is compelling, but it's risky. The challenge is the journey from today's customer, whom most companies understand well, to tomorrow's customer, whom they don't. On top of this, you're dealing with competitors and policy makers in an interactive system. Scenarios that

are completely macroeconomic or play back a “single shot” set of responses don’t reflect the reality that something unexpected will happen in the external environment.

**Matt McEvoy (Burberry)**

Burberry operates in a very fragmented industry, where the ability to maintain market share is always dependent on the brand. Because our market share is so small, we always feel that if we do something great, it can actually be meaningful.

We probably don’t think enough about the way competitors move; the thing we lack most is probably a better view of the competitive environment. Information is very anecdotal in the countries where we operate, so maintaining the brand, which protects you from the ins and outs of fashion, is our number-one priority.

**Professor Pankaj Ghemawat (IESE)**

Obviously, the chief strategy officers who have weighed in know more about what companies want from strategy than I do. But as an academic, I do find their very practical suggestions striking, partly because of the disconnect with current conversations among strategy researchers in academia. Even more alarmingly, this disconnect seems to have worsened in recent years.



Four workshop participants during a break in the action, from left to right: Sven Smit (McKinsey), Michael G. Jacobides (London Business School), Laurence Capron (INSEAD), and Michael Birshan (McKinsey)

It seems to me that there is a major missed opportunity here: if there were more forums for interchange between academics and practitioners—something that this roundtable has attempted to provide, albeit in a small-scale way—we might be more likely to see academic research that accounts for and tries to address at least some of the practitioners’ concerns and needs.

## The social side of strategy

### Professor Laurence Capron (INSEAD)

I’ve become increasingly aware of how important nonrational issues are in strategy setting. An obvious example is that some CEOs tend to be biased toward M&A, which can have enormous implications for corporate priorities.

### Professor Michael G. Jacobides (London Business School)

We shouldn’t forget that strategy frameworks are also tools to allow political conversations—to help navigate the political tensions in a corporation. Strategy discussions are invariably burdened by resource-allocation agendas; actually, what’s labeled “strategic” is often what is politically protected by senior management, not what’s most valuable for a firm. Many a strategy discussion is actually about executives saying, “You aren’t going to cut my unit.” I was recently talking to a senior executive from a global pharma firm who described the internal squabbles about which tools to use to evaluate the portfolio, as everyone knew how the “right” tool would shape the kudos and budget they would get.

### Sven Smit (McKinsey)

I agree that much of the song and dance called strategy in companies is really a resource-allocation process laced with pride. I have yet to see anybody say, “I understand my business is on the way down. I will give you \$50 million cash back this year and the same again next year. I can see lots of good opportunities in the company for us to better use that \$50 million!”

In resource-allocation negotiations, there’s a stretch target and a “sandbagging” target; in between sits the realistic target. At the best companies, the social game is a real fight. When individuals aggressively dispute other people’s insights with facts, that’s a good

process. Too often, those involved just hope the CEO moves their way, and they don't really discuss content.

**Professor Michael G. Jacobides (London Business School)**

In both teaching and research, I think we don't pay enough attention to the difference between strategy as resource allocation and strategy as insight generation. There is a yearly strategy process, which focuses on resource allocation. We should acknowledge it as such and better understand its pathologies. But we also need to take a fresh look at how we identify ways to improve a firm's positioning and performance, by explicitly asking, "What insight-generating activities, tools, and frameworks would be useful?"

**Conor Kehoe (McKinsey)**

You'd be for a proposal of ours: we rename the annual strategy process the strategic-allocation or the reallocation process. And we have something separate called the strategic review.

**Sven Smit (McKinsey)**

We would argue that good resource allocation is an outcome of strategy. There's a lot of empirical evidence that, actually, the strategist cannot pick the winner but can pick the loser. It's about killing stuff more than about promoting stuff. Then, when you recognize the winner, promote it and give it resources. But picking the winner, as we know from the segment-level data on venture capital and private equity, is harder than weeding out the loser. We also know it from distributions of M&A, we know it from market-

*From the McKinsey Quarterly archives, 1980*

"The notion of making corporate choices and allocating resources suggests a picture of a chief executive officer who has been provided with a broad menu of business opportunities from which he can simply choose the most mouthwatering and then supply the money and people required to pursue them."



—Fred Gluck, "Strategic choice and resource allocation"

ing projects, we know it from R&D projects—picking the R&D winners is much harder than preventing a loss. I have yet to see the company where the process gives 90 percent of the time to deciding what we're not going to do, with the hope that by not doing certain things the rest will prosper.

**Mark Reckitt (Smiths Group)**

Fifteen years ago, we did a rigorous, activity-based cost analysis to work out the payoff product by product, country by country, and we ended up with some real danglers, which we just cut. Some were really embarrassing: products had been launched by people who at that point were CEOs. And the fact that we cut such a product says to everyone, "Look, you're going to make mistakes. It doesn't matter. Don't worry about it too much." And that freed up huge resources, both financial and management, to push harder on the things that were really successful.

**Mark Wilson (Unilever)**

Someone once said to me, "Do you know something about projects in a business? Up to a certain point, they're almost impossible to keep alive, and then they flip virtually overnight to being almost impossible to kill." And that state can change over just a few weeks. It's a function of gatekeeping processes and which reputations have become sufficiently attached to the project. ◉

# Synthesis, capabilities, and overlooked insights: Next frontiers for strategists

The founder of McKinsey's Strategy Practice, a London Business School professor, and a chief strategist turned professor describe pain points and possibilities for strategists on the leading edge.

**Following a recent meeting of the minds** among academic, corporate, and McKinsey strategy leaders, three participants offered to pick up the pen and offer further reflections. Fred Gluck, founder of McKinsey's Strategy Practice and a former managing director of the firm, expounded on the theme of strategic synthesis. Michael G. Jacobides, a professor at London Business School, explored in greater detail areas where he sees opportunities for academics to contribute to the work of practitioners. And Dan Simpson, longtime head of strategy for Clorox and now an executive-in-residence with the Haas School of Business, at the University of California, Berkeley, shared his experience on the thorny issue of matching strategic thrusts with corporate capabilities.

## Fred Gluck



## The essence of strategic management

**Strategies, in my experience,** always come from one of three sources: strategic planning, strategic thinking, and opportunistic decision making—with the latter two being the most important.

I think of strategic planning as the job of collecting and analyzing the enormous amounts of data that characterize the modern world and monitoring changes in markets and the competitive environment. This process, which requires frameworks and concepts, is where academics can contribute most in the way of ideas, and strategic-planning groups can add the most value. Strategic planning, defined in this way, provides the raw material and factual basis for strategic thinking and opportunistic decision making.

The next challenge is to synthesize this raw material into what I once called (in a 1978 McKinsey staff paper that was subsequently summarized in the *Quarterly*) an “integrated set of actions designed to create a sustainable advantage over competitors.”<sup>1</sup> In my view, this is the province of CEOs and their top-management teams, and the quality of the synthesis and the effectiveness of the implementation are determined by the quality of the interaction between those teams and the strategic planners. This is the essence of strategic thinking and strategic management: it’s where creativity is paramount and insights take place, and it’s not something that should be limited to an annual strategic-planning process.

Checklists of strategic leverage points—though I prefer the richer notion of “dimensions,” or “strategic degrees of freedom,” as Ken

<sup>1</sup> See Frederick W. Gluck, Stephen P. Kaufman, and A. Steven Walleck, “The evolution of strategic management,” excerpted in “Thinking strategically,” *McKinsey Quarterly*, June 2000, [mckinsey.com](http://mckinsey.com).





From the *McKinsey Quarterly* archives, 1982

“Inability to articulate a strategy in a single, incisive, natural-sounding sentence is a sure sign that there is something wrong in the strategy itself.”

—Kenichi Ohmae, “Foresight in strategic planning”

Ohmae called them in his book *The Mind of the Strategist*—are a powerful means of structuring these discussions and stimulating strategic thinking.

Those involved must gain agreement on what the dimensions are; what, in each dimension, is the second level of strategic degrees of freedom; and what data and analyses are required to shed light on these questions. There are some obvious dimensions: customers, costs, and so on. But new ones are always coming in. You’re more likely to grapple with the right issues if you explicitly take the time to ask along which dimensions should your organization be doing its strategic thinking and engaging in creative debates.

The question then becomes what process continually engages the top-management team in synthesizing and resynthesizing the analyses into both meaningful strategic initiatives and some strategic rules of thumb that can inform opportunistic decision making and continually evolve. A related step in building a robust and insightful approach to managing a company strategically is to engage the board in the process. This must be done in a manner that keeps directors fully informed about the dimensions of the strategy being explored and that provides them with ample opportunity to probe and contribute to the strategic thinking.

Our recent conference in London (see “What strategists need: A meeting of the minds,” on page 38) began with a lively debate on the paucity of new frameworks for strategy development. We wound

up spending a considerable amount of time sharing views on the people and processes that underpin strategy. I thought this was appropriate, and I am hopeful that as the developers of strategic ideas—in academia, corporate strategy departments, and McKinsey—continue pushing the state of the art in response to the changing business environment, they will focus at least as much on tools supporting synthesis and bold responses to unexpected opportunities as on frameworks and planning.

**Fred Gluck** founded McKinsey's Strategy Practice, served as the firm's managing director from 1988 to 1994, and was a member of McKinsey's New York office from 1967 to 1995.

## Michael G. Jacobides



From black swans to gray rhinos: Four ways academics can help managers

**In his famous book,** Nassim Taleb admonished us to beware of “black swans,” disasters so rare that managers disregard them and academic models exclude them—and for which we’re therefore not prepared.

Personally, I think this concern is overdone. The real danger is “gray rhinos”: while hard to miss in the zoo, they are surprisingly difficult to spot in the South African bush, obscured as they are by the vegetation. By the time they’re visible, they are already storming toward you, leaving little chance to react. As academics, our job is to help managers tune into the rustling leaves or cracking twigs of an approaching challenge—or opportunity—before it’s upon them. To do that, we must focus on the parts of the environment that matter most and make sure the tools we carry are fit for the purpose.

A recent roundtable discussion involving leading-edge thinkers and practitioners from business schools, corporate-strategy departments, and McKinsey vividly illustrated both the promise and the challenge of turning academic research into actionable insights. Academics are often criticized—fairly, on the whole—for working in ivory towers far removed from the needs of real-world executives on the ground.<sup>2</sup> In my view, we can do a great deal more to realize “gains from trade” between our two worlds, and in this article I set out four areas where that can happen.

### How being rigorous helps improve decisions

First and foremost, we need rigor. But there are different types of rigor: the rigor of abstract analytical models, and behavioral rigor, which looks at how individuals, groups, and institutions actually behave. So far, we’ve expected too much from research that might be analytically rigorous but still doesn’t describe reality accurately. I’m thinking particularly of work that comes out of economics, such as game theory or financial economics, which can help but also can obfuscate.

When we confuse beautiful models with messy reality, we all suffer. In the run-up to the financial crisis of 2008, for example, many policy makers deluded themselves into thinking that markets could regulate themselves, while regulators remained blissfully unaware of the business models and structures that had developed in the financial sector. Academics and their models share the blame for these oversights.<sup>3</sup>

Behavioral work, though, is far more promising. We’re learning more and more about behavioral biases and the way individuals really make decisions. Now we need behavioral and evolutionary economics to step up and show us how organizations make decisions—and why we can expect them, quite predictably, to make bad decisions and to stick with the wrong behavior. The more we know

<sup>2</sup> In this sense, Bob Sutton and Jeff Pfeffer’s idea of evidence-based management is a useful reality check for managers and academics alike. For more, see their book *Hard Facts, Dangerous Half-Truths and Total Nonsense* (2006).

<sup>3</sup> In my work with two McKinsey alumni, Michael Drexler and Jason Rico, we consider how the wrong kind of (analytical) rigor led the economy into the financial-sector mess and propose an evolutionary framework to get out of it. See “Rethinking the future of financial services: A structural and evolutionary perspective on regulation,” *Journal of Financial Perspectives*, 2014, Volume 2, Number 1, [gfsi.ey.com](http://gfsi.ey.com).

about organizational pathologies, the better the outcomes we can achieve.<sup>4</sup>

### Strategy doesn't work the way we think it does

The importance of investigating these organizational dynamics speaks to a related issue: as academics, we don't spend enough time looking at the way strategic decisions are really made. Often, what we call strategy is less about navigating to a distant shore and more about allocating resources among competing projects or people in the here and now. Even our infatuation with innovation may have to do more with making sure the organization keeps its focus on customers (as opposed to internal politics) than it does with new products and services. Strategy acts as a motivating and disciplining device, which helps avoid organizational pathologies.

By leveraging behavioral and evolutionary work, we can get a much clearer picture of the organizational reality of strategy and a better understanding of how to add value through cognitive issues (such as the use of the right frameworks and analogies) and a focus on the most relevant parts of the business environment. And without focusing too much on the negative, we need to understand strategic failure better and to identify the process that drives it.<sup>5</sup>

### Winning doesn't just mean finishing first

There's also a growing body of research, in institutional and evolutionary economics and economic sociology, looking at the web of relationships within a sector and in the economy: how complex production systems emerge, evolve, and interact and how value migrates within and between sectors. Whether you call these webs industry architectures, ecosystems, or organizational fields, they're

<sup>4</sup> A lot of work has appeared on individual decision making and biases, such as Daniel Kahneman's *Thinking, Fast and Slow* (2011) or Richard Thaler and Cass Sunstein's *Nudge* (2008). McKinsey's contributions include Dan Lovallo and Olivier Sibony's "The case for behavioral strategy," *McKinsey Quarterly*, March 2010, mckinsey.com. The only risk is overestimating the role of individual managers and their cognitive biases and underappreciating the role of institutional biases, such as those illustrated by Graham Allison and Philip Zelikow's *Essence of Decision* (1999). Paradoxically, little managerial work has emerged on the academically influential streams of behavioral and evolutionary economics. Even today, refreshing insights can come from reading the two foundational contributions: Richard Nelson and Sidney Winter's *An Evolutionary Theory of Economic Change* (1982) and James March and Herbert Simon's *Organizations* (1958).

<sup>5</sup> Robert Burgelman and Andy Grove's dense book on Intel, *Strategy is Destiny* (2002), shows how strategy works through resource allocation, which McKinsey research has shown to be surprisingly inert. See Stephen Hall, Dan Lovallo, and Reinier Musters, "How to put your money where your strategy is," *McKinsey Quarterly*, March 2012, mckinsey.com. Don Sull's *Why Good Companies Go Bad* (2005) illustrates several organizational pathologies and considers what can be done about them.

a lens for viewing reality and can show us some very valuable new perspectives.

These ideas have some big implications for competition—implications that we’re only just beginning to understand. In many sectors, winning doesn’t just mean finishing first; it means changing the rules of the game to your own advantage. Consider how Google and Facebook have redefined the way we interact with information, while also creating ecosystems that collaborate and compete with Apple.<sup>6</sup>

### New landscapes demand new maps

Finally, academics and consultants can come together to revisit popular ideas, even those that have profoundly shaped practice, such as Clay Christensen’s views on disruptive innovation or Michael Porter’s five forces. Models like these are widely used and accepted because they’re user-friendly, make things simpler, and reassure executives that they’ve acted on well-substantiated knowledge.

But should established firms try to be disrupters? Is Porter’s famous model universally applicable? Academic research on such questions is limited, and some of that work suggests the answers are not clear-cut; there are many “ifs” and “buts” that popular frameworks lack. Sadly, though, mainstream academic journals aren’t interested in testing, refuting, or updating strategy frameworks, for all these publications’ stated interest in practical implications. As academics, we can add value by being objective and rigorous about the conditions under which established views do and don’t work well. We can also point out some new, valuable ideas that don’t get enough play in the popular business press and the consulting community.<sup>7</sup>

In all of these areas, what really excites me is the prospect of a stronger link between practitioners and academics, so we can leverage the research we’ve done and shape the research we need to do. Together, we can simplify reality without distorting it and uncover the social laws that we don’t yet understand but shape our world.

<sup>6</sup> Ron Adner’s book, *The Wide Lens* (2012), provides a research-founded analysis of ecosystems. My *Harvard Business Review* article (written with John Paul MacDuffie in 2013) considers “How to drive value your way” as sectors and ecosystems change.

<sup>7</sup> Costas Markides and Paul Geroski’s *Fast Second* (2004) debunks some popular myths about the need to finish first, and Freek Vermeulen’s blogs and his book *Business Exposed* (2010) try to publicize research findings that bear on practice.

**Michael G. Jacobides** holds the Sir Donald Gordon Chair of Entrepreneurship and Innovation at London Business School.

## Dan Simpson



## Making capabilities strategic

**In a recent exchange** with a thoughtful group of corporate strategists, academics, and McKinsey strategy leaders, several of us debated the importance of capabilities. Some participants felt that management writing about them had devolved into theoretical gibberish.

I agree there is some gibberish written, but my experience is that capabilities are practical and actionable, and a critical part of strategy. Strong ones create new growth options. Capabilities are also the conduit between strategy and execution, and a failure to assess capabilities objectively is often at the root of execution problems. What, in retrospect, is ascribed to poor execution instead has its roots in an unexpectedly large gap between a company's capabilities and the ones needed to deliver the strategy successfully.

This gap exists, in part, because of another mismatch: between the rigor of tools and methods for assessing market attractiveness (which are fairly robust, thanks to the contributions of Michael Porter and others) and those for assessing internal skills and capabilities. Frustrated, many organizations make only a cursory attempt to clarify and actively manage their capabilities. In this article, I offer a few suggestions for doing better.

### Inventorying internal resources

Resources come in two forms—assets and capabilities—and it's important not to confuse them. Understanding assets is not



that hard. At my former employer, Clorox, brand equities are a huge asset, as are protected technologies, the manufacturing network, and efficient access to retail distribution. A significant portion of Clorox's value is derived from monetizing those assets in both current and new markets. People-based skills and capabilities can be even larger sources of value, but they are much harder to assess. Three approaches can help:

**Get objective inputs.** Capabilities are relative, so an external lens is critical. Formal benchmarking is one obvious method. Another is to get honest input on strengths and liabilities from people who know both your company and others well. Customers, suppliers, and industry experts are good sources, as are experienced hires who join from the outside and former employees now working in businesses that don't compete with yours.

Most companies tend to believe their capabilities are stronger and more distinctive than they really are, but that is not always the case. At Clorox we found a couple of operational areas particularly difficult, leading us to believe we were not that good—but we learned that they were even tougher for others. Excelling was still a challenge, but the outsiders made us realize we had a greater advantage than we had thought. The inverse was true in other areas: capabilities we thought were superior turned out to be just table stakes.

**Uncover the logic that separates past successes from failures.**

Another way to get a more objective view of capabilities is to look back at your company's most significant successes and failures over, say, a 10- to 15-year period. Write the facts (not the outcomes) of each case on an index card and then try to identify threads of underlying logic that would help people not familiar with the company predict success or failure. With the logic—your capabilities—in hand, people should be able to sort the cards with at least 70 percent accuracy. It's not a perfect science, but it can help increase objectivity. It's also a way to see how capabilities change over time.

The output from these two exercises should be not only a robust list of capabilities but also an objective assessment of areas where



the organization is not very skilled. If skills in those areas are required to execute a new strategy, realistic plans must be put in place to acquire them.

### **Go beyond isolated capabilities, to integrated competencies.**

I define a competency as an integrated set of individual capabilities. In large multibusiness firms, competencies usually exist at the enterprise level. Getting an enterprise view is difficult, though, for two reasons.

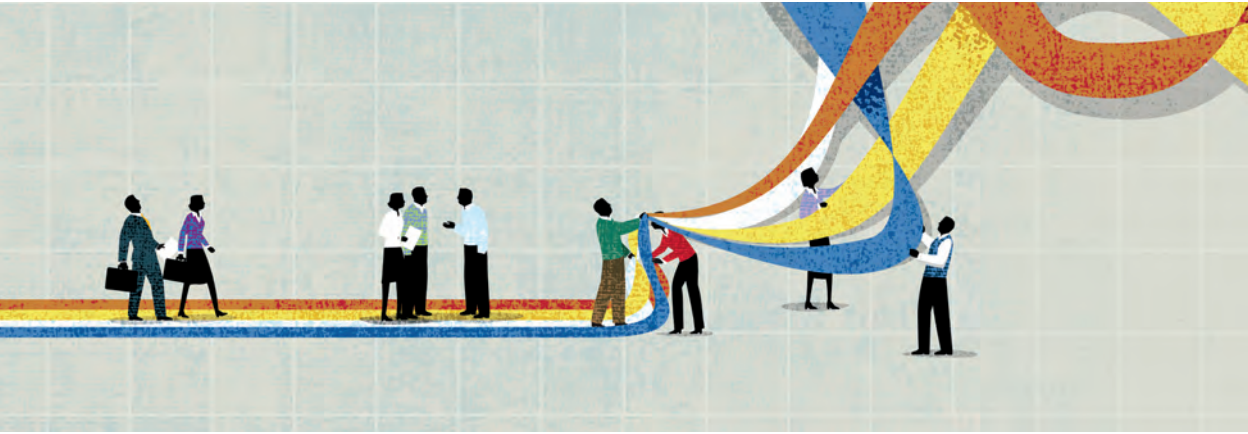
The first is that while it's relatively easy to rise above the business-unit structure, enterprise-level competencies tend to be viewed as areas of functional expertise as opposed to being defined from the customer's perspective. Customers don't see functions—they see benefits.

The second reason is that because competencies are complex, it's hard to be sure you have a real advantage relative to competitors. Some competitors are more capable in one area, while others are more capable in a different one, so you end up with a mixed bag. Interestingly, though, the very complexity that makes it hard to identify competencies is what makes them very hard for others to replicate.

Clorox, for example, has strong capabilities in market segmentation and consumer insights, in retail execution, and in product and packaging innovation. Are any of those world-class in a competitive set that includes P&G and other premier global players? Probably not. However, the combined set—consciously integrated with processes—does give Clorox a clear edge in midsized consumer-goods categories; together, the integrated set forms a competency Clorox called brand building. That competency is superior only in certain contexts, but it did open up opportunities beyond the current portfolio.

### **Prioritizing and enhancing capabilities**

Understanding your capabilities and competencies is important, but it's not enough. You have to match them to market opportunities and close the gaps.



**Use strategy to identify and prioritize capability gaps.** In the current businesses, gaps are often fairly obvious, though you need to consider them at both the business-unit and enterprise level. At Clorox, one enterprise gap was how to build consumer desire in a very fragmented media environment quite different from the environment when most of the major brands were built. Filling that gap was a major undertaking. You also have to identify new capabilities that will be needed down the road, in both current markets and new markets the company is considering.

**Close gaps with a portfolio approach.** The unstated default option to close gaps in large companies is internal development, and that probably is best when long-term proprietary advantage is needed. But it is not the only option—partnerships and acquisitions should be considered as well.

When Clorox added capabilities to make products from natural ingredients—part of a sustainability strategy—it used all three options. Internal development and partnerships played important roles in the development of *Green Works* natural cleaners, and Clorox acquired capabilities in the formulation of natural personal-care products when it bought Burt's Bees. Partnerships have become such an important part of Clorox that the company made a conscious choice to develop an internal capability in partnership management.

**Make conscious choices on where to disinvest.** Reducing investment in capabilities that are no longer as critical to the future is a controversial but often necessary call. Resources for new capabilities need to come from somewhere, and hanging on to outdated capabilities can hamper future performance.

Strategy choices and the capability agenda *must* match. The sooner and more certainly a new capability will be needed and the larger the gap, the more aggressive you have to be in filling it. If the gap is too large, you probably need to alter the strategy to match a more realistic capability-development plan.

Clarifying and actively managing people-based capabilities is much more complicated and nuanced than this short article implies. But I firmly believe that a robust capability-development agenda isn't just another corporate priority; it must be inextricably linked with the crafting of strategy. ◉

**Dan Simpson** was the chief strategist at Clorox from 1989 to 2003, served in the office of the chairman from 2004 to 2013, and is now an executive-in-residence at the Haas School of Business, at the University of California, Berkeley.





Illustration by Matthew Billington



Leading in the era of

# brilliant machines

Can machines replace executives? Algorithms are increasingly able to make good decisions, but they can't replace the human touch that is the essence of great leadership.

**66**  
**Artificial  
intelligence meets  
the C-suite**

Perspectives from  
Erik Brynjolfsson,  
Andrew McAfee,  
entrepreneur and  
Kaggle CEO  
Anthony Goldbloom,  
and data scientist  
Jeremy Howard

**76**  
**Manager and  
machine: The new  
leadership equation**

Martin Dewhurst  
and Paul Willmott

# Artificial intelligence meets the C-suite

Technology is getting smarter, faster. Are you? Experts including the authors of *The Second Machine Age*, Andrew McAfee and Erik Brynjolfsson, examine the impact that “thinking” machines may have on top-management roles.

**The exact moment** when computers got better than people at human tasks arrived in 2011, according to data scientist Jeremy Howard, at an otherwise inconsequential machine-learning competition in Germany. Contest participants were asked to design an algorithm that could recognize street signs, many of which were a bit blurry or dark. Humans correctly identified them 98.5 percent of the time. At 99.4 percent, the winning algorithm did even better.

Or maybe the moment came earlier that year, when IBM’s Watson computer defeated the two leading human *Jeopardy!* players on the planet. Whenever or wherever it was, it’s increasingly clear that the comparative advantage of humans over software has been steadily eroding. Machines and their learning-based algorithms have leapt forward in pattern-matching ability and in the nuances of interpreting and communicating complex information. The long-standing debate about computers as complements or substitutes for human labor has been renewed.

The matter is more than academic. Many of the jobs that had once seemed the sole province of humans—including those of pathologists, petroleum geologists, and law clerks—are now being performed by computers.



And so it must be asked: can software substitute for the responsibilities of senior managers in their roles at the top of today's biggest corporations? In some activities, particularly when it comes to finding answers to problems, software already surpasses even the best managers. Knowing whether to assert your own expertise or to step out of the way is fast becoming a critical executive skill.

Yet senior managers are far from obsolete. As machine learning progresses at a rapid pace, top executives will be called on to create the innovative new organizational forms needed to crowdsource the far-flung human talent that's coming online around the globe. Those executives will have to emphasize their creative abilities, their leadership skills, and their strategic thinking.

To sort out the exponential advance of deep-learning algorithms and what it means for managerial science, McKinsey's Rik Kirkland conducted a series of interviews in January at the World Economic Forum's annual meeting in Davos. Among those interviewed were two leading business academics—Erik Brynjolfsson and Andrew McAfee, coauthors of *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (W. W. Norton, January 2014)—and two leading entrepreneurs: Anthony Goldbloom, the founder and CEO of Kaggle (the San Francisco start-up that's crowdsourcing predictive-analysis contests to help companies and researchers gain insights from big data); and data scientist Jeremy Howard. This edited transcript captures and combines highlights from those conversations.

## The Second Machine Age

*What is it and why does it matter?*

**Andrew McAfee:** The Industrial Revolution was when humans overcame the limitations of our muscle power. We're now in the early stages of doing the same thing to our mental capacity—indefinitely multiplying it by virtue of digital technologies. There are two discontinuous changes that will stick in historians' minds. The first is the development of artificial intelligence, and the kinds of things we've seen so far are the warm-up act for what's to come. The second

big deal is the global interconnection of the world's population, billions of people who are not only becoming consumers but also joining the global pool of innovative talent.

**Erik Brynjolfsson:** The First Machine Age was about power systems and the ability to move large amounts of mass. The Second Machine Age is much more about automating and augmenting mental power and cognitive work. Humans were largely complements for the machines of the First Machine Age. In the Second Machine Age, it's not so clear whether humans will be complements or machines will largely substitute for humans; we see examples of both. That potentially has some very different effects on employment, on incomes, on wages, and on the types of companies that are going to be successful.

**Jeremy Howard:** Today, machine-learning algorithms are actually as good as or better than humans at many things that we think of as being uniquely human capabilities. People whose job is to take boxes

## Interviewees



**Andrew McAfee** is associate director and principal research scientist of the Center for Digital Business at the Massachusetts Institute of Technology's Sloan School of Management.



**Erik Brynjolfsson** is the Schussel Family Professor of Management Science at the Sloan School.



**Anthony Goldbloom** is the founder and CEO of Kaggle.



**Jeremy Howard** is a research scientist at the University of San Francisco.

of legal documents and figure out which ones are discoverable—that job is rapidly disappearing because computers are much faster and better than people at it.

In 2012, a team of four expert pathologists looked through thousands of breast-cancer screening images, and identified the areas of what's called mitosis, the areas which were the most active parts of a tumor. It takes four pathologists to do that because any two only agree with each other 50 percent of the time. It's that hard to look at these images; there's so much complexity. So they then took this kind of consensus of experts and fed those breast-cancer images with those tags to a machine-learning algorithm. The algorithm came back with something that agreed with the pathologists 60 percent of the time, so it is more accurate at identifying the very thing that these pathologists were trained for years to do. And this machine-learning algorithm was built by people with no background in life sciences at all. These are total domain newbies.

**Andrew McAfee:** We thought we knew, after a few decades of experience with computers and information technology, the comparative advantages of human and digital labor. But just in the past few years, we have seen astonishing progress. A digital brain can now drive a car down a street and not hit anything or hurt anyone—that's a high-stakes exercise in pattern matching involving lots of different kinds of data and a constantly changing environment.

## Why now?

*Computers have been around for more than 50 years. Why is machine learning suddenly so important?*

**Erik Brynjolfsson:** It's been said that the greatest failing of the human mind is the inability to understand the exponential function. Daniela Rus—the chair of the Computer Science and Artificial Intelligence Lab at MIT—thinks that, if anything, our projections about how rapidly machine learning will become mainstream are too pessimistic. It'll happen even faster. And that's the way it works with exponential trends: they're slower than we expect, then they catch us off guard and soar ahead.

**Andrew McAfee:** There's a passage from a Hemingway novel about a man going broke in two ways: "gradually and then suddenly." And that characterizes the progress of digital technologies. It was really slow and gradual and then, boom—suddenly, it's right now.

**Jeremy Howard:** The difference here is each thing builds on each other thing. The data and the computational capability are increasing exponentially, and the more data you give these deep-learning networks and the more computational capability you give them, the better the result becomes because the results of previous machine-learning exercises can be fed back into the algorithms. That means each layer becomes a foundation for the next layer of machine learning, and the whole thing scales in a multiplicative way every year. There's no reason to believe that has a limit.

**Erik Brynjolfsson:** With the foundational layers we now have in place, you can take a prior innovation and augment it to create something new. This is very different from the common idea that innovations get used up like low-hanging fruit. Now each innovation actually adds to our stock of building blocks and allows us to do new things.

One of my students, for example, built an app on Facebook. It took him about three weeks to build, and within a few months the app had reached 1.3 million users. He was able to do that with no particularly special skills and no company infrastructure, because he was building it on top of an existing platform, Facebook, which of course is built on the web, which is built on the Internet. Each of the prior innovations provided building blocks for new innovations. I think it's no accident that so many of today's innovators are younger than innovators were a generation ago; it's so much easier to build on things that are preexisting.

**Jeremy Howard:** I think people are massively underestimating the impact, on both their organizations and on society, of the combination of data plus modern analytical techniques. The reason for that is very clear: these techniques are growing exponentially in capability, and the human brain just can't conceive of that.

There is no organization that shouldn't be thinking about leveraging these approaches, because either you do—in which case you'll probably surpass the competition—or somebody else will. And by the time the competition has learned to leverage data really

effectively, it's probably going to be too late for you to try to catch up. Your competitors will be on the exponential path, and you'll still be on that linear path.

Let me give you an example. Google announced last month that it had just completed mapping the exact location of every business, every household, and every street number in the entirety of France. You'd think it would have needed to send a team of 100 people out to each suburb and district to go around with a GPS and that the whole thing would take maybe a year, right? In fact, it took Google one hour.

Now, how did the company do that? Rather than programming a computer yourself to do something, with machine learning you give it some examples and it kind of figures out the rest. So Google took its street-view database—hundreds of millions of images—and had somebody manually go through a few hundred and circle the street numbers in them. Then Google fed that to a machine-learning algorithm and said, “You figure out what’s unique about those circled things, find them in the other 100 million images, and then read the numbers that you find.” That’s what took one hour. So when you switch from a traditional to a machine-learning way of doing things, you increase productivity and scalability by so many orders of magnitude that the nature of the challenges your organization faces totally changes.

## The senior-executive role

*How will top managers go about their day-to-day jobs?*

**Andrew McAfee:** The First Machine Age really led to the art and science and practice of management—to management as a discipline. As we expanded these big organizations, factories, and railways, we had to create organizations to oversee that very complicated infrastructure. We had to invent what management was.

In the Second Machine Age, there are going to be equally big changes to the art of running an organization.

I can't think of a corner of the business world (or a discipline within it) that is immune to the astonishing technological progress we're seeing. That clearly includes being at the top of a large global enterprise.

I don't think this means that everything those leaders do right now becomes irrelevant. I've still never seen a piece of technology that could negotiate effectively. Or motivate and lead a team. Or figure out what's going on in a rich social situation or what motivates people and how you get them to move in the direction you want.

These are human abilities. They're going to stick around. But if the people currently running large enterprises think there's nothing about the technology revolution that's going to affect them, I think they would be naïve.

So the role of a senior manager in a deeply data-driven world is going to shift. I think the job is going to be to figure out, "Where do I actually add value and where should I get out of the way and go where the data take me?" That's going to mean a very deep rethinking of the idea of the managerial "gut," or intuition.

It's striking how little data you need before you would want to switch over and start being data driven instead of intuition driven. Right now, there are a lot of leaders of organizations who say, "Of course I'm data driven. I take the data and I use that as an input to my final decision-making process." But there's a lot of research showing that, in general, this leads to a worse outcome than if you rely purely on the data. Now, there are a ton of wrinkles here. But on average, if you second-guess what the data tell you, you tend to have worse results. And it's very painful—especially for experienced, successful people—to walk away quickly from the idea that there's something inherently magical or unsurpassable about our particular intuition.

**Jeremy Howard:** Top executives get where they are because they are really, really good at what they do. And these executives trust the people around them because they are also good at what they do and because of their domain expertise. Unfortunately, this now saddles executives with a real difficulty, which is how to become data driven when your entire culture is built, by definition, on domain expertise. Everybody who is a domain expert, everybody who is running an organization or serves on a senior-executive team, really believes in their capability and for good reason—it got them there. But in a sense, you are suffering from survivor bias, right?

You got there because you're successful, and you're successful because you got there. You are going to underestimate, fundamentally, the



importance of data. The only way to understand data is to look at these data-driven companies like Facebook and Netflix and Amazon and Google and say, “OK, you know, I can see that’s a different way of running an organization.” It is certainly not the case that domain expertise is suddenly redundant. But data expertise is at least as important and will become exponentially more important. So this is the trick. Data will tell you what’s really going on, whereas domain expertise will always bias you toward the status quo, and that makes it very hard to keep up with these disruptions.

**Erik Brynjolfsson:** Pablo Picasso once made a great observation. He said, “Computers are useless. They can only give you answers.” I think he was half right. It’s true they give you answers—but that’s not useless; that has some value. What he was stressing was the importance of being able to ask the right questions, and that skill is going to be very important going forward and will require not just technical skills but also some domain knowledge of what your customers are demanding, even if they don’t know it. This combination of technical skills and domain knowledge is the sweet spot going forward.

**Anthony Goldbloom:** Two pieces are required to be able to do a really good job in solving a machine-learning problem. The first is somebody who knows what problem to solve and can identify the data sets that might be useful in solving it. Once you get to that point, the best thing you can possibly do is to get rid of the domain expert who comes with preconceptions about what are the interesting correlations or relationships in the data and to bring in somebody who’s really good at drawing signals out of data.

The oil-and-gas industry, for instance, has incredibly rich data sources. As they’re drilling, a lot of their drill bits have sensors that follow the drill bit. And somewhere between every 2 and 15 inches, they’re collecting data on the rock that the drill bit is passing through. They also have seismic data, where they shoot sound waves down into the rock and, based on the time it takes for those sound waves to be captured by a recorder, they can get a sense for what’s under the earth. Now these are incredibly rich and complex data sets and, at the moment, they’ve been mostly manually interpreted. And when you manually interpret what comes off a sensor on a drill bit or a seismic survey, you miss a lot of the richness that a machine-learning algorithm can pick up.

For more on the rapid advance of machine learning and its effect on employment, see “The Great Decoupling”—which includes a video interview with Nobel laureate Robert Shiller on wage insurance—forthcoming on [mckinsey.com](http://mckinsey.com).



**Andrew McAfee:** The better you get at doing lots of iterations and lots of experimentation—each perhaps pretty small, each perhaps pretty low-risk and incremental—the more it all adds up over time. But the pilot programs in big enterprises seem to be very precisely engineered never to fail—and to demonstrate the brilliance of the person who had the idea in the first place.

That makes for very shaky edifices, even though they’re designed to not fall apart. By contrast, when you look at what truly innovative companies are doing, they’re asking, “How do I falsify my hypothesis? How do I bang on this idea really hard and actually see if it’s any good?” When you look at a lot of the brilliant web companies, they do hundreds or thousands of experiments a day. It’s easy because they’ve got this test platform called the website. And they can do subtle changes and watch them add up over time.

So one of the implications of the manifested brilliance of the crowd applies to that ancient head-scratcher in economics: what the boundary of the firm should be. What should I be doing myself versus what should I be outsourcing? And, now, what should I be crowdsourcing?

## Implications for talent and hiring

*It’s important to make sure that the organization has the right skills.*

**Jeremy Howard:** Here’s how Google does HR. It has a unit called the human performance analytics group, which takes data about the

performance of all of its employees and what interview questions were they asked, where was their office, how was that part of the organization's structure, and so forth. Then it runs data analytics to figure out what interview methods work best and what career paths are the most successful.

**Anthony Goldbloom:** One huge limitation that we see with traditional Fortune 500 companies—and maybe this seems like a facile example, but I think it's more profound than it seems at first glance—is that they have very rigid pay scales.

And they're competing with Google, which is willing to pay \$5 million a year to somebody who's really great at building algorithms. The more rigid pay scales at traditional companies don't allow them to do that, and that's irrational because the return on investment on a \$5 million, incredibly capable data scientist is huge. The traditional Fortune 500 companies are always saying they can't hire anyone. Well, one reason is they're not willing to pay what a great data scientist can be paid elsewhere. Not that it's just about money; the best data scientists are also motivated by interesting problems and, probably most important, by the idea of working with other brilliant people.

Machine learning and computers aren't terribly good at creative thinking, so the idea that the rewards of most jobs and people will be based on their ability to think creatively is probably right. ◦

This edited roundtable is adapted from interviews conducted by **Rik Kirkland**, senior managing editor of McKinsey Publishing, who is based in McKinsey's New York office.

# Manager and machine: The new leadership equation

**Martin Dewhurst and Paul Willmott**

As artificial intelligence takes hold, what will it take to be an effective executive?

**In a 1967 *McKinsey Quarterly*** article, “The manager and the moron,” Peter Drucker noted that “the computer makes no decisions; it only carries out orders. It’s a total moron, and therein lies its strength. It forces us to think, to set the criteria. The stupider the tool, the brighter the master has to be—and this is the dumbest tool we have ever had.”<sup>1</sup>

How things have changed. After years of promise and hype, machine learning has at last hit the vertical part of the exponential curve. Computers are replacing skilled practitioners in fields such as architecture, aviation, the law, medicine, and petroleum geology—and changing the nature of work in a broad range of other jobs and professions. Deep Knowledge Ventures, a Hong Kong venture-capital firm, has gone so far as to appoint a decision-making algorithm to its board of directors.

What would it take for algorithms to take over the C-suite? And what will be senior leaders’ most important contributions if they do? Our answers to these admittedly speculative questions rest on our work with senior leaders in a range of industries, particularly those on the vanguard of the big data and advanced-analytics revolution. We have also worked extensively alongside executives who have been experimenting most actively with opening up their companies and

<sup>1</sup>Peter Drucker, “The manager and the moron,” *McKinsey Quarterly*, 1967 Number 4, forthcoming on [mckinsey.com](http://mckinsey.com).

decision-making processes through crowdsourcing and social platforms within and across organizational boundaries.

Our argument is simple: the advances of brilliant machines will astound us, but they will transform the lives of senior executives only if managerial advances enable them to. There's still a great deal of work to be done to create data sets worthy of the most intelligent machines and their burgeoning decision-making potential. On top of that, there's a need for senior leaders to "let go" in ways that run counter to a century of organizational development.

If these two things happen—and they're likely to, for the simple reason that leading-edge organizations will seize competitive advantage and be imitated—the role of the senior leader will evolve. We'd suggest that, ironically enough, executives in the era of brilliant machines will be able to make the biggest difference through the human touch. By this we mean the questions they frame, their vigor in attacking exceptional circumstances highlighted by increasingly intelligent algorithms, and their ability to do things machines can't. That includes tolerating ambiguity and focusing on the "softer" side of management to engage the organization and build its capacity for self-renewal.

## Missing links

The most impressive examples of machine learning substituting for human pattern recognition—such as the IBM supercomputer Watson's potential to predict oncological outcomes more accurately than physicians by reviewing, storing, and learning from reams of medical-journal articles—result from situations where inputs are of high quality. Contrast that with the state of affairs pervasive in many organizations that have access to big data and are taking a run at advanced analytics. The executives in these companies often find themselves beset by "polluted" or difficult-to-parse data, whose validity is subject to vigorous internal debates.

This isn't an article about big data per se—in recent *Quarterly* articles we've written extensively on what senior executives must do to address these issues—but we want to stress that "garbage in/garbage out" applies as much to supercomputers as it did 50 years

ago to the IBM System/360.<sup>2</sup> This management problem, which transcends CIOs and the IT organization, speaks to the need for a turbocharged data-analytics strategy, a new top-team mind-set, fresh talent approaches, and a concerted effort to break down information silos. These issues also transcend number crunching; as our colleagues have explained elsewhere, “weak signals” from social media and other sources also contain powerful insights and should be part of the data-creation process.<sup>3</sup>

The incentives for getting this right are large—early movers should be able to speed the quality and pace of decision making in a wide range of tactical and strategic areas, as we already see from the promising results of early big data and analytics efforts. Furthermore, early movers will probably gain new insights from their analysis of unstructured data, such as e-mail discussions between sales representatives or discussion threads in social media. Without behavioral shifts by senior leaders, though, their organizations won’t realize the full power of the artificial intelligence at their fingertips. The challenge lies in part with the very notion that machine-learning insights are at the fingertips of senior executives.

That’s certainly an appealing prospect: customized dashboards full of metadata describing and synthesizing deeper and more detailed operational, financial, and marketing information hold enormous power for the senior team. But these dashboards don’t create themselves. Senior executives must find and set the software parameters needed to determine, for instance, which data gets prioritized and which gets flagged for escalation. It’s no overstatement to say that these parameters determine the direction of the company—and the success of executives in guiding it there; for example, a bank can shift the mix between lending and deposit taking by changing prices. Machines may be able to adjust prices in real time, but executives must determine the target. Similarly, machines can monitor risks, but only after executives have determined the level of risk they’re comfortable with.

<sup>2</sup> See Stefan Biesdorf, David Court, and Paul Willmott, “Big data: What’s your plan?,” *McKinsey Quarterly*, March 2013; and Brad Brown, David Court, and Paul Willmott, “Mobilizing your C-suite for big-data analytics,” *McKinsey Quarterly*, November 2013, both available on [mckinsey.com](http://mckinsey.com).

<sup>3</sup> See Martin Harrysson, Estelle Métayer, and Hugo Sarrazin, “The strength of ‘weak signals,’” *McKinsey Quarterly*, February 2014, [mckinsey.com](http://mckinsey.com).



Consider also the challenge posed by today's real-time sales data, which can be sliced by location, product, team, and channel. Previous generations of managers would probably have given their eyeteeth for that capability. Today's unaware executive risks drowning in minutiae, though. Some are already reacting by distancing themselves from technology—for instance, by employing layers of staffers to screen data, which gets turned into more easily digestible PowerPoint slides. In so doing, however, executives risk getting a “filtered” view of reality that misses the power of the data available to them.

As artificial intelligence grows in power, the odds of sinking under the weight of even quite valuable insights grow as well. The answer isn't likely to be bureaucratizing information, but rather democratizing it: encouraging and expecting the organization to manage itself without bringing decisions upward. Business units and company-wide functions will of course continue reporting to the top team and CEO. But emboldened by sharper insights and pattern recognition from increasingly powerful computers, business units and functions will be able to make more and better decisions on their own. Reviewing the results of those decisions, and sharing the implications across the management team, will actually give managers lower down in the organization new sources of power vis-à-vis executives at the top. That will happen even as the CEO begins to morph, in part, into a “chief experimentation officer,” who draws from acute observance of early signals to bolster a company's ability to experiment at scale, particularly in customer-facing industries.

We've already seen flashes of this development in companies that open up their strategy-development process to a broader range of internal and external participants. Companies such as 3M, Dutch insurer AEGON, Red Hat (the leading provider of Linux software), and defense contractor Rite-Solutions have found that the advantages include more insightful and actionable strategic plans, as well as greater buy-in from participants, since they helped to craft the plan in the first place.<sup>4</sup>

In a world where artificial intelligence supports all manner of day-to-day management decisions, the need to “let go” will be more

<sup>4</sup> See Arne Gast and Michele Zanini, “The social side of strategy,” *McKinsey Quarterly*, May 2012, mckinsey.com.

significant and the discomfort for senior leaders higher. To some extent, we're describing a world where top executives' sources of comparative advantage are eroding because of technology and the manifested "brilliance of crowds." The contrast with the command-and-control era—when holding information close was a source of power, and information moved in one direction only, up the corporate hierarchy—could not be starker. Uncomfortable as this new world may be, the costs of the status quo are large and growing: information hoarders will slow the pace of their organizations and forsake the power of artificial intelligence while competitors exploit it.

## The human edge

If senior leaders successfully fuel the insights of increasingly brilliant machines and devolve decision-making authority up and down the line, what will be left for top management to do?

### Asking questions

A great deal, as it turns out—starting with asking good questions. Asking the right questions of the right people at the right times is a skill set computers lack and may never acquire. To be sure, the exponential advances of deep-learning algorithms mean that executive expertise, which typically runs deep in a particular domain or set of domains, is sometimes inferior to (or can get in the way of) insights generated by deep-learning algorithms, big data, and advanced analytics. In fact, there's a case for using an executive's domain expertise to frame the upfront questions that need asking and then turning the machines loose to answer those questions. That's a role for the people with an organization's strongest judgment: the senior leaders.

The importance of questions extends beyond steering machines, to interpreting their output. Recent history demonstrates the risk of relying on technology-based algorithmic insights without fully understanding how they drive decision making, for that makes it impossible to manage business and reputational risks (among others) properly. The potential for disaster is not small. The foremost cautionary tale, of course, comes from the banks prior to the 2008 financial crisis: C-suite executives and the managers one and two levels below them at major institutions did not fully understand

how decisions were made in the “quant” areas of trading and asset management.

Algorithms and artificial intelligence may broaden this kind of analytical complexity beyond the financial world, to a whole new set of decision areas—again placing a premium on the tough questions senior leaders can ask. Penetrating this new world of analytical complexity is likely to be difficult, and an increasingly important role for senior executives may be establishing a set of small, often improvisatory, experiments to get a better handle on the implications of emerging insights and decision rules, as well as their own managerial styles.

### Attacking exceptions

An increasingly important element of each leader’s management tool kit is likely to be the ability to attack problematic “exceptions” vigorously. Smart machines should get better and better at telling managers when they have a problem. Early evidence of this development is coming in data-intensive areas, such as pricing or credit departments or call centers—and the same thing will probably happen in more strategic areas, ranging from competitive analysis to talent management, as information gets better and machines get smarter. Executives can therefore spend less time on day-to-day management issues, but when the exception report signals a difficulty, the ability to spring into action will help executives differentiate themselves and the health of their organizations.

Senior leaders will have to draw on a mixture of insight—examining exceptions to see if they require interventions, such as new credit limits for a big customer or an opportunity to start bundling a new service with an existing product—and inspiration, as leaders galvanize the organization to respond quickly and work in new ways. Exceptions may pave the way for innovation too, something we already see as leading-edge retailers and financial-services firms mine large sets of customer data.

### Tolerating ambiguity

While algorithms and supercomputers are designed to seek answers, they are likely to be most definitive on relatively small questions. The bigger and broader the inquiry, the more likely that human synthesis will be central to problem solving, because machines,

though they learn rapidly, provide many pieces without assembling the puzzle. That process of assembly and synthesis can be messy and slow, placing a fresh premium on the senior leaders' ability to tolerate ambiguity.

A straightforward example is the comfort digitally oriented executives are beginning to feel with a wide range of A/B testing to see what does and does not appeal to users or customers online. A/B testing is a small-scale version of the kind of experimentation that will increasingly hold sway as computers gain power, with fully fledged plans of action giving way to proof-of-concept (POC) ones, which make no claim to be either comprehensive or complete. POCs are a way to feel your way in uncertain terrain. Companies take an action, look at the result, and then push on to the next phase, step by step.

This necessary process will increasingly enable companies to proceed without knowing exactly where they're going. For executives, this will feel rather like stumbling along in the dark; reference points can be few. Many will struggle with the uncertainty this approach provokes and wrestle with the temptation to engineer an outcome before sufficient data emerge to allow an informed decision. The trick will be holding open a space for the emergence of new insights and using subtle interventions to keep the whole journey from going off the cliff. What's required, for executives, is the ability to remain in a state of unknowing while constantly filtering and evaluating the available information and its sources, tolerating tension and ambiguity, and delaying decisive action until clarity emerges. In such situations, the temptation to act quickly may provide a false sense of security and reassurance—but may also foreclose on potentially useful outcomes that would have emerged in the longer run.

### Employing 'soft' skills

Humans have and will continue to have a strong comparative advantage when it comes to inspiring the troops, empathizing with customers, developing talent, and the like. Sometimes, machines will provide invaluable input, as Laszlo Bock at Google has famously shown in a wide range of human-resource data-analytics efforts. But translating this insight into messages that resonate with organizations will require a human touch. No computer will ever manage by walking around. And no effective executive will try to galvanize

action by saying, “we’re doing this because an algorithm told us to.” Indeed, the contextualization of small-scale machine-made decisions is likely to become an important component of tomorrow’s leadership tool kit. While this article isn’t the place for a discourse on inspirational leadership, we’re firmly convinced that simultaneous growth in the importance of softer management skills and technology savvy will boost the complexity and richness of the senior-executive role.

How different is tomorrow’s effective leader from those of the past? In Peter Drucker’s 1967 classic, *The Effective Executive*, he described a highly productive company president who “accomplished more in [one] monthly session than many other and equally able executives get done in a month of meetings.” Yet this executive “had to resign himself to having at least half his time taken up by things of minor importance and dubious value . . . specific decisions on daily problems that should not have reached him but invariably did.”<sup>5</sup> There should be less of dubious value coming across the senior executive’s desk in the future. This will be liberating—but also raises the bar for the executive’s ability to master the human dimensions that ultimately will provide the edge in the era of brilliant machines. ○

<sup>5</sup> Peter Drucker, *The Effective Executive: The Definitive Guide to Getting the Right Things Done*, New York, NY: Harper & Row, 1967.

**Martin Dewhurst** and **Paul Willmott** are directors in McKinsey’s London office.



## Picture This

# IT transformation since the 1960s

### Some things haven't changed much . . .

## 1967

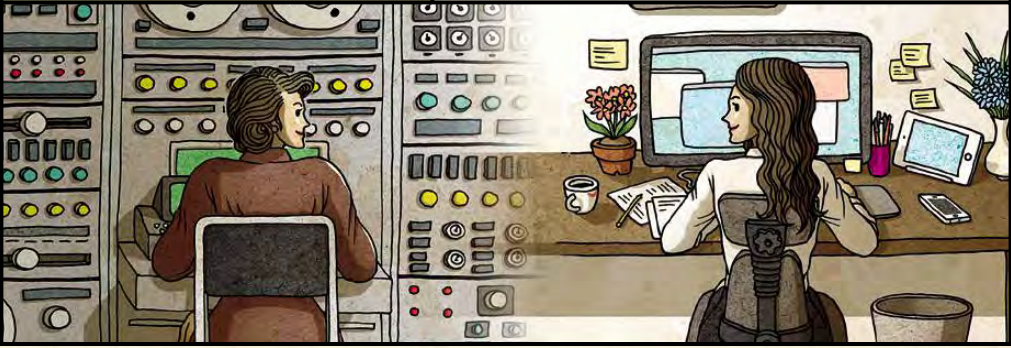
“The computer has created something that had never existed in the history of the world—namely, paying jobs for mathematicians.”

Peter Drucker,  
“The manager and the moron”

## 2011

“In the United States alone, our research shows, the demand for people with the deep analytical skills in big data (including machine learning and advanced statistical analysis) could outstrip current projections of supply by 50 to 60 percent.”

Brad Brown, Michael Chui, and James Manyika,  
“Are you ready for the era of ‘big data’?”



## 1968

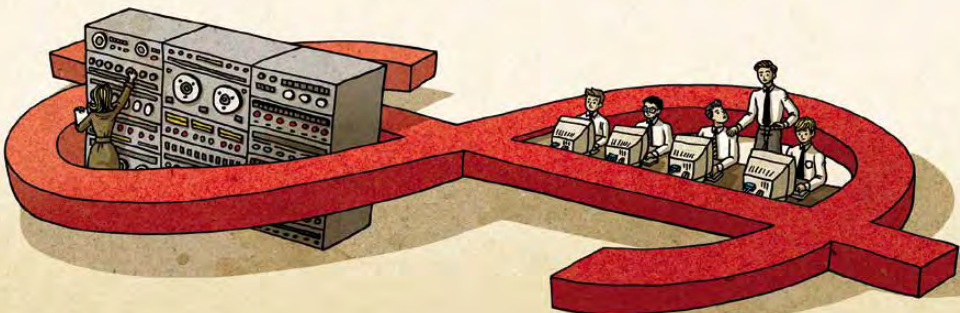
“How can I keep on justifying major computer expenditures when I can't show a dollar saved to date from our last three applications?” asks the president of a large consumer goods company.”

“Unlocking the computer's profit potential”

## 2002

“IT can be quite valuable when deployed as part of a management plan to reorganize specific core activities of a business. . . . But when generic IT solutions are applied to support functions . . . it is unlikely to move the needle on a company's productivity.”

William W. Lewis, Vincent Palmade, Baudouin Regout, and Allen P. Webb, “What's right with the US economy”





A sampling of then-and-now quotes about information technology from the *McKinsey Quarterly* archives highlights how this dynamic sector has confounded and amazed senior executives through the decades.

50  
Q

... while others have been transformed

1965

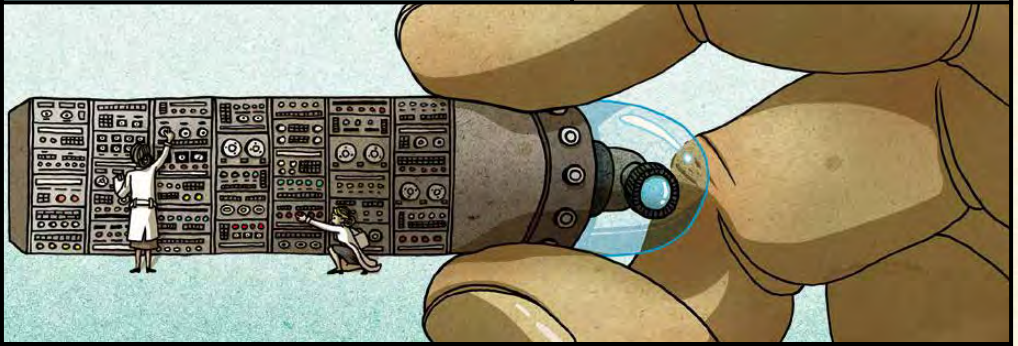
“Three top executives stood on a Manhattan sidewalk watching workmen maneuver seven huge wooden crates into their corporate headquarters building. The hardware inside the crates represented a commitment of perhaps \$3 million over the next two years in machine rental, systems, and programming costs.”

John T. Garrity and V. Lee Barnes, “The payout on computers”

2010

“Pill-shaped microcameras already traverse the human digestive tract and send back thousands of images to pinpoint sources of illnesses.”

Michael Chui, Markus Löffler, and Roger Roberts, “The Internet of Things”



1967

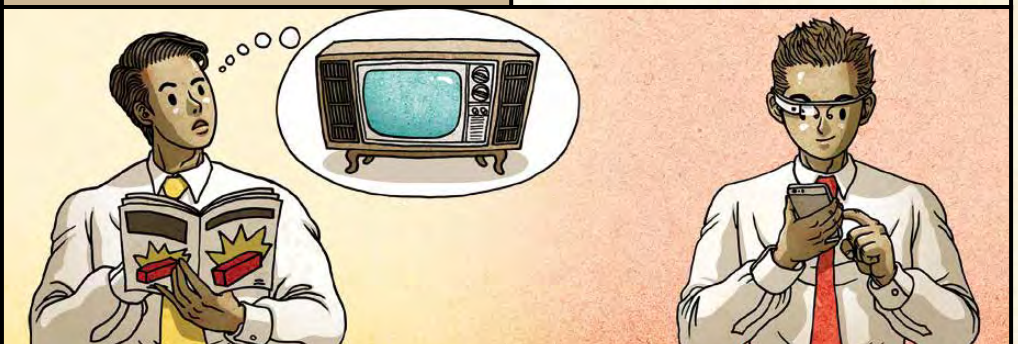
“Promotional and advertising material . . . could well combine the best features of television and catalog advertising, and provide consumers with a sort of animated Sears Roebuck catalog in which the pictures would spring into vivid life as the remote customers turned the electronic ‘pages.’”

Douglas F. Parkhill, “The promise of the computer utility”

2013

“Consumers may soon be able to search by image, voice, and gesture; automatically participate with others by taking pictures or making transactions; and discover new opportunities with devices that augment reality in their field of vision.”

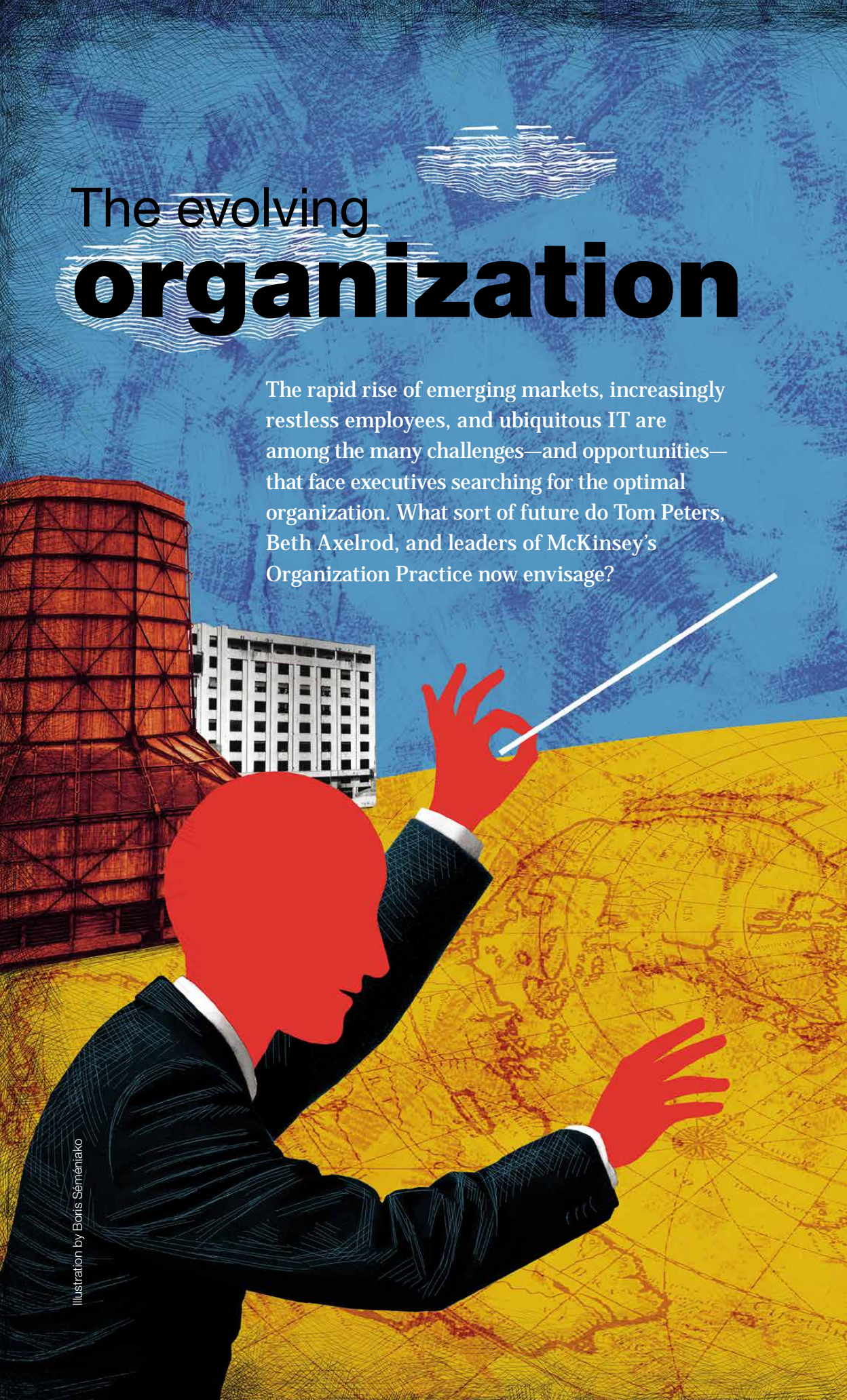
Peter Dahlström and David Edelman, “The coming era of ‘on-demand’ marketing”





# The evolving **organization**

The rapid rise of emerging markets, increasingly restless employees, and ubiquitous IT are among the many challenges—and opportunities—that face executives searching for the optimal organization. What sort of future do Tom Peters, Beth Axelrod, and leaders of McKinsey's Organization Practice now envisage?





**88**  
**Tom Peters**  
**on leading the**  
**21st-century**  
**organization**

**97**  
**The past and**  
**future of global**  
**organizations**

Wouter Aghina,  
Aaron De Smet, and  
Suzanne Heywood

**107**  
**Realizing the**  
**power of talented**  
**women**

Michelle Angier  
and Beth Axelrod





# Tom Peters on leading the 21st-century organization

Thirty years after leaving McKinsey, the prolific author returns to discuss tomorrow's management challenges and the keys to organizational change and transformative leadership in any age.

**About two years ago**, Tom Peters felt as if he were falling behind. In response, he cleared out his calendar and spent much of the next 18 months reading recent business books. The result? "I'm more confused than when I started," he quips.

The remark is vintage Peters—a stimulating mix of provocation, sloganeering, down-home wisdom, and self-deprecation. In a world that's anything but straightforward and simple, Peters refuses to reduce business and management to an orderly set of bullet-point prescriptions. This is, after all, the man who famously declared that "If you're not confused, you're not paying attention."

Across the nearly 40 years Peters has been writing about business, he has remained a remarkably consistent champion of what might be called the "softer" side of management. His many books and articles have, as much as anything, beaten the drum for the personal meaning and significance that workers, managers, and executives can draw from the hours, days, and years they spend working for a living. A hint: it's not about accumulating wealth or getting promoted to the top.

Not that Peters hasn't kept up with the changing times. He was one of the first to take to the blogosphere, in 1999. His Twitter presence is prolific. And his relentless calendar of speeches and client

engagements continues to expose him to a wide range of big and small companies across the globe—a source of ongoing renewal.

Now 71, the former Navy Seabee and McKinsey partner took time away from the pastoral pleasures of his Vermont farm—and his heavy travel schedule—to visit McKinsey’s Boston office for a wide-ranging discussion with Suzanne Heywood and Aaron De Smet, two leaders of the firm’s Organization Practice, and *Quarterly* editor in chief Allen Webb.

*The Quarterly: This year marks the 40th anniversary of your start in McKinsey’s San Francisco office. From the perspective of your many years helping executives, what would you say is missing from today’s discussion about management?*

**Tom Peters:** Well, one answer to that, as far as I’m concerned, is “I don’t know.” My real bottom-line hypothesis is that nobody has a sweet clue what they’re doing. Therefore you better be trying stuff at an insanely rapid pace. You want to be screwing around with nearly everything. Relentless experimentation was probably important in the 1970s—now it’s do or die.

It takes a certain confidence, though. The first partner I worked for at McKinsey had the self-assurance to look a chief executive officer in the eye and say, “We don’t know what the hell’s going on. Can we play with this together?”

*The Quarterly: How do you find a focus if you’re experimenting with everything?*

**Tom Peters:** Peter Drucker once said the number-one trait of an effective leader is that they do one thing at a time. Today’s technology tools give you great opportunities to do 73 things at a time or to at least delude yourself that you are. I see managers who look like 12-year-olds with attention deficit disorder, running around from one thing to the next, constantly barraged with information, constantly chasing the next shiny thing.

The only thing on earth that never lies to you is your calendar. That’s why I’m a fanatic on the topic of time management. But when you use that term, people think, “Here’s an adult with a brain. And he’s

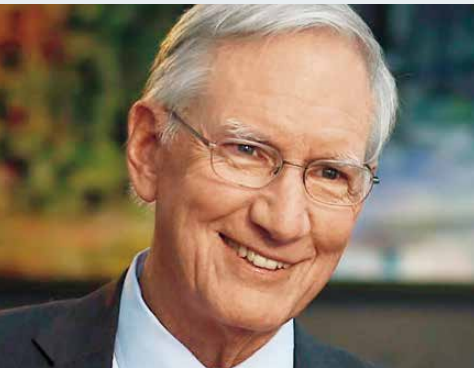
teaching time management. Find something more important, please.” But something more important doesn’t exist.

Did you ever read *Leadership the Hard Way*, by Dov Frohman? The two things I remember from that book are, one, that 50 percent of your time should be unscheduled. And second—and I love that this is coming from an Israeli intelligence guy—that the secret to success is daydreaming.

*The Quarterly*: What else should executives do with all that unstructured time?

**Tom Peters**: I was at a dinner party recently with a guy who’s probably one of the top ten finance people in the world. At one point

## Tom Peters



### Vital statistics

Born November 7, 1942, in Baltimore, Maryland

### Education

Graduated with bachelor’s and master’s degrees in civil engineering from Cornell University and an MBA and a PhD from Stanford University’s Graduate School of Business

### Career highlights

**The Tom Peters Company** (1984–present)

Founder and chairman

**McKinsey & Company** (1974–81)

Partner

**The White House** (1973–74)

Drug-abuse adviser

**US Navy** (1966–70)

Combat engineer in the Seabees

### Fast facts

Coauthor, with Robert Waterman, of *In Search of Excellence: Lessons from America’s Best-Run Companies*; ranked by NPR as one of the “top three business books of the century”

Has traveled more than 5 million miles, giving more than 2,500 speeches in 67 countries

Followed by more than 107,000 people on Twitter

Helped create the 7-S framework of organizational effectiveness



he said, “Do you know what the biggest problem is with big-company CEOs? They don’t read enough.”

Isn’t it intriguing that’s number one on his list? We’ve always had to keep up. But now we need to be students in a way that maybe we haven’t been before. Albert Allen Bartlett said that “the greatest shortcoming of the human race is our inability to understand the exponential function.” I think he was talking about the sustainability of population growth, but he might just as well have been talking about how big companies never outperform the market over the long haul.

*The Quarterly: Or about increasingly short executive tenures.*

**Tom Peters:** The question is how do you survive? One way to deal with the insane pace of change is by living to get smarter and to learn new things. Another way is by going up the value-added chain beyond the kinds of tasks and roles that can be automated. Kleiner Perkins just hired the former president of the Rhode Island School of Design, John Maeda, as one of their general partners. His role is to introduce design thinking into each of the companies that Kleiner Perkins invests in, to get the design element into them. Machines can automate a lot of things, but design is something humans do best. It’s part of the way you play around with things—part of the relentless experimentation. You falter, you get back up, and eventually you figure things out. That’s the design process.

“Design mindfulness” has got to be in everything you do—down to the littlest thing. Even the language you use in your e-mails. There’s a character to communications. There’s a character to business. It’s how you live in the world.

*The Quarterly: And this informs organizational design too, right? Going beyond lines and boxes on the org chart.*

**Tom Peters:** I hate to ever defend lines and boxes. But I also don’t believe that hierarchy is dead. I flew 40 hours with Emirates Airline last week, and I want to think there were charts and boxes in the Emirates Airline operation, particularly in the Mechanics Department. I said to somebody while I was there, “I’m trained as a civil engineer.

I want to drive across a bridge where there was a project manager whose alternate name was ‘son of a bitch.’”

But at the same time, the fact that people think first about lines and boxes means they haven’t gotten the corporate-culture message yet. Lou Gerstner has this wonderful passage in his book that says something to the effect of, “When I came to IBM I was a guy who believed in strategy and analysis. What I learned was that corporate culture is not part of the game: It *is* the game.”<sup>1</sup>

You know, I was a San Francisco 49ers fan, and their great coach Bill Walsh said the same thing. In 1979, he inherited a team that had won 2 games and lost 14 the previous season. His entire first year was teaching football players how to wear coats and ties on buses. And he said, “The key is to become a professional organization.” On the one hand, coats and ties may be a formality, but Walsh said, “You’ve got to do the corporate culture first.” Two years later, he won the Super Bowl.

*The Quarterly:* Having Joe Montana on his team helped.

**Tom Peters:** I would not disagree with that; how could a 49ers fan disagree with that?

*The Quarterly:* Our own research into organizational performance and health finds strong correlations between the “soft” stuff and shareholder returns, which probably doesn’t surprise you. What’s the best way to think about the softer side of management?

**Tom Peters:** Unless you were born with a very, very silver spoon, you’re going to spend the majority of adult life at work. Why shouldn’t this be a joyful experience or an energetic experience or a vivid experience?

If you’re a leader, your whole reason for living is to help human beings develop—to really develop people and make work a place that’s energetic and exciting and a growth opportunity, whether you’re

<sup>1</sup> Louis V. Gerstner Jr., *Who Says Elephants Can’t Dance?: Inside IBM’s Historic Turnaround*, New York, NY: HarperBusiness, 2002.

running a Housekeeping Department or Google. I mean, this is not rocket science.

It's not even a shadow of rocket science. You're in the people-development business. If you take a leadership job, you do people. Period. It's what you do. It's what you're paid to do. People, period. Should you have a great strategy? Yes, you should. How do you get a great strategy? By finding the world's greatest strategist, not by being the world's greatest strategist. You do people. Not my fault. You chose it. And if you don't get off on it, do the world a favor and get the hell out before dawn, preferably without a gilded parachute. But if you want the gilded parachute, it's worth it to get rid of you.

*The Quarterly: Do you feel leaders are starting to get that message rather than giving greater importance to the charts-and-boxes approach?*

**Tom Peters:** Some of them. Maybe 5 percent? Somebody once asked me, "What is your number-one goal in life?" I said, "My number-one goal in life, at the age of 71, is to be able to walk past a mirror without barfing."

People say that fame is important, but in the end it really isn't. People say that wealth is important, but in the end it really isn't. My ex-wife had a father who was in the tombstone business. I've seen a lot of tombstones. None of 'em have net worth on 'em. It's the people you develop. That's what you remember when you get to be my age.

I don't have much patience with CEOs who don't see it that way.

*The Quarterly: Why is it so difficult to make that sale—to get the culture point across?*

**Tom Peters:** In his new book,<sup>2</sup> Rich Karlgaard says that companies end up in a vicious—rather than a virtuous—circle, in which the people who get promoted to the top and the people who advise them come from "the dark side," meaning they're less engaged with the

<sup>2</sup> Rich Karlgaard, *The Soft Edge: Where Great Companies Find Lasting Success*, San Francisco, CA: Jossey-Bass, April 2014.

people side, the culture side, the values side of things. There's a bit of truth to that.

*The Quarterly:* *Let's come back to the question of change. How does change come about?*

**Tom Peters:** We're in the big-change business, aren't we? Isn't that the whole point? I mean, any idiot with a high IQ can invent a great strategy. What's really hard is fighting against the unwashed masses and pulling it off—although there's nothing stupider than saying change is about overcoming resistance. Change is about recruiting allies and working each other up to have the nerve to try the next experiment. You find allies. You encircle the buggers.

You don't bring about change in real big meetings or virtual meetings. You bring it about one person at a time, face to face—when we discover we have some common interests and we're both pissed off, say, at too many CEOs who talk about charts and boxes. And so we create a conspiracy. It's a subversive act, and being coconspirators in a subversive act requires trust and intimacy.

Change is also about giving reinforcement at precisely the right moment. I like to say that I never help anybody travel 95 yards down a field. I find people who are already on their opponent's five-yard line, and at exactly the right moment I give 'em a very big, swift kick in the butt. And they fall over the goal line.

*The Quarterly:* *How, if at all, do today's communications technologies change the equation?*

**Tom Peters:** I'm more than willing to say that today's two year old is going to deal with his or her fellow human beings differently than you or I do. But the reality is it's 2014, not 2034, and I would argue that for the next 20 years, we're still safe believing in the importance of face-to-face contact. I'm not arguing against virtual meetings, but I'm telling you that if I'm running IBM, I want to be on the road 200 days a year as much in 2014 as in 2004 or in 1974. It has nothing to do with the value of the tools, but I've got to see you face to face now and then; I don't think I can do it all screen to screen.

Maybe the virtual-reality tools of 2024 are going to erase the need for that; I don't know. But I still can't conceive of attempting to

change a sizable organization without being on an airplane 200 days a year.

*The Quarterly:* You spend a considerable amount of time with large and small organizations. How would you describe the difference between the two?

**Tom Peters:** We tend to confuse 5 percent of leading-edge companies with the entire economy. And that's a real problem.

It's also important to recognize that there's Silicon Valley and then there's ROP, Rest of Planet. The fact that Google and Facebook might be doing this or that particular thing is interesting, but they don't exactly employ all four billion of the working people in the world.

I was looking at a US job-creation report recently. Only 5 percent of the jobs had come from companies classified as big. All the rest of 'em came from small and midsize enterprises. There's certainly a difference in how they respond to my speeches. People who work for big businesses tend to come up afterward and say, "It's the best speech I've ever heard in my life, but I can't do anything—my boss won't let me." Small-business people say, "It was the lousiest speech I've ever heard in my life, but I'm going to take one thing and do it tomorrow morning."

Now one answer to that, if you believe former US labor secretary Bob Reich, is to put more women in management. They know how to do a work-around. Men don't know how to do work-arounds, because the only thing we understand is hierarchy. That's an exaggeration, of course, but then again the neuroscientists tell us it's not that big an exaggeration. The male response is, "I can't do anything about it 'cause my boss is really against it." And the female response, by and large, would be, "Well, I know Jane who knows Bob who knows Dick, and we can get this thing done." They do it circuitously.

*The Quarterly:* Is a 21st-century leader different from a 20th-century one?

**Tom Peters:** I used to have a little slide in my presentations back when the century was turning. And it said, "Plus 21L equals minus 21L." And the point was that 21st-century-AD leadership is probably just about the same as 21st-century-BC leadership. And,

fundamentally, it is about organizing the affairs of our fellow human beings to provide some sort of a service to other people.

At some deep level, people are people, and so I believe passionately that there is no difference between leading now and leading then. What I certainly believe is that anybody who is leading a sizable institution who doesn't do what I did and take a year off and read or what have you, and who doesn't embrace the new technology with youthful joy and glee, is out of business. ○

This interview was conducted by **Suzanne Heywood**, a director in McKinsey's London office; **Aaron De Smet**, a principal in the Houston office; and **Allen Webb**, the editor in chief of *McKinsey Quarterly*, who is based in the Seattle office.



# The past and future of global organizations

Wouter Aghina, Aaron De Smet, and Suzanne Heywood

After more than 50 years of trying, the search for an ideal model of the global organization remains elusive. But intriguing new experiments are under way.

**Consider if you will the following quotations,** each from executives at Philips, the global technology company—one in the late 1970s and one quite recently:

1. “We typically lose out when a market commoditizes and we no longer differentiate, further aggravated by us being too slow or expensive.”<sup>1</sup>
2. “The matrix is too slow—we are in a very turbulent market with great potential, and we have far too many low-cost competitors. We need very short communication lines, quick decisions, alertness—we’ve got to be able to adapt fast.”<sup>2</sup>

The first statement, from current chairman and CEO Frans van Houten, is the new one; it appeared in a 2013 working paper from the MIT Center for Information Systems Research. The second, older statement, from a Philips product manager, initially appeared in a 1978 *Management Today* article and was quoted by Tom Peters in his first *McKinsey Quarterly* piece, “Beyond the matrix organization.”

<sup>1</sup> Martin Mocker, Jeanne W. Ross, and Eric van Heck, “Transforming Royal Philips: Seeking local relevance while leveraging global scale,” MIT Center for Information Systems Research, MIT Sloan School of Management, Working Paper 394, February 27, 2014.

<sup>2</sup> Tom Peters, “Beyond the matrix organization,” *McKinsey Quarterly*, 1979 Number 3, forthcoming on mckinsey.com.

The similarity of these statements, from thoughtful leaders at a well-run company, speaks to the difficulty of the global corporation's perennial challenge: how to capture scale across borders while differentiating products and services to suit the needs of local customers—all without letting complexity get in the way of speed and agility.

Aspects of this persistent challenge have played out over the years in recurring fashion in major corporations, in the marketplace for management ideas, and in the *Quarterly*. Surveying the range of heroic efforts by great practitioners and thinkers to solve these challenges once and for all, you come away convinced that there is no silver bullet to the global company's challenge. Indeed, faith in one-dimensional solutions—redrawing organizational boundaries, constructing matrices, winning the war for local talent, reengineering business processes, moving the global headquarters—is arguably dangerous. The fact is that solutions need to combine changes across organizational structures, people, and processes.

We recognize that the absence of a simple solution may not be entirely satisfying and defies the impulse to fix everything at once through a single “big bang” change to one of these elements. But we think that's more realistic, too. We also believe that, within this mix, a focus on processes is taking on greater importance—not in place of people and structure but as a means of influencing them. Thanks to digital technologies, the growing connectivity between knowledge workers, and the more collaborative organizational behavior this connectivity supports, ours is a time of significant process innovation both inside and across corporate boundaries. These process innovations may provide new ways forward in dealing with the persistent difficulties of managing complex global organizations and meeting the urgent need for greater efficiency in the face of rising global competition.

## **The evolving organizational challenge: A brief tour**

In 1959, five years before the birth of *McKinsey Quarterly*, an ambitiously titled article appeared in the *Harvard Business Review*:

“Creating a *world* enterprise.” Written by McKinsey’s Gilbert H. Clee and Alfred di Scipio, it made the radical proposal (radical, at least, for its day) that expansionist American corporations, instead of treating international activities as subdivisions of their domestic businesses, should turn the US organization into a subdivision of the wider global one.

The Clee and di Scipio article, calling as it did for “major revisions in business thinking,” was pertinent as well as provocative. In the late 1950s, after all—with the reconstruction of Europe well under way after World War II and new industrial forces stirring in Asia—growing numbers of North American executives were eyeing overseas pastures for the first time. Faced with economic pressures and foreign competition at home, and lured by bright prospects abroad, a majority of representative executives questioned in a McKinsey survey of the time (and cited by Clee and di Scipio) reported that these companies were actively stepping up the ratio of their foreign-to-domestic investments.

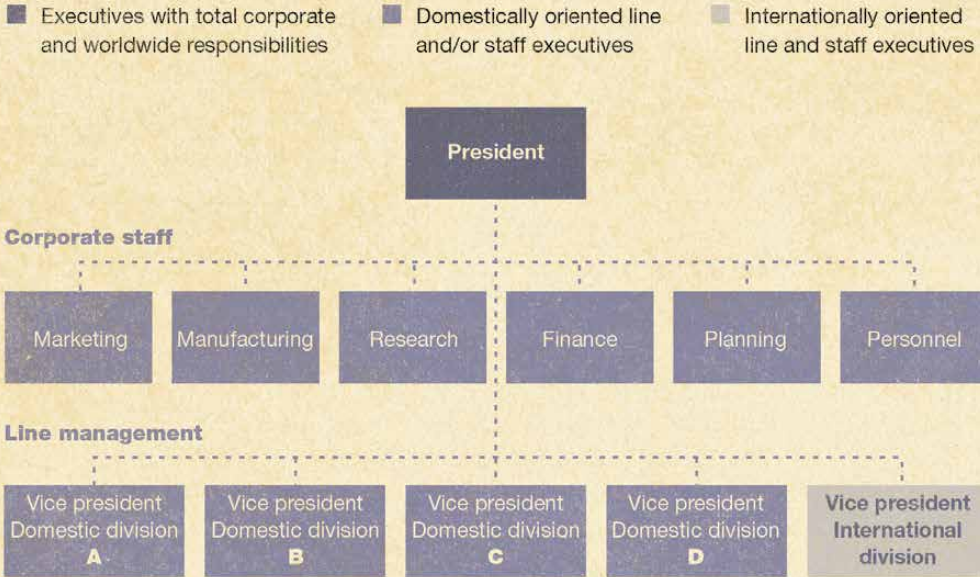
Opening such profit opportunities beyond their borders, though, created new planning, resource-allocation, and management-control issues, as well as unprecedented organizational strains. Old structures and relationships that had worked smoothly for an export-oriented domestic company were no longer appropriate as global engagement increased.

In many ways, that organizational response is the story of multinational enterprises over the past 50 and more years. In a 1965 article<sup>3</sup> featured in the *Quarterly*’s third-ever issue, Clee and McKinsey consultant Wilbur Sachtjen set out some evolving organizational patterns for global companies. There were several such models. The traditional international-division structure and its variants (Exhibit 1) all involved a shift in responsibility for policy and worldwide strategic planning to the corporate center. Then the international division was replaced by subsidiaries in assigned geographic areas, run by locally based senior line managers bearing full operating responsibility, notably in production and sales. Next, product-based and business-based structures replaced the international division with units run by senior line managers bearing worldwide responsibility for the P&L of their divisions.

<sup>3</sup> Gilbert H. Clee and Wilbur Sachtjen, “Organizing a worldwide business,” *McKinsey Quarterly*, 1965 Number 3.

## Exhibit 1

**In 1965, this exhibit from a *McKinsey Quarterly* article showed how international operations were often treated as an afterthought.**



Source: Gilbert H. Clee and Wilbur Sachtjen, "Organizing a worldwide business," *McKinsey Quarterly*, 1965 Number 3

Some of these approaches, particularly the last one, contained the seeds of the matrix organization, which gained favor in the 1970s as a solution for large organizations struggling to coordinate decision making and activities that cut across functional and business-unit lines. The theory was strong, but when Tom Peters appraised the scene, in the late 1970s, "the matrix 'solution' had brought with it problems at least as knotty as those it was supposed to cure."<sup>4</sup>

The quest for an alternative led Peters, Julien Phillips, and Bob Waterman to assert that "Structure is not organization" (as another of their *Quarterly* articles in that period was titled) and McKinsey to develop the 7-S framework of organizational effectiveness and change. Interestingly, four of the seven (skills, staff, style, and shared values) pertain to people, one (systems) to processes, and one to

<sup>4</sup> Tom Peters, "Beyond the matrix organization," *McKinsey Quarterly*, 1979 Number 3, forthcoming on [mckinsey.com](http://mckinsey.com).

structure. The seventh, strategy, spoke to the important and still-relevant idea, first articulated by Alfred Chandler in his 1962 book, *Strategy and Structure*, that the structure of an organization can be designed only after it has formed its strategy. The underlying focus of the 7-S framework on structure, people, and processes still represents a useful summary of the challenges in global organizational design today. In our experience, corporate leaders devote most attention to the first two and probably not enough to the third—even though processes can greatly influence both structure and talent.

Processes admittedly came to the fore during the business-process reengineering movement of the 1990s, which involved “rethinking and, if necessary, fundamentally reengineering how a company delivers value to its customers.” Such a rethinking, according to a 1993 *Quarterly* article, “inevitably runs up against the company’s entrenched business system and organizational structure,” requiring process redesign to “help managers break through these barriers.”<sup>5</sup> For large, complex organizations, taking a clean-sheet approach to processes rather than automating existing ones as information technology advanced was a sensible step. But it was far from sufficient to ensure a smoothly humming, healthy organization.

Continued advances in technology and connectivity have allowed companies to push well past process reengineering to new forms of engagement within and across organizational boundaries. Social networks are an obvious element of this development. But even before the full flowering of Facebook (and its equivalents behind corporate firewalls), McKinsey’s Lowell Bryan, in a 2007 *Quarterly* article, asserted that “in the digital age, there is no better use of a CEO’s time and energy than making organizations work better.” In his view, that involved “remaking the organization to mobilize the mind power of the workforce and tap into its underutilized talents, knowledge, relationships, and skills.”<sup>6</sup> Companies have begun realizing this vision by crowdsourcing ideas and holding “values jams,” as IBM famously did. They have even been throwing open the strategy

<sup>5</sup> See John Browning, “The power of process redesign,” *McKinsey Quarterly*, 1993 Number 1.

<sup>6</sup> See Lowell Bryan and Claudia Joyce, “Better strategy through organizational design,” *McKinsey Quarterly*, 2007 Number 2.

process “to enhance the quality of dialogue, improve decision making, and boost organizational alignment,” as Arne Gast and Michele Zanini wrote in a 2012 *Quarterly* article.<sup>7</sup>

## As the world turns

We survey this scene with respect both for the continually shifting nature of organizational opportunities and challenges and for the relentless efforts of leading companies and management minds to respond to them. Large global companies are often beset by complex structures and country-specific processes that proliferated over years of geographic expansion, not to mention cultural differences that can undermine smooth operations. By necessity, these companies have been at the forefront of formulating those responses, even if, at times, only by assimilating the innovations of smaller, more swiftly moving companies. Despite these efforts, high-performing global companies consistently score lower than more locally focused ones on several critical dimensions of organizational health, according to a decade-long study—of hundreds of businesses—that we highlighted in a 2011 *Quarterly* article.<sup>8</sup> These critical dimensions include direction setting, coordination and control, innovation, and external orientation.

Our research and experience suggest that the existence and persistence of a “globalization penalty” isn’t just a function of today’s context, typified by rapid growth in emerging markets and technological change. It also reflects the continuation of a journey that global organizations have been on for many years. Continually remaking the organization to embrace change is a messy endeavor—and one that’s likely, at any given time, to be accompanied by growing pains.

If that’s true, there’s no substitute for fairly regular soul searching to adapt structures, people, and processes to create the most effective organizational designs (Exhibit 2). Experimentation continues along

<sup>7</sup> See Arne Gast and Michele Zanini, “The social side of strategy,” *McKinsey Quarterly*, May 2012, [mckinsey.com](http://mckinsey.com).

<sup>8</sup> See Martin Dewhurst, Jonathan Harris, and Suzanne Heywood, “Understanding your ‘globalization penalty,’” *McKinsey Quarterly*, July 2011, [mckinsey.com](http://mckinsey.com).



each of these dimensions. L'Oréal has emphasized its people credentials by establishing itself as the top employer for female sales and marketing talent in South Korea through a conscious emphasis on empowerment, communication style, and manageable working hours. Philips has recently identified three core processes—idea to market, market to order, and order to cash—it uses to create standard models for the products, services, software, and systems that flow through most of its global operations. Although standardization has

Exhibit 2

**There's no substitute for regularly revisiting how to adapt structures, people, and processes to create the most effective organizational design.**

**People**

- Leadership
- Skills
- Workforce planning
- Values and culture



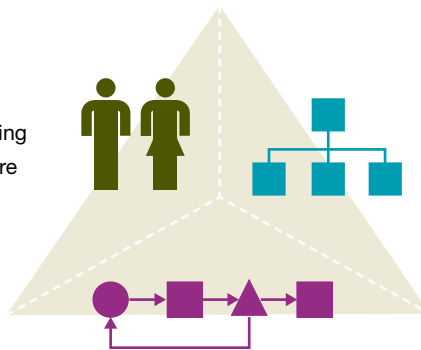
**Structure**

- Reporting lines
- Roles and accountabilities
- Governance structures
- Geographic footprint
- Partnerships



**Processes**

- Decision making
- End-to-end business processes
- Cross-functional linkages
- Performance and knowledge-management systems



**Ask yourself ...**

Does the composition of our leadership group—and our talent proposition—adequately reflect our aspirations in high-growth markets?

Are we doing enough to help our people build skills to differentiate themselves from increasingly intelligent machines?

How can we use social networks to speed up cross-border and cross-functional processes?

Which processes do we want to standardize (using, say, industry standards) and which do we want to differentiate?

How much of our structure can be virtual?

How can technology help relocate key functions to optimize our talent, engagement with customers, and cost advantages in emerging markets?

been imposed on these core processes, exceptions are permitted, and the idea is to drive greater speed and flexibility, more localization, and higher efficiency simultaneously.<sup>9</sup>

Experiments like Philips's point toward more process-oriented structures, which are likely to become increasingly useful given the power of technology and connectivity to transcend traditional boundaries both within and across companies. Process improvements today can go beyond the cost-oriented "denominator" of corporate productivity to embrace the "numerator" of learning-based performance-enhancement networks and spaces where innovation and growth occur.

The possibilities are particularly alluring for large global organizations, where these process-oriented structures can help harness the specialized capabilities of a distributed network of business partners. In the apparel industry, for instance, Li & Fung has organized and coordinated a fully fledged supply network of more than 10,000 business partners.<sup>10</sup> The flexible scalability of this network, which uses processes to address the structural aspects of organizational design, speaks to the global corporation's long-standing difficulty in coordinating complex and far-flung production operations.

These distributed process structures are proving powerful *inside* companies, as well—for instance, by bringing diverse participants into the strategy-creation process. For example, in 2009, 3M reinvigorated its Markets of the Future process, which provides critical input to its strategic planning. The company's crowdsourcing of the strategy process to more than 1,200 employees in 40 countries helped energize creative talent—the people side of the organizational-design conundrum—while identifying nine new future markets with an aggregate revenue potential in the tens of billions of dollars.

Similarly, learning environments where teams of participants interact with other teams around sets of processes designed to enhance performance not only help solve difficult operational challenges but also enable employees to continue the learning and

<sup>9</sup> See Mocker, Ross, and van Heck, "Transforming Royal Philips: Seeking local relevance while leveraging global scale," 2014.

<sup>10</sup> F. Warren McFarlan, Michael Shih-ta Chen, and Keith Chi-ho Wong, "Li & Fung 2012," Harvard Business School Case 312-102, January 2012.

development that create meaning in their professional lives. Consider, for example, how the software company SAP drew together participants from a wide range of otherwise unrelated companies, in 2003, to help speed the adoption of its new NetWeaver technology architecture. The processes in this network structure supported peer-to-peer collaboration and learning among customers, systems integrators, and independent service vendors, while helping SAP to achieve its own strategic objectives. These newfangled process-oriented solutions to the structure and people part of the perennial organizational challenges contrast—and yet coexist—nicely with the more traditionally standardized routines, which remain suitable for wringing scale-based cost efficiencies from less varying (and often industrial) processes. The trick is to recognize which process-based structure is best for which objective and then to proceed accordingly.

We're starting to see glimmers of global organizational redesign reflecting these new realities. One international engineering company, for example, has restructured to put its commercial-project process (including decisions about whether to bid on a contract and then the preparation of the offer) at the heart of the organizational structure. This model enables more effective team-based problem solving that transcends organizational silos and geographic boundaries, in part through the use of collaborative technologies.

It's still too early to paint a definitive picture of what the global organization of the future will look like as efforts like these become more commonplace. What we're confident about is that "process-centric" thinking will be a more prominent feature of organization design than it has been in the past, even if the peculiarities of culture suggest that each process-based structure is likely to be a custom fit. Leaders should bear in mind these principles as they pursue their own solutions:

- Tomorrow's answer will be different from today's. As markets, competitors, and strategies evolve, so will the structural, people, and process elements of a coherent design system.
- The specification of globally consistent roles and processes should be kept to a minimum. The most effective companies allow business units to tailor their organizations to local conditions so as to better achieve their wider commercial goals.

- **Technology has made location less important than it used to be—but it still matters. While videoconferencing and social media keep far-flung executives connected, co-location brings additional benefits. Companies should always seek ways to bring people physically together.**

If the last 50 years are any guide, the most important organizational structure, process, and people issues will continue to ebb and flow as the environment evolves and organizations respond. But new opportunities for organizational innovation will present themselves, and those companies able to recognize and willing to embrace them will gain huge competitive advantage by doing so. ◉

*The authors would like to thank Vidushi Sharma and David Turnbull for their contributions to this article.*

**Wouter Aghina** is a principal in McKinsey's Amsterdam office, **Aaron De Smet** is a principal in the Houston office, and **Suzanne Heywood** is a director in the London office.

# Realizing the power of talented women

**Michelle Angier and Beth Axelrod**

In 2010, eBay embarked on a journey to bring more women into its top ranks. It found that commitment, measurement, and culture outweigh a business case and HR policies.

**During the summer of 2013**—about two and a half years after the start of a major effort to increase the number and proportion of senior-leadership roles held by women at eBay Inc.<sup>1</sup>—we conducted a global gender-diversity survey on the attitudes and experiences of our top 1,700 leaders.<sup>2</sup> The survey revealed some good news: for example, our leaders—women and men alike—consider gender diversity an important business goal. Moreover, we found no aspiration gap: women and men, in roughly the same proportion, want to move up.

Many of the findings, however, were troubling, for they suggested that men and women experience the company in strikingly different ways. A majority of women, for instance, felt that their male colleagues didn't understand them very well, though a majority of men felt well understood by the women. Likewise, women were significantly less likely than men to believe that their opinions were listened to and more likely to doubt that the most deserving people received promotions. Finally, we did not see any significant differences in the survey results across geographic regions. Our

<sup>1</sup> By which we mean all our business units (eBay Marketplaces, PayPal, and eBay Enterprise), referred to as eBay hereafter.

<sup>2</sup> Senior vice presidents, vice presidents, senior directors, and directors.



gender-diversity challenges (and therefore opportunities) were global ones. We were both frustrated and motivated by these survey results.<sup>3</sup>

But they didn't necessarily surprise us. The company's gender initiative really had significantly increased the representation of women in leadership roles. Between 2011 and 2013, in fact, their number rose by 30 percent annually, and we increased the proportion of leadership roles held by women every year. This early progress exceeded our expectations and showed that it is possible to make a difference.

Nonetheless, we believed that our demographic results ran ahead of the cultural reality—the numbers were moving in a positive direction, but the experience of women at our company wasn't yet notably different. At the root of the challenge, we believed, was the pervasive mix of unconscious mind-sets, behavior, and “blind spots” that color anyone's perceptions of gender. Now, with some wind at our backs from the progress on demographics, and armed with the data from the gender survey, we committed ourselves to addressing our cultural challenges.

### **'This is personal'**

Even getting to this point took significant effort. Gender diversity has long been a passion of our CEO, John Donahoe, but it wasn't something he could tackle immediately upon assuming the role, in 2008. The global recession and a business turnaround at eBay came first.

By 2010, the turnaround was succeeding, and John was keen to sustain it. In a competitive marketplace for talent, he argued, eBay should create a business climate where talented women could thrive. At the end of that year, he launched our Women's Initiative Network (WIN). Although today this effort includes women at all levels, we began with leaders, defined as directors and higher, because we wanted to start with something manageable that we could do well. Besides, if you don't have role models at the top, it's

<sup>3</sup> We do not believe that our cultural environment is significantly different from those of other global companies. However, we know that our gender-diversity initiative significantly raised the awareness and expectations of both women and men at eBay. We believe that the survey results reflect this and that our culture of candor enables people to speak their minds. The candid feedback we received provides clear direction for our ongoing efforts.

harder to encourage women at earlier stages of their careers to pursue their aspirations.

At our first global WIN Summit, in January 2011, eBay's 200 highest-ranking women met with our senior-executive team for three days of professional development and networking. At the outset, John went onstage and described, in quite personal and moving terms, why gender diversity matters so much to him. He recalled one of his wife's more challenging career experiences and concluded, "I just remember thinking: my god, she has a tougher row to hoe than me." He went on to discuss her career experience over 25 years, the issues she has faced as a successful professional woman, and how it felt to observe all this. John finished by explaining his aspirations for WIN and his desire for a more supportive, inclusive environment at eBay. "This is personal," he told us.

Indeed, from the outset, John's personal conviction rather than a conventional business case inspired our gender-diversity initiative—not because the case is irrelevant<sup>4</sup> but because it can't, in itself, generate enough passion and conviction to sustain gender diversity as a priority. Our company's experience thus far suggests that a committed chief executive and C-suite are essential to telegraph the importance of the effort. When senior leaders engage with something, others are encouraged to make individual commitments, establish shared goals, and accept collective accountability. Real change can't happen without a commitment from the top, because that's where people take their cues.

Soon after the WIN Summit, John publicly demonstrated his commitment by proposing to eBay's board that he be held accountable for the effort's success. The focus areas he chose included increasing the number of women in leadership roles, reducing their attrition rate below that of men, and improving women's satisfaction with their jobs and work. He also committed himself to mentoring five women leaders. (We should note here that we do not set quotas, which we philosophically oppose; we simply aim to achieve progress.)

<sup>4</sup> See, for example, Thomas Barta, Markus Kleiner, and Tilo Neumann, "Is there a payoff from top-team diversity?," *McKinsey Quarterly*, April 2012, [mckinsey.com](http://mckinsey.com).

John's role modeling had a remarkable effect. About a year after he had taken on the goals—a year when the initiative was broadly discussed internally—he was in a meeting with our senior vice presidents. John was reviewing his annual goals when someone spontaneously suggested that they all adopt a similar set of gender-related ones. By the end of the discussion, all our senior vice presidents (about 20 of our most senior leaders) had agreed to include gender-related items in their annual goals. Later that year, we rolled out a modified version of the goals to all our vice presidents (about 170 leaders). These included:

- All open leadership positions should have a diverse slate of candidates and interviewers.<sup>5</sup>
- Top-talent women, at every level, should have career-development plans and discuss them with their managers.
- Leaders should monitor the diversity of their promotion pipelines to ensure fairness.
- Each senior vice president and vice president should help to develop top-talent women by mentoring or sponsoring five of them.
- The company would continue to measure progress on our demographics regularly.

Why did we wait a year for this to happen? After all, we could have mandated goals right away. We didn't, because we strongly felt that senior leaders needed to find and "own" their roles in our gender-diversity effort at their own pace. John called this "meeting everybody where they're at in the journey."

## **A focused approach**

The goals our leaders chose helped us focus on a few essential people processes in the early days: recruiting, promotions, and development planning. This, in turn, inspired straightforward

<sup>5</sup> This idea came from a participant at the first WIN Summit. Recognizing that the suggestion made sense, John announced on the spot that he would adopt it.



and obvious changes. For example, we insist on diverse slates of candidates. We've expanded our pool of women candidates for top-management jobs by looking more carefully internally, by more actively leveraging our leaders' and employees' personal networks, and by expecting our sourcers to find more diverse candidates. In addition, we stepped up our presence at targeted recruiting events, such as the annual Grace Hopper Celebration of Women in Computing and the conference of the Society of Women Engineers.

Other changes seemed straightforward but in reality required us to take on hidden biases more directly. In our promotion and development-planning processes, for example, we wanted to counter the assumption that managers—men and women alike—know what teammates want from their careers. That's particularly dangerous for women because a manager can unwittingly make incorrect assumptions about things like their geographic mobility or interest in stepping up to the next level. In addition, if a woman doesn't have a deliberate conversation about her aspirations with her manager, she may assume that merely doing good work and keeping her head down will win her promotion.

To help counter this problem, we began encouraging all women in leadership roles to define their aspirations, create a plan to achieve them, and discuss it with their managers. Because talking about gender is difficult for everyone, we created simple tools our managers can use to prompt and sustain productive development conversations (see sidebar, "Talking the talk to thrive").

# Talking the talk to thrive

Some women suspect that their managers may not be comfortable talking to them about their careers. Some men think they might do or say the wrong thing when talking to women. Few people have much experience discussing gender and understanding how it affects careers. Our company therefore decided to facilitate the conversation by choosing a few topic areas and suggesting questions and discussion starters that managers could use.

## Career aspirations

What are your career aspirations?

What do you dream about or imagine in your future?

How could your aspirations be better met?

How connected do you feel to our purpose?

## Compelling, challenging work

How excited are you about the work you are doing today?

What would it take for you to feel you are innovating in your job?

How much are you learning/growing in your current role?

## Team-working norms

What do you want in your next role?

When will you be ready for a change?

How well does your team define expectations and working norms for each other?

How well do those norms enable you to make choices that work for your work life and personal life?

What flexibilities do you want/need to enable your work life and personal life to thrive?

## Measure and share

**Companies measure what matters. We pull our gender data twice a year and share this internally at our leadership forums and WIN events. Measurement is essential to establish a baseline for tracking progress and to reinforce accountability. Everyone knows we will be transparent with the numbers inside our company.**

At the beginning of 2011, shortly after WIN started, we determined the number and proportion of women leaders across the organization and in each business, function, region, and critical talent segment. We looked at the number and proportion of women hires and promotions, compared the attrition rates of our men and women leaders, and established the number and proportion of women at every management level. Looking at the data is motivating. It reinforces our commitment to gender diversity and instills confidence that the company is serious.

We share the demographic data at meetings of senior vice presidents and vice presidents and at each global WIN Summit. The data are also discussed at staff meetings convened by the heads of each business and function and by the technology and customer-service/operations groups. These organizations therefore see their own gender data, including the mix by level, the progress and status of women leaders, and the outcomes of decisions on hires, promotions, and terminations. In the staff meetings, we also show the number and proportion of women leaders reporting to the direct reports of each business-unit president, so all of them can see the data.

It's hugely important to share this kind of information within the company because progress begets progress, and even senior leaders need encouragement to maintain focus and enthusiasm. Last and perhaps most important, transparency demonstrates commitment and conviction.

## **Changing the culture—for everyone**

Since WIN began, eBay has more than doubled the number of women in leadership roles. At the same time, we have increased the proportion of women in leadership by improving the promotion rates and (notably) our retention of female leaders. We've made progress across all businesses, functions, geographic regions, and key workforce segments, including technology. Yet the numbers can also tell a different story. At the most senior level, we are still almost exclusively male, and our board diversity remains a work in progress. Despite the impressive increase in numbers at the director-and-above level, we are far from declaring victory and are in fact humbled by our experience thus far.



We know that shifting the culture to improve the day-to-day experience of women at eBay has only just begun. Yet cultural change is essential because culture trumps all: even the best policies fail if employees think it isn't really acceptable to avail themselves of them without hurting their careers. Furthermore, women must have faith that our people processes are fair to feel confident that they can build lasting careers at eBay.

The perception of fairness in people processes matters to everyone, not just women. Many of the concerns they expressed in our survey—for example, about promotions, hiring, challenging assignments, mentorship, or the visibility of job opportunities—worried men too. By improving our execution and the perceived fairness of our people processes, we can make eBay a better place for women and men to build their careers.

This is no small undertaking—nearly 6,000 people managers around the globe must raise their game—but it is also a tremendous opportunity. We intend to spur cultural change through multiple efforts, including our people-manager-effectiveness initiative already under way. We have just embarked on this journey.



As we reflect on what drove the early progress of our gender-diversity initiative, it is clear that a few things mattered most: senior-leadership commitment and conviction, a focus on a few people processes, and the measurement of our data. Our continued progress will require shifting mind-sets and changing our culture so each employee gains a greater awareness and understanding of these issues and becomes better equipped to embrace our differences and support our successes.

This isn't just a journey for women. Academic research shows that everyone has gender biases and expectations. Women and men acquire these attitudes, many of them unconscious, early in life. Starting with the children we raise, we must rewrite the norms that limit both genders, and this will take time. "Meeting everybody

where they're at in the journey" is hard while establishing trust and sustaining momentum for change, but it's a worthy effort. In the future, winning companies will be those that learn to deploy the entire workforce productively and inclusively. We hope eBay will be one of them. ○

**Michelle Angier** is the global leader of eBay's Women's Initiative Network. **Beth Axelrod**, the company's senior vice president of human resources, is an alumna of McKinsey's London and Stamford offices, where she was a principal. In the late 1990s, she was a leader of McKinsey's War for Talent project, which quantified the challenges that leading US companies faced in finding talented executives.

Thriving over the

# long haul



**118**  
**Reflections on  
corporate longevity**

Ian Davis

**123**  
**Lou Gerstner  
on corporate  
reinvention  
and values**

**130**  
**The power  
of enduring  
companies**

Perspectives from  
Ratan Tata and  
Marcus Wallenberg

What have we learned about why some companies survive—and thrive—much longer than others? And does it really matter? Former IBM CEO Lou Gerstner, Ratan Tata, and Marcus Wallenberg join former McKinsey managing director Ian Davis to debate the issues.



# Reflections on corporate longevity

Ian Davis

McKinsey's former managing director explores the phenomenon of long-lived companies and the values and practices they share.

**Does corporate longevity matter?** And, if so, why do some companies manage to create value and endure over decades—even centuries—whereas other companies slowly die or fizzle out after a brief burst of productive creativity?

The editors of *McKinsey Quarterly*—which has been publishing articles for 50 years, while the firm itself has been active for 88 years—asked me for some personal reflections on these questions. The perspectives below are based on my own beliefs and observations and on discussions with business leaders, three of whom are featured in the following pages.

## Does longevity matter?

Free-market economists tend to dismiss the value of longevity. Joseph Schumpeter's term "creative destruction" has become shorthand for a messy but effective way of delivering valuable innovations and progress. No rational person in a free society, these economists say, would want to frustrate innovations that render existing products and companies obsolete but bring prosperity and benefits to the broader population. They add that no rational person in a free society would want to prevent new managers or owners from using existing assets more productively.



Up to a point, I support that argument. But it needs to be examined and challenged constantly if the underlying idea is not to be abused. Not all destruction is creative, and not all creativity is destructive. The demise of a company is not damaging only for its stakeholders. Sometimes, it may also be an inefficient way of innovating in the economy or an industry, because it breaks up established and tangible assets, such as R&D know-how and strong consumer and supplier relationships. A company that learns to adapt and change to meet market demands avoids not just the trauma of decline or an unwanted change of ownership but also very real transaction and disruption costs.

Corporate endurance should not be an end in itself. That said, in a very real sense, survival is the ultimate performance measure.

## **Time frames and planning cycles**

Longevity, in a business context, is a relative concept. Some industries (such as professional services, private banking, insurance, and luxury watches) more naturally incline to long time frames, particularly when customer trust is of high importance. In other industries (such as technology or fashion) the pace of change tends to be much faster and barriers to entry structurally much lower. A tech firm that survives for 15 years has, in a business sense, lasted as long as a consumer-product company that survives for 30. Longevity should be measured in innovation cycles, not years.

In the 1980s and 1990s, strategic-planning cycles and the concept of “strategic pacing” were much in vogue. I think it’s a shame that companies no longer focus on them to the same extent. Companies get into trouble—or the financial markets get unduly agitated or frustrated—when there is a mismatch between natural industry cycles and investor, customer, or even employee horizons. A primary task of strategic management is to define the relevant planning cycles and to think about how to manage from one to the next.

This thought process is quite different from formulaic strategic-planning exercises, which have correctly been called into question by many practitioners, as well as my colleagues in McKinsey’s



Strategy Practice.<sup>1</sup> Rather, for executives truly interested in longevity, this sort of strategic management involves regularly undertaking the difficult exercise of self-critically examining the fit between their enduring mission, industry and business cycles, and evolving strategic priorities.

## What does it take?

Why is it that most companies disappear and so few endure over time? In considering this question, I exclude from its scope state-owned and family businesses (whose survival can be an end in itself rather than an outcome of sustained success). I also distinguish between corporate endurance and corporate ownership. Organizations can continue to thrive under different owners, and many companies are bought and sold precisely because they lack the scale to leverage or exploit their success. Indeed, evidence from the oft-maligned private-equity industry suggests that a change of ownership can strengthen a company's performance.

The causes of business demise—of a failure to endure—are well documented at a general level. They include failure to address changes in market demand or competition effectively; human failings such as hubris, exhaustion, or loss of ambition; loss of operational competitiveness; and above all an inability to deal with new, often disruptive, technological innovations. And sometimes, of course, external factors outside a company's control, such as natural disasters, intervene.

Perhaps less commented upon is the challenge presented by legacy assets and legacy mind-sets. A failure to adapt to seismic change (whether customer or technology driven) is, I have found, rarely caused by intellectual oversights or an inability to grasp what is happening. More often, the culprit is an inability to escape from a successful past and to accept the huge financial and human costs of responding effectively. Kodak, for example, actually invented digital photography but proved unable to embrace the new

<sup>1</sup> See Chris Bradley, Lowell Bryan, and Sven Smit, "Managing the strategy journey," *McKinsey Quarterly*, July 2012, [mckinsey.com](http://mckinsey.com).

technology until it was too late. In this sense, and echoing Marcus Wallenberg's sentiments on page 130, creative destruction as a managerial concept can be most effective when applied *within* an organization.

In my observation, organizations that successfully adapt over multiple product and innovation cycles demonstrate a number of characteristics, in addition to the foundational requirements of sustained ambition and basic competitiveness. These companies:

- relentlessly focus on their customers, and not just on their performance with customers but also on understanding what their best and most innovative customers are doing
- engage their key suppliers to solve problems and identify opportunities, so that these activities also become key sources of insight
- avoid introversion and actively seek to understand broader trends outside their own organizations and industries
- challenge legacy thinking and legacy mind-sets, encouraging—and tolerating the cost of—internal competition and cannibalization
- avoid hubris, by creating a culture of dissatisfaction with current performance, however good. Andy Grove was right—paranoia is helpful
- adopt a predominantly “grow your own” talent philosophy to create a robust and loyal culture but mix it selectively and judiciously with external hires. In times of fundamental and disruptive change, enduring companies must be willing to change their management
- do not tolerate extended tenures in top-management roles
- focus relentlessly on values and constantly demonstrate why they matter—the values of a company, to be meaningful, must be reflected in the key managerial processes, such as performance

evaluation and appointments. A company's values are judged by actions and behavior, not words and mission statements

- meaningfully and purposefully engage younger generations in formulating policy and organizational development, both to stimulate innovation and to prevent generational barriers. Conversely, new tech companies in Silicon Valley might think more about how to engage older managerial generations!
- encourage their boards to play an active—but supportive—role in challenging priorities and the status quo, particularly in times of success

Each of these themes and characteristics involves risks and conflicts. As Lou Gerstner says in his interview in the next few pages, “there’s a ditch on both sides of the road.” But successful navigation will lead to the enduringly strong performance that underpins corporate longevity.

Since it was the *Quarterly's* longevity that inspired me to pen these reflections, I want to close this essay with happy 50th anniversary wishes. I for one, wherever I am, will be mightily distressed if *McKinsey Quarterly* is not celebrating its 100th anniversary in 50 years' time. ○

**Ian Davis** served as McKinsey's managing director from 2003 to 2009. He is currently chairman of Rolls-Royce and is a member of the United Kingdom's Cabinet Office Board. He also sits on the boards of BP and Johnson & Johnson.

# Lou Gerstner on corporate reinvention and values

The former IBM CEO offers his thoughts on the principles and strategies that sustain a company in the long run.

**Lou Gerstner will always be known** as the man who saved IBM after resuscitating, then reinvigorating, the near bankrupt company when he took over as chairman and CEO in 1993. Gerstner's career, though, spanned 43 years which also included more than a decade at McKinsey, senior positions at American Express, and four years as chairman and CEO of RJR Nabisco. Since stepping down from IBM in 2002 he has continued to lead an active "portfolio" life in education, healthcare, and private equity. In this conversation with former McKinsey managing director Ian Davis, he reflects on the DNA of companies that keep on creating value.

*The Quarterly: How do you think about corporate longevity? Does it help executives if their companies explicitly aim to be around a long time, by which I mean a generation or more?*

**Lou Gerstner:** I don't think so. It seems to me that companies should focus on trying to be successful five years from now, perhaps ten. If your business has already been around, say, 20 years, I don't see how it can help the management team if one of the primary objectives is getting to 100. It's not something they can execute on. I'm not sure what you can do to guarantee success in that time frame, or even on a 20- to 30-year view.

*The Quarterly: So why do some businesses last much longer than others?*

**Lou Gerstner:** A lot of it has to do with the industry. Many companies that have made it over many years have been in slow-changing industries that haven't been much affected by the external environment, that are characterized by significant scale economies, or that are heavily regulated.

Take food production. The big global players in this sector are not, typically, huge profit generators, and their turnover only increases modestly—say, by 1 to 2 percent a year, in line with demographic trends. But those businesses are in a nice place: there's not much new competition, and the changes they're up against, whether technological or otherwise, tend to be relatively small. In the automobile industry, it's long cycle times and scale economies that deter others. And in banking, it's been regulation. You see a lot of small bank start-ups in the US but the reason that so many of the large players have been around a long time is that state and federal laws make it difficult to start a national bank.

*The Quarterly: Conversely, the entry and exit barriers are much lower in, say, software or technology, where capital requirements for new entrants can be relatively light.*

**Lou Gerstner:** That's true, and it's in those sectors that companies are most often subject to strong competition, technological innovation, and regulatory change. The question, at the end of the day, is whether leaders in these and other industries can adjust. I would argue that more often than not they can't. Think about all those companies in the computer or consumer-electronics industries, like Control Data or RCA. Corporate longevity is either driven by the leadership team that is there or by a new one that comes in from the outside and is able to manage the transition to a significantly different competitive environment. There was nothing that said American Express or IBM couldn't go out of business, and IBM very nearly did. For a long time, American Express wouldn't go into credit cards, because it thought that would cannibalize its Travelers Cheques business. When I arrived at IBM in 1993, there was no inheritable or even extendable platform. The company was dying.

*The Quarterly: Is there something in the DNA of those firms that have endured—perhaps a willingness to respond to a change of direction—that enables them to survive?*

**Lou Gerstner:** In anything other than a protected industry, longevity is the capacity to change, not to stay with what you've got. Too many companies build up an internal commitment to their existing businesses, and there's the problem: it's very, very difficult to "eat your seed corn," go into other activities, or radically change something fundamental about what you've been doing, like the pricing structure or distribution system. Rather than changing, they find it easier to just keep doing the same things that brought them success. They codify why they're successful. They write guidebooks. They create teaching manuals. They create whole cultures around sustaining the model. That's great until the model gets threatened by external change; then, all too often, the adjustment is discontinuous. It requires a wrench, often from an outside force. Andy Grove put it well when he said "only the paranoid survive."

Remember that the enduring companies we see are not really companies that have lasted for 100 years. They've changed 25 times or 5 times or 4 times over that 100 years, and they aren't the same companies as they were. If they hadn't changed, they wouldn't have survived. If you could take a snapshot of the values and processes of most companies 50 years ago—and did the same with a surviving company in 2014—you would say it's a different company other than, perhaps, its name and maybe its purpose and maybe its industry. The leadership that really counts is the leadership that keeps a company changing in an incremental, continuous fashion. It's constantly focusing on the outside, on what's going on in the marketplace, what's changing there, noticing what competitors are doing.

*The Quarterly: How important are values in sustaining companies, even those that change? And can values be an enemy of change?*

**Lou Gerstner:** I think values are really, really important, but I also think that too many values are just words. When I teach at the IBM School, I use the annual reports of about ten major companies that invariably announce, on the back page or inside back page, "These are our values." What's striking to me is that almost all the values are the same. "We focus on our customers; we value teamwork; we respect the dignity of our workforce."



## Lou Gerstner



© Getty Images

### Vital statistics

Born March 1, 1942, in Mineola, New York

### Education

Graduated with a bachelor's degree in engineering from Dartmouth College in 1963 and an MBA from Harvard Business School in 1965

### Career highlights

#### The Carlyle Group (2003–present)

Senior adviser (2008–present)

Chairman (2003–08)

#### IBM (1993–2002)

Chairman and CEO

#### RJR Nabisco (1989–93)

Chairman and CEO

#### American Express (1978–89)

Various executive positions

#### McKinsey & Company (1965–78)

Director

### Fast facts

Awarded the designation of honorary Knight of the British Empire from Queen Elizabeth II, in June 2001, for his work in education and business

Chairman of the board of directors at the Broad Institute of MIT and Harvard

Vice chairman of Memorial Sloan Kettering Cancer Center's boards of overseers and managers

Received the American Museum of Natural History's Distinguished Service to Science and Education Award

But when you go inside those companies, you often see that the words don't translate into practices. When I arrived at IBM, one of my first questions was, "Do we have teamwork?" because the new strategy crucially depended on our ability to provide an integrated approach to our customers. "Oh, yes, Lou, we have teamwork," I was told. "Look at those banners up there. Mr. Watson put them up in 1938; they're still there. Teamwork!" "Oh, good," I responded. "How do we pay people?" "Oh, we pay on individual performance." The rewards system is a powerful driver of behavior and therefore culture. Teamwork is hard to cultivate in a world where employees are paid solely on their individual performance.

I found a similar problem at American Express, where our stated distinguishing capability was the quality of the service we delivered versus that of our competitors Visa and MasterCard, which were owned by a diverse group of bank holding companies. It turned out that on a quarterly basis, we only measured financial performance and that the assessment of our service quality, on crucial customer-satisfaction matters such as statement clarity or phone-call wait times, was only done once a year. People do what you *inspect*—not what you *expect*.

If the practices and processes inside a company don't drive the execution of values, then people don't get it. The question is, do you create a culture of behavior and action that really demonstrates those values and a reward system for those who adhere to them? At American Express, we had an annual award for people, all over the world, who delivered great service. One winner I'll never forget was a young chauffeur whose car windscreen had smashed and hit him in the head while he was driving an American Express client to the airport. Bleeding profusely, he continued the journey and got the client to the plane on time. By explicitly recognizing through world-wide communications the incredible commitment of people like this (and the rewards they receive), you can get people to behave in a certain way. Simply talking about it as part of your values isn't enough.

*The Quarterly: Some companies with reputedly strong values still find it hard to change. Do values ever get in the way of the adjustment you are talking about?*

**Lou Gerstner:** I find it hard to think about bad values per se. The problem, as I say, comes when values are simply ignored and not reinforced every day by the internal processes of the company. The fault lies in not demanding adherence to the important values: sensitivity to the marketplace, awareness of competitors, and a willingness to deliver to the customer whatever he or she wants, regardless of what your internal historical assets have been.

In that sort of situation, it's very hard to change. IBM was enamored with mainframes because mainframes made all the money. But if we were going to change, we had to find a way to take the money away from mainframes and allocate it to something else. So it isn't what companies say; it's what they do. Do you think Eastman Kodak

didn't see the move from analog to digital photography? Of course they did. They invented it. But if they had a value—I'm sure they did—of being market sensitive and following the customer, they didn't follow it. They didn't make the shift.

*The Quarterly: Are there any relevant lessons from your post-IBM experience in the private-equity industry?*

**Lou Gerstner:** I think that private-equity activity tends to come at the end of the corporate cycle, when a company is already in trouble, has been mismanaged, or is an orphan in need of new leadership. So private equity is another outside agent that comes in when management has failed to do what it needs to do.

*The Quarterly: Is the management of generational change within a company an important component of adaptability and staying sensitive to the market? Does involving younger people meaningfully in routine decisions help create the right conditions for change?*

**Lou Gerstner:** The problem with all of these things is that there's a ditch on both sides of the road. I've known times in my career when older and wiser heads restrained younger people carried away by short-term dollar signs. So it's hard to generalize, but certainly you have to listen to all the executive team. Organizations, in my experience, tend to be healthiest where there is a supremacy of

From the *McKinsey Quarterly* archives, 1973

*Thirty years before famously saying, "The last thing IBM needs right now is a vision," Lou Gerstner warned Quarterly readers against complacency after drafting a plan.*

"Nothing new really happens as a result of the plan, except that everyone gets a warm glow of security and satisfaction now that the uncertainty of the future has been contained."



—Louis V. Gerstner Jr.,  
"Can strategic planning pay off?"

ideas, where people are willing to listen to the youngest person in the room—provided, of course, that he or she has the facts.

My successor at IBM has embraced what we called an IBM jam. It goes on for several days; every IBMer could dial in and discuss important topics like cloud computing or mobile computing. That represented a real effort at IBM to tap the ideas of the younger, newer employees, not just the senior executives. Always listening to the younger folks won't guarantee you the best strategy. But if you don't listen to them at all, you won't get it either.

*The Quarterly: Do you think ownership structure makes a difference? We've noticed that a large proportion of enduring companies have been privately owned.*

**Lou Gerstner:** There are obviously many more private companies than public companies, certainly in the United States, so you would probably expect this outcome. One thing I would say, though, is that the preoccupation with short-term earnings in the public-company environment—not something private companies are so concerned with—is quite destructive of longevity.

And that's a bad thing. Who says the analysts are right when they mark down a company's stock just because it makes 89 cents in the first quarter rather than the 93 forecast by the market? Are they thinking about the long-term competitiveness of the company? Are they thinking this would have been a good time to reinvest, or are they just churning out numbers and saying they want earnings per share to go up every quarter? This kind of short-term pressure on current earnings can lead to underinvestment in the long-term competitiveness of a business.

It's very interesting to me that a company like Amazon has been able to convince the world that it doesn't have to make meaningful earnings, because it's investing for the future—building warehouses and building distribution and building hardware and software applications. It's so rare to see that happening. It's like they're acting like a private company. It could be that private companies can operate without the pressure of trade-offs of short- and long-term investment and performance. ○

This interview was conducted by **Ian Davis**, former managing director of McKinsey, and McKinsey Publishing's **Tim Dickson**.

# The power of enduring companies

In separate commentaries, Marcus Wallenberg and Ratan Tata both argue that creative destruction can be taken too far.

## Marcus Wallenberg



© Bloomberg via Getty Images

“We should not underestimate the significance of large, enduring firms”

**Joseph Schumpeter** focused his attention largely on new businesses and their role in eating the breakfast of established companies. But in my view, “intrapreneurs”—risk takers on the inside—are just as important as entrepreneurs in promoting new ideas and new technology.

One Swedish company that supports this point is Atlas Copco, an engineering business that has been in our family’s portfolio since 1873 and is still one of the leading global players in pneumatic machinery and mining equipment. I remember my grandfather, when he was chairman, citing it as an example of a business that had been able to reinvent itself over and over again. In the early days, for example, Atlas sold materials for railroad construction, but that activity was hit hard by the recession of the 1870s. Fortunately,

other innovations came through, notably in pneumatics, while the company later was nimble enough to acquire patents from Rudolf Diesel to make diesel engines.

Much depends on the attitude of the owners, board, and top management. In my opinion, it's their strong duty to foster a culture of constant innovation that drives its own creative destruction on the inside. A related issue is a willingness, when things look bad, to find ways of breathing new life into and rebuilding even very old companies. It's not easy, but in my experience it's possible, with the right determination, to take the long view, persevere, and succeed in what seems to others a hopeless situation. It's not always necessary to break up companies or introduce innovations from the outside to stay ahead of the game. Established firms have a huge natural advantage in the marketplace because of their strong customer and supplier bases, their long-term shareholder structure, and their deep reservoir of capable people.

We have stuck with many businesses where we were confident that doing so would create value in the long run. The capital markets need investors who recognize that the innovation cycle is often measured in years and that you can't create successful product portfolios with a short-term view. In our part of the world, the presence of dominant long-term owners on the share registers—investors who feel a responsibility toward companies in difficulty—is an advantage. When those shareholders take the lead in a restructuring, other institutions tend to follow.

Owners and boards who are in it for the long term must choose their leaders according to the challenge at hand; there are appropriate skills for a restructuring, but different ones will be needed when expansion is called for. It's vital for a chairman to be closely in touch with the CEO—on boards where I am chairman, I speak to the CEO a couple of times a week. I also think boards ought to stay informed on operations, immersing themselves in specific investment decisions rather than just talking about long-term strategy. Nordic boards have been quite successful in doing that.

All in all, we should not underestimate the significance of large, enduring firms. From society's perspective, think of what I call "the



rings on the water”: the indirect business generated by a large corporation like Ericsson through small suppliers, service contracts, technology spin-offs, and the like. Sometimes we are too philosophical about losing large businesses and forget the economic impact on these networks.

**Marcus Wallenberg** is chairman of SEB (Skandinaviska Enskilda Banken), the bank founded by his great-great-grandfather in 1856. He also serves as the chairman of Saab and Electrolux and sits on the boards of directors for Investor AB and AstraZeneca, among others.

“The challenge for leaders is how to keep injecting urgency”

**Ratan Tata**



© Bloomberg via Getty Images

**I believe it's really important** to have companies survive over the longer term. I hate to see major corporations disappearing from the scene because someone has cashed out, because the managers have been unable to escape their comfort zones, or because boards have not been sufficiently nimble to change with the times. When these things happen, decades of effort and innovation go to waste. It's bad when businesses don't fight it out, whether the enemy is a competitor's new product, an industry-transforming innovation (such as transistors), or the impact of something clearly outside a company's control (like climate change).

Disruptive events often provide the spark to change course or enter a new field, as opposed to allowing competitors to nibble at your feet. I was lucky to become chairman of Tata Group when previously protected Indian markets were opening up to foreign companies. The basis of competition had changed, and we had an opportunity

to go overseas. Some people tried to block those reforms at the time. But their impact now is visible everywhere, particularly in the automobile sector—all global car manufacturers are present in the Indian market. Open markets have encouraged local companies to adopt new technologies, to become more creative, to lower costs, and to improve offerings to the consumer.

One of the big dangers for any business is complacency; the challenge for leaders is how to keep injecting urgency. I think much depends on how good a CEO is at motivating his or her team and generating the sort of excitement that leads people to do things in different ways. That doesn't mean taking cavalier risks. People in Tata's companies have been remarkably receptive to simple slogans such as "Question the unquestioned" and "Lead, never follow." Managerial rotation is critical: we used to have managers who did not even rotate away from a single function, who started in manufacturing and finished in manufacturing or started in R&D and retired in R&D. Unilever is good at avoiding that, and we have learned from it.

Besides the ability to innovate, I believe an attachment to good values drives corporate longevity. It's something we have had throughout Tata's history and on which we never compromise. Values are in our DNA, and they have carried us into new markets, helped us redistribute our assets, and, ultimately, made us a successful global company.

One hundred years from now, of course, I expect Tata to be much bigger and more global than it is now. More important, I hope the group comes to be regarded as India's best—best in the way we operate, best in the products we deliver, and best in our value system and ethics. ○

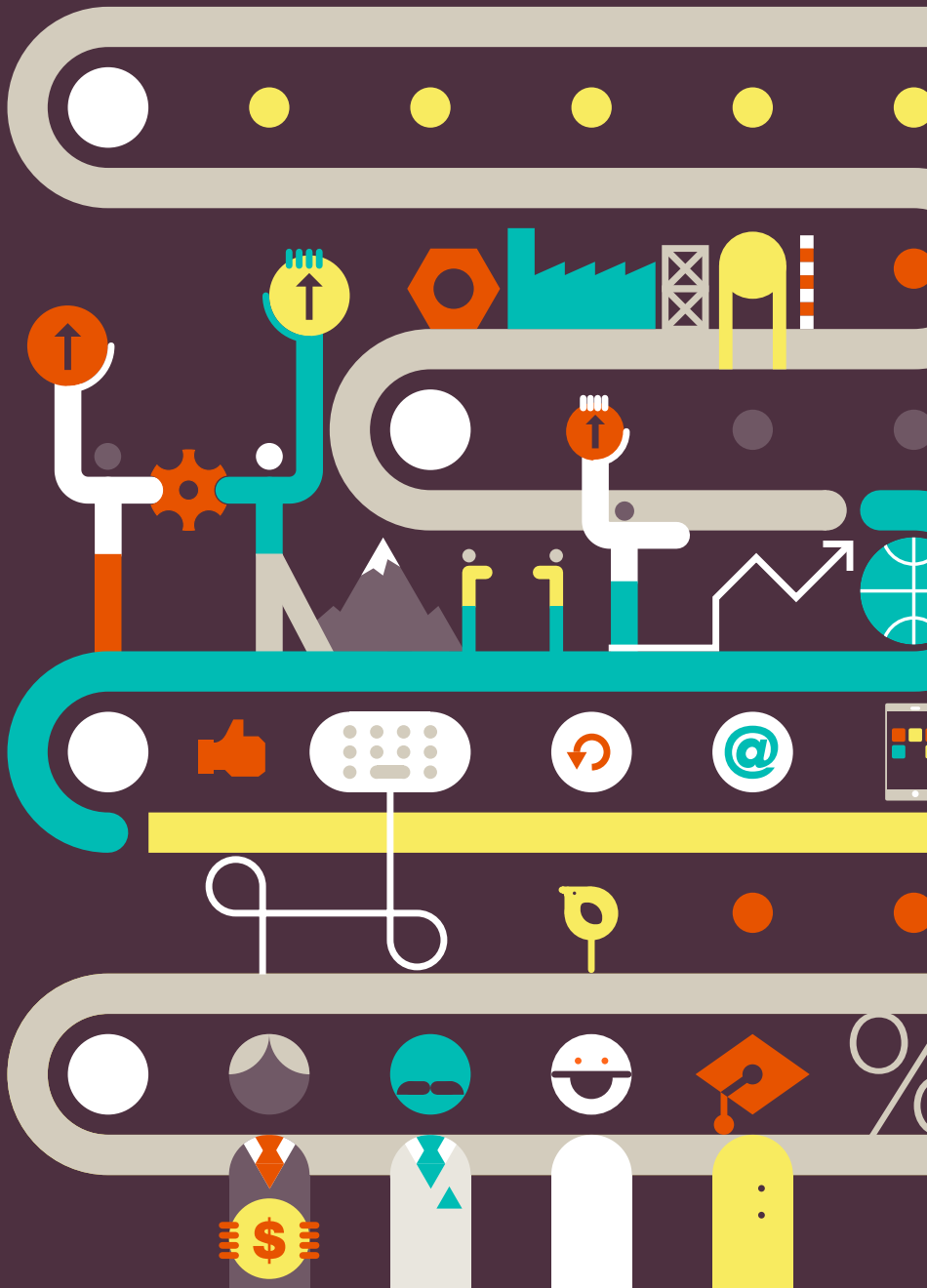
**Ratan Tata** served as chairman of Tata Sons, the holding company of the Tata Group, from 1991 to 2012. He is a member of the board of directors for Alcoa and of the Indian Prime Minister's Council on Trade and Industry, among other positions. Tata began operating as a trading firm in 1868.

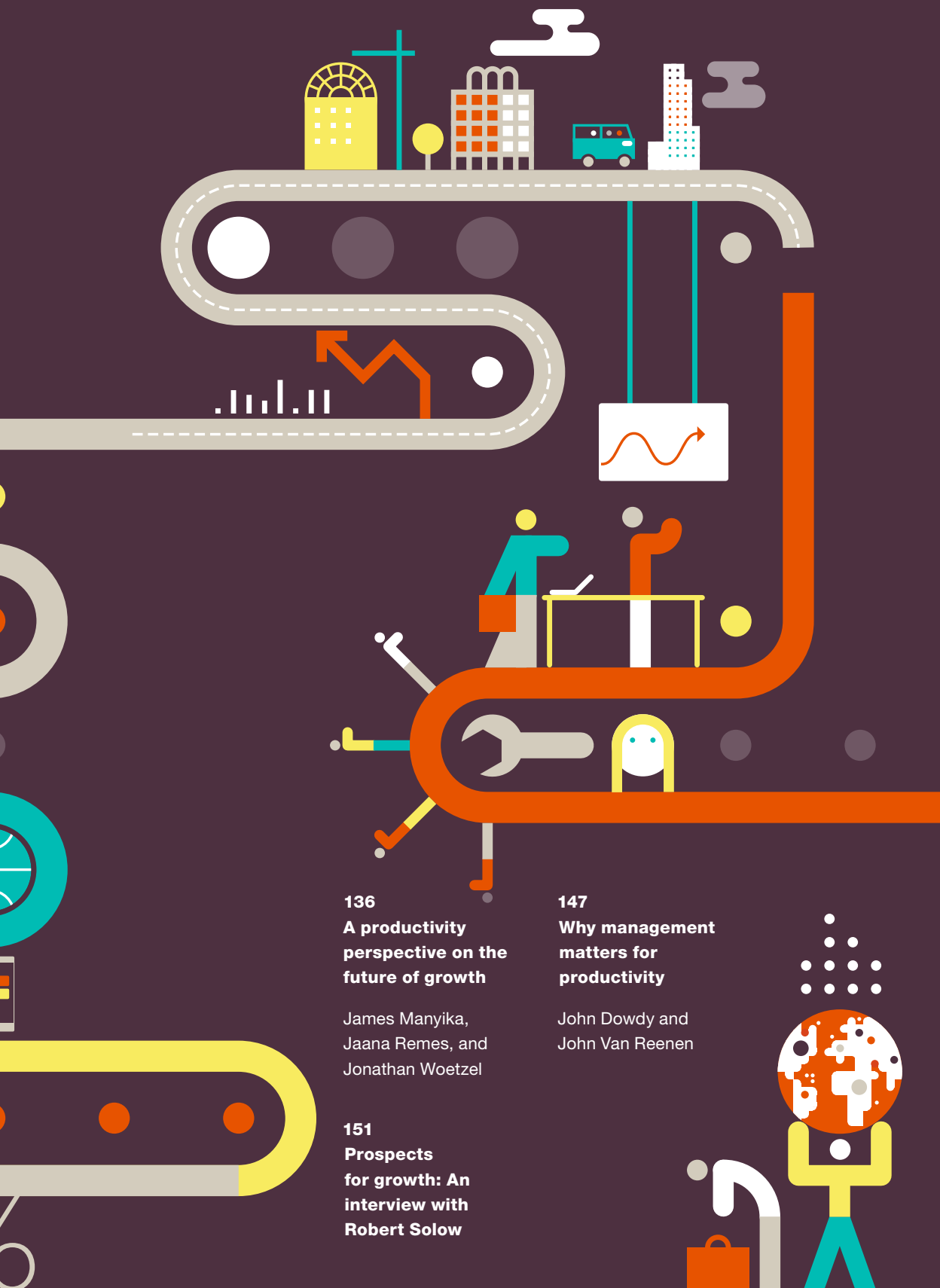
*These commentaries were adapted from interviews conducted by Ian Davis, former managing director of McKinsey, and McKinsey Publishing's Tim Dickson.*

# Productivity

## and the future of growth

Global growth is headed for a slowdown as the world's population ages—unless labor productivity makes another big leap forward. Will management-led innovation keep prosperity rolling? Nobel laureate Robert Solow and McKinsey experts weigh in on the prospects.





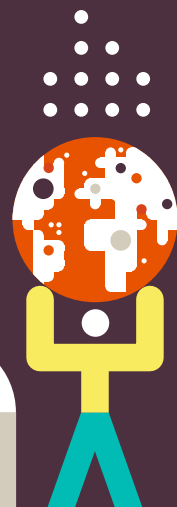
**136**  
**A productivity perspective on the future of growth**

James Manyika,  
Jaana Remes, and  
Jonathan Woetzel

**147**  
**Why management matters for productivity**

John Dowdy and  
John Van Reenen

**151**  
**Prospects for growth: An interview with Robert Solow**



# A productivity perspective on the future of growth

James Manyika, Jaana Remes, and Jonathan Woetzel

If demography is destiny, global growth is headed for a slowdown. History, however, suggests that productivity could ride to the rescue.

**Throughout history**, economic growth has been fueled by two factors: the expanding pool of workers and their rising productivity. From the perspective of rising prosperity, however, it is productivity that makes all the difference. Disparities in GDP per capita among countries—or between the past and the present in the same country—primarily reflect differences in labor productivity. That in turn is the result of production and operational factors, technological advances, and managerial skills. As managers improve efficiency, invest, and innovate to be competitive, their collective actions expand the global economy.

The past 50 years have seen unusually rapid growth in GDP and GDP per capita (Exhibit 1). How likely is this growth to continue? Given the demographic drag that's already coming into play, prospects for future growth—and the related implications for debt levels and future pension liabilities—will depend very heavily on sustained productivity growth. But arriving at useful forecasts of the productivity of future workers can be difficult.

It may be helpful to look back at lessons from the research of the McKinsey Global Institute (MGI), which during the last 25 years has analyzed the causes of differences in labor productivity between industries, sectors, and countries. These lessons help explain why some have thrived while others have fallen behind. To help celebrate *McKinsey Quarterly's* 50th anniversary—and to examine the future

prospects for economic growth around the globe—MGI looked forward and backward in time at productivity performance and economic growth.

We found that a simple extrapolation from the past does indeed suggest an impending decline in global growth—the result of a sharp decline in the number of available workers. A closer look, however, reveals substantial opportunities to maintain relatively high GDP growth rates through continued growth in labor productivity. Whether these opportunities are realized will depend on the reforms of policy makers and the ingenuity of managers and engineers, particularly in sectors with big productivity gaps. Can companies harness machine learning and artificial intelligence to raise the productivity of knowledge workers? What potential remains for shop-floor productivity gains as telematics and other advanced technologies pave the way for major process improvements? How far will we be able to expand the talent pool through the fuller economic engagement of women?

The bottom line is this: while half-century forecasts are hazardous—particularly for the forecaster!—a productivity-based perspective on the future of growth suggests that a demographic slowdown today need not lead to economic stagnation tomorrow.

## **The cross-country productivity approach**

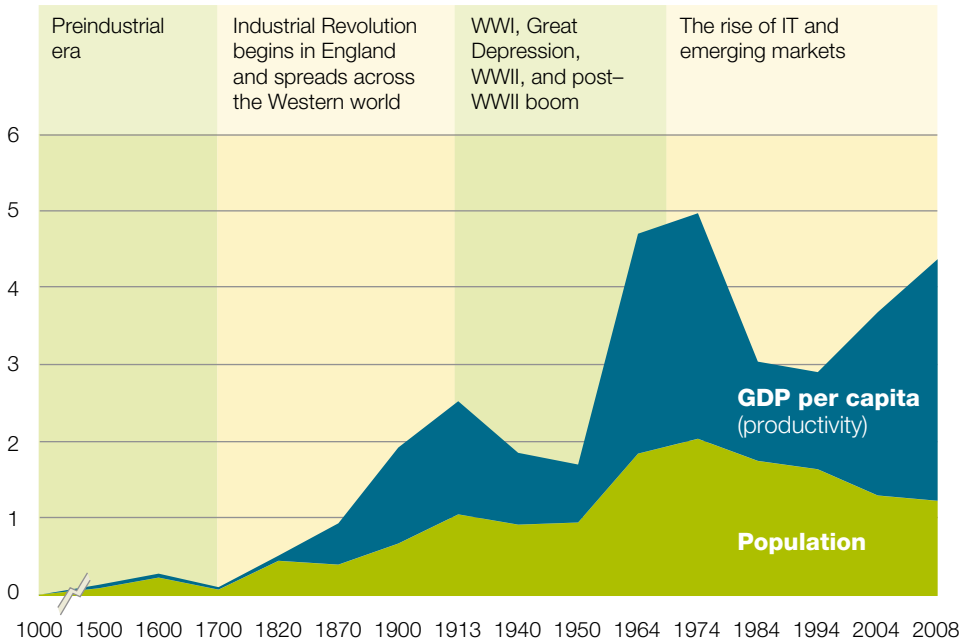
For nearly a quarter century, the McKinsey Global Institute has focused on the role productivity growth plays in economic performance. Along the way, MGI's findings have challenged conventional thinking about the sources of productivity growth and clarified two primary lessons for policy makers and executives. The first lesson is to accept no sweeping generalizations regarding the state of a country's competitiveness or the prospects for its future economic performance; macrolevel insights can be generated only by rolling granular examination of individual businesses up to the industry, sector, and country levels. The second lesson is to recognize productivity improvements as the primary source of sustained and long-term economic growth. To raise economic performance, we must focus on the causes of productivity differences among companies, industries, sectors, and countries.



## Exhibit 1

**The role of productivity in global GDP growth has been on the rise since the start of the Industrial Revolution, with major surges following World War II and the mid-1990s.**

**Contribution to world GDP growth, GDP per capita vs population, years 1–2008,<sup>1</sup>**  
compound annual growth rate (CAGR), %



<sup>1</sup> X-axis labels represent end points in ranges—eg, the range 1 to 1000 CE is labeled as 1000, 1000 to 1500 CE is labeled as 1500, and so on.

Source: McKinsey Global Institute analysis based on data from economist Angus Maddison

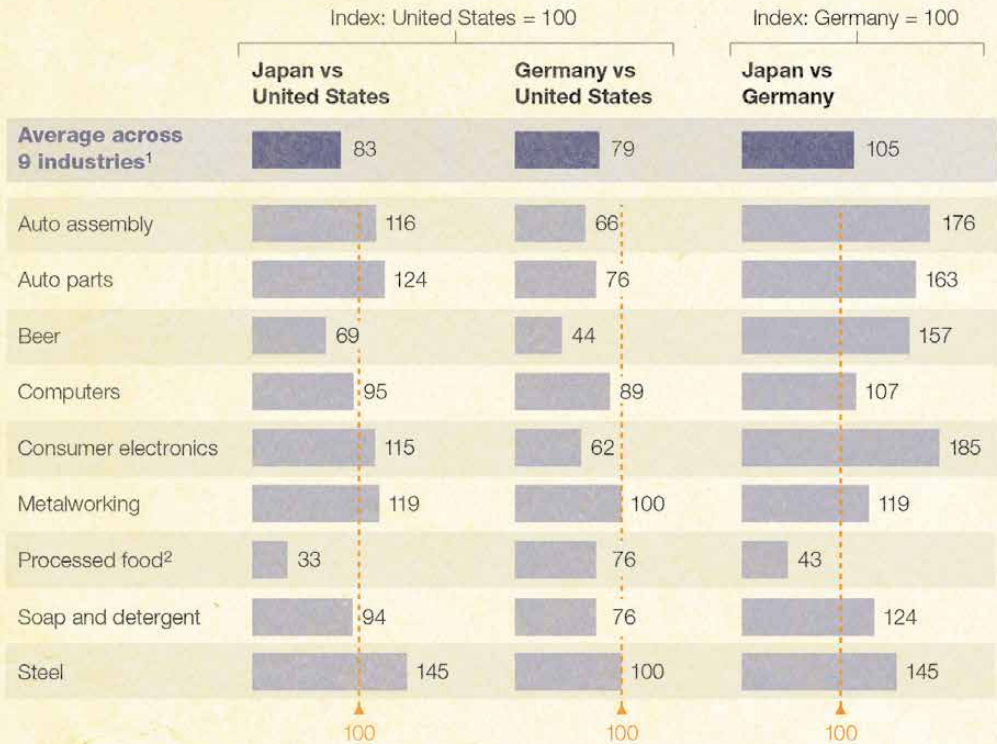
Some examples help illustrate these lessons. The first requires going back to the 1970s and 1980s, when the export prowess of Japan led to a consensus, in the United States and Europe, that its economic performance had surpassed theirs. MGI tested this pervasive thinking through a set of cross-country comparisons at the sector level in each economy. These revealed that while Japan's steel industry, for example, was 45 percent more productive than the US one, its food-processing industry was only a third as productive (Exhibit 2). By examining a range of representative sectors at the microeconomic level, MGI debunked the popular notion that the Japanese economy, overall, was outperforming the US economy.

This same set of cross-country productivity comparisons also highlighted the ways in which operational factors, from scale to production processes, had a far greater influence on productivity than education, the usual suspect at the time. Moreover, MGI found that productivity was highest in industries and countries that are exposed to, rather than protected from, competition. The research also revealed a shadow side of Japan's strong productivity in the automotive and consumer-electronics sectors: weak service-sector performance (Exhibit 3). Low productivity in the service sectors,

Exhibit 2

**MGI's 1993 study of manufacturing productivity debunked the then-popular notion that the Japanese and German economies had become more efficient than that of the United States.**

Value added per hour worked (industry-level purchasing-power parity)



<sup>1</sup> Weighted by numbers of employed people.

<sup>2</sup> Based on shipments.

Source: William W. Lewis et al., "The secret to competitiveness—competition," *McKinsey Quarterly*, November 1993, mckinsey.com

which accounted for a growing majority of jobs, soon became the Achilles' heel of Japan's overall economic growth.

The overarching insight to emerge from this early MGI research continues to hold a powerful validity: companies, industries, and nations can change their economic prospects only by identifying what it would take to improve their productivity growth. Sweden, for example, raised it by removing land and pricing barriers identified in a 1995 MGI study. These policy actions enabled the productivity of Sweden's retail sector to rise at up to twice the rate of most of its counterparts in the rest of Europe during the decade that followed.

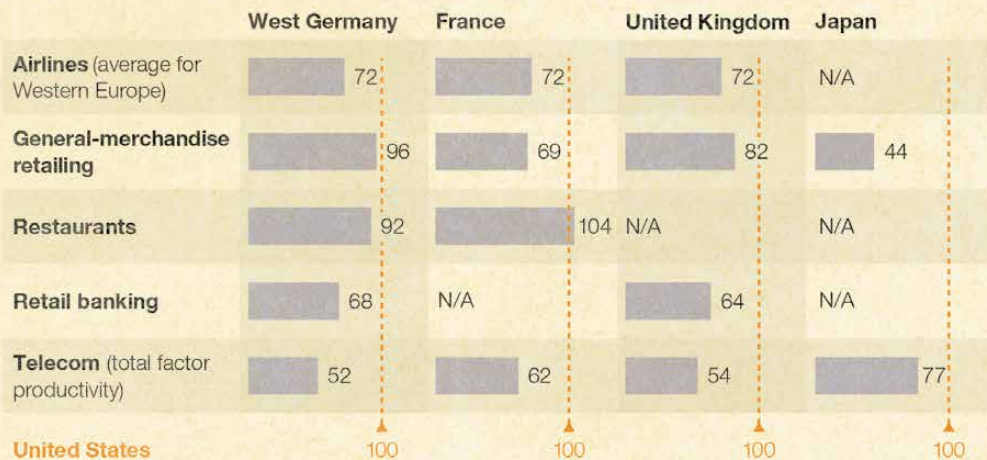
### Breaking down the numbers

To get a handle on the prospects for global growth going forward, MGI took a comprehensive look at the sources of growth in the past. The global economy today is six times its size in 1964, having risen

Exhibit 3

**MGI's 1992 study of service-sector productivity showed that performance was strongest in sectors and countries that were most exposed to competition.**

Service-sector productivity; index: US labor productivity = 100



Source: William W. Lewis et al., "Service sector productivity and international competitiveness," *McKinsey Quarterly*, 1992 Number 4

from \$14 trillion to \$84 trillion. In that time, the global economic balance has shifted between regions, particularly from Western Europe and North America to Asia. The story behind global GDP growth over the decades can be broken down into two pieces: growth from an increase in the number of employed persons and growth from labor productivity, or an increase in the average productivity of employed people. This approach usefully accounts for a comprehensive set of factors—from production inputs, like manufacturing technology, to operational factors, such as capacity utilization—in a single productivity rate.

This methodology shows that more than half of the 3.8 percent average annual historical growth in GDP has come from rising labor productivity—53 percent, to be exact. The balance has come from increases in the total number of employed persons. But the relative contributions of that growth and of labor productivity have not been consistent over time. The last four decades have seen relatively more and more growth come from productivity increases, particularly in emerging markets.

## Looking forward

The rising share of labor productivity's contribution to global growth is important because the coming years will see the dramatic effects of a slowdown in the growth of population as it ages in many countries. In the world as a whole, the United Nations forecasts an average of just 0.03 percent annual growth in the number of employed persons during the next 50 years, compared with 1.8 percent in the last 50. Thus, for global economic growth to match its historical rates, virtually all of it must come from increases in labor productivity.

Can we deliver? As a thought experiment, consider what would happen if the average productivity-growth rates of individual countries during the past half century were to remain unchanged over the coming one. This is arguably an aggressive assumption, as it assumes that South Korea, China, and other economies that had exceptionally rapid growth in the past can sustain it as their incomes rise. Even if we extrapolate forward historical productivity assumptions, when we apply lower employee-growth forecasts on a country-by-country basis and then aggregate up to an average

annual global GDP growth rate, we see it falling from 3.8 percent over the last 50 years to 3.2 percent over the next 50.<sup>1</sup>

This isn't the end of the story, though. The lessons of MGI's earlier work suggest that the smaller and more specific the scale we use to look at this problem, the more likely we are to understand the differentiators between growth that surprises or disappoints. We draw on dozens of country and industry studies to point out two broad categories of issues that will tell the tale in the years ahead. The first is the ability of individual countries to catch up to the productivity level of the world's top performer, or what might be called the labor-productivity frontier. The second is the potential to push out that frontier further through advances in management, tools, technology, and the organization of functions and tasks.

### Catching up

Tremendous growth opportunities would come from catching up with the labor-productivity frontier. If every country were to perform at that level, global GDP would grow to nearly three and a half times its current size. Currently, however, many countries lag significantly behind, especially in emerging markets (Exhibit 4). Even China and India, which have experienced high levels of recent productivity growth, lag substantially behind front-runners, such as the United States, in absolute productivity levels.

Yet history shows that some countries, notably South Korea and Japan, have made striking gains. Looking forward, which countries and sectors might hold a similar potential? Is it possible to identify leading indicators of real growth opportunities, particularly where the gap between current performance and the global benchmark is wide? The possibilities stand out at three levels: across economies, within economies, and within industries:

**Falling barriers to trade and foreign direct investment.** MGI case studies show that countries and sectors can make rapid productivity

<sup>1</sup> Our population forecasts through 2064 come from the United Nations. Employment forecasts are derived from UN forecasts of working-age populations, with an assumed steady employment rate. The GDP and employee compound annual growth rate from 1964 to 2012 are held constant and applied to 2064 on a country basis, from which GDP is derived (GDP per employee multiplied by the projected number of employed persons). The GDP growth rates of individual countries are then aggregated into the global figure provided. Sources: The Conference Board, McKinsey Global Institute's Global Growth Model, the United Nations.

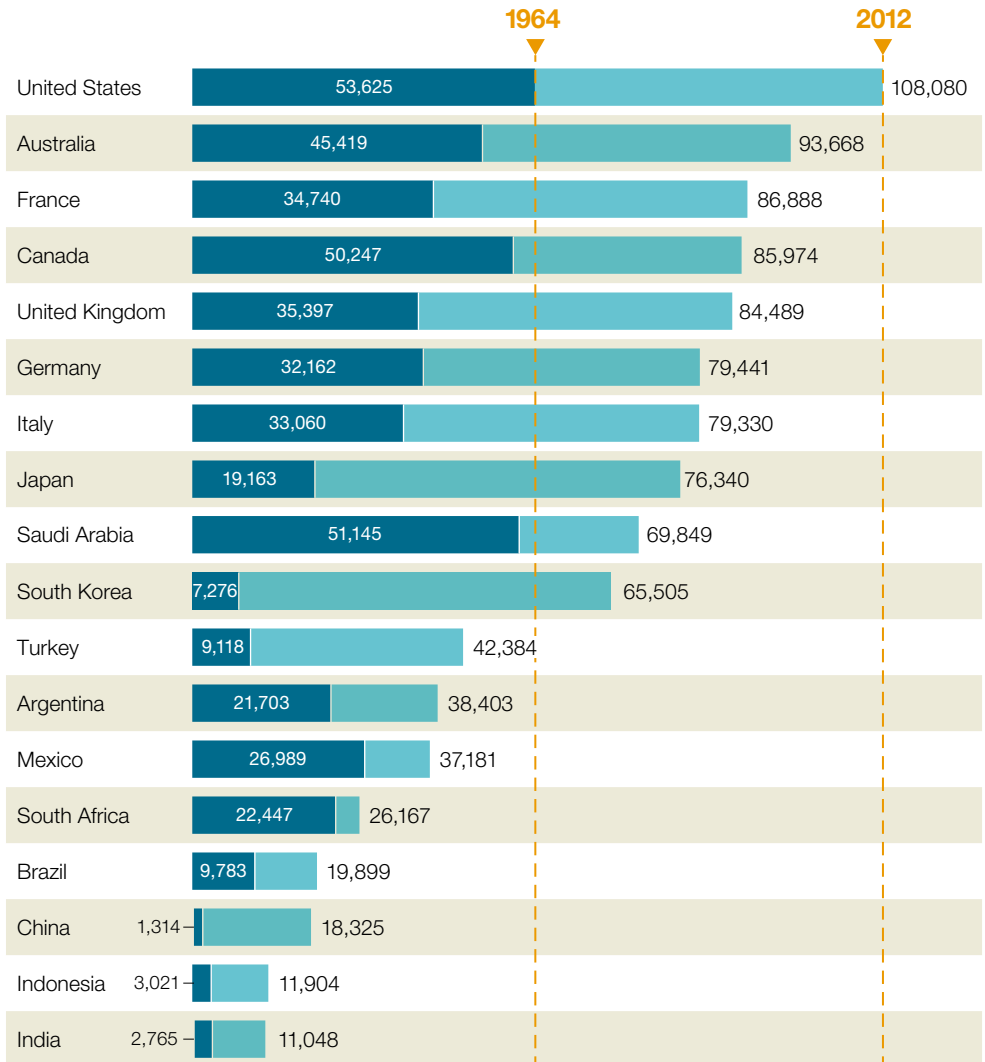
gains when international barriers to trade and foreign direct investment fall. In the 1990s, removing these barriers led to rapid gains in areas as diverse as the automotive sectors of India and Mexico, Europe’s freight-transport industry, and Brazil’s agriculture.

Exhibit 4

**Many countries have advanced well past the productivity frontier established by the United States in 1964. But the frontier has advanced, too, leaving significant future catch-up opportunities.**

**Progress toward productivity benchmarks,<sup>1</sup>  
GDP per employee in 1964 and 2012, \$**

■ 1964 ■ 2012



<sup>1</sup> Excludes Russia because of lack of historical data.

Source: Conference Board; McKinsey Global Institute analysis



Similar leaps forward may be possible if, say, Mexico's nationalized energy industry or India's protected retail industry are successfully opened up for foreign investors to pour in capital and increase competitive intensity.

**Regulatory changes that increase competition and performance pressure.** These types of reforms, which occur within rather than across economies, are particularly important in local services. Sectors with high potential for upcoming productivity improvements include retailing in Japan and South Korea if land-related constraints to large-scale retailing are opened up. (The sector is currently subject to restrictive zoning rules and to regulations governing the maximum size of stores.) Liberalizing the environment for Europe's professional-service providers—from architects to notaries—also holds strong potential given the restrictive laws that currently constrain them. Nearly all industries in India stand to benefit if protections for small-scale production are removed, which would allow for economies of scale. Public services, whose efficiency and quality could rise dramatically through new incentives and managerial practices, are another very large opportunity across the globe.

**Private-sector companies that catalyze industry change.** In the United States, Wal-Mart contributed to a retail-productivity boom in the late 1990s through managerial innovations that increased the sector's competitive intensity and propelled the diffusion of managerial and technological best practices. The rise of leading companies in emerging markets may drive a similar dynamic. In the near term, for example, Alibaba holds tremendous potential for productivity increases in online retailing. Our colleague John Dowdy's firm-level research (see "Why management matters for productivity," on page 147) shows these dynamics at work in virtually every country and industry.

### Beyond boundaries

Pushing out the labor-productivity frontier is also important. In general, the boundaries of productivity move outward when engineers and managers innovate and implement more effective and efficient ways of producing goods and delivering services and when designers and engineers create new and better products and services.

The labor-productivity frontier has grown four times over since 1964, and there are many good reasons to expect it will advance. As machine learning takes hold, for example, deep-learning algorithms may substitute for people in some jobs that were previously their sole province. (It's hard to know how this will play out, though history suggests we could be pleasantly surprised by the productivity benefits from redeploying people to new areas, as was the case in the shift from agriculture to manufacturing.<sup>2</sup>) Simultaneously, a range of technological changes in manufacturing, such as advanced robotics, large-scale factory digitization, and 3-D printing, are enabling shorter supply chains and greater proximity to innovative supply ecosystems.

Related opportunities exist in ostensibly mature operational techniques, such as lean production, which may be turbocharged in the years ahead as sensors and new analytical tools make it possible to understand, with greater precision than ever before, what customers truly value. That, of course, would eliminate additional forms of waste.<sup>3</sup> Parallel efforts to restore rather than expend the material, energy, and labor inputs used in making a wide range of goods are giving rise to a circular economy, with far-reaching productivity implications.<sup>4</sup> Finally, small and midsize businesses will almost certainly get a productivity boost as mobile applications, cloud computing, and other novel technologies make it easier to innovate.

Pushing out the frontier will require a willingness to make significant changes in business processes and organizational structures, as well as trade-offs between mature businesses with healthy cash flows, on the one hand, and disruptive (often digital) business models, on the other, with the potential for self-cannibalization even as they offer a transformative productivity potential. Another transformative opportunity, in many countries, continues to be

<sup>2</sup> For more, see "Artificial intelligence meets the C-suite," on page 66; and "The Great Decoupling," forthcoming on mckinsey.com, which includes commentary from Robert Shiller on the employment implications of machine learning and the potential future role for wage insurance. Finally, for analysis on the historic relationship between productivity and employment growth, see David Hunt, James Manyika, and Jaana Remes, "Why US productivity can grow *without* killing jobs," *McKinsey Quarterly*, February 2011, on mckinsey.com.

<sup>3</sup> See Ewan Duncan and Ron Ritter, "Next frontiers for lean," *McKinsey Quarterly*, February 2014, mckinsey.com.

<sup>4</sup> See Hanh Nguyen, Martin Stuchtey, and Markus Zils, "Remaking the industrial economy," *McKinsey Quarterly*, February 2014, on mckinsey.com.

the status of women, whose greater employment could alter the demographic equation and boost growth independently of productivity advances.

Expanding the frontier will also require continuing to build skills through public- or private-sector investment within specific industries. The US Department of Defense and the Apollo project, for example, catalyzed innovations in semiconductors—which rippled out into other technology sectors. Similarly, the Finnish army’s demand for reliable and efficient communications in the field led to the development of wireless technologies.



Caution and concern have underscored nearly every recent discussion surrounding the potential for global growth. To be sure, a simple examination of demographic trends suggests that we may see a slowdown, particularly in mature economies. A closer look at productivity possibilities by country and sector, however, suggests reason for continued optimism. ○

*The authors would like to thank Richard Dobbs and Lindsay Pollak for their contributions to this article.*

**James Manyika** and **Jonathan Woetzel** are directors of the McKinsey Global Institute, where **Jaana Remes** is a partner.

# Why management matters for productivity

John Dowdy and John Van Reenen

While government policy will play a key role, the actions of managers and their organizations will decisively influence the realization of global productivity potential in the years ahead.

**Achieving the productivity** “catch-up” and “frontier expansion” noted in the previous article ultimately will depend on the actions of individual firms and their management teams—influenced, of course, by the government policy context in which they operate. How does the view from the trenches in those firms compare with the McKinsey Global Institute’s country- and sector-level one? It’s quite consistent, according to research on the relationship between management practices and firm-level productivity. McKinsey conducted that research over more than a dozen years, in conjunction with the Centre for Economic Performance at the London School of Economics and partners from Stanford and Harvard universities.

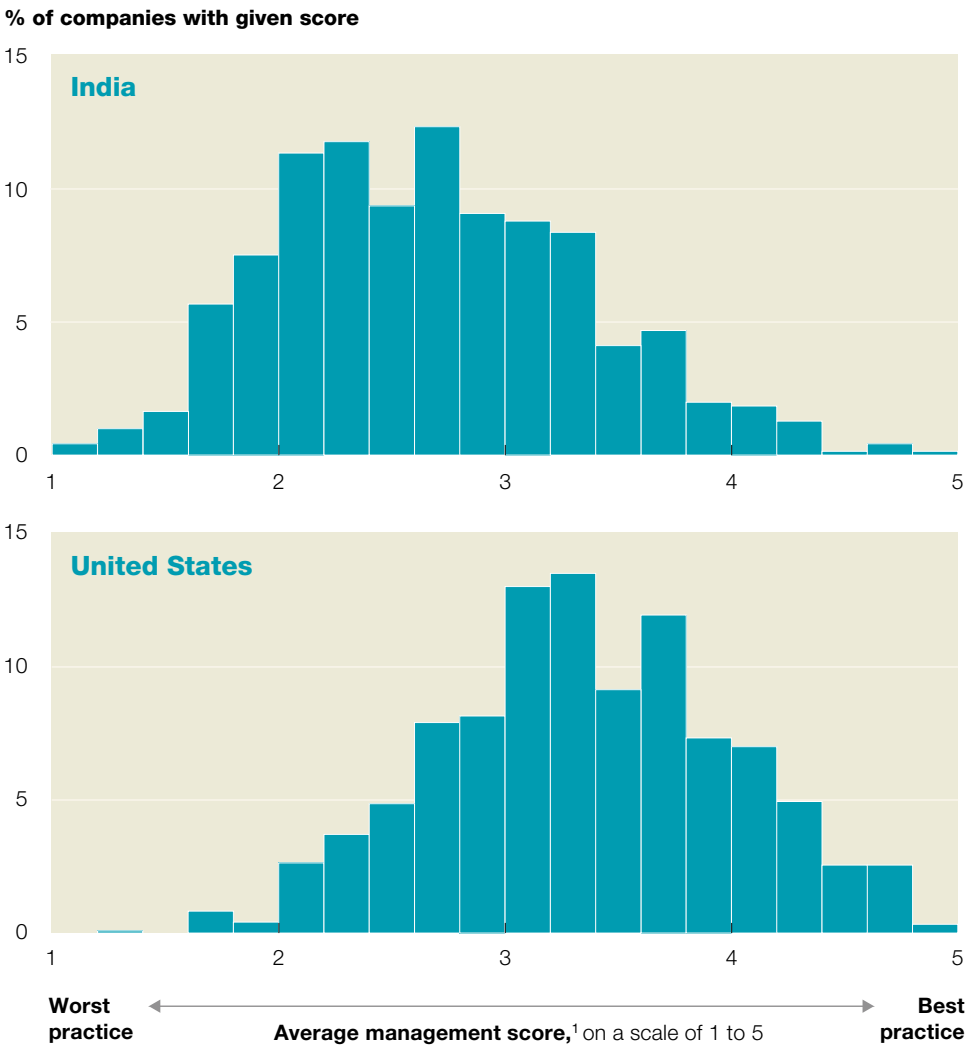
Our study now spans roughly 14,000 organizations in more than 30 countries.<sup>1</sup> It shows that the core elements of management can be assessed and scored and that well-managed firms have higher productivity, market value, and growth, as well as a greater ability to survive adverse conditions, such as global financial recessions. Our research further indicates that more than 80 percent of all productivity variation occurs within a given sector for a given country

<sup>1</sup> The data collected are updated from our original report: *Management practice and productivity: Why they matter*, July 2007, Centre for Economic Performance, London School of Economics, [cep.lse.ac.uk/management](http://cep.lse.ac.uk/management).

and that there’s a “long tail” of persistently badly managed firms in all countries and across all sectors. These findings suggest a significant potential for management-led productivity improvements in every country on Earth. Of course, the tail of poorly managed firms is much bigger in some countries, such as India, than in others, such as the United States (Exhibit 1).

Exhibit 1

**The long tail of poorly managed firms is much bigger in some countries than others—for example, in India compared with the United States.**



<sup>1</sup>Sample of 1,225 manufacturing companies in the United States and 729 in India.

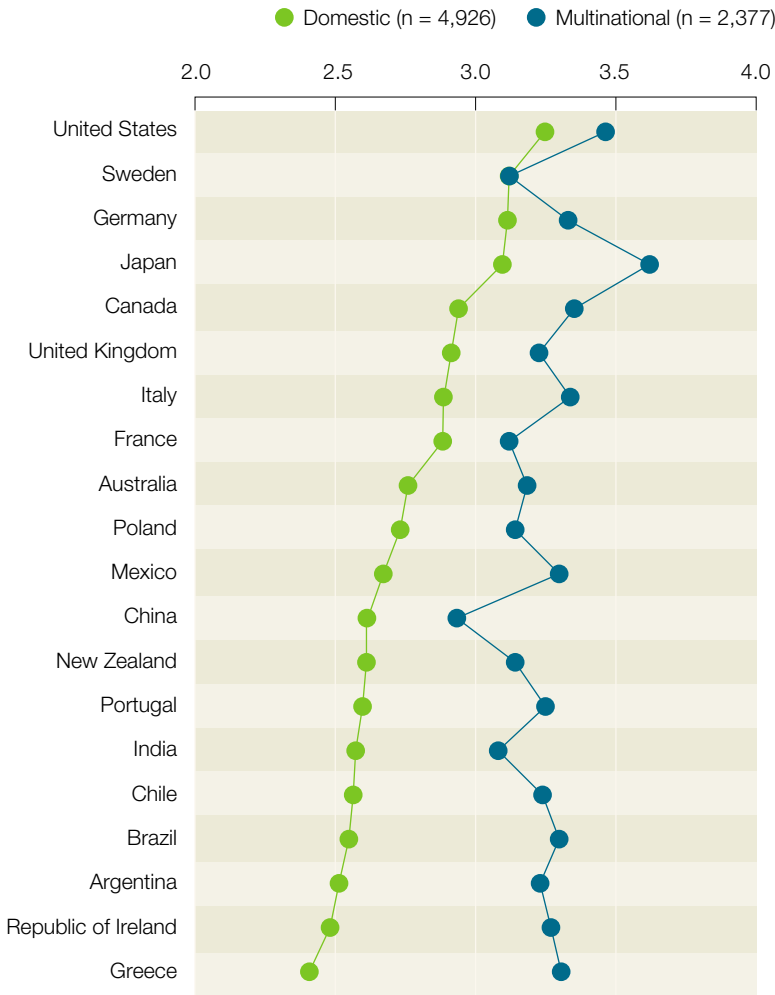
Source: Updated data from original report: *Management practice and productivity: Why they matter*, July 2007, Centre for Economic Performance, London School of Economics; McKinsey analysis

Historically, multinationals have played an important role in seizing this potential because they have been the most productive companies, on average, no matter what their country of origin or where they operate (Exhibit 2). As multinationals based in emerging markets grow in prominence in the years ahead, we are likely to see

Exhibit 2

**Historically, foreign multinationals have been the most productive companies, no matter where they operated.**

**Average management scores for domestic companies and foreign multinationals,<sup>1</sup>**  
on a scale of 1 to 5, where 1 = worst practice and 5 = best practice



<sup>1</sup> Sample of 7,303 manufacturing companies; domestic subsidiaries of multinational companies—eg, a Toyota subsidiary in Japan—are excluded.

Source: Updated data from original report: *Management practice and productivity: Why they matter*, July 2007, Centre for Economic Performance, London School of Economics; McKinsey analysis



new “flavors” of the powerful market dynamics that help these companies stimulate productivity by bringing technology and know-how, which spill over into the broader economy. Multinationals invest in raising their employees’ skills, which also diffuse into the broader economy as people move around and set up their own businesses. Finally, the increased competition that multinationals bring (and are exposed to) forces domestic players to improve their own productivity—driving down prices, increasing demand, and creating more choice for customers.

Interestingly, there’s an almost complete lack of self-awareness among managers about the productivity or management effectiveness of their own companies: we found virtually no correlation between their independent rankings of the management practices of their companies and our own assessment, conducted as a double-blind study. The possible solutions our research suggests include transplanting superior management practices between countries by rotating key managers, both inside companies and outside them. Rotation boosts productivity performance over time by ensuring that a larger number of operations benefit from the leadership of more productive managers—provided, of course, that companies weed out weak ones rather than cycle them elsewhere in their operations. ○

*The authors would like to thank their collaborators in this work, especially Nicholas Bloom, Stephen Dorgan, Dennis Layton, and Raffaella Sadun.*

**John Dowdy** is a director in McKinsey’s London office; **John Van Reenen** is a professor of economics and the director of the Centre for Economic Performance at the London School of Economics.

# Prospects for growth:

## An interview with Robert Solow

The economist who won a Nobel Prize for advancing our understanding of technology looks at the past and future of productivity-led growth.

**More than 50 years** have passed since Robert Solow published the path-breaking model of economic growth for which he won the Nobel Prize in 1987. This model proposed that growth occurred not solely from the accumulation of capital and increase in labor, as previously theorized, but also from what Solow called “technological progress”—a term now better known as total-factor-productivity growth, which encompasses advances in technology as well as in management and organizational techniques. In the early 1990s, Solow accepted the role of academic adviser to the then-fledgling McKinsey Global Institute (MGI), which was proposing to research and explain differences in the productivity of industries and countries. Economist Martin Neil Baily and McKinsey Publishing’s Frank Comes recently sat down with Solow to discuss the implications of those early studies for business and economics, as well as the prospects for future productivity-led growth.

*The Quarterly:* What, if anything, surprised you about the findings of the early MGI studies?

**Robert Solow:** What came as something completely new to me was that if you looked at the same industry across countries, there were almost always dramatic differences in either labor productivity or total factor productivity. To my surprise, it turned out that most of the time, certainly more often than not, the difference in productivity—in the auto industry or the steel industry or the

residential-construction industry in the US and in countries in Europe—was not only substantial but couldn't seriously be explained by differences in access to technology.

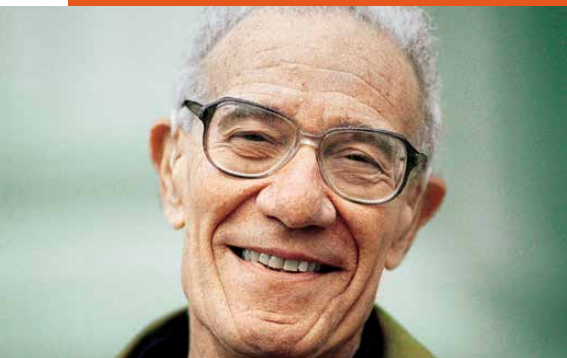
We also found that the productivity differences could not be traced to differences in access to investment capital. The French automobile industry, much to my surprise, turned out to be more capital intensive than the American automobile industry. So it was not that either. The MGI studies instead traced these differences in productivity to organizational differences, to the way tasks were allocated within a firm or a division—essentially, to failures in managerial decisions.

I was, of course, instantly suspicious of this. I figured to myself, “What do you expect a bunch of management consultants to find but differences in management capacities? That's in their genes. That's not in my genes.” But MGI made a very convincing case for this. And I came to believe that it was right.

*The Quarterly: So management was the primary factor in productivity differences?*

**Robert Solow:** Yes, and there was another surprise, for which there was partly anecdotal, partly statistical evidence. If you asked why there were differences that could be erased or diminished by better management, the answer was that it took the spur of sharp competition to induce managers to do what they were in principle capable of doing. So the idea that everybody is everywhere and always maximizing profits turned out to be not quite right.

## Robert Solow



Robert Solow is professor emeritus of economics at the Massachusetts Institute of Technology. He received the Nobel Prize in economics in 1987 for his contributions to the theory of long-term macroeconomic growth.

MGI made a very good case that what was lacking in these trailing industries in other countries—or in the US, in cases where the US trailed—was enough exposure to competition from whoever in the world had the best practice. And this, of course, can apply within a country. We know that in any industry, there is a whole distribution of productivity levels across firms and even, sometimes, across establishments within a firm. And much of that must be due to the absence of any spur to do more.

So an interesting conclusion to me was that international trade serves a purpose beyond exploiting comparative advantage. It exposes high-level managers in various countries to a little fright. And fright turns out to be an important motivation.

*The Quarterly: So competing against the global best-practice leaders is a way to encourage your own industry to use best practice?*

**Robert Solow:** Yes, and it goes beyond that, even. Competing as part of the world economy is an important way of gaining access to scale. If you're a Belgian company or even a French company, it may be that best practice requires a scale of production larger than the French domestic market will provide for French producers.

So it's important for such companies to have access to the international market. That was not something I had thought of. And I don't think anyone had—at least I had no reason to think, within economics, that there had been much thought about management activities as a big difference between best practice and less good practice. We had always thought, "Well, people seek profits. And if they seek profits, they'll have to adopt best practice." Not so.

*The Quarterly: Do you think the lessons from the microsector-level view have changed the way economists work? Or has this remained outside the economics profession?*

**Robert Solow:** I think it's been partially absorbed by the economics profession. There is much more interest in industrial organization, in competitive advantages and how they work themselves out in productivity.

*The Quarterly: Looking toward the future, are there other issues in economics that MGI's sector-level approach might be helpful for?*

**Robert Solow:** I would like to see more work on the determinants of productivity and productivity increases within the service sector. To begin with, I don't think we even have a very clear idea about the relative capital intensity within the service sector or between the service sector and goods-producing sector.

I remember I was once writing something in which I was describing the service sector as being of relatively low capital intensity. And then I stopped and remembered that the following day I had an appointment with my dentist and that my dentist's office was as capital intensive a 500 square feet as I had ever seen in my life.

So I think the place where the MGI approach is most needed right now is in the service sector. There has been service-sector work within MGI, and outside of it as well, but not as much as is warranted in view of the 70 percent or more of all employment in advanced economies that's in service industries.

*The Quarterly: Are there particular places in the service sector where you'd look first?*

**Robert Solow:** Well, that brings me to another MGI result that I found fascinating. At one point, we were trying to understand the industrial basis, the sectoral basis, for the acceleration and deceleration of productivity growth. And one of the things we found was that the two largest sectoral contributions to the acceleration of productivity growth when it was accelerating and, presumably, to the deceleration when it was decelerating came from wholesaling and retailing.<sup>1</sup> Both of them, at the time, were low-productivity sectors and low-productivity-growth sectors. But they employ so many people that a slight improvement in the productivity of retailing makes a large contribution to the increase in national productivity.

There has been some work on that, but I think the work is needed now more in personal services. God knows, in healthcare. And education. Or child care. All sorts of things.

<sup>1</sup> See William W. Lewis, Vincent Palmade, Baudouin Regout, and Allen Webb, "What's right with the US economy," *McKinsey Quarterly*, February 2002, mckinsey.com.

*The Quarterly: What do you think about the prospects for future growth?*

**Robert Solow:** As an ordinary macroeconomist, I have avoided forecasting as if it were a foul disease—as indeed it is. It’s very damaging to the tissues. So I don’t think one can say too much.

But two things are pretty clear. Everywhere, both in the developed economies and in the emerging economies, population growth is likely to be slower, much slower than it has been in the past century. I don’t know how this is going to go in the very poor parts of the world, like Africa, but certainly in the emerging economies the classical demographic transition will take place. And in the developed economies, population growth is going to slow. So there is going to be a problem that both of them will face. The motivation for what we used to call capital widening—simply to provide the standard capital intensity for an increasing population in areas such as housing and consumer domestic durables—will be weaker, and that will certainly slow the total rate of growth.

The growth of per capita income is a different matter. And there I think the key issue is economies such as Russia, India, China, Brazil, and so on. There, industries still have to catch up to the technological frontier, still have to modernize to achieve the level of technological advancement that Europe and North America have already achieved. That catching up, I think, you have to expect to happen. If it doesn’t happen, that will likely be for political, not economic, reasons. But leaving aside politics, about which it’s hard to say anything intelligent, there is still a lot of room for catch-up. And this needs to be quantitatively analyzed, industry by industry, because industries catch up, not whole economies.

*The Quarterly: There are some very pessimistic folks when it comes to future growth. Bob Gordon, for example, who thinks that a lot of innovation has run out of steam. And Larry Summers, whose thoughts about secular stagnation look at it more from the demand side of the economy. Are you as pessimistic as they are about the prospects for growth?*

**Robert Solow:** I’m not as pessimistic as Bob Gordon about the long-run technological prospects, because I feel less certain about



them than he is. In the case of Gordon, by the way, I think that to a certain extent he is concerned not so much with the real-GDP-per-hour-worked side of this as with how much technology changes our lives. And though we might conceivably have technological innovations which improve productivity dramatically, they won't change life as much as the wheel or, as Bob Gordon likes to point out, the flush toilet. But I'm not as pessimistic as Bob Gordon about the future of advanced technology. I'm just uncertain.

The secular-stagnation notion is that it may be harder, for the next 50 years, to maintain full utilization of economies than it was in the last 50 years. One technical way to put it is that the real interest rate compatible with full utilization might be negative. This is like Alvin Hansen's old secular stagnation.<sup>2</sup> In a way, it rests on running out of profitable investment opportunities.

Rapid technological progress, if it entails hardware, is a way of providing investment opportunities that are profitable. So we have to hope for that. And as I say, I'm not necessarily pessimistic about that at all. If slower population growth eliminates some investment opportunities—those that come from providing a house and a refrigerator and a washing machine for every family—then if technological progress slows a little bit, the balance between diminishing returns and technology could shift a bit in favor of diminishing returns. The available rates of return on plant and equipment investment might be a little lower. The motivation to invest—comparing that with the rate of interest, which can't fall below zero—that gap might narrow. And it could get harder to maintain full employment.

There's a good Keynesian answer to this, which involves government expenditures. But we're not so great at that and not getting any better at it either. So I think that there is a case to be made that it might be harder in the future to generate the investment spending—the nonincome-induced spending, the autonomous spending, to use the lingo—that's needed to maintain full employment and full utilization.

<sup>2</sup> Alvin Harvey Hansen, *Full Recovery or Stagnation?*, New York, NY: W.W. Norton, 1938.

*The Quarterly: And here we are at a time when corporate investment is low.*

**Robert Solow:** It's a little mysterious because corporate profits are very good, and corporations are sitting on cash. The natural reading of that—but I don't know if it's true—is that they're worried about their future profitability, because that's what would limit their willingness to invest. Why they are worried about their future profitability, I don't know.

*The Quarterly: What might be done to accelerate growth? Do you think there are things that managers could do to spur the US or the global economy?*

**Robert Solow:** I take the Milton Friedman point of view here, which is strange for me. It's not the business of the individual manager to say, "What would be good for the health of the economy?" It's primarily the business of the individual manager to increase efficiency and profitability. I think that to the extent top management is paralyzed by political uncertainty or whatever, that is a kind of funk—a failure of collective action.

*The Quarterly: In the 1980s, you said that we can see IT everywhere but in the productivity numbers. Do you think that was true then? And if so, did it remain true?*

**Robert Solow:** I think when I made that remark, I was reviewing somebody's book. It was true, and now it's no longer true. You can, in fact, trace the productivity effects of information technology. In retrospect, and probably inevitably, there was a lag in learning how to make effective use of it in manufacturing, in retailing, in wholesaling, in all sorts of large sectors. But now, I think there's no doubt that you can measure big user gains in productivity from the computer. I don't think I was wrong when I said that you couldn't. I wasn't predicting the future. I was saying what was true at the time. ○

This interview was conducted by **Martin Neil Baily**, who holds the Bernard L. Schwartz Chair in Economic Policy Development at the Brookings Institution, and McKinsey Publishing's **Frank Comes**.



# The future of capitalism

Capitalism is under siege as questions about income inequality, resource sustainability, and the efficiency of markets overshadow the system's unparalleled contributions to prosperity. Does business have what it takes to fix it?

**160**  
**Redefining  
capitalism**

Eric Beinhocker  
and Nick Hanauer

**170**  
**Business, society,  
and the future of  
capitalism**

Paul Polman



# Redefining capitalism

Eric Beinhocker and Nick Hanauer

Despite its ability to generate prosperity, capitalism is under attack. By shaking up our long-held assumptions about how and why the system works, we can improve it.

**Capitalism is under attack.** The financial crisis of 2008, the stagnation of the middle class in many developed countries, and rising income inequality are challenging some of our most deeply held beliefs about how a fair and well-functioning society should be organized.

Many business leaders are of two minds about the situation. They note that market capitalism has yielded massive increases in human prosperity, particularly in the West in the 19th and 20th centuries. More recently, it has lifted hundreds of millions from poverty in emerging economies. Yet despite these historic accomplishments, it's also easy to worry that something is wrong with how the system is performing today.

This article will argue that while we have been correct to believe that capitalism has been the major source of historical growth and prosperity, we have been mostly incorrect in identifying how and why it worked so well. By analogy, our ancestors did *know* that the stars and planets moved in the sky and had various theories to explain their observations. But it wasn't until the Copernican model replaced the Earth with the sun at the center of the solar system and Newton articulated his laws of gravitation that people understood *how* and *why* they move.



Likewise, the conventional economic theories we have relied upon for the past century have misled us about the workings of capitalism. Only by replacing our old theories with better and more modern ones will we build the deeper understanding necessary to improve our capitalist system.

## Rocking-horse versus wild-horse economics

For the past century, the dominant economic paradigm—neoclassical economics—has painted a narrow and mechanistic view of how capitalism works, focusing on the role of markets and prices in the efficient allocation of society’s resources. The story is familiar: rational, self-interested firms maximize profits; rational, self-interested consumers maximize their “utility”; the decisions of these actors drive supply to equal demand; prices are set; the market clears; and resources are allocated in a socially optimal way.

Over the past several decades, though, some of the bedrock assumptions of neoclassical theory have begun to unravel. Behavioral economists have accumulated a mountain of evidence showing that real humans don’t behave as a rational *homo economicus* would. Experimental economists have raised awkward questions about the very existence of utility; and that is problematic because it has long been the device economists use to show that markets maximize social welfare. Empirical economists have identified anomalies suggesting that financial markets aren’t always efficient. And the macroeconomic models built on neoclassical ideas performed very poorly during the financial crisis.

Andy Haldane, the chief economist of the Bank of England, notes that the conventional theory views the economy as a rocking horse that, when perturbed by an outside force, sways for a while before predictably settling back down to a static equilibrium. But, as Haldane has pointed out, what we saw during the crisis was more like a herd of wild horses—something spooks one of them, it kicks another horse, and pretty soon the whole herd is running wildly in a pattern of complex, dynamic behavior.<sup>1</sup>

<sup>1</sup> Andy Haldane discussed these views in a speech on November 11, 2013, at an event held by the United Kingdom’s Treasury: “Teaching economics as if the last decade mattered.”



In the years before the crisis, a new view of economics began to stir. Since the crisis, it has begun to blossom.<sup>2</sup> This view holds that the economy is a constantly evolving, interacting network of highly diverse households, firms, banks, regulators, and other agents, more like Haldane's wild herd than a rocking horse. The economy—a complex, dynamic, open, and nonlinear system—has more in common with an ecosystem than with the mechanistic systems the neoclassicists modeled their theory on. The implications of this emerging view are only just beginning to be explored. But the two of us believe it has fundamental implications for how people think about the nature of capitalism and prosperity.

Significantly, this view shifts our perspective on how and why markets work from their allocative efficiency to their effectiveness in promoting creativity. It suggests that markets are evolutionary systems that each day carry out millions of simultaneous experiments on ways to make our lives better. In other words, *the essential role of capitalism is not allocation—it is creation*. Life isn't drastically better for billions of people today than it was in 1800 because we are allocating the resources of the 19th-century economy more efficiently. Rather, it is better because we have life-saving antibiotics, indoor plumbing, motorized transport, access to vast amounts of information, and an enormous number of technical and social innovations that have become available to much (if not yet all) of the world's population. The genius of capitalism is that it both creates incentives for solving human problems and makes those solutions widely available. And it is solutions to human problems that define prosperity, not money.

## Prosperity redefined

Most of us intuitively believe that the more money people have, the more prosperous a society must be. America's average household disposable income in 2013 was \$38,001, versus \$28,194 for Canada;<sup>3</sup> therefore, people believe, America is more prosperous than Canada.

<sup>2</sup> See Eric D. Beinhocker, *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics*, Boston, MA: Harvard Business School Press, 2006; and Eric Liu and Nick Hanauer, *The Gardens of Democracy: A New American Story of Citizenship, the Economy, and the Role of Government*, Seattle, WA: Sasquatch Books, 2011.

<sup>3</sup> OECD Better Life Initiative, *OECD Better Life Index: Country Reports*, 2013, [oecd.org](http://oecd.org).

But the idea that prosperity is simply about having money can be disproved with a simple thought experiment. Imagine you had the \$38,001 income of a typical American but lived among the Yanomami people, an isolated hunter-gatherer tribe deep in the Brazilian rainforest. You'd easily be the richest of the Yanomami (they don't use money, but anthropologists estimate their standard of living at something around \$90 a year). But you'd still feel a lot poorer than the average American. Even after you'd fixed up your hut, bought the best baskets in the village, and eaten the finest Yanomami cuisine, all of your riches still wouldn't get you antibiotics, air conditioning, or a comfy bed. Yet even the poorest Americans typically have access to these important elements of well-being.

This is why prosperity in human societies can't be properly understood by looking just at monetary measures, such as income or wealth. Prosperity in a society is *the accumulation of solutions to human problems*.

These solutions run from the prosaic (crunchier potato chips) to the profound (cures for deadly diseases). Ultimately, the measure of the wealth of a society is the range of human problems it has solved and how available it has made those solutions to its people. Every item in a modern retail store can be thought of as a solution to a different kind of problem—how to eat, dress, entertain, make homes more comfortable, and so on. The more and better the solutions available to us, the more prosperity we have.

## **Growth redefined**

We typically talk about growth in terms of GDP, though it has been much criticized recently as a measure of progress. There have been a variety of attempts to make GDP account for things such as environmental damage, unpaid work, the progress of technology, or the development of human capital.

In our view, the biggest problem with GDP is that it doesn't necessarily reflect how growth changes the real, lived experience of most people. In the United States, for example, GDP has more than tripled over the last three decades. Although those increases have been concentrated at the top of the income spectrum, people

across the board have benefited from improvements in technology (say, safer cars, new medical treatments, and smartphones). Other changes, though, have been accompanied by unintended consequences (such as the stress many knowledge workers feel from 24/7 connectivity). Is life actually better or worse for most people? How are the gains of growth shared? GDP cannot answer these questions.

If the concept of growth is to have significance, it should represent improvements in lived experience. If the real measure of a society's prosperity is the availability of solutions to human problems, growth cannot simply be measured by changes in GDP. Rather, *it must be a measure of the rate at which new solutions to human problems become available.*

Going from fearing death by sinus infection one day to having access to life-saving antibiotics the next, for example, is growth. Going from sweltering in the heat one day to living with air conditioning the next is growth. Going from walking long distances to driving is growth. Going from needing to look up basic information in a library to having all the world's information instantly available on your phone is growth.

Growth is best thought of as an increase in the *quality and availability* of solutions to human problems. Problems differ in importance, and a new view of growth must take this into account: finding a cure for cancer would trump many other product innovations. But in general, economic growth is the actual experience of having our lives improved.

This is different from other alternative measures of growth. For example, research shows that happiness does not necessarily correlate with GDP growth—Bhutan has even famously developed a Gross National Happiness (GNH) Index. Likewise, the United Nations created a Human Development Index (HDI) based on Amartya Sen's theory of human capabilities and freedom. What the two of us are proposing sits somewhere between GDP and these measures. Like GDP, it is intended to be a definition of *material* prosperity. But it is also a more meaningful way of thinking about material standards of living than GDP.

Can the rate at which solutions appear and their availability be measured? While such a measure has not been tried yet, we believe it is possible. Inflation is measured by looking at changes in the prices of goods and services in a “basket” typically consumed by households. Similarly, it’s possible to look at how the actual contents of such a basket are changing across time or how they differ across countries or levels of income. What kind of food, housing, clothing, transport, healthcare, education, leisure, and entertainment do people have access to?

## Capitalism redefined

If prosperity is created by solving human problems, a key question for society is what kind of economic system will solve the most problems for the most people most quickly. This is the genius of capitalism: it is an unmatched evolutionary system for finding solutions.

Finding new solutions to human problems is rarely easy or obvious—if it was, they would have already been found. For example, what is the optimal way to solve the problem of human-powered transportation? There are a multitude of options: bicycles, tricycles, unicycles, scooters, and so on. Human creativity develops a variety of ways to solve such problems, but some inevitably work better than others, and we need a process for sorting the wheat from the chaff. We also need a process for making good solutions widely available.

**Capitalism is the mechanism by which these processes occur. It provides incentives for millions of problem-solving experiments to occur every day, provides competition to select the best solutions, and provides incentives and mechanisms for scaling up and making the best solutions available. Meanwhile, it scales down or eliminates less successful ones. The great economist Joseph Schumpeter called this evolutionary process “creative destruction.”**

The orthodox economic view holds that capitalism works because it is *efficient*. But in reality, capitalism’s great strength is its **problem-solving creativity and effectiveness**. It is this creative effectiveness that by necessity makes it hugely *inefficient* and, like all evolutionary processes, inherently wasteful. Proof of this can be found in the

large numbers of product lines, investments, and business ventures that fail every year. Successful capitalism requires what venture capitalist William Janeway calls “Schumpeterian waste.”<sup>4</sup>

## The role of business

Every business is based on an idea about how to solve a problem. The process of converting great ideas into products and services that effectively fulfill fast-changing human needs is what defines most businesses. Thus, the crucial contribution business makes to society is *transforming ideas into products and services that solve problems*.

This sounds simple and obvious, and many executives would say, “Of course that is what we do.” But again, that is not what standard theory says businesses *should* do. In the 1970s and 1980s, academic work based on neoclassical theory argued that maximizing shareholder value should be the sole objective of business. If corporations just did this, said these professors, they would maximize overall economic efficiency and social welfare. This focus did correct some deficiencies in the previous system, most notably by empowering shareholders to push back against CEOs who maximized the size of their empires rather than economic returns.

But some argue that elevating the creation of shareholder value to the status of primary objective is based on a faulty assumption—that capital is the scarcest resource in an economy, when in reality it’s knowledge that’s the scarce, critical ingredient in solving problems.<sup>5</sup> It has also led to a myopic focus on quarterly earnings and short-term share-price swings, to say nothing of a decline in long-term investment.<sup>6</sup> This is in startling contrast to the attitudes of even the recent past. If you asked a CEO in the 1950s, an era of tremendous prosperity growth, what his job was, his first reply would probably

<sup>4</sup> William H. Janeway, *Doing Capitalism in the Innovation Economy: Markets, Speculation and the State*, Cambridge, UK: Cambridge University Press, 2012.

<sup>5</sup> Clayton M. Christensen and Derek van Bever recently called the assumption of capital scarcity into question in “The capitalist’s dilemma,” *Harvard Business Review*, June 2014, hbr.org.

<sup>6</sup> See Dominic Barton and Mark Wiseman, “Focusing capital on the long term,” *Harvard Business Review*, January–February 2014, hbr.org, for more on the unintended consequences of maximizing shareholder value.

have been “to make great products and services for customers.” After that, the CEO might have said something about looking after his company’s employees, making profits to invest in future growth—and then, finally, giving the shareholders a decent, competitive return.

We believe that a reorientation toward seeing businesses as society’s problem solvers rather than simply as vehicles for creating shareholder returns would provide a better description of what businesses actually do. It could help executives better balance the interests of the multiple stakeholders they need to manage. It could also help shift incentives back toward long-term investment—after all, few complex human problems can be solved in one quarter.

This is not to say that shareholders or other owners are unimportant. But providing them with a return that is competitive compared with the alternatives is a boundary condition for a successful business; it is not the *purpose* of a business. After all, having enough food is a boundary condition for life—but the purpose of life is more than just eating.

Some companies already think in these terms. Google, for example, defines its mission as “to organize the world’s information and make it universally accessible and useful”—a statement about solving a problem for people. And it famously refuses to provide quarterly financial forecasts.

## **Government redefined**

Traditional economic theory holds that markets are efficient, inherently maximize welfare, and work best when managed least. But such perfect markets don’t seem to exist in the real world. Furthermore, this view fails to recognize that the great genius of capitalism—solving people’s problems—has, by necessity, a dark side: the solution to one person’s problem can create problems for someone else.

This is the age-old puzzle of political economy: how does an economic system resolve conflicts and distribute benefits? A fancy derivative product may help corporate treasurers solve their problem of managing corporate risk, and it might make bankers rich, but it



might also create greater systemic risk for the financial system as a whole. Likewise, eating fatty food may solve someone's problem of satisfying unconscious desires programmed by millennia of evolution. But it might also create new problems of clogged arteries and burden society with that person's future health costs.

It can be challenging to distinguish between problem-solving and problem-creating economic activity. And who has the moral right to decide? Democracy is the best mechanism humans have come up with for navigating the trade-offs and weaknesses inherent in capitalism. Democracies allow its inevitable conflicts to be resolved in a way that maximizes fairness and legitimacy and that broadly reflects society's views.

Seeing prosperity as solutions helps explain why democracy is so **highly correlated with prosperity**. Democracies actually help **create prosperity because they do several things better than other systems of government**. They tend to build economies that are **more inclusive**, enabling more citizens to be both **creators** of solutions and **customers** for other people's solutions. And they offer the best way to resolve conflicts over whether economic activity is generating solutions or problems. Many (though not all) government regulations are created to do just that—to encourage economic activity that solves problems and to discourage economic activity that creates them—thus fostering trust and cooperation in society.

Businesspeople often complain about regulation—and indeed many regulations are poorly designed or unnecessary—but the reality is that solving capitalism's problems requires the trust and cooperation



that good regulation fosters. It is notable that the most prosperous economies in the world all mix regulation with free markets, while unregulated and anarchic economies are universally poor.

## What problems do you solve?

Once we understand that the *solutions* capitalism produces are what creates real prosperity in people's lives, and that the *rate* at which we create solutions is true economic growth, then it becomes obvious that entrepreneurs and business leaders bear a major part of both the credit *and* the responsibility for creating societal prosperity. But standard measures of business's contribution—profits, growth rates, and shareholder value—are poor proxies. Businesses contribute to society by creating and making available products and services that improve people's lives in tangible ways, while simultaneously providing employment that enables people to afford the products and services of other businesses. It sounds basic, and it is, but our economic theories and metrics don't frame things this way.

Today our culture celebrates money and wealth as the benchmarks of success. This has been reinforced by the prevailing theory. Suppose that instead we celebrated innovative solutions to human problems. Imagine being at a party and rather than being asked, "What do you do?"—code for how much money do you make and what status do you have—you were asked, "What problems do you solve?" Both capitalism and our society would be the better for it. ○

**Eric Beinhocker**, an alumnus of McKinsey's Washington, DC, and London offices, is the executive director of the Institute for New Economic Thinking at the Oxford Martin School, University of Oxford. **Nick Hanauer** is an entrepreneur, venture capitalist, and author. This article is adapted from "Capitalism redefined," *Democracy: A Journal of Ideas*, Issue 31, Winter 2014, [democracyjournal.org](http://democracyjournal.org).

# Business, society, and the future of capitalism

Paul Polman

Unilever chief executive Paul Polman explains why capitalism must evolve, his company's efforts to change, and how business leaders are critical to solving intractable problems.

**Capitalism has served** us enormously well. Yet while it has helped to reduce global poverty and expand access to healthcare and education, it has come at an enormous cost: unsustainable levels of public and private debt, excessive consumerism, and, frankly, too many people who are left behind. Any system that prevents large numbers of people from fully participating or excludes them altogether will ultimately be rejected. And that's what you see happening. People are asking, "What are we doing here? The amount of resources we currently use is 1.5 times the world's resource capacity. Is that sustainable? A billion people still go to bed hungry. Is that sustainable? The richest 85 people have the same wealth as the bottom 3.5 billion. Is that sustainable?" Digitization and the Internet have given consumers enormous abilities to connect and aggregate their voices. Power is dispersed, but wealth is concentrated. Further development and population growth will put a lot more pressure on our planet.

Capitalism needs to evolve, and that requires different types of leaders from what we've had before. Not better leaders, because every period has its own challenges, but leaders who are able to cope with today's challenges (see sidebar, "From the archives: The social role of the world enterprise"). Most of the leadership skills we talk about—integrity, humility, intelligence, hard work—will always be there. But some skills are becoming more important, such as the ability to focus on the long term, to be purpose driven, to think systemically,

and to work much more transparently and effectively in partnerships. There are enormous challenges, but business leaders thrive on them and are well placed to solve them, as they also offer enormous opportunities. I often say it's too late to be a pessimist.

## **The new corporation**

Business is here to serve society. We need to find a way to do so in a sustainable and more equitable way not only with resources but also with business models that are sustainable and generate reasonable returns. Take the issues of smallhold farming, food security, and deforestation. They often require ten-year plans to address. But if you're in a company like ours and you don't tackle these issues, you'll end up not being in business. We need to be part of the solution. Business simply can't be a bystander in a system that gives it life in the first place. We have to take responsibility, and that requires more long-term thinking about our business model.

In our effort to achieve that at Unilever, we first looked inward. We actually had a ten-year period of no growth, and that forces you to make your numbers or you're under pressure from your shareholders. You end up underinvesting in IT systems and in training your people; your capital base erodes. And bit by bit, you become internally focused, think in the shorter term, and undertake activities that don't create long-term value. So how do you change that?

The first thing is mind-set. When I became chief executive, in 2009, I said, "We're going to double our turnover." People hadn't heard that message for a long time, and it helped them get back what I call their "growth mind-set." You simply cannot save your way to prosperity. The second thing was about the way we should grow. We made it very clear that we needed to think differently about the use of resources and to develop a more inclusive growth model. So we created the Unilever Sustainable Living Plan, which basically says that we will double our turnover, reduce our absolute environmental impact, and increase our positive social impact.

Because it takes a longer-term model to address these issues, I decided we wouldn't give guidance anymore and would stop full reporting on a quarterly basis; we needed to remove the temptation to work only toward the next set of numbers. Our share price went down 8 percent when we announced the ending of guidance, as many saw this

as a precursor to more bad news. But that didn't bother me too much; my stance was that in the longer term, the company's true performance would be reflected in the share price anyway. Our final internal change was to alter the compensation system to bring in some incentives related to the long term. Ultimately, a year or so was needed to make it very clear internally that we were focused on the long term, on sustainable growth. To reinforce that message externally, we focused our effort more on attracting the right longer-term shareholders to our share register.

## **The benefits of long-term thinking**

Thinking in the long term has removed enormous shackles from our organization. I really believe that's part of the strong success we've seen over the past five years. Better decisions are being made. We don't have discussions about whether to postpone the launch of a brand by a month or two or not to invest capital, even if investing is the right thing to do, because of quarterly commitments. We have moved to a more mature dialogue with our investor base about what strategic actions serve Unilever's best interests in the long term versus explaining short-term movements.

That's very motivational for our employees. We may not pay the same salaries as the financial sector, but our employee engagement and motivation have gone up enormously over the past four or five years. People are proud to work on something where they actually make a difference in life, and that is obviously the hallmark of a purpose-driven business model. We're getting more energy out of the organization, and that willingness to go the extra mile often makes the difference between a good company and a great one.

Let me be clear, though: a longer-term growth model doesn't mean underperforming in the short term. It absolutely doesn't need to involve compromises. If I say we have a ten-year plan, that doesn't mean "trust us and come back in ten years." It means delivering proof every year that we're making progress. We still have time-bound targets and hold people strictly accountable for them, but they are longer than quarterly targets. Often they require investments for one or two years before you see any return. For instance, one of our targets is creating new jobs for 500,000 additional small farmers. We had 1.5 million small farmers who directly depended on us, and we've already added about 200,000 more to that group. It's a

long-term goal, but we still hold people accountable. The same is true for moving to sustainable sourcing or reaching millions with our efforts to improve their health and well-being. All of this is hardwired to our brands and all our growth drivers.

## Convincing investors

When we reported on a quarterly basis, we often saw enormous volatility in our share price, which attracted short-term speculators. By abolishing full quarterly reporting of the P&L, we took some of the volatility out. But moving to a longer-term focus required spending significant time reaching out to the right shareholders. Any company—certainly a company of our size—has thousands if not millions of shareholders, and they can have different objectives. Some want you to spin off businesses and get a quick return. Some want share buy-backs, some want dividend increases, some want you to grow faster. It's very difficult to run a company if you try to meet the needs of all your shareholders. So we spent time identifying those we thought would feel comfortable with our longer-term growth model instead of catering to shorter-term interests.

We have seen our shareholder base shift. That's probably not happening as fast as we would have liked, but we are starting to see **change as our results come in more consistently and we can provide more proof: several years of consistent top- and bottom-line progress, many years of consistent dividend increases, and so on.** We're starting to attract more longer-term thinkers, who are sufficiently numerous to satisfy our business model. It's the same thing with consumers. Which consumers are you seeking? You cannot appeal to all of them; you decide which ones you want and then target those. Why not apply that same principle to your shareholder base?

It's not only corporate leaders who need to take a longer-term view of capitalism. Pension funds own 75 percent of the capital on US stock exchanges, representing companies like ours. These funds are actually there to guarantee longer-term returns for all of us when we eventually retire. They firmly believe in that mission, but many of them have activity systems that do not support it. They might offer quarterly incentives to their fund managers; they might employ short-term hedge funds and others, disturbing the normal economic process. It is increasingly clear now that a lot of this activity actually **destroys more value than it builds.**



A fund manager, like a company, needs to think, “How can I stimulate the right behavior? How can I have a more mature discussion? How can we look at other drivers so that we see we’ve got a model for longer-term returns?” I think we will all end up being in a better position than we otherwise would. At Unilever, we’ve looked at our own pension fund, with \$17 billion in assets, and questioned whether it was invested according to our views on long-term capitalism. We are seeking to adhere to the responsible-investment principles that the UN Global Compact is championing. We have also issued our first “green bond” in consumer goods to galvanize change in the financial markets. We are talking to the growing group of high-net-worth individuals about putting their money to good use. More people are becoming more amenable to the argument than would have in the past.

## A new business model

In the coming 15 years, we need to align on the new Millennium Development Goals. We have a unique opportunity to create a world that can eradicate poverty in a more sustainable and equitable way. That is very motivational. Business needs to be part of it. Corporate social responsibility and philanthropy are very important, and I

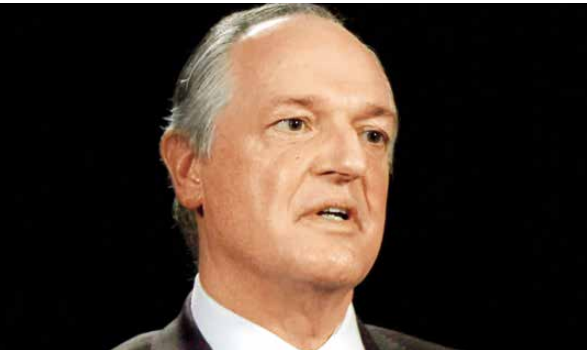


From the *McKinsey Quarterly* archives, 1974

### The social role of the world enterprise

*The relationship between business and society isn't a new concern for Unilever. In McKinsey Quarterly's Winter 1974 issue, the company's chairman, who was then Sir Ernest Woodroffe, wrote about the need for multinationals to be "less foreign" as they worked to "temper economic sense with social considerations."*

“We who work in multinational enterprises cannot expect to be loved for our own sake. . . . [Resentment] is directed against the alleged power of the multinationals; against decisions that are thought to be taken in remote Head Offices; against foreigners on whom nationals depend for jobs; and, in particular, against foreigners who appear to manifest their superiority by the very imposition of their expertise and different standards, who appear to threaten cultural identity. . . . This is the problem of the multinationals. Yet these very multinationals . . . have been satisfying the needs of many hundreds of millions of people. . . . They have made huge contributions—in capital and jobs, in technology and commercial know-how, in management skills and management coaching. If their contribution is not to be stifled, those of us who work in multinational enterprises must heed the reactionary pressures . . . and be sympathetic to national sensitivities.”



For more, see our video interview with Paul Polman in the online version of this article, on [mckinsey.com](http://mckinsey.com).



certainly don't want to belittle them. But if you want to exist as a company in the future, you have to go beyond that. You actually have to make a positive contribution. Business needs to step up to the plate.

Although some people might not like business or fail to understand that it needs to make a profit, they do understand that it has to play a key role in driving solutions. In the next ten years, I think you are going to see many more initiatives undertaken by groups of businesses to protect their long-term interests and the long-term interests of society. Governments will join these initiatives if they see business committed. It is, however, becoming more difficult for governments to initiate such projects in the current political environment as long as we don't adjust our outdated governance model.

The Tropical Forest Alliance is a good example of what can be done. If we keep going with deforestation, which accounts for 15 percent of global warming, our business model and, frankly, our whole society are at risk. On top of that, the consumer is saying, "I'm not going to buy products anymore created through deforestation." So industry got together and said that we need to use combined scale and impact to create a tipping point. The Consumer Goods Forum (representing \$3 trillion in retail sales), which we helped to create, is one of these coalitions of the biggest manufacturers and retailers. When they said, "By 2020, we're not going to sell any more products from illegal deforestation, whether soy, beef, pulp, paper, or palm oil," that sent an enormous signal across the total value chain and generated action on the supplier side. Governments are now joining. We're actually close to a tipping point to address these issues. That is the new world we have to learn to live in. ○

**Paul Polman** is the chief executive officer of Unilever. The interview underlying this article was conducted by **Rik Kirkland**, McKinsey Publishing's senior managing editor, who is based in McKinsey's New York office.

Extra Point

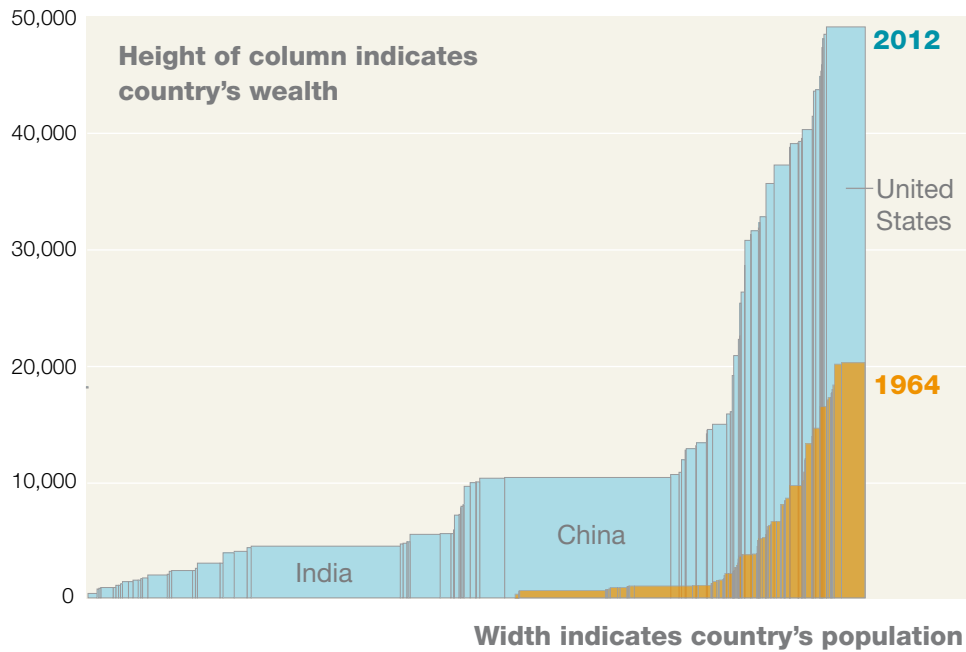
# A richer world

Lindsay Pollak, Jaana Remes, and Anna Thomas

In the 50 years since *McKinsey Quarterly* began publication, a rising economic tide has lifted much of the world. Each block in the chart below represents a country, with the block’s height indicating GDP per person and its width population. Not only has progress been widespread, but the world’s widest, most populous blocks—China and India—have become dramatically richer, with per capita wealth in China moving to more than \$10,000, from roughly \$600. On the far right of this economic map, US per capita GDP has increased to nearly \$50,000, from roughly \$20,000.

## The wealth of nations

GDP per capita,<sup>1</sup> \$



<sup>1</sup>At 2012 purchasing-power parity, for 91 countries. Excludes the following countries because of lack of data: Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Czech Republic, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Myanmar, Russian Federation, Serbia, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. Excludes countries with small populations relative to their wealth: Kuwait, Luxembourg, Qatar, Switzerland, and United Arab Emirates.

Source: The Conference Board; McKinsey Global Institute analysis

Lindsay Pollak is a consultant in McKinsey’s Silicon Valley office, Jaana Remes is a partner with the McKinsey Global Institute, and Anna Thomas is an alumna of the San Francisco office.



For more on the world’s past and future growth prospects, see “A productivity perspective on the future of growth,” on page 136.



**Marcus Wallenberg**  
the limits of creative destruction

**Andrew McAfee**  
artificial intelligence in the C-suite

**Paul Polman**  
reinventing capitalism

**Plus 37 McKinsey experts and  
15 more thought leaders on**

the new management environment

industry dynamics in an age of inflection

next frontiers for strategy

the executive of the future

global organizations

enduring companies

productivity and management

and much more!

**Q**<sup>50</sup>

**50 years  
of insight**