

DISCOVERY CARLSON

FALL 2021



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We've all seen change happen right before our eyes as a result of the COVID-19 pandemic. But in business, some of the most important changes can happen subtly and with little fanfare.

Take, for instance, artificial intelligence. A concept that once seemed to only exist in science fiction movies is now in almost all of our homes. Slowly but surely, we've all welcomed the likes of Alexa and Siri into our lives to the point where we now almost depend on them on a day-to-day basis.

The same has happened at businesses across the world. AI and machine learning are no longer novelties. Many organizations, both big and small, now rely on that technology to get the job done. But should we? How do we find that happy medium where we can utilize technology while not surrendering our ability to see things in our own unique ways?

This is the crossroads where we now find ourselves. And much like the rest of the business community, how we adapt to these changes will make all the difference. As you'll read in these pages, Carlson School of Management faculty members are at the center of these important conversations. Their shared belief that business can be a force for good is at the foundation of everything that they do.

With supply chain issues continuing to dominate the headlines, Assistant Professor Necati Ertekin wanted to see how a business could be successful with an omnichannel retailing approach that blends traditional brick-and-mortar retail with e-commerce.

Now that more people are beginning to shop for their groceries online, Professor Joe Redden is exploring how online grocery stores can support those striving to eat healthy for weight loss.

Working together has never been more important. Associate Professor Pri Shah studied how teams in all organizations could function better together when there is conflict.

I have the immense privilege of sharing research initiatives such as those above in this issue of Discovery at Carlson. You'll also find an introduction to our newest faculty and a section that highlights a few of the many awards and honors our Carlson School faculty have won recently. As you read through this, if you have any comments on the publication, please feel free to contact me at gupta037@umn.edu.

PROFESSOR ALOK GUPTA

*Senior Associate Dean of Faculty and Research
Curtis L. Carlson Chair in Information Management*

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ALOK GUPTA

Senior Associate Dean, Faculty and Research
Curtis L. Carlson Chair in Information Management

Smarts, Artificial and Human

“Will Humans-in-the Loop Become Borgs? Merits and Pitfalls of Working with AI”

Fügener, A., Grahl, J., Gupta, A., and Ketter, W., *Management Information Systems Quarterly (MISQ)*, (July 2021)

“Cognitive challenges in human-AI collaboration: Investigating the path towards productive delegation”

Fügener, A., Grahl, J., Gupta, A., and Ketter, W., *Information Systems Research*, (Forthcoming)

How much should you trust Alexa? Will you let it tell you what to do next?

In a sense, these are questions Alok Gupta believes we all should be asking.

In two recent research papers, Gupta, the Curtis L. Carlson Chair in Information Management and the Carlson School’s Senior Associate Dean of Faculty and Research, tested how humans and machines work together. His findings regarding artificial intelligence (AI) demonstrate why humans shouldn’t rely too much on machines for making decisions.

In a paper published in the September issue of *MIS Quarterly*, Gupta provocatively asks whether “humans-in-the-loop will become Borgs.” The term “humans-in-the-loop” refers to hybrid work environments where humans and AI “machines” collaborate. A second paper, which will appear in a future issue of *Information Systems Research*, demonstrates that humans have cognitive limitations about their metaknowledge—that is, our knowledge or assessment about what we don’t know. This limitation makes it difficult for us to delegate knowledge work to machines, even when we should. Gupta co-authored both papers with Andreas Fügener, Jörn Grahl, and Wolfgang Ketter, all members of the University of Cologne’s Faculty of Management, Economics, and Social Sciences.

AI is no longer sci-fi. More and more businesses have incorporated AI and machine learning into their processes in order to make better decisions relating to contracts, supply chains, and consumer behavior. Scholars have been studying humans-in-the-loop work environments for some time—Gupta himself has conducted research in this area. But he notes that studies have tended to focus “on short-term performance and not what happens in longer-term decision-making processes.”

As these papers show, those longer-term effects aren’t all positive. In fact, “simulation results based on our experimental data suggest that groups of humans interacting with AI are far less effective as compared to human groups without AI assistance,” Gupta says.

Where reliance on AI-assisted decision-making can be particularly deficient is in the development of new solutions that can generate genuine innovation. “Humans have an uncanny ability to connect the seemingly unconnected dots to come up with solutions that are not generated by linear thinking,” Gupta notes. “Most innovations occur when humans face challenges in their day-to-day environments. The more humans are removed from any environment, the more unlikely it will become to innovate in that particular space or to make accidental discoveries.”

“We need to ‘teach’ future knowledge workers...how to assess their own limitations...so that they can effectively work with AI-based machines.”

In other words, by relying too much on AI for decision-making, we are in danger of surrendering our greatest strength—the capacity to see things in our own unique ways. We also risk not being able to leverage the insights that other people can provide.

On the other hand, the co-authors’ newest paper notes that being unaware of what we don’t know limits AI’s usefulness. This fundamentally limits how well we can collaborate with AI. There are times when humans need to, in a sense, “defer” to the machines. The authors’ research shows that humans and AI improve their collaborative performance when AI delegates certain decision-making tasks to humans, not the other way around.

All this certainly doesn’t mean AI isn’t a highly useful tool. However, the rush to adopt AI-based technologies to replace or augment human work has its perils. An approach to human-AI interaction that Gupta and his co-authors recommend is what they call “personalized AI advice.” This means designing an AI system that can observe an individual’s decision-making and assess where its “advice” falls short, based on an individual’s decision patterns. “It can then set an appropriate level of advice that optimizes the joint performance of the human plus AI while retaining human individuality and uniqueness,” Gupta says.

“The implication of our work,” he adds, “is that we need to ‘teach’ future knowledge workers not just about new competencies but also about how to assess their own limitations in those competencies so that they can effectively work with AI-based machines.”

As Gupta notes, “there has been a lot of talk about AI taking over jobs. Many researchers feel that this estimate is overblown.” Human creativity and insight will always be necessary. There’s a great deal AI can and will do to help us make better decisions. But as Gupta’s work suggests, we humans (and not Alexa) should have the final say, using our distinctive capacity for judgment.

A Vested Interest

“The Long-Term Consequences of Short-Term Incentives”

Edmans, Alex, Fang, V.W., Huang, Allen, *Journal of Accounting Research*, (Forthcoming)

Granting restricted stock and options to top managers has become an ingrained corporate strategy for numerous companies to attract and retain top talent. But often, when such grants vest—that is, when the stock becomes eligible for selling or options become eligible for exercising—they can encourage what Carlson School Associate Professor of Accounting Vivian Fang calls “managerial myopia.” It’s a strategy that might keep a company’s short-term stock price high, but at the price of building long-term value.

That’s one of the key findings in a new paper Fang has co-written with Alex Edmans of the London Business School and Allen Huang of the Hong Kong University of Science and Technology. In their paper, which will appear in an upcoming issue of the *Journal of Accounting Research*, the authors examine the long-term effects of vesting equity.

How did vesting equity become such a major form of compensation? Fang points to a survey previously conducted by co-author Edmans, which shows that before the 1970s, pay was dominated by salaries and annual bonuses, with only moderate levels of equity. From the mid-1970s to the end of the 1990s, stock options became the largest component of CEO pay. And between 2001 and 2014, performance-based stock replaced options as the most popular form of equity compensation. Among its other attractions for businesses, equity compensation allows tech startups and other high-growth, often cash-strapped firms to give employees a below-market salary with the promise of big rewards later.

These days, “for the typical CEO, the wealth changes caused by stock price movements are much larger than the corresponding changes in annual pay,” Fang says.

The granting of stock and options are a strategy for aligning the interests of managers with those of shareholders. “One of the most fundamental principles of finance is that managers are supposed to represent shareholders when running the company,” Fang notes. “In other words, they are supposed to maximize firm value and shareholder returns by trading off short-term and long-term cash flows and making the optimal investments.”

However, she adds, “the problem is that some managers may put too much emphasis on short-term cash flows and forgo value-increasing long-term investments.”

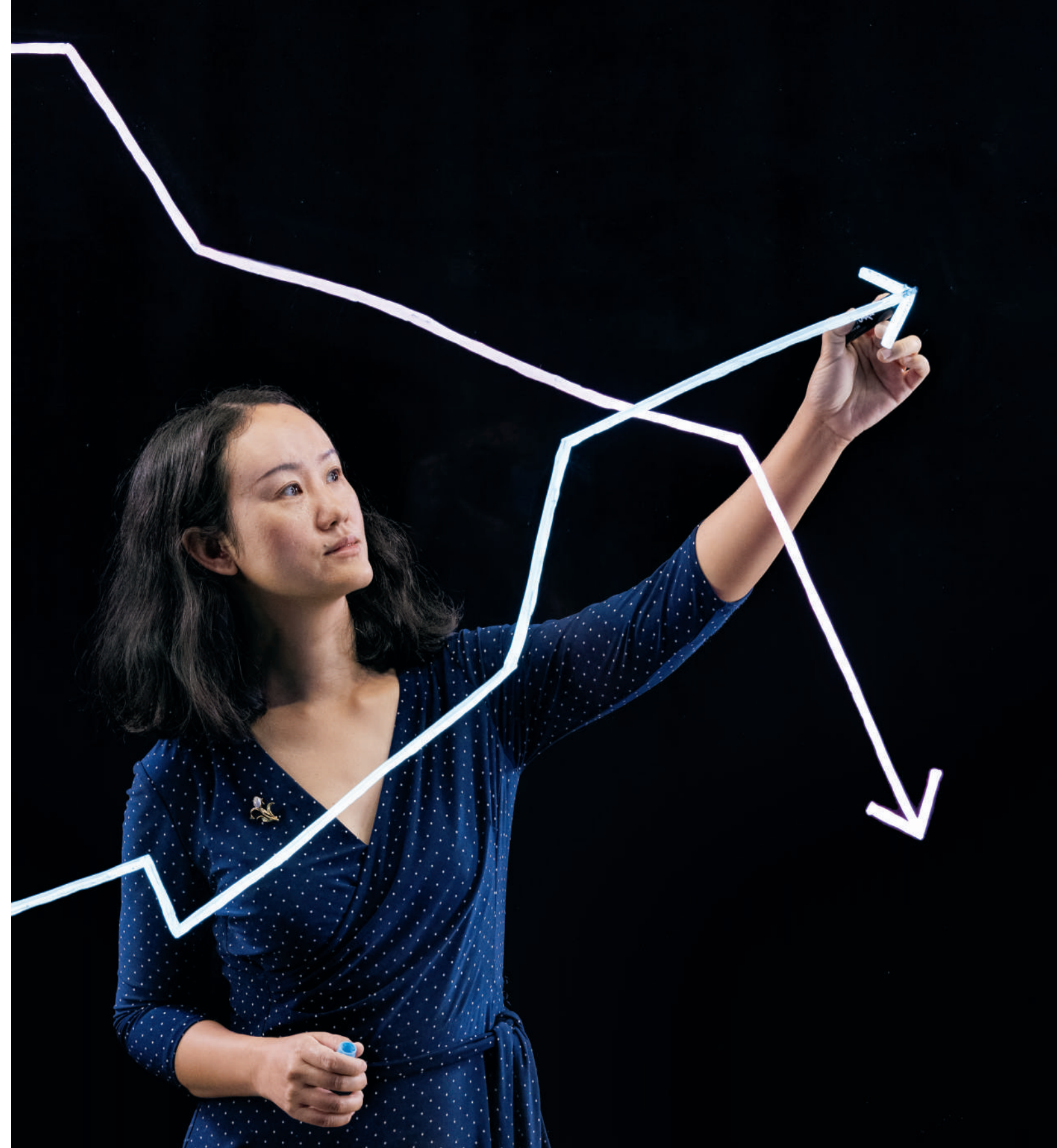
For instance, R&D investments typically improve a firm’s cash flows and value in the long term. In the short term, they tend to depress earnings. If the firm doesn’t meet the market’s earnings expectations, the stock price is likely to fall, which is undesirable for the stock-owning manager. According to Fang, research has shown that managers are willing to cut R&D and other discretionary expenses to increase short-run earnings and boost (or at least sustain) their company’s stock price. But that comes at the expense of “the firm’s long-term value and competitive success.”

“The problem is that some managers may put too much emphasis on short-term cash flows and forgo value-increasing long-term investments.”

Fang certainly doesn’t believe that equity incentives shouldn’t be used. But they can be made to work better through the vesting process.

“One way to discourage myopic or opportunistic behavior that is potentially value-destructive is to lengthen the vesting period of equity beyond a CEO’s departure,” Fang says. This is what the UK’s Corporate Governance Code and the U.S. Council of Institutional Investors have been recommending in the past couple of years. “An alternative remedy would be to spread out the vesting of a large equity grant across different dates in a year, rather than it all vesting on the grant anniversary,” she adds.

Such strategies can advance the long-term interests of all involved—the executives, the shareholders, and the company.



VIVIAN FANG

Associate Professor • Honeywell Professor in Accounting • Accounting

Hybrid vs. Online-Exclusive: The Key to Successful Ship-to-Store Services

“Online-Exclusive or Hybrid? Channel Merchandising Strategies for Ship-to-Store Implementation”

Ertekin, N., Gumus, M., Nikoofal, M., *Management Science*, (September 2021)

For brick-and-mortar (BM) retailers, adaptation and innovation have been words to live by over the last several decades. It's not hard to see why. Yes, Amazon's ever-growing reach has been a major factor. But shifting consumer expectations has played an equal—if not more influential—role. As consumers, we expect unlimited choice, we demand the friction-free experience of one-click online shopping, and many of us are hooked on the quick (if not instant) gratification that comes with free next- or same-day shipping.

In response, many BM retailers have adapted an omnichannel retailing approach, one that blends traditional BM retail with e-commerce. Done correctly, omnichannel strategies can be powerful competitive tools. But as new research from Carlson School Assistant Professor Necati Ertekin points out, they can also present retailers with a host of implementation challenges.

Ertekin's research focused on an omnichannel merchandising strategy known as ship-to-store (STS). The concept works like this: Consumers buy an item on a retailer's website and have it shipped for free to the closest BM store, where they can pick it up at their convenience (and immediately return it if they don't like it). From the retailer's perspective, it's an opportunity to generate additional business if customers make an additional purchase during the in-store pickup. Plus it allows consumers to foot the bill for last-mile delivery—i.e., getting the items from the store to their homes.

While all that sounds like a win-win, STS doesn't always work as intended. “There are many STS success stories, but you can find several failed attempts due to poor implementation,” Ertekin notes, adding that the channel merchandising of products also has a direct impact on success rates. “Among the products that can be ordered with STS, retailers make some products available as online-only and market others as hybrid that you can buy in-store or online,” he says. “The idea with the research was to provide an understanding of what types of products retailers should offer as online-exclusive vs. hybrid, along with how those channel merchandising decisions can improve STS performance.”

He dug into that question by studying 14 months of sales data from an omnichannel jewelry retailer with more than 1,000 physical stores and multiple online outlets operating under different brand names across North America. The sales figures showed that STS services do generate extra business through in-store cross-selling. And they revealed that STS can help retailers attract new customers, primarily people looking

to capitalize on free shipping and easy returns. But the data also highlighted a downside of STS, leading to sales losses. Case in point: Say an existing customer, who would normally have a product shipped to home when STS service is not an option, puts in an STS order for that product, but then, on the way to pick up the STS order, finds a better deal at a nearby competitor store. Chances are he or she will quickly abandon the original STS order for the cheaper, immediately available alternative at the competitor. The research reveals that the pros and cons of STS are less pronounced for hybrid products as customers use STS services for those products only when they are not available in-store.

“The idea with the research was to provide an understanding of what types of products retailers should offer as online-exclusive vs. hybrid, along with how those channel merchandising decisions can improve STS performance.”

The upshot: Retailers shouldn't take a one-size-fits-all approach to STS. “STS doesn't influence sales in the same manner for all products. It has varying effects on online-exclusive vs. hybrid products,” Ertekin says. “Applying the right channel merchandising strategy—deciding whether to offer a product as online-exclusive or hybrid—can help retailers improve their STS retailers.”

“For a successful STS implementation, retailers should market products that are high-priced, difficult to substitute, and which have low in-store availability as hybrid,” he adds, noting that such an approach can help prevent customers from shopping for similar items at competitor stores. “On the opposite side, retailers should market products that are somewhat generic (or easy to substitute), low-priced, and which have high in-store availability as online-exclusive.”

NECATI ERTEKIN

Assistant Professor • Supply Chain and Operations

Looking at Potential New Tools for Online Grocery Shopping

“Designing Online Grocery Stores to Support Healthy Eating for Weight Loss”

French, S., Harnack, L., Redden, J., Rivera, G., Sherwood, N., Tahir, M., and Valluri, S., *Public Health Nutrition*, (2021)

Online grocery shopping has grown rapidly across the country. Thanks in large part to the COVID-19 pandemic, more and more people are now choosing to buy their groceries on the web instead of in a store.

As online grocery shopping increases, so too does interest in ways this new shopping platform may be leveraged for the benefit of public health.

Joseph Redden, the Curtis L. Carlson Chair in Marketing Analytics, along with other University of Minnesota professors at the School of Public Health, surveyed people around the Twin Cities to gauge their interest in a variety of potential online features that may help them choose healthy eating options for the exploratory paper “Designing online grocery stores to support healthy eating for weight loss,” which was published in the journal *Public Health Nutrition*.

The study is the first to use a customer-centric approach to generate ideas for features that may be included in online grocery shopping marketplaces to support healthy food choices for weight loss.

“With close to half of American adults trying to lose weight, online grocers have the opportunity to meet the needs of a large market segment by designing their online grocery marketplaces to support healthier food choices,” Redden says.

The researchers asked participants about four possible online features:

- **Shopping cart nutrition rating tool:** A tool that provides a nutrition rating of foods in a shopper’s online cart, using a star rating system. As part of the rating tool, suggestions for improving the nutrition quality of one’s cart are provided in an interactive process while shopping. In addition, a shopper’s cart nutrition ratings over time would be plotted so that progress from past food purchases may be tracked by the shopper.
- **Healthy meal planning tool:** This tool supports healthy meal planning and the ordering of foods needed for the meals through a weekly email sent to customers that includes a list of suggested meals tailored to the customer’s personal nutrition goals, food preferences, food budget, and family size. The email also includes links to add the ingredients directly to the shopping cart to make the process more efficient (and less prone to other temptations).
- **Interactive healthy eating inspiration aisle:** The interactive healthy eating inspiration aisle provides an online “aisle”

designed to help shoppers discover products and meal ideas that align with their health and nutrition goals. The aisle is designed to be fun and interactive.

- **Healthy shopping preference settings:** The healthy shopping preference settings allow an online grocery shopper the option to set up nutrition-related shopping preferences that prioritize displaying and advertising foods that align with personal health and nutrition goals. A shopper who specifies particular nutrition goals will experience an online shopping environment designed to support those preferences.

“With close to half of American adults trying to lose weight, online grocers have the opportunity to meet the needs of a large market segment by designing their online grocery marketplaces to support healthier food choices.”

Of the four, the healthy meal planning tool has been of interest to Redden. Though this work is in the exploratory phase, Redden could see finding a way to incorporate that into further research on the subject.

“It’s not obvious that customers would be open to some of these changes,” he says. “But I would love to play with the healthy meal planning tool, and just see how satisfied people are with it. Can you get them to stay with it? Because I think that’s always the worry.”

More research is needed on the topic, Redden says, because there will need to be much more proof before anything hits the market.

“It’s not obvious that customers would latch on to these things,” Redden says. “Not to mention, if a business were to implement some of these tools, there’s a massive investment. Changing websites is not easy. It’s risky. And so we’re trying to figure out what we want our strategy to be for this going forward.”



JOE REDDEN

Professor • Curtis L. Carlson Chair in Marketing Analytics • Marketing

How Foreign Rates Can Impact a Firm's Future

“Exchange Rate Exposure and Firm Dynamics”

Salomao, J., and Varela, L., *The Review of Economic Studies*, (2021)

When a business based in Hungary is searching for the best rates to borrow money, it can often find it in a foreign currency. Why is it then that this business and others like it elect to not go that route and instead borrow in the native Hungarian forint?

New research from Assistant Professor Juliana Salomao, titled “Exchange Rate Exposure and Firm Dynamics,” explores which types of firms choose to borrow in a foreign currency and which elect to do so in a local currency.

Salomao and her co-authors examined firms in Hungary, where they were able to study the balance sheets from every firm in the country. They found that only about 30 percent of the firms chose to borrow in euros, which would provide the firm with a lower rate.

What they found was that these firms tended to be more productive and able to tolerate more risk than an average firm.

“Even though the base rate is lower for all firms to borrow in euros, once you compound that with the risk coming from the exposure of currency, only those firms that this risk is small is it worth it to borrow in euros,” Salomao says.

Firms that can tolerate more risk of being exposed to a currency that is not their own are the ones choosing to borrow in foreign currency. The research also found that since these firms were able to get lower financing rates, they were also able to grow faster than their competition.

“There is a real benefit to having access to this additional source of funds,” Salomao says.

In order to assure the correct firms are using this funding, there also needs to be a banking sector that is able to identify this risk. If banks were unable to identify this risk and gave more capital away to lesser firms, those bad decisions could depreciate the currency and lead to major defaults.

“The fact that the banks work well in identifying this risk and do allocate this cheaper funding to only the firms that can tolerate the foreign exchange risk shows that there’s a benefit to liberalizing the economy and allowing firms to borrow in a foreign currency,” she says. “This tells you that if countries are thinking about whether they should liberalize or reform their banking sector, understanding the risks of firms is really important.”

“Even though the base rate is lower for all firms to borrow in euros, once you compound that with the risk coming from the exposure of currency, it only makes sense for the firms that can handle that risk to borrow in euros,” Salomao says.

Understanding this concept could have far-reaching implications here in the United States. Because the U.S. dollar is the dominant currency in the world, if a foreign entity defaults on its loans, that country may choose to no longer invest in a foreign currency.

For instance, if the Chinese housing sector defaults and large real estate companies in China borrowed money in U.S. dollars and can't pay their debts, the Chinese government may choose to stop holding U.S. Treasury bonds because they need liquidity. That then would affect the financing cost in the U.S.

“It’s crucial to understand how the world’s economy is interconnected,” she says. “Although these financial shocks may be far away in China or in the European Union, understanding how those shocks are going to impact each other is extremely important.”

JULIANA SALOMAO

Assistant Professor • Finance

Critical Reviews and the Power of the Crowd

“Digitization and Pre-Purchase Information: The Causal and Welfare Impacts of Reviews and Crowd Ratings”

Reimers, I., and Waldfogel, J., *American Economic Review*, (2021)

The numbers are staggering. Today, Amazon has close to 60 million books for sale. Spotify lets users choose from a catalog of 70 million tracks. And Hulu, Netflix, and Amazon offer a combined total of nearly 90,000 movies and TV shows.

In short, we’re drowning in content these days. And while that seemingly endless number of choices can feel liberating—it also presents a challenge. With so many options at your disposal, how can you decide on what to watch, listen to, or read? Associate Dean Joel Waldfogel used the book industry to explore that question. More specifically, he looked at how pre-purchase information affects consumer book-buying.

As Waldfogel explains, “pre-purchase information” refers to the ratings and reviews that help you decide what books to buy. Well before Amazon launched its online bookstore, many consumers looked to professional critics for guidance on what to read, with the *New York Times Book Review* as the widely accepted standard. And while the *Times* book reviews and recommendations remain a popular cultural mainstay, its reviewers simply can’t keep pace with the ever-expanding library of available titles. “In that sense, digitization has created a problem,” says Waldfogel. “But it has also created a solution in the form of Amazon’s crowd-based star ratings system, which helps book buyers make informed decisions.”

“The *New York Times* raises awareness by alerting people to new books they otherwise might not have known about,” he says. “At the same time, Amazon book-shoppers tend to already know about the book or books they’re looking for. The star ratings give them a quality assessment—the ratings can help them decide whether or not to buy it.”

Waldfogel adds that professional and crowd-based reviews operate in a fundamentally different but often complementary fashion. “The *New York Times* raises awareness by alerting people to new books they otherwise might not have known about,” he says. “At the same time, Amazon book-shoppers tend to already know about the book or books they’re looking for. The star ratings give them a quality assessment—the ratings can help them decide whether or not to buy it.”

That understanding helped lead him to a second line of inquiry: Do professional reviews and crowd ratings make a tangible impact on demand? And if so, how big is that impact? The results were clear for the *New York Times*. Waldfogel found that a book’s sales climb by at least 55 percent in the five days after a review and by 2.8 percent over the course of a year. In contrast, Amazon doesn’t reveal sales figures for individual books, but Waldfogel’s analysis determined that the elasticity of sales with respect to an Amazon star is about 0.75. His statistical models also found that the aggregate effect of Amazon star ratings is approximately 10 times larger than the effect of *New York Times* reviews. That’s not necessarily surprising, given that the millions of books with star ratings on Amazon dwarfs the 2,000 or so titles the *Times* reviews each year.

“There are a couple of takeaways here,” Waldfogel explains. “One is that professional reviews remain relevant. People still look to them as a way to find new books—the sales figures back that up. Another takeaway involves the power of crowd-based ratings. They function as a form of free advertising. And that can help some books—including self-published ones—find success. What’s more, the authors often can find that success without traditional forms of intermediary help such as professional marketing, distribution, and the like.”

“There’s a huge amount of content—music, books, and more—being developed outside of traditional channels,” he adds. “The vast majority of them won’t find a mass audience, but thanks to the democratizing effects of digitization, they now account for a substantial amount of overall sales.”



JOEL WALDFOGEL

Associate Dean of MBA and MS Programs • Frederick R. Kappel Chair in Applied Economics • Strategic Management and Entrepreneurship

Flipping the Script on Team Conflict Research Assumptions

“Things are Not Always What They Seem: The Origins and Evolution of Intragroup Conflict”
Ferguson, A.J., Jones, S.L., Peterson, R.S., and Shah, P.P., *Administrative Science Quarterly*, (2021)

Conflict has long been thought to occur on a team level. Meaning that if conflict exists, every team member is affected by it. However, new research is turning that traditional thinking on its head. A paper co-authored by Carlson School of Management Associate Professor Pri Shah suggests answers lie at different levels.

“[Our findings] provide a new road map for how to do conflict research,” Shah said.

Published in *Administrative Science Quarterly*, Shah and her colleagues analyzed conflict within teams to better understand where conflict originates, how it evolves over time, and ultimately, affects team performance.

They completed a series of three studies: a qualitative study of conflict narratives shared by students enrolled in an executive management course; a longitudinal study of undergraduate students in a group project over the course of a semester; and a field study of employee teams at a Chinese electric bicycle manufacturer.

“Understanding where conflict originates and how it evolves over time provides managers with an opportunity for more targeted conflict resolution.”

The research group categorized team conflict origins into four levels: individual (one person impacting others separately), dyad (conflict between two people), subgroup (conflict shared among three or more people), and team level (every team member is directly involved in the conflict).

The researchers determined team conflict is not uniform, shared, or static—a significant departure from longtime assumptions—and found conflict involving a whole team is rare. Instead, conflict more commonly starts at smaller levels within the team. Disagreement between two people is the most

frequent point of origin. Experiences for each team member are also unique as they could be the instigator, a participant, or an observer of the conflict.

“I think the main takeaway [for managers] is you really have to have a good handle on knowing the social landscape of your team,” Shah said. “Understanding where conflict originates and how it evolves over time provides managers with an opportunity for more targeted conflict resolution.”

It also informs when managers may want to wait to intervene. Team performance saw a positive influence when task conflict originated from an individual or between two people, even though the other team members weren’t directly involved.

“That’s when you really get the benefit of having constructive controversy or diverging opinions and debate within your team,” Shah said.

For example, in a meeting of five people, there may be two individuals who start to take different sides on how to solve an issue. Their discussion then sparks a creative solution amongst the team, ultimately increasing the team’s overall performance. While only two people were involved in the conflict, the entire team experienced the benefit of the conflict. Research showed the same benefit did not exist when there was task conflict among all team members.

Surprisingly, the researchers found conflict tended to be “sticky” and persist where the conflict originated instead of the commonly held “bad apple” notion that it would spread over time and infect the entire team. While the cause of this remains unclear, Shah says this offers good news for managers.

“This means you have some time to diagnose where the conflict resides before trying to resolve the conflict. The conflict is likely to be contained to where it started and not diffuse quickly throughout the team,” said Shah.

The study’s overall findings flip the script on long-held ideas in conflict research, opening new pathways forward.

“Instead of looking at it as a team-level phenomenon, now we’re seeing there’s something within the dyadic relationship within the team when you’re looking at the conflict relationship,” she said. “And from that you can figure out what the configuration of conflict is within a team and see where it originates and how it evolves over time.”

PRI SHAH

Associate Professor • Work and Organizations

Introducing New Faculty Members

Kartik Ganju and Teng Ye, both assistant professors, joined the Carlson School's Information and Decision Sciences Department this summer. Each brings expertise for using data to help address societal issues.



KARTIK GANJU

Ganju comes to the Carlson School after spending the last five years at McGill University in Montreal. His research focus is health information technology, which he is looking to expand.

More specifically, he studies how health IT impacts healthcare cost, labor, and racial disparities. Ganju took interest in the topic when hospitals were mandated to digitize their medical chart systems. This led to his PhD in Business Administration at Temple University. His dissertation examined the mandate's unintended consequences, such as higher healthcare costs.

"The main question I'm trying to figure out is 'why are costs increasing?'" says Ganju. Further, he added, "What can we do to allow health IT to [promote] equitable access to healthcare?"

Additionally, Ganju's research has found that the use of clinical decision support systems reduces the disparities in amputation rates between White and Black patients.

"Everybody has a relationship with a healthcare provider," explains Ganju. "That's something that sort of touches us pretty intimately, so I think that's why I'm quite fascinated by it. Plus, the data's very good, so the opportunities for research are [almost] endless."

Amid the COVID-19 pandemic, he has focused on the shift to telemedicine and plans to continue this research at the Carlson School.



TENG YE

Striving to find how the advances of data science techniques can better facilitate human behaviors is what drives Teng Ye.

After earning a PhD in Information Science earlier this year from the University of Michigan, Ye says her goal is to continue creating interdisciplinary solutions that can positively impact real world practices. Her research has been characterized by synthesizing the strengths of machine learning, causal inference, field experiments, and social science theories.

During a Data Science for Social Good Fellowship through the University of Chicago, Ye used machine learning to help New York City specialists prioritize their outreach to tenants who are vulnerable to harassment from landlords under rent stabilization policies. Among her most recent studies, Ye also looked at how to optimize the design of team competitions for ride-sharing drivers to increase their engagement and job satisfaction.

At the Carlson School, she plans to expand her research in crowd-based economies, such as crowdfunding.

"I want to apply human-centered data science to help people in need better gather fundraising, no matter if it's individual or organizations," explains Ye. "This is also what we call data science for social good, because we really want to help people to get the resources they need."

Ye is an active volunteer project manager and data scientist for the Solve for Good platform, where nonprofits can request data science help.

Faculty Recognition

Carlson School faculty members received national recognition from a variety of associations recently for their contributions to their respective disciplines. For more than 100 years, our faculty have been conducting impactful, industry-changing research while also educating future business leaders. Some of the honors include:

Assistant Professor **Elizabeth Campbell**

Lawrence Fellow • Work and Organizations

2021 Responsible Research in Management award

Professor **Christopher Nachtsheim**

Frank A. Donaldson Chair in Operations Management • Supply Chain and Operations

2021 Youden Award for the best expository paper appearing in the 2020 issue of Technometrics

Professor **Pinar Karaca-Mandic**

C. Arthur Williams Jr. Professor in Healthcare Risk Management • Finance

2021 Women's Health Leadership TRUST Award for Community Engagement

Professor **Joel Waldfogel**

Associate Dean of MBA and MS Programs • Frederick R. Kappel Chair in Applied Economics • Strategic Management and Entrepreneurship

Named the fourth Abraham L. Kaminstein Scholar at the U.S. Copyright Office

Professor **Connie Wanberg**

Industrial Relations Faculty Excellence Chair • Work and Organizations

Named a fellow by the Academy of Management

Dean **Sri Zaheer**

Dean, Carlson School of Management • Elmer L. Andersen Chair in Global Corporate Responsibility

2021 Women in Business Career Achievement Award, Minneapolis-St. Paul Business Journal

Professor **Shaker Zahra**

Robert E. Buuck Chair of Entrepreneurship • Strategic Management and Entrepreneurship

Academy of Management's Decade Award for his co-authored article "Entrepreneurship's Next Act"

Academy of Management Dedication to Entrepreneurship Award

Faculty

ACCOUNTING

Assistant Professor **Cyrus Aghamolla**

Assistant Professor **Salman Arif**

Associate Professor **Vivian Fang** • Honeywell Professor in Accounting

Professor **Frank Gigler** • Curtis L. Carlson Chair in Accounting

Assistant Professor **Michael Iselin**

Professor **Chandra Kanodia** • Arthur Andersen & Co./Duane R. Kullberg Chair in Accounting & Information Systems

Assistant Professor **Nan Li**

Assistant Professor **Paul Ma**

Assistant Professor **Joshua Madsen**

Professor **Pervin Shroff** • Frederick H. Grose Chair in Accounting • Department Chair

Associate Professor **Gaoqing Zhang** • Lawrence Fellow

Associate Professor **Haiwen (Helen) Zhang** • Carl L. Nelson Professor in Accounting

FINANCE

Associate Professor **Hengjie Ai**

Assistant Professor **Jacelly Cespedes**

Professor **Murray Frank** • Piper Jaffray Fellow in Finance

Professor **Robert Goldstein** • Piper Jaffray Chair in Finance

Associate Professor **Xiaoji Lin**

Associate Professor **Pinar Karaca-Mandic** • C. Arthur Williams Jr. Professor in Healthcare Risk Management

Assistant Professor **Erik Loualiche**

Professor **Stephen T. Parente** • Minnesota Insurance Industry Chair of Health Finance • Associate Dean of Global Initiatives

Assistant Professor **Juliana Salomao**

Professor **Rajdeep Singh** • Arthur Upgren Chair in Investment Management

Assistant Professor **Martin Szydlowski**

Assistant Professor **Richard Thakor**

Professor **Tracy Yue Wang** • John Spooner Professor of Finance • Department Chair

Assistant Professor **Colin Ward**

Professor **Andrew Winton** • Minnesota Chair in Banking & Finance

Professor **Andrew Whitman**

INFORMATION AND DECISION SCIENCES

Professor **Gediminas Adomavicius** • Larson Chair for Excellence in Business Education • Department Chair

Professor **Ravi Bapna** • Curtis L. Carlson Chair in Business Analytics and Information Systems • Associate Dean of Executive Education

Assistant Professor **Sofia Bapna** • Lawrence Fellow

Assistant Professor **Xuan Bi**

Associate Professor **Jason Chan** • Lawrence Fellow

Professor **Shawn Curley**

Assistant Professor **Kartik Ganju**

Professor **Alok Gupta** • Curtis L. Carlson Chair in Information Management • Senior Associate Dean of Faculty and Research

Professor **De Liu** • Xian Dong Eric Jing Professor for Business Teaching

Assistant Professor **Veronica Marotta**

Professor **Gautam Ray**

Associate Professor **Yuqing Ren** • Lawrence Fellow

Associate Professor **Soumya Sen** • McKnight Presidential Fellow • Lawrence Fellow

Assistant Professor **Yicheng Song**

Associate Professor **Mani Subramani**

Assistant Professor **Mochen Yang**

Assistant Professor **Teng Ye**

MARKETING

Professor **Rohini Ahluwalia** • Curtis L. Carlson Trust Professor of Marketing

Professor **Mark Bergen** • James D. Watkins Chair in Marketing

Professor **Tony Cui** • Ecolab-Pierson M. Grieve Chair in International Marketing

Professor **Vladas Griskevicius** • Curtis L. Carlson Family Foundation Chair in Marketing • Associate Dean, Undergraduate Program

Associate Professor **William Hedgcock**

Professor **Deborah Roedder John** • Curtis L. Carlson Chair in Marketing

Professor **George John** • General Mills/Paul S. Gerot Chair in Marketing

Professor **Barbara Loken** • David C. McFarland Professor of Marketing

Assistant Professor **Irene Nahm**

Professor **Akshay Rao** • General Mills Chair in Marketing

Professor **Joseph Redden** • Curtis L. Carlson Chair in Marketing Analytics

Professor **Kathleen Vohs** • Land O'Lakes Chair in Marketing and Distinguished McKnight University Professor • Department Chair

Associate Professor **Alison Jing Xu** • Lawrence Fellow

Assistant Professor **Linli Xu**

Associate Professor **Yi Zhu** • Lawrence Fellow

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Assistant Professor **Moshe Barach**

Assistant Professor **Sunagir Dutta**

Associate Professor **Daniel Forbes**

Assistant Professor **Russell Funk** • Lawrence Fellow

Associate Professor **Aseem Kaul** • The Mosaic Company - Jim Prokopanko Professor for Corporate Responsibility • Lawrence Fellow

Associate Professor **Jiao Luo**

Professor **Ian Maitland**

Professor **Alfred Marcus** • Edson Spencer Endowed Chair in Strategy & Technological Leadership

Professor **Myles Shaver** • Curtis L. Carlson Chair in Corporate Strategy

Professor **Paul Vaaler** • John and Bruce Mooty Chair in Law & Business

Associate Professor **Gurneeta Vasudeva Singh**

Professor **Joel Waldfogel** • Frederick R. Kappel Chair in Applied Economics • Associate Dean of MS and MBA Programs

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Assistant Professor **Alex Wilson**

Assistant Professor **Sandy Yu**

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Professor **Sri Zaheer** • Elmer L. Andersen Chair in Global Corporate Social Responsibility • Dean, Carlson School of Management

Professor **Shaker Zahra** • Robert E. Buuck Chair in Entrepreneurship

SUPPLY CHAIN AND OPERATIONS

Assistant Professor **Hailong Cui**

Professor **Karen Donohue** • Curtis L. Carlson Chair in Supply Chain

Assistant Professor **Necati Ertekin**

Associate Professor **Susan Meyer Goldstein**

Assistant Professor **Ximin (Natalie) Huang**

Associate Professor **Anant Mishra**

Professor **Christopher Nachtseim** • Frank A. Donaldson Chair in Operations Management

Assistant Professor **Karthik Natarajan**

Professor **Rachna Shah**

Professor **Kingshuk Sinha** • Elmer L. Andersen Chair in Sustainable Supply Chain • Department Chair

WORK AND ORGANIZATIONS

Assistant Professor **Abdifatah Ali** • Lawrence Fellow

Professor **Avner Ben-Ner**

Associate Professor **Alan Benson** • Lawrence Fellow

Professor **John Budd** • Industrial Relations Land Grant Chair

Assistant Professor **Elizabeth Campbell** • Lawrence Fellow

Professor **Michelle Duffy** • Vernon H. Heath Chair of Organizational Innovation and Change • PhD Program Director

Professor **Theresa Glomb** • The Toro Company-David M. Lilly Chair in Human Resources

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Professor **Connie Wanberg** • Industrial Relations Faculty Excellence Chair

Professor **Mary Zellmer-Bruhn** • Department Chair

Associate Professor **Le (Betty) Zhou** • Lawrence Fellow



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