Save or Be Selfish?

A new model can help economists understand how couples make financial decisions—and why many struggle to save. Page 19
1 SHARE A LITTLE, SAVE A LOT
New research shows that when low-skilled employees tap the knowledge of their better-skilled peers, productivity increases.

2 WHEN WOMEN RULE, NATIONS PROSPER
Women leaders boost the economies of fractious nations at much higher rates than their male counterparts.

3 CLOCKING OUT EARLY IN THE C-SUITE
New research finds that at family-owned firms family CEOs put in fewer hours than professional CEOs.

4 DRIVING PRODUCTIVITY
New technology empowers firms—but can leave individuals in the dust.

5 WHEN UMPIRES STRIKE OUT
What can umpires’ mistakes tell us about how status and reputation influence decision making?

6 PUTTING UP WITH POACHERS
A new study suggests that sometimes it may be best for large companies to allow competitors to free ride on sponsored search ads.

8 RESEARCH BRIEF: THE VALUE TRAP
Assess the risk associated with the growth of a so-called value stock by considering both its book-to-price and earnings-to-price ratios.

9 CHOOSING HEALTH—AND WEALTH
How choice architecture could help the Affordable Care Act be even more affordable—for citizens and the state.

11 HOME TEAM ADVANTAGE
For nursing, hyperlocal knowledge and experience are keys to stellar teamwork—delivering better healthcare while shrinking costs.

12 BIOMEDICAL R&D TODAY INCREASES LONGEVITY TOMORROW
New research shows that greater spending on biomedical research reduces future mortality rates.

14 OBSERVATIONS FROM THE REAL WORLD
A new statistical method provides a way to better approximate lab settings when analyzing data.

15 SOCIAL SAVERS
Peer monitors can help the poorest of the poor increase their wealth.

16 Q&A: LESSONS FROM ASIA IN FINANCIAL DEVELOPMENT
Hugh Patrick discusses the liberalization of financial systems behind the remarkable economic development of China, Japan, and Korea.

18 THE LANGUAGE TRADEOFF
New research suggests that when children in immigrant families learn a new language, their parents are less likely to also pick it up.

19 SAVE OR BE SELFISH?
A new model can help economists understand how spouses make financial decisions—and why many couples struggle to save.

The terms value and growth don’t actually tell investors much about the firms they are describing.

Read more on page 8.
When low-skilled employees tap the knowledge of their better-skilled peers, productivity increases.

When Michael Bloomberg moved into City Hall in 2002 at the beginning of his first mayoral term, he revamped the office. Key city officials sat bullpen style, side by side in wall-less cubes designed to maximize transparency and communication, allowing the mayor to foster the same kind of management style—information sharing in the name of efficiency and productivity—he’d so successfully employed at his own firm, Bloomberg LP.

Conventional corporate wisdom does not always readily endorse transparency and information sharing, largely because it’s not easy to demonstrate that it’s productive, Professor Marco Di Maggio says. “Consider a taxation expert at a law firm who may not work directly with clients and so produces no billable hours—but her expertise is sought out by colleagues who produce many billable hours. As a source of expertise on tax questions, she’s undoubtedly improving the firm’s productivity, but the firm can’t readily measure just how much.”

Even if a firm’s managers want to facilitate information sharing, a lesser-skilled or newer employee might hesitate to tap his more able peers out of concern that he is showing ignorance or lack of skill. High-skilled workers may feel they confront a double-edged sword: being tapped as an expert by one’s peers can signal expertise to superiors, but answering questions may seem like an inefficient use of time.

Di Maggio, working with Marshall Van Alstyne of Boston University, teased out the realities of information sharing by working with a multinational bank that shared detailed performance data for about 4,000 loan officers from 400 branches. The bank scored each loan officer based on how well she hit established performance targets for each six-month evaluation period over two-and-a-half-years, which gave the researchers an objective measure of loan officers’ performance.

The researchers’ additional data came from an internal online information-sharing platform the bank had recently implemented. The platform allowed employees to ask and answer questions, anonymously, enabling horizontal as well as vertical communication. (Anonymity allowed staff to forgo concerns about their supervisors’ perception of their skill or productivity.) “They could ask anything—about a legal issue, a taxation issue, a risk assessment question about a new client,” Di Maggio says.

Using the platform generated a productivity gain for each lower-skilled loan officer of about 10 percent, or about one additional year of education. Those who performed poorly in previous terms saw the largest increases. Higher-level employees who regularly shared their knowledge with lesser-skilled peers were, over time, more likely to get promoted than their peers who shared their knowledge less often.

The information-sharing platform also offset the costs of conforming to a new anti-corruption regulation mandating that loan officers switch branches every two to five years through random reassignment. Every time loan officers rotate they take with them valuable knowledge about the local credit market, but the researchers found that the negative effect was less pronounced for officers that came from branches that used the platform. “They were better prepared to learn about local credit market conditions more quickly when they move to a new branch,” Di Maggio says. A similar dynamic reflects the important role of norms. “Office who had already been at a branch that used the platform were more productive once they moved to a new branch because they were accustomed to and willing to use the platform to overcome any difficulties in their new work environment,” Di Maggio explains.

The platforms can also help firms capture soft information. Loan officers can use fairly objective data points like credit scores and income to assess risk, but proposal quality is still part of the overall picture of the loan applicant that isn’t as easy to paint in a spreadsheet.

“Organizations don’t want to waste knowledge,” Di Maggio says. “Our paper shows that for large organizations who have a lot of dispersed employees working on related projects, information sharing produces a sizable productivity effect.”
When Women Rule, Nations Prosper

Women leaders boost the economies of fractious nations at much higher rates than their male counterparts.

A mere 15 percent of parliamentary representatives around the world are women—a reflection that for all the benefits democracy may bestow upon nations, it has not yet fully delivered on social equity. There are hints of change: women in top national leadership positions—president or prime minister—have more than quadrupled between 1950 and 2004, from four to 18. Recently, women have been elected to the top posts in every corner of the globe, including Chile, Germany, Liberia, and South Korea.

Many of these leaders were elected amidst turbulent backdrops: in 2013 Park Geun-hye of South Korea ran on a platform that promoted peacebuilding with North Korea. Earlier this year, Catherine Samba-Panza was chosen to lead, on an interim basis, the Central African Republic, which is in the midst of a civil war.

Professor Katherine Phillips worked with Susan Perkins and Nicholas Pearce, both of Northwestern University, to look more closely at global trends in female leadership since 1950, including evidence that having a female rather than a male leader of ethnically diverse nations leads to different outcomes. “A nation’s leaders have a lot of power to shape policy, including economic policy,” Phillips says. “So we wanted to know: Do women leaders have a different impact than their male counterparts? And are there some circumstances under which women might be more effective leaders than men?”

Social unrest often goes hand in hand with economic woes, and economists have shown that nations with higher ethnic fractionalization (EF)—a measure of the likelihood that a fellow citizen is from another ethnicity—experience more inequality and conflict. That makes governing particularly complex since leaders must navigate and balance conflicts of interest between ethnic groups. And nations with a lot of ethnic diversity have historically experienced lower GDP growth: the impact of going from no diversity to full diversity is a loss of 2 percent GDP growth. To learn the precise relationship between economic performance and national leaders, the researchers compared data for national leaders in 139 nations from 1950 to 2004 with annual Penn World Table GDP growth data. They included Gapminder measures that signal GDP health, including infrastructure investment, postsecondary schooling, and rule of law—how strong a nation’s most important institutions are.

Phillips and her co-researchers found that when troubled nations elect women to the key national leadership office their economies experience a significant rise in GDP compared with their male counterparts leading similar nations. (GDP was measured the year after their election to ensure that same-year GDP changes—which are more likely attributable to the policies of previous leaders—weren’t attributed to new leaders.) For the most ethnically diverse nations having a woman in the top national leadership position was correlated with a 6.9 percent greater increase in GDP growth in comparison to nations with a male leader.

Why might people choose a woman to lead when a nation is facing enormous strife, and why do these leaders perform better under trying conditions than their male counterparts? The team looked to other research to consider possible explanations, much of which tells a story of evolutionary psychology. Studies show women leaders tend to have a more participatory, democratic style than men and that when people perceive a threat and need for change in their environment, they prefer female leaders; they choose men to lead during times of stability. In short, women may simply be seen as better at managing difficult situations that require more inclusionary or cooperative approaches.

Women in the private sector mirror their parliamentary colleagues around the world, accounting for just about 15 percent of upper management in firms. There too the presence of women in the upper ranks is associated with greater profitability and more innovation. Taken together, these findings point to the need for policies that promote equity in leadership and suggest such efforts could produce better economic outcomes while stimulating the inclusion of other under-represented groups. “Women are perceived to have qualities needed to improve the lot for everybody,” Phillips says. “And they deliver.”
Clocking Out Early in the C-Suite

Family CEOs put in fewer hours than professional CEOs. In the last few years, economists have documented the tendency of family-run firms to perform worse than other firms. A study of Danish family firms, for example, found that a family-owned firm with a family CEO represented an average decline in profitability of about 4 percent compared to family-owned firms run by professional (nonfamily) CEOs. Until now, economists didn’t know what family CEOs were doing differently that might account for the differences in performance. New research shows that it may be what they aren’t doing: family CEOs appear to put in fewer hours than their professional counterparts.

Professor Andrea Prat, along with Oriana Bandiera of the London School of Economics and Raffaella Sadun of Harvard, came to this conclusion after conducting a time-use analysis of family and nonfamily CEOs in the Indian manufacturing sector. Their study is a more elaborate and statistically rich version of a smaller study run by Henry Mintzberg (now of McGill University in Montreal) in the 1970s.

Family ownership is common in India and productivity in the manufacturing sector varies widely. The researchers surveyed CEO time-use by talking to CEOs or their assistants, checking in at the end of the day to review what the CEOs actually did that day and to note their planned activities for the next day. About two-thirds were family CEOs; the others were nonfamily CEOs—firm managers who headed family-owned firms but were not members of the family. At the end of the three-month study period, the team checked the consistency of their reports with CEOs through personal interviews.

Founder CEOs logged 8 percent fewer hours than professional CEOs, while next-generation family CEOs (those who had inherited the helm from another family member, usually the founding CEO) were somewhat more dedicated, logging 6.6 percent fewer hours than professional CEOs. For every percent increase in hours per week the CEO put in, firm productivity increased by 1.04 percent annually. There was no evidence that family CEOs might simply be planning and using their time more efficiently than professional CEOs.

The timing of the study coincided with the monsoon season, when severe rains and floods often snarl traffic and otherwise slow business, and during the window when India hosted the Indian Premier League, an international sporting event that draws superstar cricket players and the eyes of an enthusiastic nation, allowing the researchers to look at whether outside events might affect CEOs’ efforts.

On days with extreme rain, family CEOs worked about 7.4 percent fewer hours than usual, while professional CEOs worked about 3.8 percent more hours. On cricket match days, most family and professional CEOs left their offices early to catch the game. But the professional CEOs worked more hours earlier in the day, so in the end family CEOs were still working fewer hours than professional CEOs.

To make sure that factors specific to India weren’t behind these disparities, the researchers conducted similar surveys of more than 800 CEOs at manufacturing firms in Brazil, France, Germany, the UK, and the United States. There too, they found similar differences: family CEOs in Brazil worked about 11 percent fewer hours on average than professional managers, while family CEOs in the other countries worked about 8 percent fewer hours.

Isn’t it possible and even likely that family CEOs conduct business in less formal settings? For example, a second-generation family CEO may carry on a conversation about strategy with the founding relative over dinner. “If these CEOs were doing much informal work away from the office, we would expect their work in the office to lean more heavily toward formal activities,” Prat explains. “But family CEOs actually do more informal work in the workplace.”

Family-controlled firms constitute more than half of worldwide companies that have at least 500 million dollars in market capitalization, and in some countries the percentage of family-owned firms is high: 70 percent in Italy and up to 90 percent in India. The dampened productivity can add up to a lot—in reduced profits, slower growth, and lagging wages, all of which flow into the larger economy.

While these results don’t directly link CEO working hours to productivity, Prat cautions, they do raise the question of whether family firms should consider looking to professional CEOs.

Prat’s next project is to see if CEO management styles can be correlated to performance. “You’ve seen all these management books at the airport about how to run a firm,” he says. “Typically, it’s just one CEO telling his story. We’d like to go beyond that.”

Andrea Prat is the Richard Paul Richman Professor of Business in the Finance and Economics Division at Columbia Business School.

READ THE RESEARCH


FOUNDERCEOS

8.0% FEWER HOURS

Founder CEOs logged 8 percent fewer hours than professional CEOs.

NEXT-GENERATIONCEOS

6.6% FEWER HOURS

Next-generation family CEOs logged 6.6 percent fewer hours than professional CEOs.

MORE IDEAS

Watch Professor Prat discuss this research in the Program for Financial Studies’ No Free Lunch Seminar Series: bit.ly/cbs-ideas-ceotime
Driving Productivity

New technology empowers firms—but can leave individuals in the dust.

A new app is disrupting the taxicab industry by making it possible for drivers and riders to find each other with the push of a button. With Uber, there’s no arm waving required: launched in 2009, riders reserve cars (often with drivers operating independently from a cab service) or find a rideshare by sending a text message or using the app; customers can then use the app to track their car’s location. Uber is currently available in more than 100 cities worldwide and expanding.

Historically, the activity of taxi fleets has been monitored and controlled by a central office, which provides dispatching, accounting, and human resources services to one or more taxi companies. When a customer calls for a taxi, a trip is dispatched by radio or computer—either to the first cab to book into the zone surrounding the pickup address via an in-vehicle computer system or to the cab closest by, as determined by GPS coordinates.

“By giving drivers an alternative to the old taxicab dispatching systems, Uber is, at least initially, weakening traditional taxicab firms—drivers don’t necessarily need dispatching firms anymore,” says Professor Evan Rawley.

Uber’s disruption of the taxicab industry is a prime example of a company using new technology to outperform existing service providers in a market. In fact, taxicab firms found themselves on the other side of this equation in the mid-1990s, when new dispatching technology allowed firms to outperform individual professional drivers.

To better understand the impact of technology adoption by firms—and explain Uber’s success—Rawley and Timothy Simcoe of Boston University studied this 1990s phenomenon, which saw taxicabs moving from the older CB-radio-style dispatching system to the then newly available GPS systems. They theorized that under certain conditions, when firms buy technologies that increase productivity, they have a strong incentive to expand vertically—to buy their suppliers or customers—and tend to shift toward a less skilled workforce.

Using a combination of data on taxicab firms from the US Census Bureau, a University of North Carolina survey, and their own survey of the industry, the researchers were able to determine the kinds of dispatching technologies 250 US taxicab firms used in the mid-1990s. They found that once firms began adopting GPS, the more skilled drivers—those who knew not only the best routes in the city, but where rider demand was highest, too—were forced to sell off their cars and medallions to the fleets and leave the industry. “Because the technology made fleets more productive, it made more sense for the fleets to buy up the assets, hire less skilled drivers, and direct them centrally using GPS,” Rawley says. “This put the higher-skilled drivers out of business, so to speak.”

However, Rawley points out that while their findings help explain why firms exist—as opposed to, say, a market made up of independent contractors—they also reveal taxi fleets’ fragility. Newer technologies, like those used by Uber, that increase dispatching efficiency and essentially take the taxicab firm out of the equation can threaten the productivity advantage of firms over individual drivers. At the same time, though Uber’s market presence will force car- and medallion-leasing fees for individual drivers down by offering an alternative to working with taxicab firms, Uber—not the drivers—is likely to capture most of the surplus profit. “Interestingly, if Uber becomes dominant and taxicab firms exit the industry because simply maintaining and financing cars and drivers is no longer profitable, Uber may have to start buying taxicabs and matching drivers to cars themselves—just like traditional taxicab firms,” Rawley says.
At first glance, it may not seem that the umpires of Major League Baseball (MLB) and the regulators at the US Food and Drug Administration (FDA) have much in common. But look again, says Professor Jerry Kim. “Umpires are baseball’s regulators. It’s their job to judge quality to make sure the integrity of the game is sound in an objective, unbiased way. That’s parallel to what the FDA or, for that matter, any gatekeeper or critic does.”

Kim’s previous research, into the pharmaceutical industry, showed evidence that decisions of presumably objective regulators at the FDA were influenced by the status and reputation of pharmaceutical firms: better-known, higher-status firms get faster approval for drugs similar to those that lower-status firms were bringing to market at the same time. But there’s no definitive way to tell whether the higher-status firms really were better or were just coasting on reputation, because drug quality has many facets, from how effective a drug is to whether it interacts poorly with other commonly prescribed drugs, and so on.

That led Kim, along with co-researcher Brayden King of Northwestern University, to look for a way to confirm whether perceptions of quality really are influenced by perceptions of reputation and status—including such social factors as the relationship between the evaluator and evaluatee and what they already know about each other.

Major League Baseball offered the perfect opportunity to see if and how reputational bias works. MLB has four high-speed cameras installed in each league stadium. The cameras take 25 snapshots of each pitch, capturing the speed and spin rate of each pitch from different angles and recording where in the strike zone each pitch lands. This data—for almost 80,000 pitches from almost 5,000 games in 2008 and 2009—gave the researchers objective measures of quality that they could compare to umpires’ actual calls, which they then compared with player stats and All-Star appearances.

They found that status, as measured by the average number of All-Star appearances (per year) the pitcher had made, clearly influenced umpires’ calls. About 15 percent of all calls were mistakes, but the rate at which the umpires made bad calls depended on the status of the pitcher on the mound, even after controlling for other factors thought to influence calls, including whether the pitcher is on the home team, game attendance, inning, and ball count. For a five-time All-Star pitcher, umpires were about 16 percent more likely to expand the zone and mistakenly call a ball a strike than they would for a typical pitcher who had no All-Star appearances. Similarly, a five-time All-Star pitcher was about 9 percent less likely to have the umpire mistakenly miss a pitch that was in the strike zone.

Overall, both reputation and status have comparable effects, and players with great reputations and high status enjoy an interaction effect. “All-Star status alone isn’t always great, but pitchers whose past performance aligns with their reputations enjoy a boost,” Kim says. “Pitchers like Greg Maddux who have a good reputation for throwing strikes and having precise control who were also high status benefitted the most from umpires’ biases.” In contrast, a player with high status who also had a reputation for throwing a lot of balls and overall less control saw the status effect diminished—these pitchers weren’t as likely to benefit from umpires’ mistakes at the same rate.

Kim explains these results as a function of expectations on the part of the umpires. “When an umpire sees a high-status pitcher, he assumes that player is high quality. He tends to expect a strike, and so he’s more likely to see a strike.” A pitcher with a reputation for low-status players—in any field—with good performance find themselves handicapped, while high-status players may find themselves rewarded even when they are undeserving.

**When Umpires Strike Out**

*What can umpires’ mistakes tell us about how status and reputation influence decision making?*

At first glance, it may not seem that the umpires of Major League Baseball (MLB) and the regulators at the US Food and Drug Administration (FDA) have much in common. But look again, says Professor Jerry Kim. “Umpires are baseball’s regulators. It’s their job to judge quality to make sure the integrity of the game is sound in an objective, unbiased way. That’s parallel to what the FDA or, for that matter, any gatekeeper or critic does.”

Kim’s previous research, into the pharmaceutical industry, showed evidence that decisions of presumably objective regulators at the FDA were influenced by the status and reputation of pharmaceutical firms: better-known, higher-status firms get faster approval for drugs similar to those that lower-status firms were bringing to market at the same time. But there’s no definitive way to tell whether the higher-status firms really were better or were just coasting on reputation, because drug quality has many facets, from how effective a drug is to whether it interacts poorly with other commonly prescribed drugs, and so on.

That led Kim, along with co-researcher Brayden King of Northwestern University, to look for a way to confirm whether perceptions of quality really are influenced by perceptions of reputation and status—including such social factors as the relationship between the evaluator and evaluatee and what they already know about each other.

Major League Baseball offered the perfect opportunity to see if and how reputational bias works. MLB has four high-speed cameras installed in each league stadium. The cameras take 25 snapshots of each pitch, capturing the speed and spin rate of each pitch from different angles and recording where in the strike zone each pitch lands. This data—for almost 80,000 pitches from almost 5,000 games in 2008 and 2009—gave the researchers objective measures of quality that they could compare to umpires’ actual calls, which

They found that status, as measured by the average number of All-Star appearances (per year) the pitcher had made, clearly influenced umpires’ calls. About 15 percent of all calls were mistakes, but the rate at which the umpires made bad calls depended on the status of the pitcher on the mound, even after controlling for other factors thought to influence calls, including whether the pitcher is on the home team, game attendance, inning, and ball count. For a five-time All-Star pitcher, umpires were about 16 percent more likely to expand the zone and mistakenly call a ball a strike than they would for a typical pitcher who had no All-Star appearances. Similarly, a five-time All-Star pitcher was about 9 percent less likely to have the umpire mistakenly miss a pitch that was in the strike zone.

Overall, both reputation and status have comparable effects, and players with great reputations and high status enjoy an interaction effect. “All-Star status alone isn’t always great, but pitchers whose past performance aligns with their reputations enjoy a boost,” Kim says. “Pitchers like Greg Maddux who have a good reputation for throwing strikes and having precise control who were also high status benefitted the most from umpires’ biases.” In contrast, a player with high status who also had a reputation for throwing a lot of balls and overall less control saw the status effect diminished—these pitchers weren’t as likely to benefit from umpires’ mistakes at the same rate.

Kim explains these results as a function of expectations on the part of the umpires. “When an umpire sees a high-status pitcher, he assumes that player is high quality. He tends to expect a strike, and so he’s more likely to see a strike.” A pitcher with a reputation for low-status players—in any field—with good performance find themselves handicapped, while high-status players may find themselves rewarded even when they are undeserving.

**Read the Research**


**More Ideas**

Watch Jerry Kim discuss this research at bit.ly/cbs-ideas-strikeout.
throwing strikes consistently also triggers similar expectations.

Other researchers looking at similar questions have focused on why prominent figures—be they big banks, pharmaceutical firms, sports figures, or movie stars—get favorable treatment by asking if it’s because they are better quality or if others defer to them out of self-interest. But Kim says that the umpires’ judgments are too instantaneous to allow them to make self-interested calculations. “If it’s conscious, you would expect that in important situations where they might expect more scrutiny, umpires would make far fewer of these biased calls,” Kim says. “We find the exact opposite: the more critical the situation—think bottom of the ninth, tied game, runner on second—the more umpires made biased calls. That suggests they’re relying on unconscious biases and expectations more, not less.”

The implications extend beyond baseball. “This mechanism is a metaphor for what we do in everyday life, with regulators and different kinds of gatekeepers and experts. Consider the long history of women scientists being ignored because they’re women. Even if they do great research, the established experts automatically discount them because they don’t expect great research from women,” Kim says. “If this is in fact a cognitive phenomenon, driven by unconscious expectations, and people expect you to perform poorly, then there’s the somewhat unfair and banal advice to just work harder.” Ultimately, low-status players—in any field—with good performance find themselves handicapped by comparison, while high-status players may find themselves rewarded even when they are undeserving, Kim says. “In either direction, those advantages and disadvantages add up.”

Putting Up With Poachers

A new study suggests that sometimes it may be best for large companies to allow competitors to free ride on sponsored search ads.

During the 2011 Super Bowl, Skechers promoted its Shape-ups model of muscle-toning sneakers in a famous television ad featuring Kim Kardashian. As a way to increase consumer awareness of its product, the ad paid off: in the days immediately following the Super Bowl, the search volume for both “Skechers” and “Shape-ups” spiked on Google, more than doubling in the case of the brand name.

Rather than invest in an expensive TV spot, one of Skechers’ competitors, Reebok, took a different approach: buying online ads tied to the “Shape-ups” keyword. When potential customers searched for “Shape-ups” on Google, sponsored ad results for Reebok’s EasyTone shoes appeared in the right column of the results page. By purchasing ads linked to Shape-ups, Reebok was attempting to poach Skechers’ customers.

Reebok is hardly an outlier in keyword poaching. Online advertising is the fastest growing ad medium and is likely to account for more than 30 percent of total US ad spending by 2015, according to eMarketer, a digital marketing firm. And while traditional media such as TV, radio, newspapers, and billboards are intended to create awareness of a product, sponsored search ads reach consumers when they are much closer to making a purchase, possibly only a click away.

“Poaching has been shown to be a viable strategy,” says Professor Kinshuk Jerath, the author of a new study on the strategic implications of this practice. “Companies need to know how to respond.”

Take the case of Skechers. “When a company sees its customers getting poached, often its first thought is to defend its keyword,” says Jerath, who worked on the study with Amin Sayedi of the University of North Carolina and Kannan Srinivasan of Carnegie Mellon University. Ads on Google are sold by auction, with the highest bidder winning the highest placement in the sponsored ad list, the second-highest bidder winning the second slot, and so on. (There are other factors that affect bidding and placement, one of which is discussed below.) “But in some cases—if your firm is larger or has a bigger advertising budget—it might be better not to bid highest in the auction, but rather to let the poacher steal your customer.”

Why accommodate the poachers? Because launching a bidding war drives up the price of keywords, making customers who
search online more expensive to win. Also, not all potential customers who see a TV ad will do an online search before making a purchase; many go directly to stores. “Bigger firms can rely on the stream of customers who don’t consider or respond to sponsored search ads,” Jerath says, noting that in the Skechers case, it is Skechers—not Reebok, a subsidiary of the multinational Adidas corporation—that is acting like the bigger company, because it allocated a much larger advertising budget to its product.

For bigger firms, a better response is to air even more TV ads, Jerath advises. “It’s true that casting a wider net sends more people to sponsored search—which, ironically, benefits the poachers,” Jerath says. “But it also benefits the company that buys the TV spots, because their product is now getting even more exposure.” A company may inadvertently steer some new potential customers to the search engines for every additional TV spot it airs, but it is likely to gain an even larger number of less expensive customers through other channels, rather than fight for the more expensive customers being poached away by other firms.

What about the impact of poaching on search engines? It might seem that poaching benefits companies like Google, because more competition pushes auction prices higher. But Jerath found that while search engines do not prohibit poaching, they keep it in check. When a search engine detects an attempt to poach—which it uncovers by crawling the ad snippet and its landing page—it applies a relevance multiplier that handicaps, or reduces, the poacher’s keyword bid. For example, a poacher that bids $1 for a click might find its effective bid capped at 75 cents.

Why would Google reduce competition in its own auctions? Search engine firms don’t want to lose customers to TV and other traditional ad channels, Jerath says. “Google sees the benefit in keeping all of its customers in the auction, even though it is lowering prices,” he says. “If smaller companies are driving keyword prices too high, companies with big ad budgets will just jump to TV and radio.”

The study used data from Google Insights and Spyfu.com and analyzed sponsored ad results for products including cars, yogurt, and tax software. With companies spending $30 billion a year on search engine ads, Jerath concludes, “It’s important for all of the players to understand the underlying mechanisms of this market.”
THE IDEA
Assess the risk associated with the growth of a so-called value stock by considering both the book-to-price and earnings-to-price ratio.

The Value Trap

THE RESEARCH
Typically, the term value is used to describe a company with a low price-to-book ratio (P/B), the comparison of a firm’s stock price to the book value of its equity, while growth is applied to a company with a high P/B. Investors buy a value stock—in theory a stock mispriced by the market—expecting to see greater returns.

Indeed, says Professor Stephen Penman, over the last 50 years so-called value stocks have outperformed growth stocks on average. But, in a recent paper with Francesco Reggiani of Bocconi University, Penman argues that the terms value and growth are confounding. They don’t actually tell investors much about the companies they’re being used to describe. Value can mean growth, but with risk attached. For investors, this is called a value trap—a firm that appears mispriced but is actually priced low because risk accompanies its potential earnings prospects. Looking at just P/B, though, it’s impossible for investors to tell the difference. Penman and Reggiani’s analysis shows that investors need to consider the earnings-to-price ratio (E/P) as well.

THE APPLICATION

Investors
You can use this research to refine the way you evaluate investments to elucidate the risk associated with so-called value stocks.

To help clarify the source of this risk, the researchers point to an accounting method that firms commonly employ called conservative accounting. Under this accounting method, customers’ orders aren’t booked until the revenue is in hand. Even investments in the future, such as product development, advertising, and new store openings, may be expensed in the short term and not booked as assets. If a new product is still under development or a new drug awaits FDA approval, a firm’s expectation of payoff is that much riskier. That’s very different from buying an inventory that is ready to sell. As a result, accountants defer potential earnings from these assets to the future. They are indicating that the implied earnings growth from the investments is risky.

Penman and Reggiani explored the effects of this technique by looking at 50 years of financial data from Compustat. They analyzed E/P and book-to-price ratio (B/P) of each firm listed, as well as the firm’s annual returns over the following year. They show that, for a given E/P, B/P indicates the amount of risk attached to the firm’s potential earnings growth. From that, they found the need to enhance the famed Fama and French model, an asset pricing model that targets three factors—the market, size, and whether or not a firm is a value stock. Penman and Reggiani assert that E/P and B/P should be used in concert, rather than just using B/P.

Stephen Penman is the George O. May Professor of Accounting, chair of the Accounting Division, and a Chazen Senior Scholar at Columbia Business School.

READ THE RESEARCH
Choosing Health—and Wealth

How choice architecture could help the Affordable Care Act be even more affordable—for citizens and the state.

For tens of millions of Americans who don’t have health insurance, employer-sponsored or otherwise, last fall brought the ability to choose it for the first time with the rollout of the Affordable Care Act (ACA).

“For people who already have insurance, this can be a big decision,” says Professor Eric Johnson, who has a well-established career studying how consumers assess and make financial (and other) decisions, yet confesses he needs a quiet room and closed door to make sense of his own benefits statements. “So I think that people who have never bought healthcare insurance before would find it difficult. My coauthors and I wanted to learn if people could make this decision well and, if not, whether we could help them.” Johnson worked with Allison Bajger of Columbia University, Tom Baker of the University of Pennsylvania, Ran Hassin of Hebrew University of Jerusalem, and Galen Treuer of the University of Miami.

The average person in the target market for the healthcare exchanges tends to be on the lower end of the income spectrum and is likely to spend 5 to 10 percent of her income on health insurance. If she doesn’t make the best, least costly choice for her needs, that cost represents a serious liability. And, since many will buy coverage using government subsidies, making expensive mistakes on the healthcare exchanges will also cost other taxpayers.

The researchers designed a simple choice set from which study participants would choose from four or eight insurance policies, each varying in price and with different premiums, deductibles, and co-pays. Participants were asked to pick the least expensive coverage for their situation, which researchers provided them. For example, a participant might be told to assume she would make three doctor visits and spend $1,200 on out-of-pocket costs for things like x-rays, prescription drugs, or lab tests.

The results were shocking. “People chose very poorly,” Johnson says. “They were picking very close to chance—almost as if they were throwing darts at a dartboard.” These poor choices cost hundreds of dollars a year relative to the least expensive choices.

In the next study—one of several subsequent attempts to uncover which kinds of prompts would yield the least expensive choices—they paid people to pick the right policy. “We thought, maybe people are being lazy and incentives would help,” Johnson explains. “But there was almost no difference from the first study. People still chose barely better than chance would dictate.” (Curiously, when participants were offered financial incentives, they not only spent a lot more time making their choices, they were more confident that they had chosen well—even though they had not.)

In a third variation, the researchers included a calculation of what each policy would cost, which cut down on errors significantly. But a surprising proportion of people still made poor choices, prompting the team to wonder if making what at first seemed a relatively straightforward choice was essentially impossible, especially for the typical participant, who did not have formal math training or finance skills. So the team tested how well MBA students did. This population chose the least expensive policy about 75 percent of the time, making far fewer mistakes than other participants. When the researchers asked the students how they made their decisions, most students reported, perhaps unsurprisingly, that they’d plugged the numbers into an Excel spreadsheet to calculate the least expensive option.

“We ended up with this quandary,” Johnson says. “Ordinary people—those without finance or business backgrounds—don’t do this math.” To see if they could prompt laypeople to choose the right insurance policy, they began combining choice strategies in their subsequent experiments. They started by teaching the participants how to

$570 vs $100

Telling people the cheapest option and why they should choose it produced choices that, on the exchanges, would have saved $470 per person on average per year.

Eric Johnson is the Norman Eig Professor of Business in the Marketing Division and director of the Center for Decision Sciences at Columbia Business School.

READ THE RESEARCH
5 Ways to Encourage Smart Choices

Policymakers can help consumers make better, less costly choices by offering an array of decision aids. These are adaptable for use with other insurance products in which deductibles and multiple streams of costs and payments apply.

1 Help Estimate Costs
Provide consumers a guide for estimating their likely healthcare costs by helping them gather their previous year’s insurance premiums, prescription drug costs, lab tests, doctor visits, and related healthcare costs.

2 Provide a Cost Calculator—and Make It Easy to Use
A lack of math skills may be a key factor that contributes to costly decisions. To bridge the skills gap, offer a cost calculator. Consumers could plug in their estimated healthcare spending, let the calculator do the heavy lifting, then view and compare the likely costs of each plan.

3 Use Smart Defaults—but Preserve Choice
Offer consumers a default choice by pre-checking the option that reflects the least expensive policy based on their cost calculations. So-called smart defaults point consumers to the least costly choice while leaving them free to choose other plans.

4 Provide Just-in-Time Education
Providing consumers with financial education when it’s relevant to them may be more effective than the basic financial literacy courses widely taught in high schools and colleges. Just-in-time education, offered just prior to making a major financial decision and providing an explanation of all healthcare costs and why a particular policy is the best choice for an individual’s circumstances, can take just 1.0 or 15 minutes.

5 Offer a Combination of Choice Aids
Helping consumers calculate their healthcare costs and providing just-in-time education is more effective than either alone. And telling people both what they should choose—providing a default option—and using just-in-time education to explain why it’s the best choice leads to better outcomes.

calculate the relative cost of each policy, like multiplying the monthly premiums by 12, adding their deductible or out-of-pocket costs (whichever was smaller), adding in the other costs based on the number of doctor visits they’d been told to estimate, and so on. This just-in-time education improved choices a little, but when the researchers combined education with completed calculations, the average mistake decreased from $500 to $200.

Up to this point, the researchers hadn’t used one of the newer tools for designing choices—setting up the right default option. On a theoretical live healthcare exchange this might work as a tool on the exchange site that asks you how many times you visited the doctor last year and what your total healthcare expenses were or how many times you expected to visit the doctor this year, and then recommends the least expensive policy for those circumstances. In one study, researchers mimicked this setup by prechecking the cheapest policy for each participant, who remained free to choose any policy they wanted. Results were good, yet 20 percent of participants still picked a different, more expensive policy.

The very best results came when the researchers included the prechecked default with the calculator—under this design, participants chose as well or better than the MBA students. “The combination of telling people the cheapest option and why they should choose it actually turned out to be a big win,” Johnson says.

Why do consumers choose so poorly on their own? “People seem to have a problem combining the different costs,” Johnson says. “There’s a monthly premium; there’s an out-of-pocket for each visit to the doctor. They are not doing all the math and instead appear to be overweighting deductible and out-of-pocket costs. As a result, policies with high deductibles tend to be selected much less often than they should be,” Johnson says. “People who have only very basic math skills tended to benefit more from this choice architecture, so we think this could help people who need it the most.” (Johnson notes much additional evidence that people overweight deductibles when choosing similar financial products, such as auto insurance.)

While the researchers embarked on this project wondering how they could help people make less costly choices, during the study they realized their results would let them estimate the dollar value of improving those choices. Without any kind of decision aid, people made mistakes of about $570 a year on average. “That’s a lot for an individual, and if that individual’s choice is subsidized by the government, it’s a lot out of the federal treasury,” Johnson says. “When we present the least expensive choices to individuals, they make mistakes of less than $100 on average.” The researchers made a rough calculation that if 20 million people buy insurance on the exchanges, the right choice architecture could help consumers and the treasury save between $9 to $10 billion per year.

And how do insurers fare? “Insurers could, in fact, try to take advantage of these mistakes, and so I could imagine an insurer offering a low-deductible policy that had a higher premium, which would raise their profitability,” Johnson says. “But if I’m a good provider with a good cost structure, I want to make sure the market is efficient and people are picking the policy that’s best for them, and so some insurers will, I think, be very thrilled if the choices are made more efficiently by consumers.”

The combination of telling people the cheapest option and why they should choose it actually turned out to be a big win.”

Johnson expects that while small businesses will do the math to make smart choices, they might also benefit from similar choice architecture. “If I were running an insurance brokerage, I would try to make it easier for small businesses to make this decision. That would be a huge competitive advantage.”

The researchers have been sharing their results with state-run exchanges and negotiating with some to study the decision-making processes of consumers in the real world. “We want to learn more about what is and isn’t effective,” Johnson says. “Supreme Court Justice Louis Brandeis once said the states are laboratories of democracies. If so, we’re running an amazing experiment.”

Home Team Advantage

For nursing, hyperlocal knowledge and experience are keys to stellar teamwork—delivering better healthcare while shrinking costs.

Teamwork has become a key principle of operations in virtually every industry. Even in the manufacturing sector, where workers once stood alone at their stations on the assembly line, it’s common to employ team approaches to production problem solving. At the same time, the role of specialized knowledge—human capital—in conjunction with mentoring and sharing local knowledge is increasingly being recognized for its critical role in spurring productivity: when more experienced specialists share knowledge with less experienced colleagues, researchers have found, productivity rises.

In healthcare, productivity translates not only to better financial outcomes but, more importantly, to higher quality patient care. Professor Ann Bartel, along with independent researcher Nancy Beaulieu, Ciaran Phibbs of Stanford and the Veterans Administration, and Patricia Stone of Columbia University, wanted to learn more about how human capital affects productivity in healthcare by determining the qualities of the most productive nursing teams.

Why nurses rather than doctors? While doctors diagnose and plan care, nurses implement these plans, so their work is critical to day-to-day quality of care. And nurses’ work is especially team-centered: nursing care requires multiple shifts per day, and nurses must regularly share information about patients’ conditions and treatments with those on other shifts. “It really is a group production process where individual knowledge workers develop communication solutions with coworkers and apply their expertise to solving problems,” Bartel says.

The researchers used longitudinal monthly data from nursing units in Veterans Administration (VA) hospitals in all US states from 2003 to 2006 to study the relationship between patient outcomes and nursing staff characteristics. Unlike other hospital systems, the VA creates a separate electronic discharge record for each unit stay for each patient, enabling the researchers to link patients to the nursing units in which they were treated. Another VA data set, Personnel and Accounting Integrated Data, allowed the researchers to identify when new nurses joined a unit, when experienced nurses left, whether nurses were regular staff or contract nurses hired to cover absences of regular staff, as well as each nurse’s education and experience working in the hospital and specific units.

Hospitals typically have an estimate of how long a patient with a given diagnosis is expected to stay in a unit and in the hospital. By looking at the deviation of the actual length of stay (LOS) from the expected LOS, the researchers were able to get a sense of whether patients were getting good nursing care. “High LOS is a bad outcome,” Bartel explains. “Controlling for the patient’s initial diagnosis, it indicates that the patient developed complications such as infections, blood clots, or pressure ulcers, suggesting a lower quality of care.” The detailed nature of the VA data meant the researchers could even link LOS to the characteristics of the nurses on the unit in which a patient was treated, allowing the researchers to model human capital, in a way that other studies have not, to understand how communication, knowledge sharing, and coordination work within nursing teams.

They concluded that skill level and experience in a specific unit matter a lot, producing better patient outcomes in the form of lower LOS. Specifically, patients cared for by a team of registered nurses that has more experience on that particular unit were discharged, on average, sooner than those cared for by RNs with less experience on the unit. The researchers estimate that if a hospital with 25 nursing units could increase the unit tenure of its RNs by about four years on average, each hospital could save roughly $500,000 a year while producing better patient outcomes.

Many of these seemingly informal relationship dynamics are lost to the team when experienced nurses are away or leave the unit.”
The researchers also found significant team disruption effects when hospitals brought in contract nurses: LOS increased when contract nurses substituted for staff nurses. Bartel says this demonstrates the importance of a nurse’s experience on a nursing unit. “Even very skilled contract nurses don’t have the specific knowledge about the unit,” she explains. “They receive little orientation or training and are usually brought into the unit on very short notice, and they are likely to be unfamiliar with procedures, practices, and equipment in the unit as well as with their colleagues.” While the presence of contract nurses increases staffing intensity, these additional resources do not improve patient outcomes.

To some degree, this isn’t surprising: studies in other industries have looked at the impact of contract workers and found reduced productivity, increased incidence of work accidents, and, when it comes to substitute teachers, negative impacts on student test scores. One reason that this kind of hyperlocal expertise is so important in the case of nursing teams, Bartel says, is that hospitals use their own systems, policies, and procedures, and with nursing units, unit managers are often free to establish their own work processes. That leaves staff nurses with a great deal of unit-specific human capital and contract nurses at a disadvantage.

Finally, the researchers found that other disruptions to the team, such as an experienced nurse leaving or a newly hired nurse acclimating to the unit and the hospital, resulted in significant decreases in the unit’s productivity. Because the productivity of experienced nurses spills over to less experienced nurses, team performance is enhanced as the less experienced nurses learn from their more experienced mentors. A less experienced nurse without unit-specific knowledge can’t offer that to her team. “These kinds of exchanges just can’t occur as often when experienced nurses are out,” Bartel says. “Many of these seemingly informal relationship dynamics are lost to the team when experienced nurses are away or leave the unit.”

Biomedical R&D Today Increases Longevity Tomorrow

New research shows that greater spending on biomedical research reduces future mortality rates.

Americans are living much longer than they did a century ago. A baby born in 1900 was expected to live only to 47, but by the end of the 20th century life expectancy had increased by 30 years, to 77. Among the many reasons for this increase in longevity and overall improvement in Americans’ health—improved diet, better sanitation, improved working and living conditions—is biomedical research.

“Many people have argued that research-driven biomedical innovations such as new drugs, devices, and treatments have, in fact, been responsible for increases in longevity,” says Professor Frank Lichtenberg, who specializes in the study of how research and development drive productivity. The United States devotes a lot of money to developing biomedical innovations: combined, the public and private sectors spend about $140 billion on medical research every year. The federal government, primarily through the National Institutes of Health (NIH), does very basic upstream research, while private industry does more applied research to translate it into treatments and commercialize it, such as developing new drugs.

However intuitive it is to link medical research to increased longevity, gathering evidence is not easy. Lichtenberg wanted to make a broad assessment of the impact of biomedical research on mortality—what is the social return on investment? It’s not a straightforward matter of comparing total biomedical research with overall declines in mortality. Instead, Lichtenberg used a common method in social science research called difference-in-differences analysis to look at various types of cancer. (Unlike many diseases, reliable cancer data is available thanks to the widespread existence of cancer registries in the United States that track cancer patients throughout their lives.)

“We know that in the last 20 years or so, cancer mortality rates have declined. There is progress against cancer,” he says. “But it has dropped much more for some types of cancers.
than for others." Lichtenberg’s hypothesis was that biomedical research is a cause of the drop in cancer mortality, and that cancers with the greatest declines have benefitted from more research studies about that cancer.

Lichtenberg used the National Library of Medicine’s PubMed database, which tracks details about published medical research, including each paper’s publication date and whether it received financial support from the NIH or the biomedical industry. Of the approximately 1.5 million papers published about cancer since 1975, about one-third cited research funding from public or industry sources. (Some of the other two-thirds that didn’t cite funding are review articles or editorials that did not introduce new research findings.)

Combining the PubMed data from all cancer-related research-funded publications with the cancer register data, he compared different types of cancers, the number of research papers for each type of cancer, and reductions in age-adjusted mortality, controlling for the number of people diagnosed with cancer in a given year.

Because it takes years, even decades, for biomedical researchers and developers to turn initial findings into effective treatments, Lichtenberg looked specifically at subsequent drops in the age-adjusted mortality rate—the probability of any one person dying from cancer per year. He found a significant inverse correlation: the more rapidly research about a particular cancer accumulates, the greater the subsequent decline in mortality from that type of cancer. Prostate, stomach, and colon cancers have all had large declines in mortality, roughly corresponding to increases in research publications about those cancers. Other cancers have had much smaller decreases in mortality (and pancreatic cancer showed a slight increase), corresponding with fewer research papers about those cancers.

So if research doesn’t impact treatment in the immediate future, how long does it take? About 15 years, Lichtenberg finds: today’s cancer mortality rates depend on the number of research publications there were about that type of cancer about 15 years ago.

“The 15-year lag means that any substantial reductions in medical research today, such as those that came out of last year’s budget sequestration, put future longevity gains at risk,” Lichtenberg warns. “The median time between research and publication about that research is about six years, so today’s NIH budget cuts would result in fewer publications about six years from now. Fifteen years after the decline in published research, we would begin to see smaller reductions of mortality. We would see the consequences of the cuts 21 years from now,” he says. “Those are the very real long-term consequences of reducing biomedical research.”
Observations from the Real World

A new statistical method provides a way to better approximate lab settings when analyzing data.

In an ideal world, researchers investigate cause and effect relationships in the controlled environment of a laboratory, carefully assigning subjects to specific interventions or treatments and then analyzing the results. In reality, however, most experiments fall short of this benchmark because creating such an environment would be impractical, unethical, or simply too expensive. This is often the case in business, medicine, and social science. Topics such as the effect of ad campaigns on sales or the relationship between prisons and crime are usually approached using observational rather than experimental data.

Research by Professor José Zubizarreta, who has a background in statistics and an interest in health research, offers a new method to analyze cause-and-effect relationships. His method provides a better way to approximate the structure of a lab experiment than current standard methods, allowing researchers to conduct fine-grained adjustments of variables that could confound results.

Zubizarreta used this method to address a healthcare question: Are patients who are both elderly and obese at a greater risk of acute kidney injury following surgery? In 2008, more than 30 percent of Americans older than 60 years were obese; while obesity is known to be an independent risk factor for chronic kidney disease, research has returned conflicting results about the association between the elderly obese and post-operative kidney injury. Working with medical doctors Rachel R. Kelz, Caroline E. Reinke, Paul Rosenbaum, and Jeffrey H. Silber of the University of Pennsylvania, he performed a case-controlled study of more than 500 patients who experienced renal failure after a hip or knee replacement or thoracic or colon surgery. Using the new method, the researchers matched these patients with control subjects similar in operation type, age, sex, race, and a variety of medical factors. The study, which also relied on data from Medicare claims and chart reviews, included patients from three states who were treated at 47 different hospitals. Zubizarreta’s sample-balancing method ensured that for each of these hospitals, patients who experienced an acute kidney injury were matched extremely closely on all of the demographic characteristics and medical factors to patients who were part of the control group.

The study showed that after surgery, obese patients had a 65 percent greater chance of experiencing an acute kidney injury within 30 days of their initial hospital admission. Given the prevalence of obesity among elderly patients, the authors recommend that hospitals increase their efforts to monitor the kidney function of at-risk groups following surgery. Acute kidney injury is associated with prolonged hospital stays, hospital readmissions, and lower long-term survival rates.

For Zubizarreta, the study achieved one of the primary goals that links most of his research. “I have always wanted to use statistics, mathematics, and computation to address questions of social relevance,” he says. “And in healthcare, there are so many of these issues.” In a separate project, he is applying his new method to a study on the effects of C-sections on premature infants with very low birth weights. He has also started a project that seeks to determine whether schools should operate as for-profit businesses; this project is studying the relationship between a school’s for-profit or nonprofit status and the performance of its students on standardized tests, using data from his home country of Chile.

Zubizarreta’s method can be applied to almost any topic in business, economics, and public policy. “In operations research, there has been a surge of interest in using these kinds of methods to evaluate interventions,” he says. “By making this statistical contribution, we hope to provide a way of looking at some of the most important questions facing countries around the world.”

By making this statistical contribution, we hope to provide a way of looking at some of the most important questions facing countries around the world.”

READ THE RESEARCH


José Zubizarreta is assistant professor of business in the Decision, Risk, and Operations Division at Columbia Business School.
Social Savers

Peer monitors can help the poorest of the poor increase their wealth.

Increasing a household’s capacity to save can have significant effects on a range of economic outcomes. In markets with credit constraints, not only are cash savings important for growing wealth, they also provide a buffer during financially rocky times.

In developing countries, however, rural households do not appear to save adequately, says Professor Emily Breza. It’s not an issue of access—in rural India, for example, rural bank branches offer no-frills savings accounts with zero or low minimum balance requirements and no restrictions or fees on withdrawals. Instead, Breza explains, inattention to savings balances can make savers lose sight of their goals, and temptation to spend on discretionary items makes saving hard for individuals already living with very little.

Previous research has shown that reminders and commitment devices, such as setting concrete timelines for savings goals, can help overcome these obstacles—evidence that has led many rural banks and policymakers to adopt what’s known as a business correspondent model—agents hired by banks to visit villagers at their homes and collect savings deposits. Building on this concept, Breza, with Arun Chandrasekhar of Stanford, developed a pilot program using peer monitors to help residents in 60 rural villages in Karnataka, India, reach their savings goals. They started by going door-to-door looking for volunteers for the program—individuals who were interested in saving or in encouraging a saver by being a peer monitor—finding a total of 1,300 savers and 1,000 monitors to take part.

Savers set six-month savings goals and were then divided into three groups: nonmonitored, those with a randomly assigned monitor, and those who chose their monitor from among the volunteers. Monitors might check in casually with their savers—a gentle reminder about saving for a child’s education, for example, while passing each other on a walk to school or seeing each other during temple—or do nothing, though savers knew that the monitor would be informed by the researchers about their progress toward their savings goals. Small monetary incentives were given to monitors if the savers hit their goals.

The researchers found that monitored savers were significantly more likely than nonmonitored savers to reach their goals. Those with randomly assigned monitors did the best: they saw an average increase of 38 percent in savings balances. Within that group of monitored savers, Breza and her fellow researchers also found that savers with monitors who were more central, or socially important within the network, generated a 20 percent rate of reaching their six-month savings goals, compared to a benchmark of only 7 percent for nonmonitored savers. The effect was most pronounced when a peripheral saver was matched with a central monitor.

“This signals just how valuable social network importance is,” Breza says. “People on the outside of the networks were pretty terrible peer monitors. If your monitor was a person who is a hub of information, maybe the town gossip, someone who knows what’s going on in the network, you end up saving a lot more because there is more social pressure to save.”

The fact that randomized monitors also led to more savings than letting participants choose their own monitors indicates that people don’t choose the best monitors for themselves. Breza says there are several potential explanations for this—a saver on the periphery might not feel they have enough social capital to approach a socially important monitor to ask for help, for instance, or the dynamics of the relationship may be changed when an outsider or institution (in this case, the researchers) establishes the monitored relationship instead. But while more research is needed to explain this particular effect, some practical implications from the findings are already clear.

“We already knew that bringing a human element in to bridge the gap between a bank branch and customers in these rural areas—such as in the business correspondent model—is beneficial,” Breza says. “But using peer monitors to take advantage of this rich source of information in the community presents a cost-effective way of motivating savers by using positive social pressure.”

The social network effects could also help inform the successful design of microfinance programs in developing countries. “Activities that encourage more connections within a community could have a positive impact on access to informal finance and formal risk sharing—things that not only give an economic boost to individuals, but also to entire communities.”

Activities that encourage more connections within a community could have a positive impact on access to informal finance and formal risk sharing—things that not only give an economic boost to individuals, but also to entire communities.”

Emily Breza is assistant professor of finance and economics and a Chazen Senior Scholar at Columbia Business School.

READ THE RESEARCH
Lessons from Asia in Financial Development

Hugh Patrick discusses the liberalization of financial systems behind the remarkable economic development of China, Japan, and Korea.

Editor’s Note: In this article the name Korea refers to the Republic of Korea, often referred to as South Korea.

Why write this book?
Professor Yung Chul Park of Korea University and I had produced a similar book about Japan, Korea, and Taiwan over two decades ago, looking at financial development’s relationship to the economic growth of the three countries, which was happening rapidly in the modern period up to about 1990. He suggested we write an update that would look at the last 20 years and include mainland China, about which there’s almost no literature. As before, we agreed I would do an overview chapter and edit all the chapters, he would do the Korea chapter, and we would recruit Edward Lincoln to do the Japan chapter and Yiping Huang the China chapter.

But this is not a technical book for econometricians. It is designed for anyone interested in these economies and in understanding their financial systems.

Why these three countries—and why not Taiwan this time around?
Taiwan is another successful story, but we prioritized looking at China, where, as I noted, there’s a real void. We decided China would be more immediately relevant for readers.

One question I asked myself was, what’s the essence of these three countries? It’s not simple geography. It is that the three nations are case studies of very successful catch-up growth and successful financial development, though with many twists and turns. These are cases of extraordinary success. We talked for the last decade about Asia being a key part of growth in the world now, and we’ll probably talk about that for the next decade.

Each of these nations is obviously unique, but is there any underlying pattern you can point to that characterizes the development of their financial systems?

Of course there are always political and economic constraints. There are always vested interests in the status quo. Every nation has to overcome those. But for these nations, there was an acute sense of pressure in that they were quickly facing a more global financial system, one that was becoming less domestic and regional.

All of these countries in the early postwar period had very repressed financial systems. That is not unique to China, which people tend to forget. All of them had interest rate controls, credit allocation controls, and ownership controls, and their markets functioned nothing like what we think of as markets working.

However, by the 1980s global financial markets had become well developed, with some banks and other financial institutions as major global players. Money flows were vibrant, particularly in short-term markets, but also through foreign direct investment and bond markets. All three of these countries felt tremendous pressure, both domestic and foreign, to take advantage of lower interest rates, better access to capital, and new financial technologies. The liberalization process gradually loosened controls, and you saw tremendous economic growth in Japan and Korea. By 1990 Japan had become very liberalized and Korea...
was fairly far along by then as well.

China was an outlier because of its socialist system and, in particular, because the government owned the financial system, including all banks. One thing we found is that China is currently about halfway to what we would call a highly liberalized financial system. It took 30 years to go halfway; it will probably go the rest of the way much sooner, though not immediately.

**Why do you see Korea as such an interesting case?**

South Korea is an economy that has grown very rapidly and successfully and has made this transition from being an authoritarian state to becoming a democratic state peacefully. In that sense it’s one of the most successful stories there is. It’s a different one from Japan, which was defeated and occupied. It’s a different one from China, which remains an authoritarian socialist state with market characteristics.

Korea is now regarded as one of the advanced middle-power countries. That’s really quite an impressive performance for a country that was an agricultural colony, then had a war, and was then divided.

**Japan shares many of the features of European Union countries. What would you say are the key lessons they offer each other?**

In the sense that Japan and the European Union countries are high income and developed and have similar problems, and Japan is somewhat of a frontrunner, Europe can look to Japan to see the kinds of problems it might face. The most important is Japan’s advanced stage in the demographic transition. Japan’s working-age labor force peaked in the 1990s, its population is rapidly aging, and the population is now decreasing. Europe is now starting to experience those same demographic trends.

One big lesson for Asian economies is that trying to set up a single currency and a set of rules that bring together diverse countries doesn’t work very well. You need a really strong political reason for doing it. That doesn’t exist in Asia, and even though the will did exist somewhat in Europe, it hasn’t always worked out well. Look what happened with Greece: a lot of its debt was held by institutions in Europe. Although it’s the same Euro currency, those institutions have much less desire to protect some weak bank in a foreign country than they would have for a bank in their own country—even though they’re in a so-called common eurozone or European community. Whereas in Japan, while the government debt is huge, it is held primarily by Japanese institutions and individuals, not foreigners.

**As you looked at the histories and patterns in each country, were there any surprises?**

It’s surprising how complex the interactions are and how hard it is to tease out the interactions between the financial systems and corporations in the real economy. Economists are still trying to figure out how to understand that dynamic.

I knew that Japan had tried very hard to liberalize, deregulate, and develop a bond market beginning around 1990, but that in 2010 it remained essentially a banking system. We spelled that out in rather stark terms in the Japan chapter in a way that was nevertheless striking to me. Seeing that companies weren’t going out and issuing bonds—the degree to which Japanese firms just went to their bank and borrowed more money if they needed it—was striking. Companies haven’t taken advantage of market-based finance—neither long-term bonds nor shorter-term corporate instruments have developed very much in Japan. So one big question that came out of the book for me was, what are the domestic real investment opportunities in Japan? I am not convinced the basic problem is the lack of finance even though, not surprisingly, some small companies complain about lack of access to finance. I think that is a problem of evaluating creditworthiness, certainly not unique to Japan.

I was surprised to find that Yung Chul and I disagreed somewhat on Korea! He takes a much more nuanced and skeptical view of the process of deregulation than I do. He thinks there were times when it went too far too soon.

On a similar note regarding China, I was surprised to see Yiping Huang, who wrote the chapter on China, assert that financial repression in the 1980s and 1990s was not so bad. I’d always believed that financial repression was inefficient at allocating resources. To have him say that given the context—a controlled economy with state ownership and government control—China needed to open its financial system more slowly before it started to liberalize tempered my thinking.
While Prop 227’s policy aim worked on its face, it had an unintended consequence: parents no longer needed to learn English themselves.

New research suggests that when children in immigrant families learn a new language, their parents are less likely to also pick it up.

Traditionally, most learning that takes place in the home flows from adult to child, especially when it comes to communication: parents actively teach their children how to talk, read, and write. Yet immigrant families may face a unique challenge when it comes to these essential tools and may see learning flow from child to parent, says Professor Ilyana Kuziemko. “Children have the natural gift of acquiring language, so children in immigrant families usually pick up the language of their new home before their parents do,” she says. “That leaves the parents to decide whether to invest the time to learn the language.”

The best decision isn’t obvious. On the one hand, Kuziemko points out, parents might find it easier to learn a skill if their child acts as a sort of personal tutor who can help them learn English—for example—at home. “But parents might have less incentive to learn, because once someone else in the home speaks English, they may have less need to learn it themselves,” she says. Census and public school data from before and after the 1998 passage of California’s Proposition 227 (or Prop 227) offered Kuziemko the chance to see which of these was the most likely outcome for parents whose children learned English.

Prop 227 mandated that California’s public schools provide English-only education in lieu of the once common practice of providing bilingual education in English and, most often, Spanish, which had evolved in part to serve the state’s largely Mexican, Spanish-speaking immigrant population. Among educators, opposition to bilingual education is controversial, because while immersion seems to help children acquire language skills quickly and effectively, many believe that it makes other important skills more difficult to acquire. “Think about how hard learning math in a foreign language might be,” Kuziemko points out. So although Prop 227’s mandate extends statewide, individual schools could and did opt out: if at least 20 parents in a school petitioned to continue bilingual education for their children, the school could petition the school board for a waiver. As a result, there is some variability in how strictly school districts adhere to English-only instruction. (Though parent petitions were no guarantee of retaining bilingual programs: schools whose administrators or boards supported Prop 227 were less likely to opt out than schools whose administrators opposed Prop 227.)

First, Kuziemko used data from the California public school system to look at the prevalence of English-only and bilingual education after Prop 227. The state doesn’t measure residents’ English competency in any comprehensive way, but the 1990 and 2000 censuses both required respondents to self-report if and how well each member of the household spoke English. (Self-reported data from the census on language skills, unlike much self-reported data, has been shown to be a reasonably reliable gauge of language competency.) Comparing the prevalence data with the census data for before and after the implementation of Prop 227 allowed Kuziemko to measure whether and how much English-language skills improved for both parents and children in immigrant households after the implementation of Prop 227. Among students, English skills improved most in those areas of California where schools were more compliant with Prop 227. But parents in those same neighborhoods were less likely to learn English or to see their English-language skills improve.

To Kuziemko, this suggests that while Prop 227’s policy aim worked on its face, it had an unintended consequence: parents no longer needed to learn English themselves. But is this a bad outcome? “It might be that for these families, the best use of their time is for the kids to specialize in learning English and performing the household tasks that require English fluency—reading bills, filling out a rental application, talking to the landlord, translating TV news—and for the parents to be working or contributing to the household in ways that don’t require English-language skills,” she explains. But if parents struggle to understand how well their children are doing in school or what the doctor recommends at their child’s annual checkup, that’s less than ideal. If immigrant families are to participate more fully in...
Save or Be Selfish?

A new model can help economists understand how spouses make financial decisions—and why many couples struggle to save.

In the last four decades, the way Americans save for retirement has shifted dramatically. Where once defined-benefit, employer-based plans made saving for retirement a matter of fact, today 401(k) and similar plans leave key decisions about how much and when to contribute up to individual households.

While that freedom of choice is alluring, there is overwhelming evidence that people today don’t save enough for retirement. Experts typically recommend that people save roughly 10 percent of their current income. Yet of those whose employers offer a 401(k), when polled, about one-third report not contributing anything to it. Of those who do contribute, the average savings rate is about 6 percent—just over half the standard recommendation. Furthermore, people appear to understand they have a savings problem: about two-thirds of people say they should be saving more when to contribute up to individual households.

Why do people undersave even when saving is in their own best interest? The question has puzzled economists, who, when examining how people make choices about financial management, often frame their work around rational self-interest. This work invariably focuses on individual decision making, and that might contribute to the puzzle. “We should take seriously the fact that in many households there are multiple people,” Professor Andrew Hertzberg explains. “Spouses, parents, children, and, in some cases, extended family are all financially interrelated. Spouses share wealth, they may give money to their children or may contribute to their own parents or siblings.”

Economists have shied away from thinking about multiperson financial decision making because of the complexities of modeling more than one person’s behavior in a household. “For simplicity, economists normally assume that everyone in the household is either selfless or has exactly the same objectives,” says Hertzberg, who reexamined that assumption. His new model makes it easier to study household financial behavior in a way that more accurately reflects how household partners interact and make decisions. In the model, Hertzberg considers savings as the outcome of a trade-off between each household member’s desire to spend on her own wants and her concern for saving for the future. This trade-off is affected by the fact that even in the most well-adapted relationships, people are usually a little bit selfish. This matters because consumption is a way to spend on oneself, whereas savings is shared with a partner. “A couple may want and agree to save ten percent of their income each month,” Hertzberg says. “But when one of them has the opportunity to spend a few more dollars on themselves, many people do so. And the result is that they undersave.”

The severity of the undersaving problem is affected by factors such as what percentage of income is spent on shared public consumption—such as costs related to children, rent, or food that are essentially shared—or private consumption, like sporting goods or clothing. In general, a household that has a higher fraction of shared expenses will undersave less because the interests of the household members will be more closely aligned.

Hertzberg shows that one factor that can make the undersaving problem even more dramatic is spending on private durable goods, such as a sports car or jewelry. His model predicts that household members will overspend on these items. Why is this? “Household members undersave not because of impatience but because selfishness results in their undervaluing shared savings,” he explains. “So the ability to spend a lot of money on a sports car that will provide me with pleasure for many years is the perfect way to redirect shared resources to myself.” The model may explain why the savings rate went up.
for households affected by the passage of the Retirement Equity Act (REA) in 1984. Among making many other sweeping changes related to pensions, the law introduced a mandatory requirement that retirement account holders for households affected by the passage of the Retirement Equity Act (REA) in 1984. Among making many other sweeping changes related to pensions, the law introduced a mandatory requirement that retirement account holders or even informing—the other. By including this feature in the REA, the government recognized that when a household is made up of more than one adult, financial decision making is—or should be—fundamentally a joint decision.

The savings rate increase after the passage of the REA suggests that one tactic households can use to increase their savings rate is to save in the form of assets that require joint approval to make withdrawals or borrow against. That’s one reason that jointly owned housing can be a successful form of savings—one spouse typically cannot take a loan against the house without the partner’s consent. Hertzberg’s model could provide a basis for answering a related financial services question: how much would people pay to solve their undersaving problem with other types of savings commitment technologies, such as mandatory joint authorization?

Finally, says Hertzberg, the model reinforces the idea that members of households would be more successful at building savings and assets if they negotiated how much to save, rather than simply allowing residual funds—whatever they don’t spend—to accrue.

One of Hertzberg’s next projects builds on this research by considering how households set up their financial accounts and how that impacts subsequent financial decisions about savings, spending, and debt. This research might help tackle another long-standing puzzle in economics: why do people who have money in the bank—savings—also have debt on their credit cards on which they are paying interest? “For a single person, the rational choice is to pay off the credit card and save the cost of interest,” Hertzberg notes. “But it might make sense in a household where members have individual credit cards. Credit card limits will act as a restraint on how much individual members will consume. A couple may choose to delay paying off the credit card because they know each family member would just go out and spend more.”
As home prices rise, incremental consumption as a share of incremental wealth in China is smaller than in the U.S. For the same reasons, if home prices were to fall, the decline in consumption as a share of a decline in housing wealth may also be smaller than in the U.S.

The . . . conclusion of a group of Columbia University economists led by Emi Nakamura—who formerly worked on inflation numbers for the US Bureau of Labor Statistics—is that [China’s] inflation has of late been understated, while growth in consumption was overstated. In the 1990s, however, when inflation appeared to be much lower, the indications are that inflation was overstated and growth understated.

“Rather than employing guilt or complex incentive schemes pitting the interests of future and current selves against each other, simply fostering the sense that what matters most in defining us persists over time may represent a powerful means to help us persist in achieving important goals.”

“The . . . conclusion of a group of Columbia University economists led by Emi Nakamura—who formerly worked on inflation numbers for the US Bureau of Labor Statistics—is that [China’s] inflation has of late been understated, while growth in consumption was overstated. In the 1990s, however, when inflation appeared to be much lower, the indications are that inflation was overstated and growth understated.”

“Rather than employing guilt or complex incentive schemes pitting the interests of future and current selves against each other, simply fostering the sense that what matters most in defining us persists over time may represent a powerful means to help us persist in achieving important goals.”
Here is where research by world-class business professors impacts business practices across the globe. Where a network of over 40,000 alumni are creating real change in nearly every sector and industry worldwide. And where you are immersed in the nexus of global business: New York City. Find yourself at the center of international influence. Only at Columbia Business School.

Learn more at gsb.columbia.edu