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Research

Harvard Business School
Doctoral Programs
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STUDENT RESEARCH

The Doctoral Programs at Harvard Business School educate scholars who make a difference in the world through rigorous academic research that influences practice.

More than 125 strong, Harvard Business School doctoral students represent diverse experiences and backgrounds. They examine the most critical issues in management through relevant research, creating and disseminating new knowledge as the next generation of thought leaders. By the time they graduate, students will have authored and co-authored publications with Harvard Business School faculty members and Harvard University professors, who become important mentors, colleagues, and collaborators. After completing their degree, HBS doctoral alumni continue to conduct research with both students and faculty. Harvard Business School’s ever-growing community of scholars continues to build knowledge that makes a difference in the world.
ACCOUNTING AND MANAGEMENT


ABSTRACT


We examine whether a country’s management of the COVID-19 pandemic relate to the downward biasing of the number of reported deaths from COVID-19. Using deviations from historical averages of the total number of monthly deaths within a country, we find that the probability of underreporting of COVID-related deaths for countries with the most stringent policies was 58.6%, compared to a 28.2% for countries with the least stringent policies. Countries with the lowest ex ante healthcare capacity in terms of number of available beds underreport deaths by 52.5% on average, compared to 23.1% for countries with the greatest capacity.

BUSINESS ECONOMICS


Chen, Jiafeng. “Synthetic Control As Online Linear Regression.” *Econometrica* 91, no. 2 (March 2023).


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**ABSTRACT**


How does an increase in market size, say due to globalization, affect welfare? We study this question using a model with monopolistic competition, heterogeneous markups, and fixed costs. We characterize changes in welfare and decompose changes in allocative efficiency into three different effects: (1) reallocations across firms with heterogeneous price elasticities due to intensifying competition, (2) reallocations due to the exit of marginally profitable firms, and (3) reallocations due to changes in firms’ markups. Whereas the second and third effects have ambiguous implications for welfare, the first effect, which we call the Darwinian effect, always increases welfare regardless of the shape of demand curves. We non-parametrically calibrate demand curves with data from Belgian manufacturing firms and quantify our results. We find that mild increasing returns at the micro level can catalyze large increasing returns at the macro level. Between 70–90% of increasing returns to scale come from improvements in how a larger market allocates resources. The lion’s share of these gains are due to the Darwinian effect, which increases the aggregate markup and concentrates sales and employment in high-markup firms. This has implications for policy: an entry subsidy, which harnesses Darwinian reallocations, can improve welfare even when there is more entry than in the first-best.

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**ABSTRACT**

Chen, Jiafeng. “Synthetic Control As Online Linear Regression.” *Econometrica* 91, no. 2 (March 2023).

This paper notes a simple connection between synthetic control and online learning. Specifically, we recognize synthetic control as an instance of Follow-The-Leader (FTL). Standard results in online convex optimization then imply that, even when outcomes are chosen by an adversary, synthetic control predictions of counterfactual outcomes for the treated unit perform almost as well as an oracle weighted average of control units’ outcomes. Synthetic control on differenced data performs almost as well as oracle weighted difference-in-differences, potentially making it an attractive choice in practice. We argue that this observation further supports the use of synthetic control estimators in comparative case studies.
HEALTH POLICY MANAGEMENT


Pany, Maximilian J., Michael E. Chernew, and Leemore S. Dafny. “Regulating Hospital Prices Based on Market Concentration Is Likely to Leave High-Price Hospitals Unaffected.” Health Affairs 40, no. 9 (September 2021).


Warinner, Chloe, Tuna Cem Hayirli, Regan Bergmark, Rosh Sethi, and Eleni Rettig. “Patterns of Technology Use Among Patients with Head and Neck Cancer and Implications for Telehealth.” OTO Open 5, no. 2 (April–June 2021).

ABSTRACT


Since its renaissance in the 1990s, psychological safety research has flourished—a boom motivated by recognition of the challenge of navigating uncertainty and change. Today, its theoretical and practical significance is amplified by the increasingly complex and interdependent nature of the work in organizations. Conceptual and empirical research on psychological safety—a state of reduced interpersonal risk—is thus timely, relevant, and extensive. In this article, we review contemporary psychological safety research by describing its various content areas, assessing what has been learned in recent years, and suggesting directions for future research. We identify four dominant themes relating to psychological safety: getting things done, learning behaviors, improving the work experience, and leadership. Overall, psychological safety plays important roles in enabling organizations to learn and perform in dynamic environments, becoming particularly relevant in a world altered by a global pandemic.
MANAGEMENT


MARKETING


ABSTRACT


ABSTRACT


Companies are facing increased pressure to “walk the talk” on diversity, equity, and inclusion (DEI) in their operations. One specific call-to-action from stakeholders is the public disclosure of EEO-1s. Companies with 100+ employees are federally mandated to annually report the intersectional diversity data of their workforce in the EEO-1. We examine how consumers perceive the strategic decision companies make regarding whether to disclose workforce diversity information. We find no evidence that a company’s disclosure of its workforce diversity data negatively affects attitudes or perceived company commitment to diversity, even when it reveals racial disparities across job categories. Instead, we find that consumers perceive firms that disclose their workforce data more positively and to be more committed to DEI initiatives, relative to firms that choose not to disclose, particularly when these disclosures reveal diversity within the workforce.

ABSTRACT


What conditions help new ideas spread? Can knowledge entrepreneurs’ position and develop new ideas in ways that help them take off? Most innovation research focuses on products and their reference. That focus ignores the ideas themselves and the broader ideational context. Lost are cultural conditions, concept-relations reflecting ideational use, and basic qualities of the ideas themselves. To study how new ideas spread, we use a sample of 18 million texts drawn from STEM and non-STEM fields in the Web of Science (WoS 1900–2016). We extract concepts from these texts as instantiations of ideas using a novel automated phrase mining framework (AutoPhrase) and focus on nearly 200,000 new concepts that emerged from 1992–2016. Using multi-level growth models, we predict the cumulative usage of these concepts as a function of the conditions surrounding their birth and successive usage. We find an idea’s reception is greatly affected by the evolving conditions and efforts of scholars. New scientific concepts have an identifiable “recipe” for success. They spread when they are championed by large teams of authors who reuse them; when the concept is seeded in multiple disciplines; and when the concept is dissimilar to existing terms and placed in cultural holes.
ORGANIZATIONAL BEHAVIOR


Kristal, Ariella S., Ashley V. Whillans, Max Bazerman, Francesca Gino, Lisa Shu, Nina Mazar, and Dan Ariely. “When We’re Wrong, It’s Our Responsibility as Scientists to Say So.” *Scientific American* (March 21, 2020).


In everyday life, people often have opportunities to improve others’ lives, whether offering well-intentioned advice or complimenting someone on a job well done. These are opportunities to provide “prosocial input” (information intended to benefit others), including feedback, advice, compliments, and expressions of gratitude. Despite widespread evidence that giving prosocial input can improve the well-being of both givers and recipients, people sometimes hesitate to offer their input. The current paper documents when and why people fail to give prosocial input, noting that potential givers overestimate the costs of doing so (e.g., making recipients uncomfortable) and underestimate the benefits (e.g., being helpful) for at least four psychological reasons. Unfortunately, the reluctance to give prosocial input results in a short supply of kindness.
Environmental destruction and social inequalities are increasingly urgent challenges. How can corporations, which have played a key role in creating and reproducing these problems, be part of the solution? In this paper, we advance that a shift to more democratic forms of organizing within corporations may be an important part of this transition. We first review scholarship on the disempowerment of workers. We then make the case for democratizing organizations, arguing that workers need to participate in firm decision-making so they can protect their rights and interests. We further suggest that democratic organizing practices may enable corporations to successfully pursue social and environmental objectives alongside financial ones, which is also important for addressing societal challenges. We then propose a research agenda for studying the democratization of organizations and its implications. In doing so, we highlight how organization scholars can build on prior research on democratic forms of organizing and draw from extant social science research outside of mainstream management scholarship. We conclude by calling for research that will document, and help us better understand, what it takes to develop democratic and sustainable organizations and societies.

ABSTRACT


Past research has focused on understanding the characteristics of work that are fully virtual or fully collocated. The present study seeks to expand our understanding of team work by studying knowledge workers’ experiences as they were suddenly forced to transition to a fully virtual environment. During the height of the US lockdown from April to June 2020, we interviewed 51 knowledge workers employed on teams at the same professional services firm. Drawing from in situ reflections about teams’ lived experiences, this paper explores how the shift to virtual work brought on by the COVID-19 pandemic illuminated the fundamental activities that team work requires, facilitated and undermined the performance of team activities, and prompted employees to adapt and reflect on their use of digital technology to perform these activities. Using the shift to virtual work as a unique learning opportunity, our findings demonstrate that team work entails several core activities (task, process, and relationship interactions) that require additional adjustments to successfully enact in the virtual (vs. collocated) environment.
**ABSTRACT**


The retention of inventor-employees represents a core strategic concern for firms in innovative industries. In this paper, we examine the impact of reduced patent enforceability on the mobility of inventor-employees and explore the related influence on firms’ innovative activities. To analyze this potential relationship, we use the US Supreme Court ruling eBay Inc. v. MercExchange, L.L.C., which decreased the use of injunctions in patent infringement cases and, consequently, the risk firms and individuals faced from being sued for patent infringement. Our analyses rely on difference-in-differences specifications that include state-year, firm, and technological fixed effects, and a host of other controls. Using patent application data to track the movements of 50,283 early career patent inventors before and after the ruling, we find that in
the post period, inventor-employees at firms with a greater reliance on intellectual property are relatively more likely to leave their employer. Moreover, we find that employees most affected by the change are those involved in basic research and those with generalizable skills, suggesting that the change in patent enforceability may have improved the outside employment options for certain inventors. We further detect important implications for firm performance and the direction of firm innovation resulting from these patterns.

ABSTRACT


Over the past half-century, while self-employment has consistently accounted for around one in ten of the United States workforce, its composition has changed. Since 1970, industries with high startup capital requirements have declined from 53% of self-employment to 23%. This same time period also witnessed declines in “hometown” local entrepreneurship and the probability of the self-employed being among top earners. Using 2016 data, we show that high startup capital requirements are linked with lower profitability at small scales. The transition away from high startup capital industries appears most closely linked to changes in small business production functions and less due to advantageous reallocation to other opportunities, growth in returns-to-scale among large businesses, or a worsening of financing conditions and debt levels.

TECHNOLOGY AND OPERATIONS MANAGEMENT


Predictive model development is understudied despite its importance to modern businesses. Although prior discussions highlight advances in methods (along the dimensions of data, computing power, and algorithms) as the primary driver of model quality, the value of tools that implement those methods has been neglected. In a field experiment leveraging a predictive data science contest, we study the importance of tools by restricting access to software libraries for machine learning models. By only allowing access to these libraries in our control group, we find that teams with unrestricted access perform 30% better in log-loss error—a statistically and economically significant amount, equivalent to a 10-fold increase in the training data set size. We further find that teams with high general data-science skills are less affected by the intervention, while teams with high tool-specific skills significantly benefit from access to modeling libraries. Our findings are consistent with a mechanism we call ‘Tools-as-Skill,’ where tooling automates and abstracts some general data science skills but, in doing so, creates the need for new tool-specific skills.
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Doctoral students work with faculty and alumni across the community to author and co-author publications.

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