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THIS EDITION IS DEDICATED TO

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**FOR YOUR SUPPORT, TIME, AND
EFFORT.**

EDITOR'S LETTER—Two years notched. Through a great deal of trial, error, failure, and successes, we've truly hit our stride as a publication this year. Beyond implementing a more efficient, member-centered structure, what truly brought about this change was renewing our commitment to three of the principles in which the organization originally rooted itself in: honesty, passion, and education.

REGARDING HONESTY—In society, one role of our publications is to seek out and herald the truth. However, beyond what is factually correct, it is unlikely that an absolute truth can be universally agreed upon. Thus, it is then the role of the critical thinker to build their own truth based on those facts. Each thinker will inevitably find a different truth from another, but, so long as they reach their truth through this honest process, the publication must adequately represent both conclusions.

REGARDING PASSION—Passion is a requisite to a rewarding, happy, and virtuous life. In the information age, we are often left paralyzed—unable to decide what is worth spending our limited time and energy on. This stagnance can lead to inaction, denying our minds the opportunity to discover what things we find most rewarding. The writing process, however, is an antidote to this problem. By allowing thinkers to research a topic and find the best way to communicate it, the author must fully engulf themselves in the subject matter. In implementing a structured writing practice, a publication helps cultivate its writers' passion, and allows the audience to discover their passions through engaging with its works.

REGARDING EDUCATION—Education is the most satiating fruit borne from the tree of human development. The proclivity humans have to discover, analyze, synthesize, and store information is solely responsible for how far we have come, and it is in the interest of all humans that this commitment to education is unrelenting. As such, by honing the literary skills of our writers, all of whom are students at this wonderful institution, we are grateful to contribute to their pursuit of excellence through education.

It is my hope that, by cementing our commitment to these most core values, we will be able to navigate what are sure to be tumultuous times as seekers of the truth. To borrow the words of our soon-to-graduate founder, it is imperative that, as some of our people do come and go, our impact must remain everlasting.



ABHINAV KUMAR
EDITOR-IN-CHIEF

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PARTNER EVENTS

Contributed by Jason Li, Andrew VanDerKolk, Aadit Bhavsar, Kabir Oberoi, Chaired by Jason Li and Andrew VanDerKolk



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FROM #1 PROGRAM TO #1 NETWORK: WISCONSIN REAL ESTATE CLUB'S SPRING KICK-OFF MEETING DELIVERS

BY JASON LI, ANDREW VANDERKOLK, FEBRUARY 2025

CLUB PARTNERSHIP, REAL ESTATE CLUB



The day is Thursday, January 30th in the new year of 2025. The sun has set on the city and greater isthmus, yet the students are abuzz with activity.

Look no further than the Pyle Center, where the Real Estate Club at the University of Wisconsin-Madison is hosting their kick-off meeting for the spring semester.

The real estate program and Real Estate Club at Wisconsin boasts a storied reputation. Per their club website:

“The University of Wisconsin is home to the oldest undergraduate program in Real Estate and the oldest graduate program in Real Estate in the United States.”

“The Real Estate Club began here in the late 1970s and has grown to be one of the largest student-run organizations on the University of Wisconsin-Madison campus. Open to both graduate and undergraduate

students, the club meets monthly to hear from real estate professionals and practitioners. Our speakers cover a wide range of topics including the debt markets, development, REITs, green building, and institutional trends. As one of the top-ranked undergraduate programs and one of the top-ranked MBA programs in the country, we facilitate countless opportunities to engage lecturers, guests, and alumni from across the globe.”

“We are proud to work closely with the Wisconsin Real Estate Alumni Association to continue the Badger tradition of connecting our students with networking opportunities within the Real Estate industry.”

We at the Review would like to thank the Real Estate Club, and its co-presidents [Mitchell Carroll](#) and [Will Ross](#), for inviting us to cover this event and sitting down with us afterwards for an interview.



Once attendees pass the coat check, check-in desk and mini bar, they enter into the main room of the event. The main room is divided into two sections, with the front filled with seats facing the speaker platform and the back with tables of food and refreshments, and bar tables scattered throughout for socializing. In total, there were likely over 200 attendees.

This is a marquee event for the Real Estate Club, as they have arranged a star-studded panel of speakers, all alumni from Wisconsin.

These speakers are:

- Jay Rosenberg, Head of Public Real Assets and Portfolio Manager at Nuveen
- Jonathan Brown, Executive Director of Real Estate Banking at JPMorganChase
- Joseph Betlej, Vice President and Portfolio Manager at Securian Asset Management
- Ken Statz, Managing Director at Security Capital Research & Management, Inc.

These four alumni were touted of having a collective experience spanning 140 years in real estate.

The panel began at 7:15PM, with doors opening an hour early for members to socialize. Once everyone was seated or situated, Mitchell and Will took the podium. Between the two of them, they presented issues like the upcoming speaker series for the spring semester, a career fair

preparation event, upcoming club social events, their upcoming semester trek to Denver, a tutoring program at the Graaskamp Center for Real Estate, and membership and scholarship details for the Wisconsin Real Estate Alumni Association (WREAA). The common theme connecting it all was the club's focus on student development opportunities and landing internships and jobs for their members.

Then, the four alumni panelists got onstage and are seated facing the 200 attendees, their backdrop the Madison sidewalk and street.

A professor introduces them to the audience as industry titans who collectively managed billions in capital, and their amazing success in a sector that recently grew to \$1.4 trillion. The conversation centered about REITs, known as real estate investment trusts, and touched on the school AREIT and ASAP programs, legendary faculty members and their personal mentors Steve Hawk and Jim Graaskamp, real estate investing and other infrastructure assets, and ended with a few questions about their school ties and their life lessons.

Some key points include creating a network to help you piece the puzzle together, finding a mentor that is willing to work hard and spend time for you, and asking strong questions about how to interact with trends you see in life.

"I don't know a single real estate alum who wouldn't give a student thirty minutes to talk." — Ken Statz

After the panel ended, club presidents Mitchell and Will were kind enough to sit and answer a few questions with us. Below is a polished, edited transcript of the conversation.

For those that may not know you, can you please describe yourself in terms of your major, hometown, fun fact, role in this club?

Mitchell: From Boston, big East Coast guy, I grew up born and raised there. Came to Wisconsin, was really infatuated with the real estate program, but also just how fun the school is. The work hard, play hard culture. Best decision I ever made, it's the school that fits me best. I'm a finance and real estate double major, I'm currently a senior, about to graduate in May 2025. I'm going to be working at JPMorgan in New York, doing more of the lending and M&A advisory for public REITs, so kind of what this meeting today was about. I'm very big on new experiences, trying different things, traveling to a new country, all that kind of stuff is what makes you a person and what makes life so special.

Will: My name is Will Ross, I'm from Wisconsin, I'm actually from just north of Lake Mendota. I started my undergraduate career at St. Louis University playing baseball, studying finance. I transferred here my junior year, debating if I wanted to do finance or real estate. I think real estate really just stuck out to me because of the more personal aspect and the connection-based industry that it is. Joining the Real Estate Club and seeing that in action, going on trips, really opened my eyes on how the industry works. It's not all about the numbers, and obviously creating value is a big thing, but you want to create value with people you trust and you get along with, whether that's through case competitions, tutoring, extracurriculars through the school or here at the Real Estate Club.

Could you describe the average person you would usually see at these meetings? And then, could you talk about the future of what you want this club to be after you guys graduate?

Mitchell: I'll guess I'll start with who's the average member. [It's] someone interested in real estate. Most of the people we see don't really know what they want to do. They're either in a major for it or looking to apply to the business school, or a finance major that wants to look at real estate as an option. They come to these meetings because they get a wide breadth of different industries within real estate. They get to hear from different

perspectives and they get to figure out what kind of path they want to take. Both Will and I love talking to those types of people because they're the ones that you can really inspire and show them, this is where you can take your career in real estate if you want to choose that avenue. We look for members that see [the panelists] and get inspired and say, "I want to be on that stage at some point. I want to achieve great things in real estate, and this is something to consider further on."

Will: Like Mitch said, the ideal member doesn't necessarily have to be someone that's majoring in real estate. There's a lot of economics majors, finance majors, risk management and insurance, pretty much any major that has taken a real estate class, or has family in real estate and thinks it would be interesting to hear from industry professionals. Mitch and I like getting to know somebody who's going to work on Wall Street or for some investment bank, just getting to know people that are going to work in related careers. But we all want to come out and learn and do something outside of the classroom, showing that extra dedication. When Mitch and I were younger members in this club, we liked seeing the alumni come back and give back to the program after having such a successful career. It was really the motivating force behind everything. We came from social chair positions, where we innovated more volunteering events and upped the social game of the club a bit. At the end of the day, the club is a machine and we try to be the best stewards we can when it's our turn to be in charge. Going forward, we need to stress how important it is for all the members to connect with each other.

Mitchell: I want to place some emphasis on how much real estate is a social game. It is a very social industry. You have to have some level of interpersonal skills to succeed in it. We don't look for a very specific personality type, but we do look for people that are willing to interact with other people and willing to have fun because it is a lot of work hard play hard culture, which is kind of what Wisconsin is, honestly. That's why it's such a good real estate program. We do look for those people that stay after meetings, want to interact with our speakers, network with them, come to KK with us.

Will: The ideal person that we know in the Real Estate Club and moving forward is one, you can trust them. That's a huge thing in real estate. And I think the second part is just that they are real and open, and fun to hang out with outside of work. Because people want to work with people, they don't work to work with robots.

Mitchell: *It's like the elevator or the airport test. If you are stuck in an airport with someone for 12 hours, would you rather be stuck with someone that doesn't talk or [someone] that talks a lot and has a lot to say?*

To those who are interested in real estate or those who are interested in the Real Estate Club, but may have not gotten into it yet, what would your message to them be?

Mitchell: *My roommate, a good friend of mine, very driven individual, got into real estate this year, and he's a senior. He actually just added the real estate major last summer. He asked me, "What do you think I should do to really stand out in real estate, how do I make the most of the program?" I told him to take advantage of every opportunity. He's almost done with his requirements, never had a real estate internship, but he's getting into it now. So it's not too late, and what you should do if you're interested in real estate is look at every opportunity as something that can help you achieve the next step. And if the next step is not pursuing real estate, that's fine. If you are somewhat interested in real estate, it would be worthwhile to check out one of our meetings, go to a networking event, go take a class within real estate, take another class. Those are the things that are not only going to help you recruit within real estate, but determine whether it's the right industry for you or not.*

Our meetings are a great way to do that for minimal cost because it's not like you have to invest a whole semester. You just come to a meeting and you can see different aspects that may intrigue you.

Will: *I think realistically, if you're in another major, you've never taken anything around real estate, the best thing you can do as a student is come to Real Estate Club meetings. I probably learned more from my first semester here, from coming to these meetings and asking questions to people that are older than me afterwards, than I did in my real estate classes. This year we implemented pre-meeting context slides, so even if you know nothing about real estate, one of the more senior members will explain some concepts to you so nothing is going over your head.*



THE REC 2025 INNOVATOR AWARD – HONORING SARAH WICK AND HER WORK IN REAL ESTATE AND AFFORDABLE HOUSING

BY JASON LI, ANDREW VANDERKOLK, FEBRUARY 2025

CLUB PARTNERSHIP, REAL ESTATE CLUB



In a moment that celebrates both achievement and excellence, the Real Estate Club presented the 18th ever Innovator Award, presented by the Grasskamp Center for Real Estate, recognizing an industry leader whose work has positively impacted the real estate industry.

The award goes to recipients that “1) transform aspirations into reality through their actions and achievements, 2) Inspire others to uphold and advance the tradition of innovation within the real estate industry, 3) Create impactful contributions, pioneering new ideas or initiatives that leave a lasting impression.”

Past recipients include Goldie Wolfe Miller, Michael Toolis, David Brain, Ryan Williams, and Jeff Shapack.

This year’s recipient, Sarah Wick, stood at the podium as the youngest-ever recipient and only the second woman to receive the award, embodying the deep Wisconsin roots that have influenced her career trajectory. With a background in affordable housing and policy, Sarah has helped shape legislation and transform communities through innovative housing initiatives. In her acceptance speech, she reflected on her journey—from discovering music at B-Side Records during her college years to spearheading real estate projects that bridge human stories with urban development.

"Behind every building is a human story and a need," Sarah shared, underscoring her belief that real estate is about creating spaces where lives unfold. Her work with Related Midwest, where she has helped develop over 10,000 housing units, and her role in crafting the Affordable Illinois Act, highlight her dedication to reshaping housing policy for the better. With over a billion dollars in investments funneled into Illinois, she has not only built structures but also fostered communities, demonstrating that impactful real estate is both an art and a responsibility.

Following the award presentation, a fireside chat featured Paul Elsworth, Associate Director of Affordable Housing, and other colleagues, providing insight into the challenges and innovations within the sector.

The discussion opened with a fundamental question: What does affordable housing mean today? Paul broke it down into "Big A" affordable housing—large-scale multifamily projects financed through tax credits and subsidies—designed to support working families earning up to \$65,000 annually. He reflected on the shifting landscape of urban development, from the era of brick houses to "towers in the park," and the complex financing structures that make modern affordable housing possible.

Sarah, drawing from her experience, emphasized the intricate process of developing mixed-income communities, such as the landmark Lathrop Housing redevelopment. "Financing is not for the faint of heart," she noted, recalling the seven-year regulatory journey and the resistance encountered along the way. However, she also spoke to the satisfaction of overcoming skepticism and proving the value of long-term, community-focused housing strategies.

The conversation also delved into the role of public policy, with Sarah highlighting the two primary approaches to affordable housing legislation: the "stick" method, which mandates inclusion but often faces pushback, and the "carrot" approach, which incentivizes development through subsidies and tax credits. A standout example is the 80/20 model, where high-end Class A properties help finance more affordable units within the same development, ensuring prime locations are not reserved solely for luxury housing.

The Lathrop project, one of the nation's pioneering public housing demonstrations, illustrated this approach in action. "No one had done this before," Sarah remarked, explaining the challenge of navigating uncharted territory in affordable housing policy. The initiative has set a precedent, proving that well-integrated, mixed-income developments can thrive in urban centers.

The discussion wrapped with a sobering yet optimistic look at the future of affordable housing. Paul and Sarah acknowledged the challenges of federal policy shifts, fluctuating funding sources, and increasing regulations. Recent government policy changes, including cuts to diversity and green technology programs, have put some projects at risk, forcing developers to navigate an ever-evolving landscape.

Despite these hurdles, the speakers remained hopeful. "It's okay to not be okay," Sarah remarked, reminding the audience that the work of real estate development is often met with setbacks but also brings unparalleled opportunities to shape the built environment. The event concluded with a call to action for students and professionals alike to engage with policy, think critically about urban development, and be fearless in pursuing innovative solutions.

As the Innovator Award ceremony ended, attendees left with more than just goodie bags and a plaque to admire—they carried forward a deeper understanding of the impact that thoughtful, strategic real estate development can have on communities. For those looking to shape the future of real estate, Sarah's journey serves as both an inspiration and a challenge: to build spaces that reflect the needs, stories, and aspirations of the people who call them home.



RAMP100 – UW-MADISON’S COMMUNITY FOR STUDENT ENTREPRENEURS

BY JASON LI, DECEMBER 2024

CLUB PARTNERSHIP, RAMP100



Madison, WI — It’s Thursday, November 21st, 2024. On the 2nd floor of the Wisconsin School of Business, a high entrepreneurial fervor fills the room of the fifth and final fall semester meet-up for UW-Madison’s founder community.

The meet-up, officially billed as the “[UW-Madison Entrepreneur Meetup](#),” is a bi-weekly recurring meetup that brings together Madison student and community entrepreneurs of all ages and experience levels. Tonight’s meet-up draws a crowd of fifty people, ranging from aspiring student entrepreneurs to seasoned Madison-area founders. While officially scheduled for an hour, many participants remained after and were engaged in deep discussion. The event itself begins with announcements of upcoming startup opportunities near campus, then breaking into many discussion groups focused on particular entrepreneurial interests like technology, venture capital, finding co-founder(s), and more.

These entrepreneur meet-ups operate under the umbrella of [ramp100](#): previously a start-up accelerator for UW-Madison student founders created by professor [Jon](#)

[Eckhardt](#) and [Jack Koziol](#), now transformed into an entrepreneurship community led by [Ben Lukszys](#), a junior at UW-Madison majoring in Entrepreneurship, Data Science, and Philosophy.

In an interview, Ben describes himself as a “founder’s founder;” someone who solves the pain points of other entrepreneurs and founders. He has been instrumental in building the community this semester after the ramp100 accelerator was put on pause for the 2024–25 academic year, due to the university Chancellor recruiting Eckhardt full-time for her [Entrepreneurship Initiative](#).

“So many friends were made and business partners were created during ramp100 last year, and so I wanted to keep that going. I probably made over half of my close friends at college through ramp100 alone,” Ben explains. His impact on the entrepreneurial community has been felt through multiple organizations, particularly in connecting entrepreneurs with resources on campus to reduce barriers-to-entry for newcomers and help existing entrepreneurs find mentorship and other resources.

Among the attendees of tonight's entrepreneur meet-up is Truman Nolte, a sophomore who recently switched from an Entrepreneurship major to that for Data Science. Truman describes his path; he comes from the "Mecwan bubble" in small-town Wisconsin, and arrived to Madison overwhelmed with the sheer amount of people on campus. He became more observant as a result and found an interest in books, "I don't really say what I think [because] I lack confidence... but things that I was reading in this book, was things that I've been thinking all along – maybe I'm not crazy."



When asked, Truman wants to be an entrepreneur to own his time and contribute in a meaningful way, and a regular salaried job was not something he ever wanted. He focuses on an attitude of "stumbling around," which allowed him to venture outside his comfort zone and light this "entrepreneurial fire."

"Try to embrace the change that comes with figuring things out, and not trying to set myself on any one path... if I could predict my life in the next five years, I wouldn't necessarily want to live it."

The meet-up has become a cornerstone of his growth. "This meet-up attracts the right people, the right networking and opportunities," Truman notes. He appreciates how the community embraces intellectual humility and creates a level playing field where concepts can be freely discussed and explained.

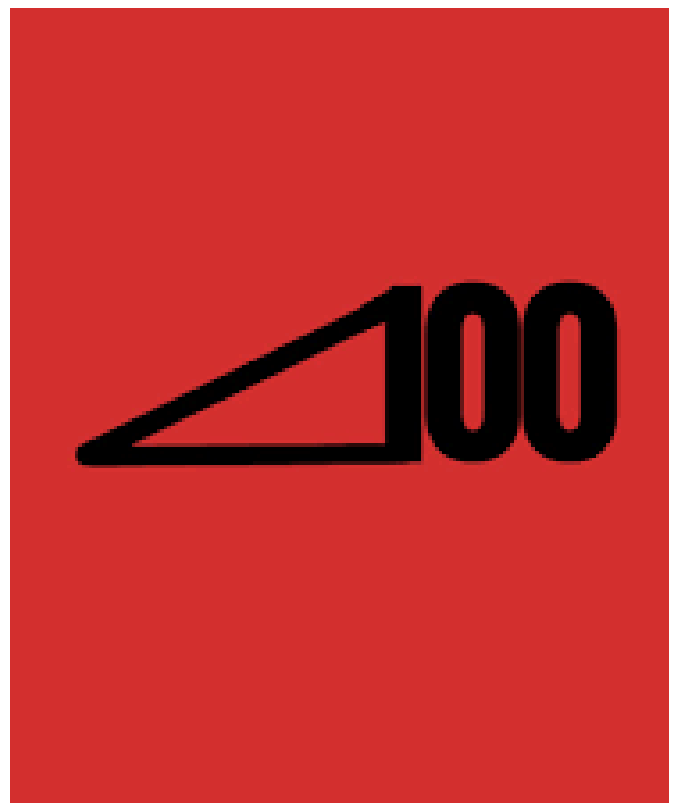
Looking ahead, Truman offers advice: "Take advantage of your maximum opportunities, minimum responsibilities lifestyle. If you do the thing that you are afraid of, address the worst possible outcome, are you going to survive? Chances are yes, and you'll be okay."

Ben's vision for the future aligns with his role as a founder's founder. "I am trying to solve as many founder

problems as possible. Because a world where founders have fewer problems creates a world with more solutions, and that's a world I want to live in." His personal message to those interested in entrepreneurship:

"The best thing to do to get started in entrepreneurship is to meet other people who are also interested in entrepreneurship. More generally, my ultimate advice to people trying to find their way in life can be distilled down to this three-step framework: 1) reflect upon or find people who you love to be around, 2) identify what these people have in common (I call them 'filters'), and 3) spend as much time finding people with those 'filters' as possible. Then, not only will you constantly be surrounded by people you love, but you'll start to become one of these people yourself. For people like me and Truman, our main 'filter' is entrepreneurship. And, that's why this meet-up and events like it are so valuable because it serves as a filter for other entrepreneurial people."

And as this evening winds down, the remaining participants finish their discussions, embodying the community's spirit of collaboration and growth. In this room, on this Thursday evening, the future of Madison's entrepreneurial ecosystem takes shape once more, one conversation at a time.



BUILDING THE SPORTS BUSINESS COMMUNITY AT UW-MADISON: THE STORY BEHIND WSBC

BY JASON LI, AADIT BHAVSAR, DECEMBER 2024

CLUB PARTNERSHIP, WISCONSIN SPORTS BUSINESS CONFERENCE



Madison, WI — In a large lecture hall at the Wisconsin School of Business, facing an audience of 200 students who look on intently, two students stand up to the podium and deliver their message:

The [Wisconsin Sports Business Conference](#) (WSBC) is set to host their marquee event of the same name, happening Thursday, March 6th at the Discovery Building, with a star-studded line-up of industry speakers and networking opportunities for students to get the skills and connections necessary to forge a career in the sports industry.

[Adrian Wojarowski](#), the general manager of the men's basketball program at St. Bonaventure University, and previously one of the NBA's most prominent news reporters, is headlining the event, with other notable names like [Chris LaPlaca](#), [Karen Murphy](#), [Jordan Solomon](#), and [Lloyd Frischer](#). The event itself is backed by national and local brands like Morgan Stanley, Global Sports & Entertainment, the Milwaukee Bucks, the Milwaukee Brewers, and [The Vault](#).

Taking a step back, for the many students who were at the lecture hall that day, the two students speaking at the podium were the co-founders and co-presidents of WSBC itself, [Jaxon Zemachson](#) and [Devin Mehta](#).

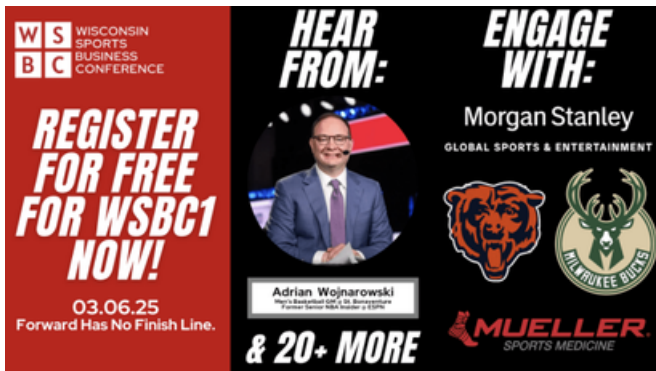
Jaxon, a sophomore majoring in Marketing and Entrepreneurship, comes from Scarsdale, New York, where he always had a passion for sports and a special interest on the business side of the industry.

Devin, a sophomore majoring in Finance, Risk Management & Insurance, and Accounting, is from Milwaukee, Wisconsin, and is a member of the [Wisconsin Investment Banking Club](#), [Diverse Leaders of Tomorrow](#), and more.

The idea for the Wisconsin Sports Business Conference first took shape when Jaxon, in his senior year of high school, learned about and attended the [Michigan Sports Business Conference](#), the largest undergraduate-run sports conference in the nation. Inspired by the potential to bring together so many like-minded individuals, and because Wisconsin is the only Big Ten university without a sports business major, Jaxon decided to execute on his vision.

He decided to pitch his idea for WSBC in his first semester at Madison, by building and marketing a simple presentation deck, and ultimately recruited a team of four other students to become the founding executive board.

Devin, at the time, was involved in other student organizations on campus, namely Diverse Leaders of Tomorrow, and the impact they had on mentorship and



career development. He saw Jaxon’s presentation deck and recognized the impact WSBC could have on students who are interested in the sports business industry. Motivated by this opportunity to help, Devin joined WSBC initially as Director of Partnerships.

But not even a month in, Jaxon recognized Devin’s passion and ability for the idea, and made a midnight decision to make Devin co-founder and co-president. The rest is history, as they say.

The Wisconsin Sports Business Conference was officially founded in September 2023, making it almost two years old to this day. In these two years, Jaxon and Devin have built a community and team of individuals who are passionate about sports business at Wisconsin. Their student planning board includes themselves, the executive board, a marketing team, an event planning team, and a sales & partnership team, all composed of current UW-Madison students.



Jaxon (left) and Devin (right) in front of the Kohl Center

Now a week away from their marquee event, with a significant amount of funding raised and high-profile speakers secured, both Jaxon and Devin realize how supportive the Wisconsin alumni have been. WSBC has a 12-person alumni advisory board, who have been there

“The craziest moment for me, and my “Aha!” moment, was when I got an email back from Joel Embiid’s agent, who was a UW-Madison grad, who said he would love to talk to me. That was a really big milestone... where I looked back and realized the power of cold-emailing and cold-calling is just absurd, especially with a .edu address.”
 – Jaxon Zemachson

every step of the way. Leading WSBC has been a transformative experience for both Jaxon and Devin. Jaxon was able to apply classroom practices to real-life situations in their organization, and help in delegating and managing responsibilities to get things done the right way. For Devin, he focused on leveraging his skills to drive execution and motivation, as it’s important for him to maintain a standard of excellence in their work.

Jaxon and Devin share this high standard and propensity for excellence, collaborating in decision-making and working with different personalities. In working together, they have been able to develop their approach to executing on new and board-reaching projects, often with no guidance, and breaking it down into practical steps of progress.

And as they prepare for the conference, Jaxon and Devin look out into the future of their project. WSBC is an idea and community that they both hope to come back to, even after 20 years, and to see it grow and evolve overtime. The alumni have supported them and the student team immensely, a tradition Jaxon and Devin look to pay forward in their foreseeable futures.

“I think our unique trademark at UW-Madison is that Badgers know what they want and they work exceedingly hard to get it. And for us, we look for that same type of person in the members we select, and we tend to find the same type of person in the alumni who support us. So continuing to find that breadth of people is something that excites me moving forward, and something that I hope remains the identity of the school, of our program, and the alumni involved in it.”
 – Devin Mehta

From their experience, Jaxon and Devin share pieces of advice for those who are following in similar footsteps.

“When things go bad, there’s two ways to handle it. You can either sit there and cry about it, or you can get up and do something about it. There’s something that goes wrong everyday, and it’s on us to fix it and figure out what the path forward is.”

– Jaxon Zemachson

“Learn to question things. Be someone who seeks to understand, who wants to challenge their viewpoints in a way that allows them to see issues as more than black and white.”

– Devin Mehta



The Discovery Building at the University of Wisconsin-Madison

Regardless of their interest in sports business, students can make the most out of their experience at the Wisconsin Sports Business Conference on Thursday, March 6th at the [Discovery Building](#).

The conference will be a place where students will hear from many different industry leaders, from Executive Vice Presidents of the NFL and Senior Vice President of the MLB, to the founder and partner of private equity shop [Arctos Partners](#), to the Chief Operating Officer of the Chicago Bears, and more.

Attendees will get to participate in panels that discuss how to prepare and get into a career in sports, how women’s sports became a billion-dollar industry, the blueprint of North American sports leagues, sports as an asset class and investment, and the future of college athletics after NIL.

Through and through, this conference will be a great opportunity you won’t want to miss.

THE INAUGURAL WISCONSIN SPORTS BUSINESS CONFERENCE, AN EVENT RECAP

BY AADIT BHAVSAR, KABIR OBEROI, MARCH 2025

CLUB PARTNERSHIP, WISCONSIN SPORTS BUSINESS CONFERENCE



Madison, WI - The first ever Wisconsin Sports Business Conference took place on March 6th, 2025 and was an instant success.

The day kicked off with a video message from Dan Katz, a UW Alum and Barstool Sports personality known as “Big Cat.” In his message, Katz welcomed attendees and emphasized the significance of the moment – bringing together students, industry professionals, and UW’s growing alumni network in sports business..

[Chris LaPlaca](#), the former head of communications for ESPN, followed with the morning keynote. He spoke about the importance of building an authentic personal brand and cultivating meaningful relationships in the professional world. LaPlaca emphasized that authenticity is a powerful differentiator as people naturally gravitate toward those who are genuine, consistent, and grounded in their values.

Following the keynote was the first panel of the day, “*You’re Not Ready for a Career in Sport. Here’s How You Can Get There.*” Panelists emphasized the importance of

developing professional skills in fields across business that can then be applied to the sports industry. They noted that passion for sports is expected, but it’s the ability to bring transferable skills that truly sets candidates apart.

Panelists: Karen Murphy (COO & EVP Stadium Development, Chicago Bears), Jordan Solomon (Partner, Arctos Partners). **Moderator:** Devin Mehta (Co-President, WSBC).

Later in the day, the focus shifted toward a growing and exciting area in sports with the panel, “*From Caitlin Clark to Rose Lavelle: Building a Billion-Dollar Women’s Sports Industry.*” This session highlighted the rapid rise of women’s sports and the strategic efforts underway to continue that momentum. The panelists shared how increased youth participation, media coverage, and investment are all playing a role in shaping the future of women’s athletics, noting the visible impact already seen in high school and collegiate sports contributing to a rapidly expanding women’s sports ecosystem.

Panelists: Olivia Hancock (Co-Founder, ByUs Media), Sascha Malas (Director of Content Operations & Head of Overtime Select, Overtime), Lola Schumacher (Student Athlete, Wisconsin Volleyball), Kelly Sheffield (Head Coach, Wisconsin Volleyball). **Moderator:** Rachel Cohen (Sports Broadcaster, Wisconsin Athletics).



Following a lunch break, we saw the panel, “*Driven to Dominate: The Blueprint of North American Sports Leagues.*” This panel highlighted the excellence that executives at the MLB, NBA and NFL all strive for and achieve. Mark Plutzer, SVP of Ticketing for the MLB, explained how the MLB, NBA and NFL all mimic best practices of each other and how there is always something to learn from each other. Troy Vincent, EVP of Football Operations at the NFL, said it best by calling himself a “lifetime learner” and encouraged everyone in the audience to adopt that same mindset in the paths they choose. The panelists displayed an open attitude and were happy to talk about any and all topics, allowing attendees to find something that resonates with them.

Panelists: Chris Petersen (SVP, Team Marketing & Business Ops, NBA), Mark Plutzer (SVP of ticketing, MLB), Troy Vincent (EVP of Football Ops, NFL). **Moderator:** Estevan Molina (PhD Student, UW-Madison).

We were finding that this theme of “finding something that resonated with attendees” to be common among the audience. We were able to sit down with attendee Michael Osterberg, Senior at UW Madison studying Personal Finance, and gather his thoughts on the experience. He remarked that “the panels are well constructed with diverse backgrounds and perspectives.” Osterberg went on to explain how the panels result in very productive and thoughtful discourse on the topics at hand. When asked about a key takeaway he has from the panels thus far, Michael answered saying, “the importance of a substantial

financial education as early and often as possible.” This was an important message and most certainly is applicable to those attending. The next session, “*Sports as an Asset Class: The Rise of Private Equity and Sports Investments.*” offered a deep dive into the financial side of sports. Panelists discussed how sports franchises are now viewed as long-term, high-value assets – attracting major private equity interest. As Aaron Ryan, former NBA executive and current CEO of Belden Avenue Advisors, put it, “Having worked inside leagues and with different start-ups, I’ve seen firsthand how sports has transformed into a diversified asset class. It’s no longer just ticket sales and sponsorship – it’s media rights, private equity, data, and global growth strategy.”

Panelists: Kristin Bernert (Co-Founder & MD, SWISH Partners), Josh Glessing (CSD, Haslam Sports Group & President of Business Ops, Columbus Crew), Aaron Ryan (Founder, Belden Avenue Advisors), Matt Siegel (Partner of Athlete Relations, Patricof Co.). **Moderator:** Todd Richman (MD, Morgan Stanley).

The final panel, “*Wait, What Just Happened? Realignment, NIL, and the Future of College Athletics.*” addressed one of the most complex topics in modern college sports. Speakers examined how Name, Image, and Likeness (NIL) has evolved – shifting from individual brand deals to school-run collectives that now play a major role in recruitment. With the pace of change and growing concerns around fairness and sustainability, they suggested more federal or NCAA-level regulation of NIL could be on the horizon.

Panelists: Sarah Franklin (Professional Volleyball Player, LOVB Madison), Lloyd Frischer (Co-Head of Basketball & Head of Basketball Client Marketing, CAA Sports), Atty. Megan Jerabek (Shareholder Attorney, von Briesen & Roper), Brian Mason (Head of NIL Strategy, Wisconsin Athletics). **Moderator:** Matt Spalter (COO, East Goes Global).

Beyond the panels and speakers, the success of WSBC was also reflected in the strength of its planning and community support. Brian Mason, Director of NIL strategy for the Wisconsin Badgers, praised the conference for its thoughtful execution and student-driven focus, “It was very well planned and really stood out because it was centered around the students,” Mason said. When asked about the most memorable moment of the day, he pointed to the strong alumni turnout as a highlight. “It was great to see so many alumni show up, it really showcased the strength of UW-Madison and its connections in the sports

world,” he shared. Looking ahead, there’s clear enthusiasm for what’s next. The hope is that WSBC can continue to grow, potentially attracting more industry leaders, expanding partnerships, and becoming a signature event not just on campus, but across the sports business landscape. As interest and momentum build, the conference is poised to become a lasting platform for students to connect, lead, and leave a mark on the industry.

Congratulations to organization co-founders [Jaxon Zemachson](#) and [Devin Mehta](#) for creating a very enjoyable and informational event, and hats off to the entire planning crew at WSBC for such a successful event and an unforgettable experience.

Being an NBA insider for so long, he learned just about everything there is to know about relationship building. His key piece of advice is to just reach out. He continues saying, “Call people when you don’t need something from them and help them even when they can’t help you.” As students in business, there is so much focus around networking and making connections, that sometimes it gets lost that making connections with other human beings is a delicate task and must be handled as such. This keynote speech certainly opened the eyes of many in the audience, including our club attendees.

The Inaugural Wisconsin Sports Business Conference has come and gone and it was undeniably an unforgettable event. From the moment you walk into the room till the end of the last speaker, you see excellence in all forms throughout the event. From the guest speakers, to the lanyards, to the decor, this event was meticulously planned and thus resulted in a massive success.



GOVERNMENT LAW

*Contributed by Rithik Ravindran, Raja Chinnakotla, Margaret Probst,
Jack McCreery, Estella Nelson, Chaired by Andrew VanDerKolk*



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“LAWS ARE NOT MADE FOR THE GOOD ALONE, BUT TO PREVENT EVIL.”
— CICERO

As Chair of the Government & Law Committee at Wisconsin Business Review, I am continually reminded of the vital role public-facing scholarship plays in shaping our understanding of governance, law, and institutional power. Our mission is to examine not only the intentions behind public policy but the real-world impacts these decisions have on people’s lives—from rural farmers to urban commuters, from students in public schools to consumers navigating a digital economy.

*Writing for WBR is both a responsibility and a privilege. Through articles like *The Google Antitrust Story*, *Feeding America or Fighting It?*, and *Trump and Musk’s Federal Workforce Overhaul*, our committee has explored the tensions*

between regulation and innovation, efficiency and equity, democracy and market logic. These pieces reflect our belief that good writing does more than describe—it interrogates, illuminates, and ultimately imagines what a better future might look like.

The pages of this journal serve as a forum for rigorous, independent thinking. Here, our writers are not just chroniclers of policy, but architects of public understanding. At its best, WBR fosters a community of inquiry committed to clarity, impact, and intellectual honesty. It is a privilege to help steward that tradition.

Andrew VanDerKolk
Chair, Government & Law Committee

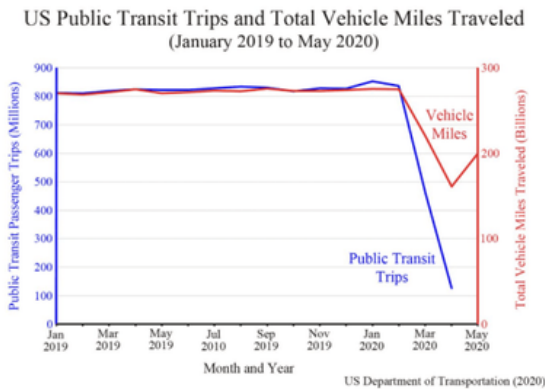
THE STATE OF PUBLIC TRANSPORTATION IN THE UNITED STATES

BY RAJA CHINNAKOTLA, JANUARY 2025
GOVERNMENT & LAW COMMITTEE

Public transportation in the United States has always been fraught. Compared to other developed nations, America lags behind on most metrics of public transportation supply and demand. Yet, the perception of public transportation has seemingly worsened. Many believe that public transportation is a critical solution to climate change, as it can offset the over 10% of emissions caused by personal vehicles. However, systems face challenges such as staffing shortages, transit delays, and increased crime, leading many to question how America can improve its already failing systems.

The Impact of COVID-19 on Public Transportation

COVID-19 was a catalyst for many of the current problems in public transportation. First, the demographic of public transportation users shifted. Many workplaces, particularly office jobs, transitioned to virtual environments, leading to a decrease in ridership of 6 million people per month and contributing to an overall decline in transportation revenues.



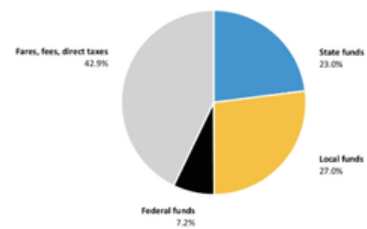
In response, the federal government heavily subsidized transportation systems through the American Rescue Plan Act of 2021. The ARPA allocated federal funds to systems totaling \$30.4 billion dollars to prevent system collapse under the economic pressures of the pandemic. Along with decreased ridership, transit systems reduced their capacities for buses, trains, and other modes of transportation. The US Bureau of Labor Statistics report on US Transit System Labor Productivity finds that between 2020 and 2022, there was a decrease of over 1.384 billion passenger miles traveled. Transit systems

were running fewer routes and at a lower frequency. Post-pandemic, responses to these challenges have varied.

Funding Shortfalls and Large City Challenges

The expiration of federal funding in 2022 left many transportation agencies facing severe shortfalls. In Chicago, increased pressures with infrastructure and reduced federal funds led to a projected \$550 million dollar shortfall by 2026. Contributing factors include building new projects, declining ridership, and reduced state spending. The Chicago Transit Authority (CTA) courted \$1.5 billion from the Illinois state government, but political gridlock has hindered progress.

States and Localities Fund Most US Transit

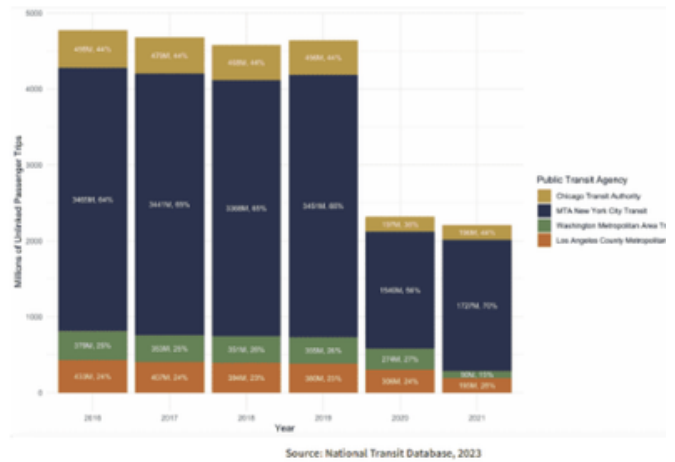
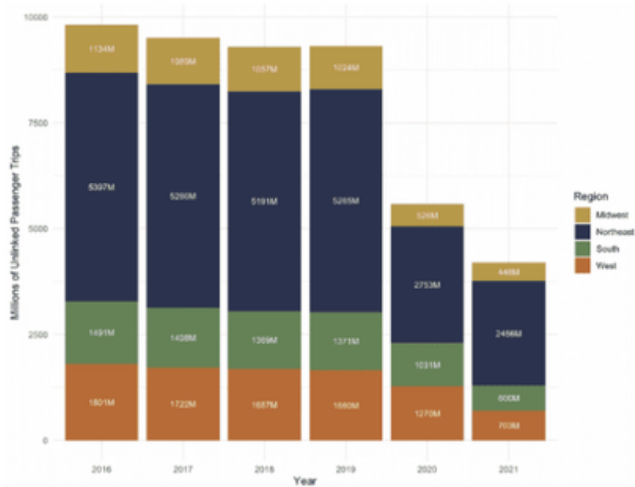


Source: Yonah Freemark, in Search of Equitable Transit Operations (Washington, DC: Urban Institute, 2021).
Notes: Includes all US transit agencies reporting to the National Transit Database as of 2019.

Currently, the CTA has returned to its current rail service level from the pandemic, but without the necessary financial support from the government – to hire staff, fix existing infrastructure, and build new projects – the CTA will crumble under pressure. This scenario exemplifies the broader conflict between different levels of government, which hinders adequate transportation for all. From New York to Los Angeles, large cities have faced significant impacts from reduced ridership and funding. Fortunately, other transit systems in mid-size cities around the country are flourishing.

Success Stories in Mid-Sized Cities

Cities like Richmond, VA, Tucson, AZ, and Madison, WI have avoided the steep declines experienced by larger metropolitan areas. Specifically in Richmond, post-pandemic, their transit was thriving. Since 2020, the Central Virginia Transit Authority (CVTA) found a 104% ridership increase from the pandemic. This is in stark contrast to the CTA losing 46% ridership since 2020.



The CVTA's \$750 million investment has bolstered the system. Transit systems, like the CVTA have been able to thrive because of their adaptability to severe disruptions. Similarly, Madison, WI, saw a nearly 20% ridership increase since 2020, with continued growth expected due to investments in projects like bus rapid transit. Smaller systems were less affected by office closures and remote work during the pandemic. Moreover, the smaller size of these systems allows for greater flexibility with resources. Rather than juggling through thousands of buses and routes, smaller systems can strategically cut at smaller volumes. With greater versatility, smaller systems were able to thrive under post-pandemic challenges.

While Duffy expressed significant disapproval of current secretary of Transportation Pete Buttigieg, he doesn't show any signs of creating radical change. He might focus on fixing current infrastructure, like roads and highways rather than making public transportation his top priority. However, the new DOGE committee with Elon Musk and Vivek Ramaswamy poses significant threats to the US federal government, since they aim at cutting 2 Trillion dollars of federal spending. Many speculate that those cuts will directly impact federal funding of the transportation systems across the board. Nonetheless, public transit won't have increased federal support compared to the Biden Administration.

Federal Policy and Public Transit's Future

With Trump elected as president, there will also be changes to public transit. During his first administration, Trump had negative impacts on public transportation. He shifted funds from the Better Utilizing Investments to Leverage Development (BUILD) program in favor of highways and roads. While the program allocated around 70% of the funds to highways, only 11% went to public transportation. This was a significant decrease from the Obama administration. As we enter a second Trump administration, it is unlikely that he will change his position in favor of public transportation. Specifically in the NOVA area, Trump signaled to suspend funds for a new light-rail project in Baltimore. Moreover, Trump's pick for Transportation Secretary, Sean Duffy, signals a slight change from the first Trump administration. Born in Wisconsin, Duffy, former reality star turned Congressman is a conservative Republican and FOX Business host. Compared to other people predicted to take the position, like former Uber executive Emil Michael and California representative Jeff Denham, he isn't keen on disrupting the agency. But compared to the first administration, pick Elaine Chao, Duffy signals greater loyalty to Trump rather than institutional experience.

Potential Solutions for Sustainable Public Transit

Since public transportation around US cities will become less reliant on federal funds, there needs to be localized solutions to ensure that those systems thrive. One proposed solution is congestion pricing, which imposes surcharges on vehicles entering high-traffic areas, such as downtowns. The idea aims to increase revenue streams for transportation while reducing overall car congestion. A headlining proposal for congestion pricing recently hit a hard stop in New York. Kathy Hochul, the current governor of New York, initially rejected a proposal for congestion pricing of \$15 dollars per entry. Though she has about-faced and now supports congestion pricing, though at a reduced cost of \$9 dollars. Rideshare services like Uber and Lyft would face a smaller surcharge of \$2.75 per ride. However, there has been significant pushback from unions to the proposal, who argue that congestion pricing is simply another hidden tax that would disproportionately impact low-income workers who drive into the surcharge areas for work. While congestion pricing remains contentious, it could provide a significant revenue stream without heavily burdening public transit users. Similar policies are already successful in European cities like London and Paris, proving that the idea is viable.



Another potential solution is raising ticket prices. Critics argue that increasing fares could unfairly affect those that use public transport the most, a bloc that includes low-income and marginalized groups. Increasing prices would not be beneficial on its own, it should be coupled with a new pricing scheme. To mitigate this, fare increases could be paired with pricing caps, such as the Metropolitan Transportation Authority’s (MTA) OMNY system, which limits charges to 12 swipes per week. In other words, the 13th swipe and up are available at no additional cost. With an increase in pricing, systems should institute a pricing policy where there is a cap on charges per week or month. This raises revenues from all tickets while rewarding those who use the systems often. By creating more localized policies that solve problems with funding, transportation systems can adequately address the needs of their riders while improving their budget problems.

The future of public transportation in the US hinges on effective collaboration between municipal, state, and federal authorities. While a new Trump administration may not significantly harm systems, other federal initiatives could threaten funding. Nonetheless, by adopting successful strategies from cities like Richmond and Madison, there is hope that the US can move toward a more robust and equitable public transportation network, following the examples set by Europe and Asia.

Along with greater revenue increases, public transportation systems should prioritize smaller-scale investments compared to expensive infrastructure. Currently, most American cities operate exclusively bus routes with limited train services. Underground metros are the exception with systems since they are expensive to build. For instance, the MTA extension of the Purple Line cost \$4 billion dollars per mile. For instance, the MTA’s Purple Line extension cost \$4 billion per mile, highlighting the financial strain of large-scale projects. With smaller systems strapped for cash, expanding current services and increasing bus routes is more functional and cost effective as opposed to creating new train routes that would break the bank. Smaller, incremental improvements can better address budget constraints while meeting riders’ needs.

PATENTING LIFE: 23ANDME, GMOS, AND WHERE WE DRAW THE LINE

BY **ESTELLA NELSON**, JANUARY 2025
GOVERNMENT & LAW COMMITTEE

The question of whether life can be owned touches on some of the most profound ethical, legal, and philosophical debates of our time. Ownership implies control, and control over life—whether in the form of genetically modified organisms or personal genetic data—raises critical concerns about autonomy, fairness, and the boundaries of innovation. While it is straightforward to own pets or buy plants, extending this concept to the very building blocks of life itself is far more contentious. Companies like Monsanto and 23andMe have demonstrated that life, at least in certain contexts, can be treated as intellectual property – but should it be? This has ethical, real-world implications—not just for corporations and governments, but for every individual, as we navigate a world where biological materials are increasingly commodified.

Biotechnology has created incredible opportunities to address challenges in medicine, agriculture, and environmental sustainability. However, these advancements come with a price. Who benefits from the innovations, and at what cost to the broader society? The ownership of life is no longer just a theoretical debate. It has become a pressing issue with far-reaching consequences, affecting farmers, consumers, and even patients. Understanding the implications of this ownership requires an examination of patent law, corporate practices, and ethical dilemmas in the biotech industry.

Patent Law and Biotechnology

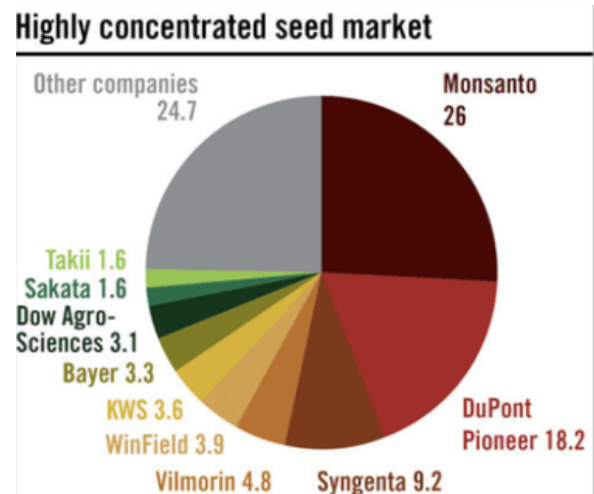
US patent law requires that items be novel, inventive, and have industrial applications—essentially, they must be new and useful. Inventors are granted exclusive rights over their creations, which can be legally protected. In the biotech industry, this framework is applied differently. Unlike Europe, the United States does not exclude living things from patentability, except human beings. However, there must be significant differences between the patented living entity and naturally existing ones. This distinction creates opportunities for innovation but also



ethical dilemmas. The ability to patent GMO plant varieties has economic and developmental benefits. Intellectual property protection incentivizes companies to invest in research and development, fueling advancements in biotechnology. However, Monsanto's dominance in the market raises concerns about monopolistic practices. As of 2020, GMOs accounted for around 90% of soybean and corn production in the US, according to the FDA. Monsanto dominates this market, controlling nearly a quarter of global commercial seed sales. Their flagship product, the Roundup Ready soybean, exemplifies this control. These plants are genetically modified to resist Monsanto's own weedkiller, ensuring dependence on their products.

Monsanto's Aggressive Patent Enforcement

Monsanto's enforcement of its patents is aggressive and far-reaching. Holding over 4,000 patents in the US, the company has pursued numerous court cases against farmers for alleged violations, solidifying its reputation as an uncompromising enforcer of intellectual property rights. One notable case, *Bowman v. Monsanto*, reached the Supreme Court in 2012. Vernon Bowman, an Indiana farmer, was sued for patent infringement after saving



Roundup Ready seeds and mixing them with local soybeans to produce a second-generation crop. This practice, which historically allowed farmers to cut costs and increase sustainability, was deemed a violation of Monsanto's patent. The Supreme Court's ruling clarified that patent exhaustion—the idea that buyers can use purchased products as they wish—does not apply to genetically modified plants. Creating new seeds from GMO crops constitutes making copies, which infringes on Monsanto's patents. This decision established a precedent that reinforced the company's control over its products.

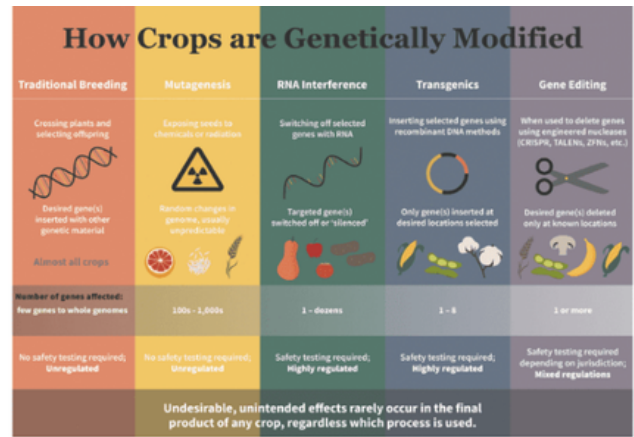
Historically, farmers could save seeds for future planting, sell them back to local granaries, or reuse them, fostering a cycle of self-reliance and local commerce. However, Monsanto's patented protections disrupt this tradition, forcing farmers to repurchase seeds each growing season. These practices ensure Monsanto's market dominance but place significant financial strain on small-scale farmers who rely on affordable and reusable seeds to remain competitive. Critics argue that these policies burden farmers and also stifle agricultural diversity by narrowing the availability of non-GMO seeds.

The *Bowman v. Monsanto* case underscores the broader tension between protecting innovation and preserving traditional agricultural practices. While intellectual property laws incentivize technological advancements, they also risk consolidating power in the hands of a few dominant corporations. This dynamic raises ethical questions about the balance of power in the agricultural sector and the long-term implications for food security and farmer independence.

The Role of GMOs in Agriculture

GMOs play a vital role in addressing the challenges of a growing global population. These crops maximize yields, improve resistance to pests and diseases, and adapt to changing environmental conditions, offering solutions to food security and sustainability. However, these advancements come at a significant cost. Their high prices and the monopolistic practices of companies like Monsanto create substantial barriers for smaller farmers, who often cannot afford the expensive seeds and related technologies. This economic divide forces many small-scale farmers out of business, further consolidating agricultural power in the hands of large corporations.

The legal landscape surrounding GMOs amplifies these challenges. Another notable court case, *Schmeiser v. Monsanto Canada Inc.*, provides insight into the extent of corporate control. Percy Schmeiser, a Canadian farmer,



was sued by Monsanto for allegedly growing their patented Roundup Ready canola without purchasing the seeds. Schmeiser argued that the seeds had accidentally spread to his fields via wind or cross-pollination, but the Canadian Supreme Court ruled in Monsanto's favor in 2004. This decision reaffirmed that even unintentional use of patented genetic material could constitute a violation, further underscoring the risks for farmers operating near GMO fields. Critics argue that such rulings place an unreasonable burden on farmers to monitor and control natural processes like pollination, which are often beyond their control.

These legal precedents highlight critical ethical questions about the commodification of life. By allowing patents on genetically modified plants, the line between innovation and exploitation becomes blurred. What prevents this framework from extending to other organisms, including human genetic material? As biotechnology continues to evolve, society must confront these issues, balancing the need for progress with the rights and autonomy of individuals and communities.

23andMe and DNA Ownership

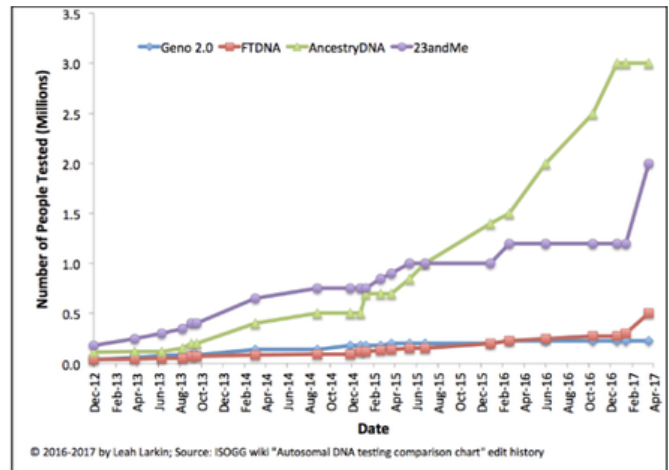
Similar concerns about ownership arise in the context of 23andMe. In September, all seven independent board directors resigned over disagreements with the founder's decision to take the company private. Once a leader in direct-to-consumer genetic testing, 23andMe has seen its market share collapse, losing 99.9% of its value. As the company faces an uncertain future, questions about the fate of its vast DNA database loom large.

23andMe has suggested partnerships with pharmaceutical companies to use genetic data for developing personalized medicines. However, this raises significant privacy concerns. HIPAA protections do not apply to non-healthcare companies like 23andMe, leaving

consumer data vulnerable to exploitation. Much like farmers buying Monsanto seeds, consumers often sign away substantial rights without fully understanding the implications.

The commodification of genetic information reflects broader trends in biotechnology, where corporate interests often outweigh individual rights. Recent developments, such as the unauthorized use of genetic databases by law enforcement, further complicate this landscape. In a prominent case involving GEDmatch, a genetic genealogy database, police gained access to identify a suspect in the Golden State Killer investigation. While this helped solve a decades-old criminal case, it also exposed privacy vulnerabilities in consumer genetic databases, raising questions about how such information should be used and who should control access.

Additionally, the rise of genetic data marketplaces, such as Nebula Genomics, highlights the growing commercialization of personal DNA. Companies now allow consumers to sell their genetic information directly to researchers or pharmaceutical firms. This shift has sparked debate about whether individuals are truly informed about the long-term implications of these transactions, especially as data security concerns and the potential for misuse grow. The combination of these events emphasizes the urgency of establishing stronger ethical and legal frameworks to protect individual rights in the age of genomic commerce.



research, stem cells are unspecialized and have the potential to develop into various types of cells within the body, making them crucial for regenerative medicine and developmental biology. Immortal cell lines like HeLa, on the other hand, are already specialized and are primarily used to study specific biological processes, test treatments, or understand disease mechanisms over extended periods. This distinction makes them complementary tools in scientific research, each serving unique purposes.

Despite all of her monumental contributions, neither Henrietta Lacks nor her family received recognition or compensation for decades, raising profound questions about consent, ownership, and equitable distribution of

The Legacy of HeLa Cells

The story of HeLa cells underscores the ethical complexities of using human biological materials for innovation. Taken from Henrietta Lacks without her knowledge or consent in the 1950s, HeLa cells became the first immortal cell line. Unlike normal cells, which stop dividing after a set number of cycles (a phenomenon called the Hayflick limit), immortal cell lines like HeLa are able to divide indefinitely under proper laboratory conditions. This unique property allows scientists to conduct prolonged and repeatable experiments, making HeLa cells invaluable for medical research. These cells have contributed to breakthroughs in vaccines, cancer treatments, and more. For instance, they played a pivotal role in the development of the polio vaccine, in vitro fertilization techniques, and advancements in cancer research.

Immortal cell lines differ from stem cells in significant ways. While both can replicate and are used extensively in

1920
Henrietta Lacks was born Loretta Pleasant on August 1, 1920, in Roanoke, Virginia to Elias and Johnny Pleasant.

The world owes much to Henrietta Lacks. Lacks was a Black woman whose cells were removed during a biopsy in 1951 and used for research without her knowledge or approval. A few months after Lacks' diagnosis of cervical cancer, she died at the age of 31. She never would have known that, more than six decades later, her cells would continue to grow and provide a foundation for advancements in science and medicine.

Lacks' cells revolutionized the field of medicine. Her amazing and immortal cells, commonly known as HeLa cells, have been used for decades in biomedical research. HeLa cells have been used to study, among other things, cancer, the effects of radiation and AIDS. HeLa cells led to the development of successful drugs in fighting human diseases, including leukemia, hepatitis, herpes, human papillomavirus, Parkinson's disease and influenza.

1941
On April 10, 1941, Henrietta Pleasant married David "Doc" Lacks.

1941
HeLa cells were used by a German virologist to help prove that the human papillomavirus causes cancer.

1951
A biopsy of Henrietta Lacks' cancer was taken and sent to the lab of George Gaylord resulting in the creation of HeLa cell line.

1951
The virus infection mechanism of HIV was studied by scientists who infected HeLa cells with HIV.

1952
Scientists used HeLa cells to help develop the polio vaccine.

1952
HeLa cells were used to study tuberculosis.

1973
Scientists used HeLa cells to study the behavior of salmonella inside human cells.

2013
The NIH announced an agreement with Henrietta Lacks' family to allow researchers access to the whole genome data of HeLa cells.

benefits from scientific advancements. HeLa cells highlight the persistent tension between scientific progress and personal rights. On the one hand, access to biological materials has fueled extraordinary breakthroughs that have saved millions of lives. On the other, the lack of informed consent and equitable treatment exposes systemic inequities in how marginalized individuals and communities are treated by the scientific community. This case has since inspired discussions around bioethics and led to the eventual establishment of agreements to recognize and include the Lacks family in decision-making processes related to the cells' use.

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The legacy of HeLa cells parallels contemporary concerns about genetic data ownership, particularly in companies like 23andMe. These issues underline the urgent need for robust legal and ethical frameworks to safeguard individual autonomy while fostering innovation. Just as organ donation requires consent, so too should the use of cells and genetic material. Without such safeguards, history risks repeating itself, with progress achieved at the expense of fairness and justice.

The Future of Life Ownership

Life is increasingly treated as a commodity, owned primarily by corporations rather than individuals. This commodification extends from genetically modified crops to personal genetic data, and even to biological materials like HeLa cells, creating profound ethical and societal challenges. While biotechnology offers groundbreaking advancements, corporate ownership over fundamental aspects of life raises concerns about individual autonomy, societal equity, and ethical boundaries.

As biotechnology continues to advance, the implications of this trend grow more significant. Genetically modified organisms (GMOs) have transformed agriculture, enabling higher yields and pest resistance, but their patents have

concentrated power in the hands of a few corporations like Monsanto. Cases such as *Bowman v. Monsanto* and *Schmeiser v. Monsanto Canada* highlight how these legal frameworks often burden farmers and stifle agricultural diversity. Similarly, companies like 23andMe and genetic data marketplaces like Nebula Genomics have turned personal DNA into a commercial asset, sparking debates about privacy, consent, and the ethics of genetic data usage. Meanwhile, the legacy of HeLa cells demonstrates how historical injustices can persist in modern science, emphasizing the need for stronger ethical safeguards.

The balance between innovation and ethical responsibility remains precarious. Society must grapple with whether life can and should be owned, and if so, under what conditions. Addressing these issues will not only shape the future of biotechnology but also define the moral and ethical boundaries of science and commerce for generations to come. As corporations continue to wrestle control from individuals, the ethical issues multiply and the stakes get bigger. The law reads that a person's life cannot be owned. Redefining life from a human level to a cellular level increasingly blurs the distinction between reasonable and outrageous. Maybe life can be owned at a cellular level – but we will let corporations once again take ownership of human lives? That is a question that we must ask ourselves and decide – preferably before our cells are patented away.

ASSESSING THE TIKTOK BAN: IMPLICATIONS FOR ECONOMY, SECURITY, AND SOCIETY

BY JACK MCCREERY, FEBRUARY 2025
GOVERNMENT & LAW COMMITTEE

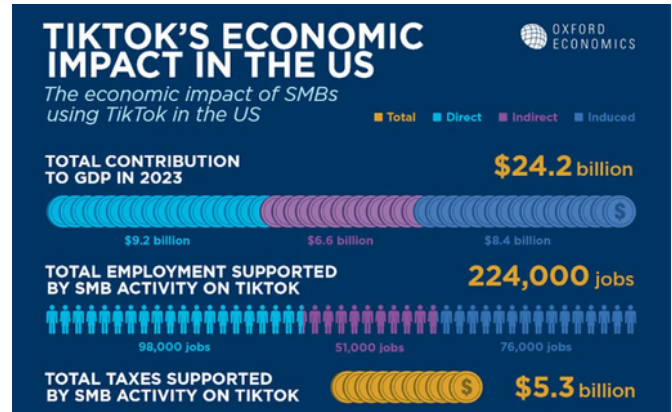
The potential ban of TikTok on U.S. devices has sparked input from many voices, each offering different ideas about what this action would mean for the United States. While many stakeholders believe that the ban would benefit the U.S. economy and foster domestic innovation, its impact is complex. On a broad scale, the ban could have a positive economic effect by ensuring that revenue stays with U.S. companies rather than flowing to China. Experts suggest that American firms would fill the void left by TikTok's exit, as platforms like Instagram and Snapchat have already developed their own short-form content features. However, this assessment overlooks the small-scale impacts. Many content creators who depend on TikTok for income could suddenly lose their primary revenue stream, indicating that the ban may harm individuals even if it benefits large corporations.

Furthermore, this debate underscores a larger conversation about the role of global tech companies in national affairs. As policymakers weigh economic benefits against potential social and security risks, the discussion reveals deep-seated concerns about digital sovereignty and control over critical data. Balancing innovation with national security remains a central challenge for lawmakers and industry leaders alike.

Data Security Concerns

TikTok is owned by the Chinese internet technology company ByteDance, which has raised concerns among the U.S. Congress and other Western governments. The primary worry is that, because ByteDance is headquartered in Beijing, the data collected by TikTok could be subject to Chinese government investigations. Legislation such as the 2017 National Intelligence Law and the 2014 Counter-Espionage Law requires Chinese corporations to turn over data when requested by authorities. This presents an ethical dilemma, as TikTok users may not consent to having their personal data accessed by Chinese officials. Although TikTok has introduced "Project Texas" to address these concerns—storing U.S. user data with a U.S.-based contractor, Oracle Corp.—a significant amount of data remains in Chinese centers.

In addition, the evolving nature of cybersecurity threats



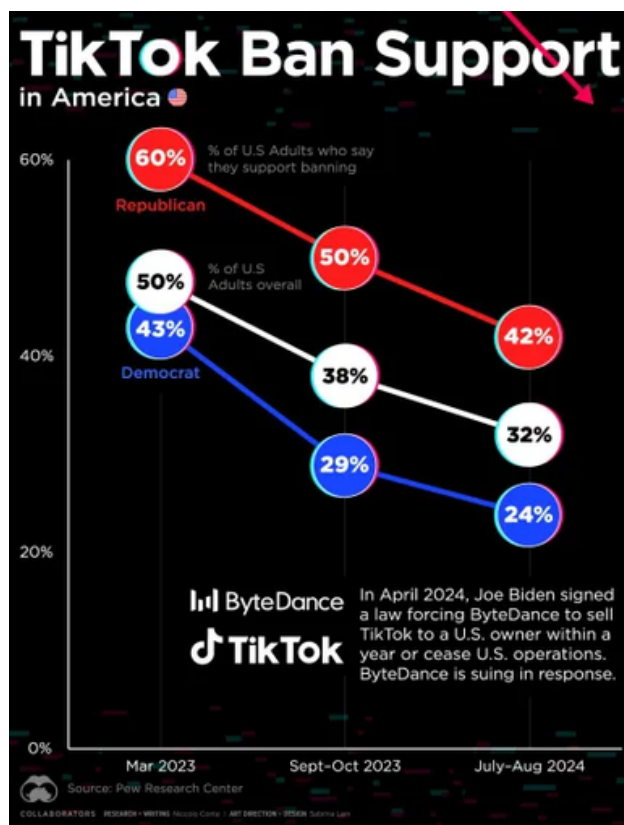
means that even with these measures, risks persist. Critics argue that the geopolitical tension between the U.S. and China makes any data-sharing arrangement inherently unstable. As technology continues to advance, policymakers must remain vigilant and continuously update regulations to ensure that user data is protected against emerging threats.

Influence on Public Opinion

Another concern is that the Chinese government may be using TikTok to influence U.S. public opinion. While definitive proof is lacking, many U.S. politicians, including Dan Crenshaw and Mike Gallagher, suspect that TikTok censors anti-China sentiment while promoting pro-China content. As China seeks to challenge the United States as the world's largest economy, enhancing its global image could boost foreign investment and trade. Consequently, Congress passed a bill in April 2025 stipulating that if TikTok is not sold by ByteDance, the platform will be banned in the United States.

Moreover, the potential for algorithmic manipulation extends beyond overt political messaging. The subtle reinforcement of certain narratives over others can have long-term implications for public discourse and democratic engagement. This raises questions about the balance between free expression and the prevention of covert influence, emphasizing the need for transparent algorithms and oversight in digital platforms.

Economic Implications



Although the full economic impact of a TikTok ban remains uncertain, many experts believe that removing TikTok from U.S. devices could be largely beneficial to the domestic economy. A panel hosted by the University of Chicago Booth Review found that 54% of economic experts expected a positive impact from the ban, with 25% remaining uncertain. Economists argue that banning TikTok—whose profits are currently sent to China—would boost demand for domestic alternatives such as Meta’s Reels and YouTube Shorts. Oxford professor Vili Lehdonvirta contends that Instagram Reels is well positioned to fill the gap left by TikTok. In the U.S., Instagram Reels is already growing at a rate of about 20% (with 13 million users) compared to TikTok’s 4% (4.8 million users). Without TikTok, this growth may accelerate further, encouraging Meta to invest more in short-form content and advancing American innovation.

At the same time, critics caution that the ban might create short-term disruptions in the digital advertising market and innovation ecosystem. Some analysts point to potential losses in revenue for startups and small tech companies that rely on TikTok’s platform for exposure. Thus, while macroeconomic benefits are promising, the transition period may require additional support for sectors that face immediate challenges due to the ban.

Productivity and Distractions

A less measurable benefit of a TikTok ban may be increased productivity among U.S. workers. According to TikTok’s public statistics, the average American user spends 53.8 minutes per day on the app—the highest among social networking platforms. Eliminating TikTok could remove one major distraction from the workplace, potentially increasing overall productivity. However, there is also the possibility that users may simply switch to similar services like Instagram Reels, which could negate any productivity gains.

Furthermore, the ban may prompt employers to reexamine their workplace policies regarding digital distractions more broadly. Companies might invest in technology solutions and employee training to foster a more focused work environment, potentially sparking a trend towards stricter digital use policies. This renewed focus on productivity could lead to long-term benefits in efficiency and employee performance.

Impact on Content Creators

Although a national TikTok ban may benefit the U.S. economy broadly, it fails to account for the thousands of creators who rely on the platform for their livelihood. Many creators would lose not only their primary platform but also a significant stream of income. While high-profile creators might easily transition to other platforms like YouTube or Reels, smaller creators could lose their established audiences and be forced to start over. For instance, while a viral TikTok star might migrate successfully, a hobbyist sharing cooking recipes could lose her following almost overnight.

In response, some industry observers suggest that the ban could accelerate the diversification of content platforms, pushing creators to build their brands across multiple channels. This transition might encourage a more resilient digital ecosystem where creators are less dependent on a single platform. However, the process of building a new following could be challenging and may widen the gap between already prominent influencers and emerging talent.

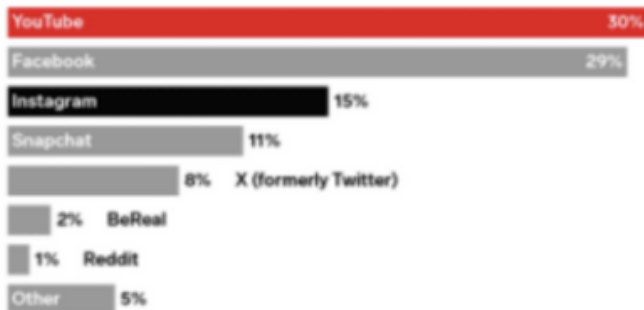
Monetization Differences

It is important to note the differences in how TikTok and Instagram Reels support content creators. TikTok’s creator fund compensates creators based on views and engagement (likes, comments, and saves), and creators can also earn money through brand partnerships and

Twice the Number of US Creators Prefer YouTube to Instagram as a TikTok Alternative

% of US TikTok content creators, March 2024

Q: Which of the following would you consider your primary alternative for sharing your content if TikTok were to be banned?



Note: n=688 ages 18+; excludes those who do not create content on TikTok; numbers may not add up to 100% due to rounding
Source: CivicScience as cited in company blog, April 1, 2024

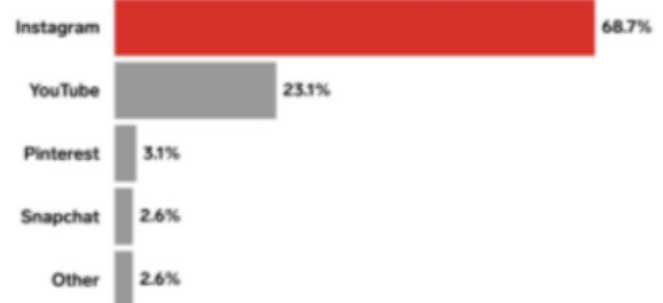
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US Creators Think Instagram Is Best for Growing an Audience if the TikTok Ban Takes Effect

% of US-based TikTok creators, May 2024

Q: Which platform do you see as your best alternative to TikTok for growing an audience?



Note: n=200 who have at least 10,000 followers; numbers may not add up to 100% due to rounding
Source: Fohr, Dec. 18, 2024

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commissions. Reels offers similar monetization opportunities, including compensation for views and interactions, brand partnerships, and commissions on sales made through embedded links. Additionally, Instagram provides opportunities for creators to participate in ad campaigns and display ads within posts and stories. However, differences in their algorithms result in distinct financial outcomes. Instagram Reels' algorithm favors viral content with high engagement rates, whereas TikTok's algorithm prioritizes personalized content that fosters rapid growth for emerging creators. This design has helped many new influencers gain prominence on TikTok, making it an attractive platform for those seeking quick financial gains.

Additionally, these monetization models could influence the competitive landscape of social media platforms. TikTok's creator fund and e-commerce platform has driven up to \$15 billion in revenue to small businesses, as detailed in the [TikTok Economic Impact Report 2024](#). As each platform fine-tunes its compensation strategies, there may be increased pressure on companies to innovate further in order to attract top talent. This competition could ultimately lead to more diverse and robust revenue streams for creators, though it might also result in significant shifts in market dynamics that require careful regulatory oversight.

National Security and Political Dynamics

The issue extends beyond individual creators. Many small businesses use TikTok for advertising, benefiting from the platform's massive user base and unique engagement. According to Inigo Rivero, Managing Director at House of

Marketers (a leading TikTok agency), TikTok is "too integrated into American society to be banned" and plays a significant role in small-business advertising. Nonetheless, national security concerns continue to provide a strong rationale for the ban. Should TikTok remain unsold by ByteDance, it will be removed from U.S. app stores on January 19, 2025—one day before President-elect Donald Trump is scheduled to take office. Although Trump, who previously supported efforts to ban TikTok during his presidency, has since become a vocal supporter of the platform (stating during his campaign, "For all of those who want to save TikTok in America, vote for Trump"), he may attempt to reverse the ban once in office. Ultimately, while some effects of the ban are foreseeable, many specifics remain uncertain and may only become clear after the ban is implemented.

This move also highlights the broader geopolitical contest between the U.S. and China, reflecting a trend toward digital protectionism amid rising global tensions. As governments grapple with the challenges posed by transnational technology firms, similar measures may become more common, further intertwining national security concerns with economic and political strategies on the international stage.

FEEL GOOD VS. REAL GOOD: HOW LOCALIZATION ACCOMPLISHES WHAT CORPORATIONS CAN'T

BY MARGARET PROBST, JANUARY 2025
GOVERNMENT & LAW COMMITTEE

MADISON, WI – The cash register flashes, “Round up to the nearest dollar for charity?” and you feel as though you’ve made a tangible effort in reducing world hunger, poverty, education inequality, or whatever charity they advertised. News flash, your spare change went to fund an NGO executive’s salary. NGOs are the epitome of performative aid – promising hope to communities while actually causing harm.

We exist in a “feel-good” society with a general desire to pursue change. As individuals in this enormous world, we look toward large Non-Governmental Organizations (NGOs), e.g., Goodwill, to take our generosity and turn it into results. However, NGOs exist with a halo effect; they are glorified by society, allowing them to be more performative. Regardless of actual outcomes, marketing teams over-promote their impact in the humanitarian aid industry. Marketing campaigns are why most people don’t understand the implications of the humanitarian aid crisis we are in. To solve this crisis, we need localization, the idea that resources should be allocated to local agencies that have the capability to create tailored solutions.

In theory, localization is an efficient and effective process for global developmental and humanitarian aid initiatives. In reality, capitalism fundamentally undermines localization efforts. Capitalism depends on economic disparities that fuel profit margins; it systematically resists global development in favor of economies of scale. This explains why Walmart succeeds while Mom-and-Pop shops fail (Cook-Lundgren). Despite well-intentioned global initiatives to improve the humanitarian aid process, capitalism’s profit-driven nature often perpetuates inequality and ultimately prevents localization from taking root in communities seeking growth.

World leaders are no strangers to the potential that localization holds. In Istanbul in 2016, The Grand Bargain



was launched “to improve the effectiveness and efficiency of humanitarian action” by reallocating funding from large-scale players to local agencies, supported by 51 commitments ranging from cash assistance to supporting local responders. This followed two other major initiatives: the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). Like many plans introduced by NGOs, MDGs and SDGs were too ambitious and optimistic to achieve tangible results (Cook-Lundgren). The Grand Bargain is more realistic and achievable and has actually produced visible results. It blends “incremental and individual” actions with “anticipatory” actions. They aren’t trying to solve poverty in one step; rather, they use a model built on meeting people where they are today. However, despite their more dynamic approach, their results are not at breakthrough levels.

Historically, we have seen well-intentioned programs aimed at combating global poverty and increasing equity; however, these efforts are often spearheaded by technical experts who lack deep understanding of the issues—resulting instead in exacerbated problems. A famous example is the United States’ donation of rice to Haiti following the Caribbean Basin Initiative, a program implemented by former President Ronald Reagan in 1984 offering food aid after Hurricane Allen (1980) and severe flooding during the mid-1980s (Mullin). US officials believed free rice was an inexpensive and efficient way to combat food insufficiency. Citizens were pleased with free food; farmers who largely depended on domestic rice sales were not as pleased. This exemplifies giving without intention. A better approach would have been investing in local rice farmers. Such giving helps immediately but also benefits future economic growth. The United States advertised this program as a great success; US citizens felt pride in their humanitarian aid despite its negative effects. This same scenario continues worldwide: white

technical experts enter communities with “on-paper” solutions that locals must integrate, even when these solutions often hinder communities instead (Bruce-Raeburn). Technical experts often target the poor rather than addressing forces creating their poverty (Kadir). Localization offers communities opportunities to target foundational problems instead. However, true problems in developing countries are fundamentally political, not technical (Kadir). Consequently, localization must occur alongside addressing systemic issues related to capitalism fueled by current economic disparities. Thus, it’s simple, dissolve capitalism so localization can follow? Right—simple? From an economic perspective, it’s not quite black-and-white. It’s easy to see advantages economic inequality offers large corporations: exploitation of inexpensive labor and strategic geographic placement allowing avoidance of trade and labor laws (CLASP). Corporations must focus on the triple bottom line and prioritize long-term welfare over immediate profit for localization efforts to succeed.

Once ready for integration, various questions arise, primarily centered around defining poverty itself, as without answering this question clearly, ending poverty remains impossible. No single metric perfectly describes poverty or provides a standardized method for comparison across countries. Furthermore, poverty’s inherent political conception is a westernized model rooted in neocolonialism and neoliberalism (Fischer). Returning briefly to Haiti’s example: was US involvement purely moral? Or did neoliberalism play a part in maintaining economic power? As previously stated, poverty is inherently political. Throughout reformation efforts to push towards localization, the defining poverty conversations will be of great importance. They will need to define two qualifying dimensions – how is poverty defined? At what point is a country sufficient in economic development to reduce foreign aid benefits? Without answering these questions clearly, ending poverty remains impossible.

Today people define poverty not based on economic standing but visually, supported by various vehicles perpetuating stereotypes. Poverty is not only classist but racialized and gendered as well. One MDG goal was “promoting gender equality and empowering women” (WHO). At first glance – a great idea, upon deeper reflection – who defines empowerment? Who measures success? While intentions are good, execution fails because it doesn’t address systemic issues within communities themselves. Utilizing localization allows communities understanding internal issues to create



tailored solutions leading toward greater goals – for example: female empowerment.

Furthermore, when Western countries enter foreign-aid contexts they crowd out local government and organizational efforts, undermining genuine local leadership potential and leaving behind dependency rather than sustainable growth (Northwestern).

As we push toward localization we’re faced with a dilemma: allow Western countries continued control or leave implementation solely up to developing nations? Western countries would perpetuate neoliberalism replicating current systemic failures; conversely, leaving implementation solely up to impoverished countries could deepen inequalities or internal corruption due to lack of resources or governance experience.

A balance, a board of nations perhaps, is ideal; however even such boards must first confront deep-rooted systemic issues for true localization success.

This transformation requires fundamental cultural shifts but through individual actions starting locally.

NGOs remain persistent in offering the “feel good” opportunities to round up at the grocery store or donate online. However, instead of participating in these corporate performances, we must redirect our efforts towards local agencies. Swap rounding up at the grocery store for donating supplies to a local school or investing in local development projects. On a global scale, these individual efforts will add up and lay a foundation for localization to flourish. The path to more equitable growth is not through Western initiatives in foreign aid but through empowering local agencies and dismantling systemic issues that have long hindered meaningful change.

THE GOOGLE ANTITRUST STORY – “JUST GOOGLE IT”

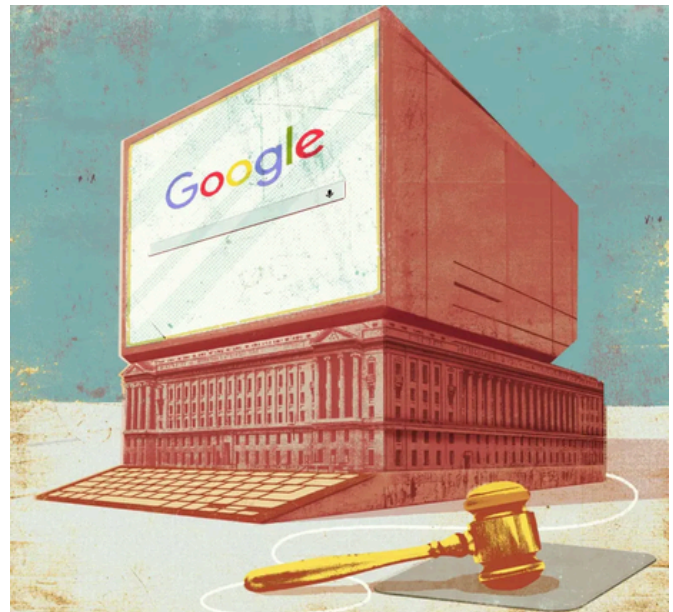
BY RITHIK RAVINDRAN, MARCH 2025
GOVERNMENT & LAW COMMITTEE

The Department of Justice’s antitrust case against Google’s advertising monopoly in the search business is a landmark case for the future of regulating large tech monopolies. Their case shows how antitrust frameworks in their current form have several limitations when they are applied to potentially address digital monopolies because they were created for regulating traditional industries. The case will also push forth critical questions about how to balance the increased market competition between the online search advertising market and the overall effect it will have on consumer welfare. Ultimately the case will be a powerful litmus test for the U.S. government to determine if its current legal framework is capable of regulating modern tech giants, potentially setting a precedent for future antitrust action.

The antitrust landscape faces a behemoth challenge as the Department of Justice attempts to take on Google Antitrust in a case over its monopolization in the digital advertising sphere. This case in many ways mirrors the historic antitrust battles of the past such as the splitting of AT&T and Standard Oil. While the AT&T breakup led to increased competition in the telecommunications industry and Standard Oil’s dissolution helped to tackle the concentration of economic power in the oil industry, what differentiates this case is the unique challenge posed by how interconnected all of Google’s varying services are. As we see the tech sector continue to consolidate with a couple of giants such as Meta, Apple, and Amazon having the pricing power to shape entire industries, the advertising dominance of Google rings alarm bells for policymakers for its significant influence over pricing power and consumer welfare.

The dominance we are seeing in the digital advertising sphere by Google raises tremendous concerns about reducing competition because of the vast overreliance by small businesses on Google’s advertising technologies and platforms. These issues are further aggravated by the government’s inability to effectively regulate digital companies as the legal framework the litigation is building their case on was developed in an era before the computer, and may not be able to deal with the intricacies of modern tech monopolies. The DOJ’s legal challenge marks a turning point in tech regulation, and the case’s result will reveal to the American public the growing

insufficiencies of existing legal tools in the face of digital integration or force Washington to face the modern monopoly.



Google’s Market Dominance

Google has a nearly unparalleled level of dominance in the digital advertising market, as its advertising services reach all sectors of the online economy. Google controlled approximately 26.8% percent of the global digital advertising market which creates about \$200 billion in ad revenue. Their closest competitors are Meta with 21.1% and Amazon with 12%, which shows how outsized their influence is in the online advertising sphere. Unlike traditional advertising companies which maintain separate entities that operate and manage ad spaces digitally, Google operates an integrated system that includes data analytics, effective ad placement, and distribution(via its social media and search applications). This cohesive closed-loop system allows Google to collect and analyze significant amounts of data from users to better optimize ad placements, and algorithmically manipulate prices in ways its competitors in the online ad sphere cannot replicate.

The implications of this level of dominance are stark. Small businesses constitute a significant portion of

Google Ads users and they often rely heavily on the platform for visibility and revenue generation. Google's overwhelming market share means these businesses have no particular choice but to use its services even though there are many concerns about the limited transparency in pricing and the increased dependency on Google's advertising infrastructure. These issues are indicative of the structural vulnerabilities in digital advertising and the broader tech sector where an entity can come in and dictate terms for the majority of the market. The question of whether Google's dominance of the online advertising market has reached the point where it is oppressing competitors is exactly what the DOJ's case is probing, and is the central tenet of the argument. Unfair practices such as algorithmic manipulation of prices and supply chain dominance in the online advertising sphere are why there is an urgency to address the current dynamics of the sector.

DOJ's Allegations Against Google

The Department of Justice is litigating against Google as they are alleging the company is utilizing its market dominance in the online advertising space to unfairly stifle its competitors for making up ground. The DOJ says they are capable of establishing a monopolistic control of the online advertising market because Google's advertising platforms such as AdSense and DoubleClick are uniquely integrated with many of its other services like YouTube and Google Search, allowing them to delineate their advertising platforms from individually owned service entities. By bundling all of these services together, Google allegedly creates barriers for smaller competitors to enter the market and compete effectively as they have to not only compete against Google's advertising technology but all of Google's products. The complaint from the DOJ focuses specifically on how Google forges exclusive agreements with publishers and advertisers when utilizing their platforms, serving as a key mechanism to prevent rivals to also allow them access to the same distribution channel. In the DOJ's eyes, this practice has completely distorted the digital advertising ecosystem to favor Google because they can unilaterally consolidate more power in the sector.

Another major focus of the DOJ's case is Google's alleged manipulation of auction systems, which determine how digital ads are bought and sold. Critics argue that Google uses its control through their algorithms over these auctions to prioritize its services which deeply disadvantages competing advertisers and publishers who use other platforms. The DOJ has been contending these

practices have a downstream effect on consumers which negatively affects consumers as they may face higher prices as businesses pass on the advertising costs to them. The DOJ is demonstrating to the public by outlining these allegations that Google's practices violate antitrust laws designed to promote fair competition as Google has no serious intent in promoting consumer welfare.

How Google's Integration of Services Creates a Monopoly

One of the main tenets of the DOJ's legal argument is that Google's integration of services across multiple platforms creates a self-reinforcing monopoly that cannot be beaten in the online advertising space. Google's unparalleled ecosystem which connects YouTube, Gmail, Google Maps, and the Android operating system allows it to take in troves of user data. This user data gives Google the unique capability to offer hyper-targeted advertising in all of their applications: a service competitors find nearly impossible to match. Furthermore, Google also has complete control over the supply chain for the digital advertising sphere. They dominate each stage of the process, from ad creation (Google Ads), then effective distribution through Google's Display Network, which gives users access to millions of websites and apps across all their platforms and services. By controlling and dominating every step of the development of online ads, Google has successfully implemented vertical integration in the digital ad sector to maintain commanding control of every aspect of the advertising process.



Such integration creates what economists call a "network effect," where Google's services become more valuable as more users and advertisers participate. As a result, advertisers are compelled to stay within Google's ecosystem, knowing that leaving would limit their reach and effectiveness. Publishers, too, face pressure to prioritize Google's ad tools to access its vast pool of advertisers. The DOJ argues that this dynamic entrenches Google's market position and discourages innovation by smaller competitors, who lack the resources to build comparable infrastructure.

How Google Differs from Traditional Monopolies

Google's monopolistic behavior is completely different from the traditional monopolies we have seen being split up like Standard Oil or AT&T. Unlike those historical giants where their domination came from controlling tangible resources or infrastructure, Google's dominance lies in its control over data and algorithms. Data because of its importance to the digital economy has often been referred to as the "new oil", and Google has a unique ability to utilize it for their advertising platforms as they can harvest and analyze tremendous amounts, giving them a competitive edge that many companies can effectively counteract. Furthermore, the interconnectedness of Google's services is so deep and distinctive, that often the innovations in one of their services end up reinforcing their dominance in another. A good example of this is whenever we see improvements to Google Search, they also enhance the company's ad-targeting capabilities and thus drive more reinvestment into its ecosystem and increase overall revenue.

The traditional legal frameworks for antitrust practices struggle to deal with the complexities of Google's monopolistic practices because they were intended to regulate monopolies that operated in more easily delineated markets that also had simpler supply chain structures. Google's integration blurs these boundaries which increases the difficulty to define where one market ends and another begins. This lack of clarity complicates the DOJ's task of proving harm under existing laws as they focus on consumer welfare metrics like price increases. Many services appear "free" to users in Google's case which masks the costs associated with reduced competition, such as lower-quality services and decreased innovation, without any other alternatives to select from. The fundamental difference we see here is truly indicative of the need for modernizing antitrust frameworks capable of addressing the nuances of digital monopolies.

Limitations of Existing Antitrust Frameworks

There are evident limitations in the existing antitrust foundations the DOJ's case rests upon against Google, as they face tremendous litigatory constraints in outdated enforcement mechanisms and legal standards. The Sherman Antitrust Act (1890) remains the nucleus of the DOJ's methods for antitrust enforcement, though its digital applicability has continued to evade the prosecutorial talents of the antitrust division. The Federal antitrust enforcement has historically made their arguments around priced-based consumer harm, however

this becomes particularly complicated with a digital behemoth such as Google. Many of its core services—Google Workspace, YouTube, Search—are offered free, making traditional price manipulation a difficult legal argument. The DOJ has instead focused on trying to prove harm in reduced ad revenue for publishers through inflated costs. This is legally reminiscent of their case against Microsoft in 1998, where they argued Internet Explorer bundled many products and dwindled effective competition in the tech market.

Even with the success of regulating Microsoft, legal tools beyond the Sherman Act have failed repeatedly to curb the expansion of Google's digital empire. The Clayton Act (1914), passed to govern merger review, did not prevent the acquisitions of DoubleClick (2007) or AdMob (2009), which were significant deals allowing the company to monopolize the advertising sphere. Google, through these mergers, was able to implement a vertically integrated ad stack, where they could control the supply (advertisers) and the demand (publishers) in digital advertising. The DOJ at the time did not recognize, nor anticipate the long-term consequences of these acquisitions, allowing for Google to establish an ad ecosystem with monopolistic control, making it nearly impossible for challengers to compete. Furthermore, regulatory enforcement has been slow and reactive to the rapid digital expansion of Google's commercial endeavors. As the trial begins, Google will probably be launching new ads in new markets, and bringing in their latest Gemini models for advanced AI-driven ad targeting.

Consumer Welfare and Market Consequences

Google's Dominance in digital advertising has a direct impact on the welfare of consumers through its monopolistic control of pricing and challenges to competition. One of the biggest issues with regulating Google is the small business dilemma: Google's ad tools are indispensable for 65% of small and medium-sized businesses (SMBs), but their cost-per-click (CPC) rates have risen by 18% year-over-year to \$2.69 in 2024. This paradox forces small businesses into a high-cost dependency on Google ads, due to their relatively high conversion rate (4-6% click-through rate on average). However, as CPCs rise, marketing budgets are strained, especially for limited capital small businesses.

The short-term impact on small and medium businesses (SMBs) could potentially be disruptive if Google's online advertising sector were to be forcefully spun off, as a fragmented ad ecosystem in the near term could initially

increase marketing costs from inefficiencies, and decreased effectiveness in ad targeting. In the long run, however, we could see that increased competition could lower prices and create more opportunities for businesses to leverage multiple platforms. For example, if Amazon Ads or an independent online advertising network gained traction through court-mandated data-sharing requirements, SMBs could utilize cross-platform arbitrage to shift ad spending to platforms that can offer better rates or a better advertising product for their service.

The DOJ's Proposed Solutions

The Department of Justice has proposed two key structural remedies: divesting Chrome from Google Search and restructuring the Android operating system. Both face significant hurdles towards enforcement. Theoretically, Chrome could be forced to operate independently and could allow competitors such as DuckDuckGo, Brave, and Perplexity to compete on a neutral platform, the underlying ad infrastructure would still exist for Google through its back-end data ecosystem and thus might maintain some level of dominance in the search industry. Similarly, unbundling the Google Play services with the Android operating system could potentially increase mobile competition, but at the same time could degrade overall user experience and welfare rather than improve it. The true effectiveness of the DOJ's regulatory solutions depends on whether they can address the underlying advantage in advertising for Google.



Google as The Litmus Test for Antitrust Modernization

Despite the vast limitations the DOJ faces, Google gives the Federal government the potential to set a *transformational precedent* for the regulation of digital monopolies, if it can be done through effective structural remedies. One of the big questions regulators face is whether forcing Google to break apart its ad business, through the forceful selling of AdX for example, would restore market competitiveness and if Google would

reformulate monopolistic dominance in alternative digital markets. Some critics argue that even if Google were forced to divest in the online advertising industry, its control of data and algorithmic advantages would allow it to become a titan in emerging industries such as e-commerce (Google Shopping) and cloud computing (Google Cloud), which have increasingly diversified the company's revenue stream from advertising.

Google's case highlights the legal fragmentation in antitrust enforcement internationally. In the E.U., Google under the Digital Markets Act (DMA) has to follow interoperability requirements which forces them to allow competitors fair access to their platforms. However in the U.S., there aren't any structural regulations equivalent, as the EU can implement broad, sweeping industry-wide rules, the US follows a case-by-case litigatory approach means even if the DOJ has success in its case against Google, it cannot translate those regulations over to other Tech giants such as Meta, Amazon, Microsoft, Apple, etc. Having such global regulatory discrepancies creates a gray area where internet companies can slightly modify their business operations to remain compliant within a myriad of jurisdictions without fundamentally changing their anticompetitive business practices, creating alarming concerns about regulatory arbitrage.

If the DOJ can succeed in securing strong remedies like a restructuring of Google's online advertising division through forced sales, it could create a unique precedent for more aggressive future regulatory actions taken by the DOJ's antitrust division. Platforms such as Meta and Amazon which have businesses built similarly to Google, could see renewed scrutiny, with an established legal playbook. If the case results in limited penalties such as a settlement without structural changes, it could embolden Google and other internet giants to pursue profligate digital imperialism. The outcome of the case will help us determine whether the current legal framework is sufficiently capable of regulating today's digital monopolies as they did with Standard Oil (1911), or if we will need significant legislative reforms to modernize the pillars of our antitrust foundations, the Sherman and Clayton Acts to keep competition alive in a digital world.

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EDUCATION UNDER ATTACK: THE FUTURE OF DEMOCRACY AND PUBLIC SCHOOLS

BY ESTELLA NELSON, MARCH 2025
GOVERNMENT & LAW COMMITTEE

“Doublethink means the power of holding two contradictory beliefs in one’s mind simultaneously, and accepting both of them.”

— George Orwell, 1984

George Orwell’s classic has long been a staple in the literary world, a cautionary tale of government control and the dangers of not being able to think critically and for oneself. Ironically, it also joins the reams of other books facing bans across the United States. Under the new Trump administration, the very foundations of American democracy are changing, and access to education is becoming more important than ever. Democracy is built on the foundation of a well-educated populace, citizens who can critically evaluate issues and candidates to make well-informed decisions for themselves and their country. As soon as that fails, the system dies with it.

Is it that surprising that education would be the first to go under Donald Trump?

From Trump’s first campaign to his current presidency, he has long stood on a platform of rampant misinformation and baseless claims. PolitiFact recently published their 1,000th fact-check of the president, outpacing every politician to hold office before him. Now, Trump’s latest plans include abolishing the Department of Education (DOE), among other efforts to change the public school system – a move taken straight from Project 2025. As of Mar. 3rd, his pick for DOE secretary, Linda McMahon, advanced past the Senate with a 51-45 vote along party

lines. McMahon has not made the policies planned for the department a secret. She has been quoted saying that she agrees with Trump’s plans to “put her out of the job”.

McMahon, billionaire co-founder of WWE, has long been a regular presence in Trump’s circle. They met at Wrestlemania in 2007, where he made an appearance on the show promoting The Apprentice. After his Republican nomination in 2016, she contributed close to 6 million in funding, later going on to lead the Small Business Administration that term. During his second campaign, McMahon chaired the America First Action, a conservative super-PAC that heavily endorsed Trump. Even before her DOE nomination, she served on his transition team this election cycle.

It’s safe to say that McMahon would be a loyal player to add to the board.

The DOE sub-cabinet nominations aren’t much different, naming six more conservative voices to serve beneath McMahon. Headlining the pack is Kimberly Richey, the proposed Assistant Secretary for Civil Rights, who has long been outspoken against critical race theory and action civics within schools. Between the seven, several policies have reemerged as headliners for their departmental plans.

The largest of these is shutting down the DOE entirely. Despite this repeated claim, it’s an unlikely outcome. To fully shut down a department requires a vote from



Congress, where Republicans only hold a slim majority (53-47 in the Senate, 220-215 in the House). And it's not an issue that is cleanly cut down party lines. Several GOP lawmakers have expressed reservations about closing the department entirely, leaving a risky vote. Furthermore, the proposal is a likely candidate for a Democratic filibuster, should it be brought to Congress. It would presumably require a supermajority vote – defined by a total of two-thirds – which Republicans don't have the presence for. The more natural outcome is Trump downsizing the department, putting pressure on states to conform to new policies.

Federal government funding only constitutes about 10% of K-12 school budgets, but it plays a vital role for programs such as Title 1, HeadStart, and Special Education. Title 1 is especially important in providing financial backing to school districts beneath the poverty line, bridging the educational gap. In the collegiate space, DOE is the largest holder of student loan debt. They also provide Pell Grants, money for college that students never have to repay. In the midst of everything, the program is already facing a 2.7 billion dollar deficit heading into the next fiscal year. In order to address this deficit, Congress would need to approve additional funds for 2026. While Pell Grants have historically been a bipartisan agreement, that is likely to change under the Trump era. He has been clear on his policies for cutting government spending, especially around education. While this is still a decision that would be decided in Congress, Republicans have continued to show that they will side with his orders. This would push more responsibility to provide aid on to colleges already facing extreme federal budget cuts.

For the most part, states are in charge of schools. The 10th amendment grants them power, as it's not explicitly given to the federal government. However, the administration can still have a profound effect on shaping school policies through the usage of these funds. By making the funds discretionary, they can force schools to comply with the policies they want implemented, at the risk of losing the money. Trump has already started this process with two executive orders, one ending funding for schools with covid-19 mandates, and the other stripping budgets from schools that teach critical race theory, allow organizations that promote a specific gender or race, or allow transgender students to “socially transition” (go by a different name or pronouns than those assigned at birth) or compete in sports. It also underscores the importance of extolling American greatness and how it's “grown closer to its noble principles throughout its history”, while simultaneously banning anything that says the US is “fundamentally racist, sexist, or otherwise discriminatory.”

But to ignore history dooms us to repeat it. The truth is, the United States has been discriminatory, from slavery to internment camps, to a lack of women's voting rights and segregation. We still grapple with these issues today. Blind nationalism isn't the answer. Education is.

This leads us to the last of Trump's policies: the expansion of school choice. An executive order issued on Jan. 29 calls for using federal funds to support these initiatives, which previously have been at the discretion of the state. This has headlined the Republican party for the last few years, appearing prominently in the Project 2025 plan, a conservative policy action plan intended for the next president. It also appears to be a commonly restated proposal amongst his slew of DOE nominations. Wisconsin is uniquely situated to examine these programs, as it pioneered the country's first voucher system back in 1991.

At its inception, school choice was designed to aid parents who were dissatisfied with their public schools, but lacked the means to move to another school district or send their children to a private school. Families who were beneath 175% of the federal poverty line (about \$54,000 yearly) could apply for the program, provided that they had not attended a private school the year before. Essentially, the state grants the student a voucher to cover the cost of the new selected school. In 2023/24, this was around \$10,000 for K-8, and 13,000 for 9-12. The Milwaukee Parental Choice Program (MPCP) was the first of now four Wisconsin school choice initiatives. The requirements have also since changed, allowing families to apply whose income is up to 300%, or almost \$94,000 a year, above the poverty line. One other significant change was made. In 1995, religious schools became eligible to accept voucher students.

As of 2023-24, 96% of Wisconsin students participating in the program used the vouchers to attend a religious school. That's a significant amount of state funds going directly to faith affiliations, especially when considering that nearly 55,000 students participated last year. It skirts around violations between church and state by stating that they are funding the parents, who then choose to use that money to send their children to religious schools.

However, despite these schools' usage of public funds, they are not required to abide by the same guidelines as public schools. The government cannot do anything that would ‘deprive parents of fair opportunity to procure instruction for their children’ (*Farrington v. T. Tokushige*) on the basis of the due process clause. This case was later applied in Ohio to determine that too much legislation around private schools essentially makes them public

schools, and therefore unconstitutional. The government is similarly limited in its oversight around religious private schools, given the free exercise clause in the First Amendment. Therefore, they are allowed to discriminate on the basis of sex, sexual orientation, and disability, unlike their public counterparts. At Fox Valley Lutheran, a private school in Appleton, WI, two female students faced expulsion for being in a homosexual relationship. The pair would only be allowed to graduate if they agreed to break up and speak with a pastor. Tony Evers, the WI state governor, was contacted, but due to the school's status, the government is not allowed to intervene. Furthermore, these same private schools are exempt from the same heavy reporting practices other schools must comply with, making it difficult for authorities and parents alike to ensure that educational practices are up to standard.

Furthermore, these voucher funds are directly taken from public school endowments. A larger school choice program constitutes pulling more money back, leaving school budgets that are already tight worse off. For students who don't want to attend a private school, they are suddenly left in the uncomfortable situation of being trapped in a worsening school system. It's not always a choice either. For many students, particularly those in rural areas, there are simply no other options. Even if they received the voucher, there is no private institution to transfer to. Moreover, vouchers only cover the initial cost of tuition. It doesn't cover expenses such as transportation, uniforms, books or anything else that may make these schools inaccessible for disadvantaged families.

These issues come into sharper focus when observed through the political lens of the upcoming state superintendent elections. On April 1st, two candidates, incumbent Jill Underly and challenger Brittany Kinser, will face off, with many of these issues on the table. Kinser, a former independent education consultant, is pushing for a stronger presence of charter and voucher schools in Wisconsin, all at the expense of the public school system.

What Trump is proposing goes beyond this. He's advocating for a universal school choice program, where limitations like income and percentage of participating students are eliminated. This would gut public schools. Affluent families would be able to collect vouchers, collecting money they don't need, while their rural counterparts remain trapped in increasingly underfunded schools. Education is what allows us to move up in the world, and equal access is crucial to that. It's pure Orwellian doublethink: claim that universal school choice is about making sure everyone gets a fair chance at a good

education while pulling funds from the places that need it the most.

In an era of decreasing test scores and nationwide book bans, schooling should indeed be a focus of importance. Instead, it's under increasing attack from the new administration. Thomas Jefferson once wrote, "An educated citizenry is a vital requisite for our survival as a free people."

However, Trump has repeatedly shown that he cares little about that. Already, more than 600 million dollars of grants for teacher training across the country have been cut. More are sure to follow. From a campaign rife with misinformation and felony accusations, to his attempts to eliminate the Department of Education, he has consistently demonstrated disregard for American democratic ideals in favor of shifting more power to himself and his billionaire cabinet. Trump's latest attempts at stifling a free press only further expose his motives. He does not want an educated populace. He doesn't want people who question him. No, what Trump wants is people who fall into line in his quest for power. And they are winning senate confirmations one by one by one.

One last 1984 quote to leave you with. "*Who controls the past controls the future. Who controls the present controls the past.*" Be careful who you give that control to.



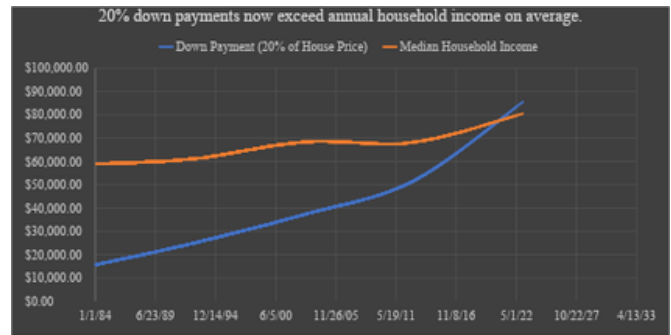
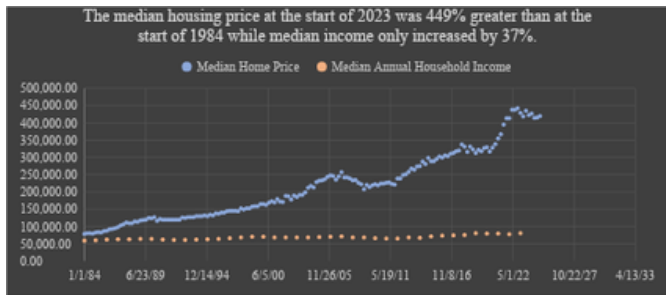
OUTPRICED: THE ECONOMIC SQUEEZE ON THE AMERICAN HOMEBUYER

BY MARGARET PROBST, APRIL 2025
GOVERNMENT & LAW COMMITTEE

MADISON, WI – Once upon a time, there was a world where a mortgage down payment was only a quarter of a household’s net income. This isn’t in a land far, far away – this was the nature of the US housing market just 40 years ago. So, kids – when your parents ask why you haven’t bought a house yet, you can tell them a 20% down payment is now 106% of net income. Not quite the same.

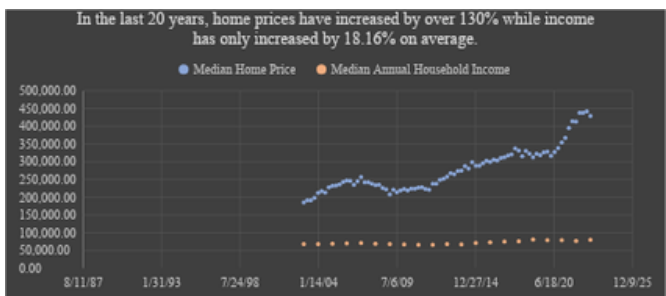
In the 1980s, the first-time homebuyer was in their late 20s. Today, the average age of first-time homebuyers is setting record-highs at 38 years old (Sola). The reason – income relative to home prices. The housing market is a highly complex market where supply and demand inefficiencies are exacerbated by inflationary pressures. It has led us to a market where a 20% down payment can exceed annual income and leave you with a debt-to-income ratio (DTI) near 40%, well above a rate a bank would approve. How did we get to this situation and what does this mean for home buyers?

Focusing on the last twenty years, it’s clear there is a substantial gap in annual home price growth and annual income. Adjusted for inflation, there is a mere 18.11% increase in income, as displayed in this graph, compared to a 101.69% increase in median home sale price. It’s hard to imagine there not being a gap here – but going back to the 80s, there was a marginal difference here – a roughly \$10k difference between the two. Today, home prices have become extreme – forget affording the house, it’s the down payment people can’t even muster.



A 449% increase since 1984 in the median home price says it all – the housing market has absolutely boomed. Other factors such as net migration and birth rates undoubtedly have played a role in controlling the everlasting supply and demand battle. However, government intervention is the man behind the puppet – macro policy has completely altered the housing market.

When debt-to-income (DTI) is a major consideration in mortgage approvals and general financing forecasting, it cannot be such that a down payment exceeds annual income. Generally speaking, this won’t forecast out – we are in a massive debt bubble waiting to burst which will disrupt the economy and alter these ratios. For context, the debt-to-GDP ratio is 1.26 (Trading Economics) in 2008, it was only 0.405 (Srinivasan). However, the housing market and home buyers don’t simply wait for the markets to be ideal buying markets – competitive markets continue to thrive, fueled by the supply and demand imbalance.



Analyzing Changes on Percentage Down

Median HH Income	Median Home Price	% Down	Down Payment	Rate	Monthly Payment	DTI
\$80,610.00	\$429,000.00	20.0%	\$85,800.00	6.82%	\$3,004.98	44.73%
\$80,610.00	\$429,000.00	15.0%	\$64,350.00	6.82%	\$3,145.11	46.82%
\$80,610.00	\$429,000.00	10.0%	\$42,900.00	6.82%	\$3,285.23	48.91%
\$80,610.00	\$429,000.00	5.0%	\$21,450.00	6.82%	\$3,425.35	50.99%

To complete the DTI argument – a bank will only allow a mortgage payment that is equivalent to 28-36% of your monthly income in the highest levered scenario. A 20% down-payment lands you far outside the interval (0%, 36%] of allowable DTI. However, more realistically, people

don't have the fluid capital to put down 20% – the typical down payment is between 10 and 15%, falling lower to 8% for first-time homebuyers (Araj).

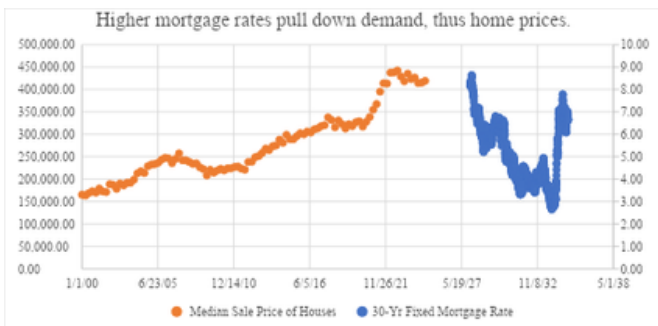
In the 10% down payment scenario, a household is spending almost 50% of its gross monthly income on a mortgage. When you consider money allocated to investment plans, taxes, and consumption goods, this scenario is seemingly impossible.

Changing income, or rather lack thereof, is the glaring shortcoming in the situation. What if income had increased at the same rate of home prices? The following table models different income scenarios, with the final row reflecting an increase in real household income at the same growth as home prices.

Analyzing Changes in Income with a Multiplier

Multiplier	Income	Median HH Income	Median Home Price	10% Down Payment	Mortgage Rate	Monthly Payment	DTI
1.00	\$80,610.00	\$80,610.00	\$429,000.00	\$42,900.00	6.82%	\$3,285.23	48.91%
1.25	\$100,762.50	\$100,762.50	\$429,000.00	\$42,900.00	6.82%	\$3,285.23	39.12%
1.50	\$120,915.00	\$120,915.00	\$429,000.00	\$42,900.00	6.82%	\$3,285.23	32.60%
1.75	\$176,334.38	\$176,334.38	\$429,000.00	\$42,900.00	6.82%	\$3,285.23	22.36%
2.00	\$241,830.00	\$241,830.00	\$429,000.00	\$42,900.00	6.82%	\$3,285.23	16.30%
4.49	\$791,741.34	\$791,741.34	\$429,000.00	\$42,900.00	6.82%	\$3,285.23	4.98%

It is impractical to suggest median household incomes should have grown at the same rate as median house sale prices, however, the model shows just how much we have fallen behind the 8-ball in this category. So people didn't have the income yet to buy these homes – how? Abnormally low interest rates.



It doesn't take an economist to understand – low mortgage rates allow more people to buy, and with deeper pockets than they have. As rates came down from its peak in the late 1990s – 18.63% in 1981 – more people were deemed “fit to borrow” by banks despite speculative situations. This would come to be known as the subprime mortgage crisis.

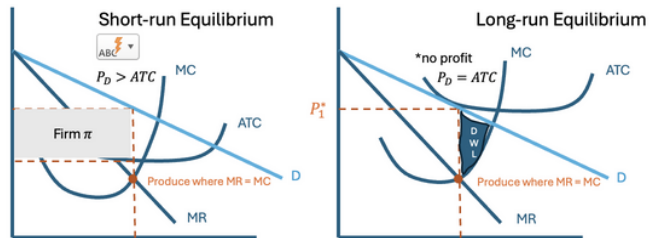
The world recovered, eventually, from the financial crisis of 2008, fueled by a broken housing market, however, rates never returned to what they were. They shot down

again in 2020 during the COVID-19 pandemic in an attempt to avoid a recession. Home prices saw another significant uptick and have remained high. I'm not suggesting a return to near 20% mortgage rates, however, having rates too low for too long contributed to the housing boom. But what booms, must bust.

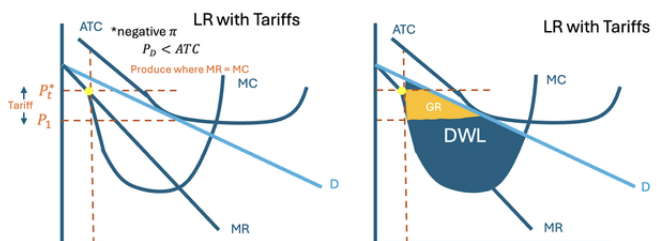
Today, the housing market is roaring, only plateauing the last few years at this high and not coming down. What's going to pop this? Tariffs.

Econ 101 – Tariffs increase prices

As the new administration took over in January, policies have been a rollercoaster of events leading to a volatile economy, to say the least. Inefficient policies, masked by empty promises, have created a divided society, some of whom are foolishly optimistic. Yes, let's make everyone else pay for our tariffs! News flash – that's not how the basic supply and demand curve works. A key factor in the effects of tariffs is the elasticity of curves, specifically the supply curve. A more inelastic supply curve, such that the slope is steeper (for their micro firm graph), will result in a larger change in prices due to a variety of factors.



While there is no line to depict the market supply in monopolistic competition, as there is no one-to-one correspondence, firms still supply with constraints. They supply where marginal cost equals average total cost, and hope that this also intersects with marginal revenue since that is profit maximization. It is not my intention to lecture on macroeconomics theory, however, you can instead visualize through the following graphs:



In long-run equilibrium, average total costs (ATC) exceed the price demanded. Firms are at a negative profit. To

reduce their costs, i.e. not absorb the tariff effect, they push the tariff to the consumer. Prices for consumers increase, and firms unable to compete with increased firm costs exit, leaving fewer firms standing. So, tell me how these tariffs are going to help small American firms?

Deadweight loss is explained by lower economic efficiency and societal surplus. You see, only a fraction of that loss is passed to the government for revenue – the majority of the increase in DWL is simply lost opportunity. It's intuitive – trade is efficient; when you forego trade, you lose efficiency.

The effects of ATC are ambiguous – can firms gain a great enough share of the to disperse their increased costs (tariffs) across units? With demand decreasing, at what point do firms have to absorb some tariff effects just to stay in business? Tariffs are bad for both consumers *and* producers. Firms are already seeing changes to lumber prices, with prices up 17.5% year-over-year (NAHB). While not all of this is attributed to the new tariffs, we see just how sensitive this industry is. So - what does that mean for consumers? Are their costs also up 17.5%?

How the Canada v. US battle will pan out

It's a flashback to 2018 – another Trump tariff, that time on washing machines – where consumers absorbed 125 to 225 percent of the tariffs via increased prices. While the tariff was *only* on washing machines, these units increased an average \$86/unit, while their counterpart, dryers, increased by \$96/unit (Yourish). It's counterintuitive that a complementary good/s price increases by greater monetary units, but this reflects the reality of the spillover effect in economics.

Now translating to houses, what else will increase? There is no singular complement to lumber in housing construction. Instead, construction companies will disperse the tariff across entire construction bills. Given 82.3% of all lumber used to come from Canada, you can imagine the substantial resulting construction costs for consumers (Shmidt et al). It declined once in 2017, the first time Trump was in office, yet whether this actually increased US lumber productions and jobs is ambiguous.

Moreover, trade occurs to *promote* specialization. It's the basic concept of comparative advantage – the ability to produce at a lower opportunity cost than another. If more extreme tariffs are implemented, firms will look to recoup some of their losses by placing the cost on consumers.

Logistically, how is shipping and transit affected when new lumber hubs are introduced? When you consider capacity

constraints and the specialized facilities needed for lumber production – how long until the US can absorb the demand switch? Effects will not be limited to the domestic markets but will shake up the global economy.

Canada relies heavily on US imports to purchase their lumber production – 84% of Canadian lumber exports are purchased by the US (Government of Canada). So where does all this lumber go instead? Sure, real estate could theoretically go boom in other parts of the world, but as we've seen – markets are not that simple. Factor in logistics, complementary goods, capacity constraints, etc. for this suggestive alternative demand – does it still work? No – it's why Canada pushed back earlier this year and would again.

Housing accounts for 16.2% of US consumption, one of the driving components of GDP (Weinstock). When this sector blows up due to the lumber tariffs, a US recession is bound to spiral. Consumers cannot absorb even greater housing costs, as we've seen the housing market is already in a debt-bubble, tariffs or not.

There is not a definitive magnitude by which home prices will increase, however, it is guaranteed that new home prices and home renovations will increase due to rising input costs, while existing home prices will increase based on relative pricing and supply and demand principles.

What are the firms saying?

Bliffert Lumber, a lumberyard based in Southeastern Wisconsin, remains hopeful. Despite the inevitable rising prices, the firm believes that they can get through an “administration that likes to use tariffs for economic policy” which was loosely compared to the resilience they faced when Bliffert went through WWI, The Great Depression, and WWII (Bruner).

Confidence is what consumers need – sentiment can defy economic health. In today's panic, we are seeing people begin to stockpile resources. Stockpiling is counterproductive – one agent locks in a low price while prices skyrocket for others following this excess demand and supply deficit that cannot keep up with stockpiling.

Firms are desperate to avoid these tariffs – some are stockpiling 33% over their normal inventory, going as far as renting out additional yard space to make room (Picciotto). However, this very short-term solution, and one that will only escalate the problem, and cannot combat the longer-term effects of these tariffs.

New-home buyers are forced to turn to new builds in the midst of a historically unfortunate time for the existing home market – record-setting high prices with low inventories (Picciotto). Yet, as we’ve seen, this isn’t a viable solution as lumber tariffs will increase these new-home prices, too. Further, leasing agents will have leverage to raise rents, leaving housing less affordable than it is today, if you can imagine that.



The intensified grudge between Canada and the US couldn’t come at a worse time

The housing market is very seasonal. It’s hot in spring – the most catastrophic target for tariffs, duties, and taxes. Had these tariffs come in winter, the magnitude of these tariffs would be less significant to the net change in real estate, slowly creeping up until spring and allowing consumers to adjust more easily.

Big (Debt) Bubble, Bound to Burst

Despite the Senate overturning Canadian tariffs and a general 90-day delay in tariffs, tensions remain high with the world on edge. As we’ve seen, this risk is not limited to the US economy but will directly affect the global markets.

With consumers and firms unable to function out of equilibrium long-term, a recession looms around the corner. It’s a bubble that’s been waiting to burst – one that has been expanding for almost twenty years – and one that the current administration is far too eager to poke with a needle.

Notes on Data Preparation

All data on mortgage rates, median household income, and median home sale price were obtained from the *Federal Reserve Economic Data* database (FRED). The data was sorted and filtered to transform the data into analyzable figures. No manipulation was done to the data, and subsets of data are noted per context, i.e. “focusing on the last 20 years.”

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TRUMP AND MUSK'S FEDERAL WORKFORCE OVERHAUL: EFFICIENCY REFORM OR OVERREACH?

BY JACK MCCREERY, APRIL 2025
GOVERNMENT & LAW COMMITTEE

Introduction: Trump's Vision for a Leaner Government

In recent years, the U.S. federal government has increasingly come under fire for inefficiency and wasted money. According to the Pew Research Center, 56% of Americans consider the U.S. federal government to be "almost always wasteful and inefficient". As such, when presidential candidate Donald Trump announced his intention to streamline the federal government, he was met with praise and support. Now that Trump has taken office and begun this process, what was formerly support has quickly turned into panic and fear, especially among federal employees.

Currently, the exact number of federal employees laid off and the Trump administration's goal for employee cuts is extremely unclear. Estimates range all the way up to 30% of the three millions civilian federal employees. These massive reductions in force have proven highly controversial, leaving many wondering if these cuts are within the constitutional powers of the executive branch.

Bringing further controversy is the involvement of the Musk-led DOGE, and how exactly the organization is impacting employee termination. Trump and Musk's efforts are no less than drastic, and have caused a substantial stir within Washington. While many argue that Trump and Musk are far out of line in their quest to improve government efficiency, some protest this and believe such measures are necessary for the health of the nation.



A History of Cuts: From Hiring Freezes to Deep Layoffs

Trump's hiring slowdown and job slashing is not entirely unique to his second term. Upon his initial inauguration in 2017, Trump worked to decrease the size of the federal government. This included a three month federal hiring freeze at the start of 2018. However, the federal government still grew by an average of 0.9% over Trump's first term, considerably more than the 0.3% growth rate experienced during Obama's second term.

While this raises questions over why Trump now believes the federal personnel cuts are necessary, the Trump administration largely points to the nearly 5% overall growth of the federal government under the Biden administration. This represents the largest growth in the federal workforce in one term since the 1980s. Trump has stated that many of the additional workers are simply not necessary. He also has stated that he's seeking to "reclaim power from this unaccountable bureaucracy" via federal staff cuts and governmental optimization.

Musk and the Mission of DOGE

While Trump seems to have clear-cut goals regarding the federal government's employees, Musk's goals are much murkier. The creation of the Department of Government Efficiency (DOGE), was primarily of Trump's doing. However, Trump has left control of the department to Elon Musk. When initially asked about the importance of DOGE, Musk stated that he would "dismantle government bureaucracy, slash excess regulations, cut wasteful expenditures, and restructure federal agencies". As such, it would appear Musk is aligned with Trump in aiming to maximize government efficiency, while limiting wasteful procedures.

Conflicts of Interest and Ethical Fallout

However, Musk heading DOGE presents several ethical and governmental concerns. Many point out how Trump seems to be surrounding himself with those loyal to him. With Musk loyal at his side, Trump would have the power to fire those misaligned with his ideals, which many

believe is far too strong a power for the president. Moreover, Musk has a significant stake in the actions of the government.

One example would be SpaceX, Musk's rocket firm, has more than \$8 billion in ongoing contracts with the U.S. government. Thus, Musk possesses the well-known goal of colonizing Mars, which he has publicly stated is only possible "so long as it is not smothered by bureaucracy". The rocket firm was also recently fined \$633,000 for alleged license infringements by the Federal Aviation Administration (FAA).

Furthermore, Musk's electric car company Tesla is facing several investigations from government agencies over safety concerns, particularly with the company's self-driving features. The presence of these conflicts are difficult to ignore as Musk holds the ability to fire the very federal employees investigating his companies. Such conflicts pose major ethical concerns over Musk's heading of DOGE, and any bias he may hold.

The Legality and Oversight of DOGE

These ethical concerns extend beyond just Musk's reach. DOGE itself is the primary target for many ethical questions surrounding the recent firing of federal workers. As it stands, DOGE is not an official government department, as it was established by one of Trump's executive orders, rather than an act of congress.

Additionally, DOGE claims to exist as an advisory body that aims to improve government efficiency, primarily through IT upgrades. However, these IT upgrades seem to have been pushed back in favor of Trump's goal of shrinking the federal government. Opponents of DOGE accuse it of vastly overstepping its authority, with courts already blocking DOGE's actions on the basis of acting outside its parameters. Many also believe that a non-official government department should have no control over the hiring and firing of federal workers. However, the department is widely supported by the American public. A poll done by CBS News concluded that most Americans, especially republicans, supported the actions of DOGE, even if they disagreed with how much influence Musk should have.

Who's Being Let Go? Defining "Non-Essential"

Regardless of the reasoning, ethical concerns, and opposition, Trump and Musk continue their efforts to shrink the federal workforce. Generally, Trump has sought

out "non-essential" employees, the exact meaning of "non-essential" varying wildly depending on department. The Department of Justice reports that 84% of its employees are essential, whereas the Department of Commerce reports that only 16% of its employees are. Estimates for Trump's overall federal reduction goal range from 200,000 less federal employees (6.7% of the total 3 million) to 900,000 (30% of the total). These inconsistencies raise questions over the exact criteria of the employees that the Trump Administration seeks for the basis of employee termination.

Currently, federal firing has primarily targeted probationary employees. Probationary employees are employees that are on a trial period, typically being new hires or employees recently moved to a new position. Due to the trial period often lasting approximately one year, these employees are being targeted because they have fewer civil protections than permanent employees. This means they can be fired with less process and under less scrutiny.

Structural Changes: Executive Orders and Legal Roadblocks

Moreover, in late January, Trump offered a so-called "buyout deal", in which employees who voluntarily resigned before February 6th would continue to receive pay until September 30th. The Trump administration was targeting a 5-10% resignation rate, with less than 3% of eligible employees taking the offer which is approximately 75,000 people. Those that took the buyout tended to be more experienced personnel, who would face fewer challenges in finding a new position. Furthermore, this would also mean that many of those that resigned were among the most valuable government employees.

The Trump Administration has put several policies in place to curtail federal hiring. On February 11th, Trump signed an executive order that only allowed one new federal hire for every four employees that were fired or left for the foreseeable future, creating a battle of attrition within the federal government. The order also stipulates that any potential new hires had to additionally be approved by a member of DOGE team leadership. With these policies in place, the government would naturally shrink in the long term, regardless of the success of the federal firing process.

However, success has begun to prove far more difficult than had been initially expected. In early March, two federal judges ordered the immediate reinstatement of 25,000 previously fired employees. Trump then filed a

motion to overturn said reinstatement, which was denied. This is not the first instance of a federal court ordering reinstatement of federal workers. Civil servants enjoy a wide variety of protections, which provide the basis for the reinstatement order. A majority of civil servants can only be fired with the reasoning of poor performance or misconduct, neither of which applied to the firings on part of Trump or DOGE.

These protections include probationary employees, though they are less stringent. However, reinstating the previously fired employees is proving to be a challenge, with the majority of the reinstated employees being placed on paid leave until further notice. Many employees that are being reinstated are unsure of when they would return to work. These reinstatement orders do nothing to replace the employees that resigned as part of the buyout deal.

Public Services at Risk and The Public Divide

Since the implications of the reduction in the federal workforce could be disastrous, the federal government has influence over many crucial U.S. services. These include water, food safety, environmental disaster response, disease control, weather reporting, and flight services. In particular, many argue that the reason for the more disastrous wildfire season in California in 2025 was largely due to the decrease in the ranks of wildland firefighters, an order which Trump signed. A loss of important personnel in many government departments could lead to a dramatic decrease in safety and quality of life across the U.S.

Despite this, 30% of the American public was in favor of large scale federal workforce reductions, according to a poll conducted by Associated Press-NORC Center for Public Affairs Research, with 40% opposing the reductions. Among those in support, the primary belief is that the U.S. government is wasteful, a view not disagreed upon by the opposition. However, opponents of the personnel cuts fear the damage these cuts could do to the economy and important government programs.

Conclusion: A Workforce in Limbo

Among federal workers, once a largely stable occupation has descended into chaos, with many workers concerned they could be terminated any day. While the majority of Americans believe the U.S. government to be largely wasteful and ineffective, they tend to stand by the workers within the government, whereas Trump and Musk seek to improve government efficiency in methods they see fit.

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FEEDING AMERICA OR FIGHTING IT? TRUMP'S AGRICULTURAL GAMBLE

BY RAJA CHINNAKOTLA, APRIL 2025
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Introduction

During the 2024 presidential election cycle, one issue Donald Trump consistently brought up through the campaign was the expensive price of staple American foods, like eggs, bread, and milk. He placed blame on the Biden Administration's failed attempts to reduce food costs, such as through the Inflation Reduction Act and other massive subsidies during Biden's tenure. This, along with other promises of less regulation and fairer trade, were some of the many reasons why Trump overperformed among farmers and rural voters. As Trump enters his second term, he is faced with challenges that are hampering the American agriculture sector, including COVID supply disruptions and crop losses from climate change. Trump is set on disrupting the status quo. We want to examine how Trump's policies affect farmers and consumers, and if Trump will accomplish the goals he promised

DOGE USDA

The Trump policy that will have the largest impact on American agriculture is his work with the Department of Government Efficiency (DOGE). Headed by Elon Musk, DOGE is tasked with eliminating "unnecessary spending within the government". While Musk and his team have hit all parts of the Federal government, I want to specifically look at the impacts that he is having on agriculture. One agency that has significant authority over food production in America is the US Department of Agriculture (USDA). In the fiscal year 2024, the USDA requested over 213 billion dollars from Congress for their operations. Of this budget from 2024, the USDA spent 71% of their budget food assistance programs (SNAP, EBT), 13% on farming and commodity programs (subsidies and grants), 5% on forestry programs and 12% on other programs like research and payroll. However, with the new administration, there have been overhauls on what and how much spending the agency does. One area DOGE is determined to cut is programs related to Diversity, Equity, and Inclusion. As of March, the USDA has cancelled over 100 contracts related to DEI, but they are facing some pushback. A policy that was reversed after public scrutiny was the 1890s Scholarship Program, a scholarship for students pursuing agricultural studies at HBCUs. Another area where the DOGE is cutting USDA budget is with their

efforts to climate proof agriculture. During the Biden administration, the Inflation Reduction Act allocated 19.5 billion dollars to "climate-smart" projects, like cleaning the water supply, installing solar panels, and transitioning to clean energy irrigation systems. However, with an executive order and approval from DOGE, Trump blocked more spending for those programs. In the future, it appears that there will be less spending as a whole in the agency, specifically in progressive programs established by previous administrations. DOGE has identified 132 million dollars of excess spending that can be cut, a small fraction of the billions the agency spends. Many speculate DOGE may find cost cutting measures in big ticket programs, like SNAP, WIC, and other food assistance programs that feed millions of Americans. Recently, the USDA rolled back pandemic era initiatives of the Local Food Purchase Assistance (LFPA) and Local Food for Schools (LFS) programs, which allocated over one billion dollars to food shelves across the country, mainly in rural areas that Trump won in 2024. While the administration is looking at reforming food assistance programs, it is unlikely that DOGE will be able to make meaningful cuts, since the scope of those programs is large and budget cuts would be highly unpopular.

Trade

In his first administration, Trump changed the paradigm for American trade by pushing a nationalist agenda through tariffs and trade restrictions. Of his trade policies, Trump introduced tariffs on China and renegotiated NAFTA (North American Free Trade Agreement) to the USMCA (United States Mexico Canada Agreement). This impacted farmers across the country, particularly corn and soybean farmers facing more restrictions than before. Even so, Trump is pushing a nationalist agenda harder in this administration compared to last. Within his first week, Trump announced 25 percent tariffs for all Canadian and Mexican goods. His rationale was that tariffs would raise revenue and put Americans on a level playing field. While predicted tariffs could increase revenue by 90 billion dollars, it pales in comparison to the national deficit and doesn't take into account job losses from tariffs. The US imports around 80 billion dollars worth of agricultural products from Canada and Mexico per year. The agricultural goods that the US imports the most are tropical fruits, beef, and grain while the most exported

goods are soybeans, corn, and dairy products. In response, former Canadian Prime Minister Justin Trudeau and current Mexican President Claudia Sheinbaum announced retaliatory tariffs of up to 25% on staple goods from America, like whiskey, orange juice, and corn. This led to a one-month pause in restrictions after starting negotiations for reducing the fentanyl trade, but a month has passed. Then, Trudeau announced the government would add up to 15% in tariffs on agricultural goods from America. With the volatile state of America's trade policy, we don't know what the future holds for agricultural trade.



The impact of Trump's trade policies will have detrimental impacts on American farmers. For one, the tariffs will reduce the competitiveness of America. Rather than mainly trading with America, Canada and Mexico could seek new trading partners to fill in the gaps. For instance, rather than trading corn with America, Mexico and Canada could look towards countries with growing agricultural industries like Brazil or Argentina. Moreover, Canada and Mexico could prop up current domestic production to supplement losses from the American market. The tariffs will also have a direct impact on US consumers. Imported goods like avocados, beef, and syrup will face a significant price rise, affecting all consumers.

Moving to partners outside of North America, Trump's new reciprocal tariffs will disrupt the current status quo of global agricultural trade. Announced on April 2nd, Trump put a minimum of a 10% tariff on all trading partners, with

specific countries having higher rates. For instance, countries in South East Asia incur tariffs of over 30% and the European Union faces tariffs of 20%. Goods that will be most affected by these tariffs are those that cannot be grown at scale in America, like coffee, tea, and vanilla. Specifically with coffee, tariffs will affect not only producers of raw beans like Vietnam and Colombia, but also countries that manufacture instant coffee like Switzerland and Italy. The World Coffee Portal, a coffee industry organization, finds that overall prices for coffee products could increase by over 20%. While coffee is a fraction of all agricultural commodities traded throughout the world, it highlights the reliance American consumers have on a globalized agricultural trade.

Tariffs will also hurt American farmers through higher operating costs. Current American agriculture requires a plethora of machines and equipment to conduct daily operations. Companies like John Deere, AGCO, and CNH are staples for agricultural equipment that American farmers own. While many companies assemble in the US, specific parts are manufactured across the globe. Tariffs will affect the intermediate goods imported, raising the final manufacturing costs. Other areas in which agriculture will be affected by trade include the greater adversarial relationship with the global trading system. Trump believes that by increasing bilateral tariffs with countries, it would posture a fairer overall trade relationship in the future – even with a 90 day pause on tariffs, this uncertainty will reverberate across the global economy. Like with restrictions on Canada and Mexico, tariffs will negatively impact American farmers and consumers. Tariffs across the board will raise prices by over 25% and reduce the supply of agricultural products in the American market place. Nonetheless, Trump's reactionary actions will posture the prosperity of all farmers and consumers during his 4 years.



Immigration

Throughout his campaign, Trump repeatedly attacked immigration from the southern border as an evil that could be eradicated with a broad solution, mass deportations. While agriculture and immigration seem distant, their relationship is key to the success of America's agricultural dominance. The lifeblood of American agriculture is the workers tending fields, butchering cattle, and picking crops. Migrant labor offers farmers affordable workers that don't have the same protections as other workers. Of the current 22.1 million workers in agriculture, over 86% of agricultural workers are foreign born, with around 45% not having proper work authorization. Of those who are undocumented, the vast majority are originally from Mexico and Central America. States that rely on large proportions of migrant workers are located close to the US-Mexico border like California, Texas, and Arizona. Even though undocumented immigrants are invariably important to agriculture, ICE (Immigration and Customs Enforcement) has started worksite enforcement in processing plants and surrounding towns.

While greater enforcement is a problem, there are possible conflicts in the administration on how to implement these policies. In her confirmation, current Secretary of the USDA, Brooke Rollins, stated that Trump's deportations goals are aligned with her policies for the USDA, since the deportations are meant to curb crime. She also mentioned how she would, "listen to farmers", signaling that there is flexibility on immigration policies for agriculture. If hypothetically the administration were to successfully deport all undocumented farm workers, it would cost the US untold amounts of money, totaling over trillions of



dollars. This would create many problems. One, farmers would need to supplement labor with American workers, since many of the crops have to be handpicked and hand-sorted, this alone would contribute to labor shortages across all agricultural industries. An almost 10 million person gap will not be closed, since farm labor is strenuous and low pay work. Second, it would be expensive for the US to detain all undocumented immigrants. The detention of a single undocumented person is 68 thousand dollars, multiplied by the 9.9 million undocumented people would total over 676 billion dollars. This is not even considering the loss of agricultural revenue from less laborers. In reality, Trump will not be able to deport all undocumented workers, but mass deportations and more worksite enforcement will create ripple effects for the US economy, with less production and greater labor shortages.



Conclusion

The future of American agricultural dominance is determined by the policies that Trump and his administration put forward. While Trump talks about taking drastic actions that will upend agriculture as we see today, resistance from courts and allies in his administration will temper the damage that could be done. His goals of independence and overhaul will be accomplished, but they will be at the expense of American farmers and consumers.

TRUMPIAN TRADE AND TECH POLICY AND TSMC: A GEOPOLITICAL CASE STUDY

BY RITHIK RAVINDRAN, APRIL 2025
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The world's most renowned and advanced chipmaker Taiwan Semiconductor Manufacturing Co. (TSMC) is caught in the perilous crossfire of a revived U.S.–China tech rivalry under President Trump's second term. Trump has intensified his "America First" semiconductor policy since his re-election in 2025, accusing Taiwan of "stealing America's chip industry" and threatening punitive tariffs on imported chips. These hardline policies are reshaping TSMC's strategy and Taiwan's geopolitical calculus. TSMC's responses – ranging from multibillion-dollar US investments to balancing between Washington and Beijing – demonstrate broader tectonic shifts in the global semiconductor industry.

Trump's aggressive semiconductor tariffs, export restrictions, and industrial policies have propelled TSMC into a tense balancing act, reshaping global supply chains in dramatic fashion, intensifying the U.S.-China tech rivalry, and redefining Taiwan's strategic position within this great-power struggle. Through his first term, Trump launched a trade and tech campaign that laid the groundwork for the chip wars of today.

From Trump 1.0 to Biden: Policy Foundations Shaping TSMC's Path

His administration imposed sweeping tariffs on Chinese tech goods and wielded export controls to cut off China's access to advanced semiconductors. A watershed came in 2020, when Washington barred TSMC from supplying Huawei – then one of TSMC's largest customers – without a license, effectively severing Huawei's chip lifeline. The Trump White House also pressured friends to exclude Chinese 5G and tightened scrutiny of Chinese investments in U.S. tech. These actions reinforced a view of chips as essential national security assets, and they jolted TSMC into rethinking its China exposure.

Indeed, by 2020 Trump officials had courted TSMC to build a U.S. fab, which culminated in TSMC's 2020 announcement of a \$12 billion Arizona plant. This first U.S. fab was intended to secure supply for America and represented the beginning of TSMC's diversification outside Taiwan and China.

The Biden administration largely extended Trump's hard line on Chinese technology, even tightening it.

In October 2022, Biden introduced sweeping export controls that banned China from buying advanced chips and semiconductor equipment, with the aim of crippling Beijing's AI and supercomputing abilities. Meanwhile, Biden was shifting away from Trump's tariff-driven strategy to an incentive-driven industrial policy at home. In 2022 he signed the bipartisan CHIPS and Science Act – allocating \$52.7 billion in subsidies and tax credits to onshore semiconductor manufacturing.

Biden's Commerce Department leveraged this funding to induce "all five leading-edge global semiconductor companies" – including TSMC and Samsung – to build fabs in the United States. By 2024, TSMC's Arizona fab was underway (pilot-producing 4 nm chips), assisted by approximately \$6.6 billion in U.S. grants.

In short, Biden married Trump's tech containment of China to robust support for allied chipmakers. This mix of sticks and carrots reinforced TSMC's strategic shift: reducing reliance on China (TSMC stopped new China-bound advanced orders under U.S. rules) and expanding in the U.S., Japan, and other friendly locales.

By the start of Trump's second term in 2025, TSMC had already built a foundation of investment and goodwill in America because of years of policy pushing by both Trump and Biden.

Trump's Second Term: New Pressures and Policies on TSMC

Tariffs, Export Controls, and the Tech War 2.0

Trump's return to office has ushered in a far more aggressive style of trade – even with Taiwan, an ally of the U.S. on security. He has threatened 25% tariffs on chips made overseas, naming Taiwan's semiconductor exports. Trump threatened early in 2025 to impose tariffs on TSMC products as leverage to "bring the industry home." The action, while unexpected by Taipei, fits his broader negotiating style: threaten with tariffs, then seek concessions or deals.

Trump's administration also made clear it could replace Biden's subsidies with tariffs as the primary way to strong-

arm investment. Historical precedent looms; in the 1980s, punitive U.S. tariffs pressured Japan to move tech manufacturing to America. Now Trump is subjecting Taiwan's chip giants to the same pressure.

In the meantime, Washington is still using export controls to cripple China's tech sector.

The expectation is a "harder stance toward China", so the chip war will intensify. U.S. controls to date (under both Trump and Biden) have targeted mostly advanced 5nm–7nm chips and EUV lithography. Second-term Trump officials are weighing whether to extend controls to older nodes or more Chinese entities.

Any tightening directly affects TSMC's China business. TSMC already is barred from shipping its newest chips to Chinese clients without U.S. approval; pending rules could restrict even 28nm or mature-node sales, further squeezing TSMC's Chinese client base. Yet U.S. export bans also lock Chinese players out of the cutting-edge, preserving TSMC's tech lead.

Trump 2.0 is essentially doubling down on a policy of containment that keeps TSMC safe from Chinese competition (i.e. SMIC catching up) while squarely putting TSMC on Team USA. Trump's Commerce Secretary matter-of-factly noted that TSMC and others are investing in America "as they sought to avoid Trump's new tariffs" – a carrot-and-stick dynamic defining the new tech war.

AI and Tech Policy Shifts Affecting Chipmakers

High-tech policy in Trump's second term is focused on AI leadership and supply chain security, which places TSMC at the center of U.S. strategic planning. Trump has installed tech hawks (even an "AI and crypto czar") to ensure American dominance in frontier technologies. A primary concern is that America's AI revolution – from bleeding-edge GPUs to cloud chips – depends on silicon made by TSMC.

As of 2024, TSMC manufactured over 90% of the world's most advanced AI chips, including the newest processors powering everything from smartphones to military systems. This reality has driven U.S. policy to secure those chip supply chains. Trump's administration has said that AI chips must be "Made in USA" or at least assembled there, to eliminate vulnerabilities.

In practical terms, Trump's tech policies have two facets for TSMC: ensuring U.S. access to the finest chips for AI and defense, by bringing more of TSMC's production and packaging to America, and to deny the chips to China.

The U.S. restricted exports of AI accelerators to China late in 2024, a setback that was aimed at China's AI ambitions but also made TSMC lose some orders that were destined for Chinese companies. Trump seems likely to maintain or tighten these AI chip bans.

The result is that TSMC must carefully balance capacity between China and the West: booming demand from U.S. clients like NVIDIA and Apple on one side, versus minimal (and tightly controlled) sales to China on the other.

Any AI policy shocks – e.g. a U.S. ban on all advanced chip sales to Chinese clients – would push TSMC to devote even more resources to U.S. and allied markets.

In a nutshell, Trump's AI policy prioritizes domestic chip self-sufficiency, indirectly making TSMC's advanced fabs a component of the U.S. innovation ecosystem.

U.S.–Taiwan Relations: Defense, Trade, and “Transactional” Support

Despite Trump's trade-bashing rhetoric, Taiwan is a key U.S. partner – but Trump has turned the relationship sharply transactional. He has explicitly demanded that Taiwan "pay for protection" and drastically raise defense spending to 10% of GDP. These demands have unnerved Taipei, which has already raised its defense budget to record levels (though still roughly 2.5% of GDP).

Taiwanese officials were offended by Trump's implication that Taiwan "doesn't give us anything," noting its semiconductor prowess was locally developed and benefits both economies. Nonetheless, Trump's tough love has nudged Taiwan's government to show acquiescence where it may. President Lai Ching-te's government quickly congratulated Trump for his re-election and reaffirmed the "long-standing partnership founded on common values" – an olive branch amid the tension.

On trade, Trump's approach is different from Biden's multilateralism. Rather than building on the first U.S.–Taiwan 21st Century Trade Initiative launched in 2022, Trump has proposed bilateral deals if Taiwan meets U.S. conditions. One condition, although unstated, is semiconductors.

Trump's statements tying trade to chip production – effectively saying give us fabs and we'll offer you free trade – have put Taipei in a difficult position. Taiwan's government is only too aware that its economy is very dependent on electronics exports (over 15% of GDP comes from semiconductors). They are thus attempting

to appease Trump by accelerating tech investment in America.

At the same time, they must reassure the Taiwanese that they are not simply capitulating. This fragile equilibrium defines U.S.-Taiwan relations in the Trump 2.0 era: close strategic coordination against China, coupled with hard-nosed deal-making on trade issues.

For TSMC, which generates approximately 70% of its revenues from North America, remaining in the good books of the Trump White House is vital – otherwise, it could face "greater regulatory risk" or politicized backlash from Washington.

TSMC has been made into both a linchpin and a pressure point in U.S.-Taiwan relations, with Trump leveraging America's security umbrella to obtain economic concessions.

Repatriating Chip Manufacturing: From CHIPS Act to "Tariff Act"

Trump's second term is reshaping U.S. industrial policy for semiconductors. While Biden favored subsidies (the CHIPS Act grants) to attract chipmakers, Trump has been more inclined to renegotiate or eliminate those subsidies in favor of market "tough love." He has pledged to review CHIPS Act funding and even wondered aloud about eliminating it entirely.

The CHIPS Act is a "terrible, terrible thing... You should get rid of it," Trump told Congress, grumbling that firms took U.S. money without providing proportionate benefit. Trump instead believes tax cuts and tariffs will achieve the desired outcome – firms building in the U.S. to avoid import taxes, without huge government spending.

The philosophical shift has tangible consequences for TSMC. Under Biden, TSMC was pledged \$6.6 billion in grants for its Arizona fabs. Through early 2025 it had gotten \$1.5 billion of that. Now Trump's review jeopardizes the rest of the funding, possibly delaying or reducing what's left. Indeed, Trump publicly scolded the Biden-era subsidies to TSMC and said he was weighing whether to hold back grant payments. TSMC suddenly finds itself in doubt over incentives pledged to it, even as it's being encouraged to expand more.

Rather than subsidies, Trump's administration is wielding the stick. By imposing (or threatening) 25% tariffs on chips, they are making it costlier to import semiconductors from Taiwan – thus incentivizing TSMC to manufacture locally.

The strategy appears to be working: in March 2025, TSMC CEO C.C. Wei appeared alongside Trump at the White House to announce a huge \$100 billion U.S. investment plan. It involves five new buildings: three additional fabs, along with two advanced packaging plants and a new R&D building.

Trump hailed it as proof that "we must make the chips we need right here... It's a matter of national security". As a quid pro quo, he essentially promised TSMC tariff relief: "By doing it here, [TSMC] has no tariffs," Trump said, describing how his tariff threats were the immediate incentive for the company's investment.

That is, Trump traded tariff exemptions for concrete investment on US soil – the reverse of Biden's cash subsidy strategy.

Trump's repatriation push extends beyond TSMC to envelop Intel and other US companies. A prime objective is to "rescue" Intel's floundering foundry business and win America a native leading-edge fab.

Reports even indicated the White House floated a landmark deal: TSMC investing in Intel's foundry business (Intel Foundry Services) or a joint venture, effectively transplanting TSMC's expertise to revive Intel.

The deal on offer would cut out Intel's fab business with TSMC in control – a partnership aimed at rapidly scaling up U.S. production capacity. However, such a tie-up raises prickly questions. TSMC would have to balance basically incompatible process technologies and corporate cultures, and it would take the risk of exposing its crown-jewel IP to a potential rival (Intel).

Taiwanese authorities are reportedly worried: Taipei would not look kindly on any coerced tech transfer undermining Taiwan's strategic edge. For now, then, the TSMC-Intel mega-deal seems improbable – Trump himself is said to be displeased at the prospect of a "foreign" company running a U.S. champion.

Instead, more tangible steps are moving ahead: TSMC is designing a new Arizona advanced packaging plant (for CoWoS technology critical to AI chips) which is also considering, and accelerating construction of its 2nd and 3rd Arizona fabs (for 3 nm and 2 nm nodes) by as much as one year. These moves are part of Trump's vision of a completely onshore supply chain – from wafer fab to chip packaging – even if realized through TSMC expansion rather than Intel revival.

Above all, Trump's policies offer a double-edged sword to

TSMC. On the one hand, tariff pressures are forcing expensive duplicative investments. TSMC's U.S. operations are more expensive and have been slowed by workforce and culture problems. Margins would be diluted as TSMC grows in Arizona.

On the other hand, being in Trump's good books shields TSMC from worse punishments – like steep import tariffs on its chips or regulatory attacks. TSMC has been able to pass on most of the tariff costs to U.S. customers so far because of its market leadership position. (After all, if Apple and NVIDIA have no alternative source of TSMC's 3 nm chips, they will pony up.)

This pricing power only goes so far, however. TSMC's smaller Taiwanese competitors with lower margins could get injured if component tariffs sweep their products. That is why Taiwan's industry as a whole is now petitioning Washington. Analysts note that Taiwanese firms lack Intel's Beltway clout, and they are scrambling to set up and shore up their U.S. lobbying.

Trump's repatriation drive is recalibrating incentives overall: fewer free dollars, more "tough" dollars, and a rebalancing of the competitive playing field in favor of investors in America. TSMC, reading the writing on the wall, is betting \$100 billion that it's better to be a Trump America partner than a target.

Geopolitical Ripple Effects on Taiwan and the Tech Balance

Taiwan's Silicon Shield

Twenty years back, Taiwan treated its semiconductor leadership as a geopolitical cushion, the so-called "silicon shield." The theory is that Taiwan's position as a vital chip supplier deters China from invading and assures American protection – since war would disrupt the worldwide technology ecosystem.

TSMC is the foundation of that shield, producing 60% of the world's semiconductors and over 90% of advanced chips. Trump policies are now testing the integrity of this silicon shield. By luring some of Taiwan's offshore chip production to the U.S., Trump theoretically reduces the world's over-reliance on the island's fabs. U.S. policymakers like Commerce Secretary Gina Raimondo had warned that 90% dependence on Taiwan for advanced chips was an unacceptable vulnerability.

From Washington's perspective, getting fabs to Arizona and elsewhere provides insurance in the event of a Taiwan

Strait crisis. Actually, some in Taipei see the \$100 billion U.S. chip commitment as "an insurance policy for [Taiwan's] security" – a way of further anchoring the U.S. in Taiwan's fate. Without U.S. security guarantees, there is no shield, as one Taiwanese strategist put it, so it is important to keep the Americans invested (both literally and figuratively).

Many in Taiwan, however, fear Trump's approach and the dangers of draining the shield. Opposition legislators have lambasted President Lai for "selling TSMC to Trump" and risking a "grave national security crisis".

If too much of TSMC's cutting-edge capacity is exported, Taiwan risks losing the same leverage that saved it. As KMT lawmaker Fu Kun-chi pointedly asked, "If TSMC is to become the 'American Semiconductor Manufacturing Co', where will Taiwan's security be then?" The former President Ma Ying-jeou accused the government of gambling with Taiwan's advantage, reducing the island from a strategic "pawn" to a "discarded piece" of great-power competition.

The Lai administration has also taken great pains to allay these fears. Within hours of the White House announcement, TSMC's CEO flew back to Taipei to stand alongside President Lai and solemnly pledge that "the company's most advanced semiconductor technologies would remain in Taiwan.!" The Presidential Office once again stated that any TSMC expansion must be screened by the government and that Taiwan will "ensure its most advanced tech does not leave the island."

In practical terms, this means that Taiwan is going to retain the bleeding-edge node development on the island (i.e., 2 nm and smaller), even as 4 nm and older processes are replicated in America.

How this plays out will determine if the silicon shield remains plausible. On one hand, collective security can be strengthened by co-production – the U.S. will be all the more determined to defend a partner that co-produces vital chips.

On the other hand, if the perception of Taiwan's indispensability fades, there is a risk (perhaps overstated) that the U.S. will be less willing to war with China over Taiwan's fate. Taiwanese economists note that onshoring chips cuts U.S. reliance on Taiwan, so Taiwan's priority is to ensure its role doesn't disappear – or U.S. willingness to defend it may decrease.

This delicate calculus is not lost on Lai's government.

Taiwan is increasing defense spending and arms purchasing to show it is not a free-rider on U.S. protection.

And in embracing tighter economic ties with America, the authorities are keen to present TSMC's US investment as win-win, generating supply chain resilience "with our partners & a stronger Taiwan-US partnership" rather than a zero-sum drain. In effect, Taiwan is trying to turn the script from "silicon shield shattered" to "silicon shield shared." The coming years will be a test of whether that semantic rewriting has substance – especially if cross-Strait tensions escalate.

Backlash from Beijing: “Hollowing Out” Taiwan

China has reacted with its usual outrage at Trump's Taiwan policies and TSMC's central position in the U.S. tech arsenal. Beijing considers Washington's courtship of TSMC as part of a strategy to "tighten its grip, hollowing out TSMC and draining Taiwan", according to China's Taiwan Affairs Office.

In a March 2025 press conference, a Chinese government spokesperson lambasted Taiwanese leaders for "shamelessly selling out Taiwan" with massive tech transfers to the U.S., calling it an attempt to "rely on the U.S. to seek independence."

Chinese state media now sarcastically refers to TSMC as "USMC" (United States/Taiwan Semiconductor) and warns that Taiwan will be a hollow shell after America sucks out its tech industry. In Beijing's narrative, Taiwan's destiny of being transformed from a 'pawn' to a 'discarded piece' is sealed – meaning China believes America will discard Taiwan once it is no longer needed.

Beyond rhetoric, China is ramping up on multiple fronts: pressuring Taiwan diplomatically, reacting to U.S. trade moves, and doubling down on becoming self-reliant in semiconductors. Beijing reacted soon after Trump's tariff and TSMC announcements with moves such as initiating an antitrust investigation into U.S. tech firms (e.g. Google) – a shot across the bow that U.S. firms can suffer in China's market.

China's leaders also emphasize that cross-Strait trade remains massive (nearly \$293 billion in 2024). They fault Taiwan's ruling party (the DPP) for trying to "decouple" from the mainland, charging that such a move is economically illogical and "doomed to fail". Certainly, hundreds of Taiwanese tech firms have plants in China; Beijing could in theory leverage that interdependence to sanction Taiwan's economy if tensions worsen.

However, China must be careful – any drastic measure (e.g., stopping rare earth exports or shutting off Apple's China sales) would run the risk of backfiring and accelerating the U.S.-led decoupling that China fears most.

Above all, China is racing to build its own TSMC. U.S. bans have only redoubled China's efforts to invest hundreds of billions of dollars in domestic chip talent (under plans like "Made in China 2025" and beyond). Chinese foundries lag by years so far – SMIC, for example, is roughly at 14 nm technology, a long way from TSMC's 3 nm. That said, Chinese engineers are trying to catch up, and China is actively recruiting semiconductor talent (including from TSMC's own Taiwan ranks).

TSMC therefore has a long-term competitive risk: though U.S. policy protects it in the short term, a more technologically independent China may try to gradually eat away at TSMC's huge China market (which was about 10–20% of revenue before 2020). Additionally, in the event of conflict, Beijing might try to target TSMC plants with cyber attacks or coercion to deter U.S. involvement.

Chinese official media publicly argue that TSMC's American expansion is undermining Taiwan's security and economy – indicating that Beijing is happy that Taiwan's reliance on America has negative consequences. This kind of propaganda can be designed to influence Taiwan's 2028 elections, favoring politicians who lean towards accommodation with China instead of further reliance on America.

In sum, Trump's policies have turned semiconductors into a geopolitical battleground. Taiwan is caught in the middle, and China is responding by militarily and economically turning up the pressure while accelerating its efforts to end Western tech dependence.

TSMC's status as the indispensable chip provider is exactly what China ultimately wants to eliminate – but until it does, that status also limits Beijing. As long as China's economy "relies heavily on imports of advanced semiconductors from Taiwan," Beijing has a stake in not waging a war that would destroy TSMC's fabs.

It's a paradox: TSMC is simultaneously a target in the tech war and an implicit guarantor of (relative) peace. Trump's open backing for Taiwan, together with his efforts to mirror some of TSMC's ability in America, is provoking China – yet even China must calculate the cataclysmic costs of doing anything at all on the "sacred mountain" of TSMC.

TSMC's Tightrope: Balancing U.S. and Chinese Demands

TSMC is treading carefully in this charged environment. The company's strategy to date has been one of practical accommodation and diversification. With the U.S. now accounting for 70% of its revenue, TSMC cannot risk defying Washington's dictates.

It has therefore eagerly followed U.S. export bans (cutting off Chinese clients like Huawei), expanded operations in America and Japan, and even engaged in backroom lobbying to shape U.S. policy.

All the while, TSMC must also guarantee Taiwan and investors that it is not any longer simply transforming into an American subsidiary. The company has committed to keeping its R&D center in Taiwan, knowing that its "competitive edge depends on technology leadership and R&D based [at home]".

It also knows that giving up its most advanced know-how – whether to the U.S. or to anyone else – would compromise its leadership. TSMC has thus adamantly resisted any agreement that has even a hint of a forced tech transfer.

Rumors that Trump wanted TSMC to either share advanced processes with Intel or open a 2 nm fab in the U.S. were met with stark warning: TSMC's track record shows it "has been extremely careful about sharing its technology, especially with key competitors," and Taiwan's government would likely prevent moves that erode the island's strategic tech advantage.

TSMC's current approach is to split the difference – satisfy U.S. hunger by localizing some of the capacity, but retain the crown jewels in Hsinchu. It is, in effect, creating a two-tiered production strategy: bleeding-edge (N3, N2, etc.) stays in Taiwan for the most part, but one-generation-earlier fabs (N4/N5) and advanced packaging can be duplicated in the U.S. and Japan.

In taking this action, TSMC tries to address U.S. insistence on supply chain security without completely "giving away the store." So far, this plan has agreement on both sides – the U.S. gets the high-end production on its soil, and Taiwan's leaders can say the most sensitive technology isn't being sent out.

The challenge will be if Trump (or a future U.S. administration) insists everything must be made in America. For example, if Washington someday orders that 2 nm chips for defense must be manufactured in the U.S., TSMC would be forced into an unpleasant choice, even a national security dilemma for Taiwan. But short of that

extremity, TSMC will likely continue to thread the needle, expanding abroad while keeping its innovation engine in Taiwan.

Financially and operationally, such global juggling is challenging. TSMC must deal with higher costs, labor shortages, and cultural adjustment in Arizona.

Ramp-up at the initial U.S. fab has been slower than anticipated – full production was pushed from 2024 to 2025 due to training and turnover issues. But TSMC also knows that the "optics" of job creation in the U.S. are extremely important to Trump.

The company has thus taken pains to smooth out these challenges: it is working closely with U.S. partners (and even outsourcing to local firms like Amkor for some packaging operations), and it is adapting management practices to help make American engineers feel more included.

TSMC also expects U.S. tax credits (since Trump favors tax credits over direct subsidies) to recover some cost.

Meanwhile, to keep its efficiency, TSMC continues to invest heavily in its Taiwan mega-fabs – plans for a 2 nm fab cluster in Taiwan are underway full steam with government support.

In effect, TSMC is building a scattered empire: Taiwan remains the technological heart and volume center, the U.S. is a high-visibility second center, and Japan (with a new fab for specialty chips) – and possibly Europe (in talks for a fab in Germany) – fill niche needs.

The diversification also reduces the existential risk that hangs over the company: a war in the Taiwan Strait. By establishing capacity offshore, TSMC increases the likelihood it would be capable of continuing to operate (at least partially) in the event of a crisis – a type of corporate insurance policy against geopolitical shock.

TSMC and the Indo-Pacific Tech Alliance

TSMC's trajectory is also cementing a broader coalition of democracies in technology. The U.S., Taiwan, Japan, South Korea, and Europe are now coordinating more to render semiconductor supply chains secure among themselves and exclude China from critical domains.

There were even talks under Biden of a "Chip 4" alliance (US–Taiwan–Japan–Korea) to formalize this cooperation. Under Trump, these multilateral arrangements are less apparent, but the outcomes are identical: Japan has

imposed export controls on chip equipment (in coordination with U.S. policy to deny China tools), the Netherlands has restricted sales of advanced lithography to China, and Japan and Europe have welcomed TSMC investments on their soil with generous incentives.

For instance, TSMC's joint venture in Japan (JASM) – sponsored by Sony and the Japanese government – will produce 7 nm and 28 nm chips, serving Japan's auto industry and cementing a tech alliance.

Similarly, a planned fab in Germany (European Semiconductor Manufacturing Co., or ESMC) – with partners including Infineon and Bosch – will focus on specialty chips for Europe's market. These steps are consistent with U.S. strategy: with TSMC capacity in a number of friendly locations, the allied network is more resilient and China's leverage is reduced.

TSMC itself is coming to be regarded by U.S. authorities increasingly as a national security cornerstone: the virtual adjunct to the defense industrial base. US military systems rely on TSMC-made chips (e.g., chips in F-35 fighters and advanced AI systems for intelligence).

This has led Washington to contemplate drastic measures: some reports suggest the U.S. has evacuation or "scorched earth" plans for TSMC in case of invasion, to keep its technology out of Chinese hands. Such possibilities are extreme (and not officially confirmed), but they speak to TSMC's perceived strategic significance.

It's no accident that Trump's announcement of TSMC's \$100 billion U.S. expansion featured his new "AI czar" and Commerce Secretary flanking TSMC's CEO on either side – reflecting just how closely U.S. tech ambitions (AI) and economic security are intertwined with TSMC.

Additionally, TSMC's situation has turned into a case study for allies such as South Korea. Seoul watches carefully how Trump deals with TSMC, because Samsung is exposed to the same pressures. Trump has not spared allies from his tariff barrage – he has made it clear that no one is excluded in his global tariff battle, not even Japan or Korea.

Indeed, if TSMC had resisted Trump's demands, there was speculation he would have slapped tariffs on all imported chips, which would also have impacted Samsung's exports. In that sense, TSMC's compliance perhaps averted a wider trade war that would have hurt other allies. Now Samsung is also putting more investment into its Texas fab expansion, and Intel (despite being U.S.-based) is lobbying hard to ensure it gets a large portion in

any U.S. semiconductor strategy.

All of these moves are suggestive of a fragmenting global industry: one bloc led by the U.S. and supplied by TSMC/Samsung, another led by China trying to catch up via state sponsorship. Geopolitics increasingly dictates where and how chips are made, something TSMC has no choice but to take in its stride.

A Precarious Equilibrium

As the semiconductor world is reshaped by President Trump's second-term policies, TSMC is both a beneficiary and a barometer of the broader geopolitical shift.

On the one hand, Trump's hard-nosed stance – tariffs, onshoring demands, and techno-nationalism – has compelled TSMC into a record-breaking expansion, effectively making it a bi-continental company and further tying it with the U.S. economy. In the near term, this enhances U.S. supply chain security and reinforces the tech alliance against China.

Yet, the triumph of Trump's pressure also begets longer-term risks: the potential erosion of Taiwan's value proposition, strife with Taiwan's society and other allies, and greater belligerence from Beijing.

TSMC's fate now commingles with high-risk geopolitics. The company must tread a fine line – satisfy U.S. strategic needs without undermining the Taiwanese foundation underpinning its innovation. Thus far, TSMC and the Taiwanese government appear set to tread this tightrope, keeping bleeding-edge R&D onshore and sending the products of it overseas, in the hopes of preserving the "silicon shield" even as they belt it with American steel.

The policy implications for Taiwan are profound. Taipei will need to accelerate military and economic reforms to improve its credibility in the eyes of Trump – increasing defense expenditures (although 10% of GDP is not feasible) and demonstrating that it is "willing to pay its share financially to Washington's support". It will also need to diversify its economy beyond semiconductors (which employ roughly only 3% of its workers despite 15% of GDP), so that Trump's ire at the chip trade imbalance does not expand into broader punitive measures.

For the global semiconductor industry, Trump's re-election solidifies a trend for government policy to pull key manufacturing onto national or friendly territory, at some cost of efficiency. It may mean higher cost and duplicate capacity, but also more resilient supply chains insulated

from geopolitical disruption. TSMC and others will accept short-term pain to build longer-term strength – in essence, an insurance premium for stability.

Expert opinion is that Trump's hardball is risky, but also reflects the fact that tech supply chains can no longer be purely commercial. Semiconductors are a strategic resource, and nations will battle for control. TSMC's case shows both the promise and pitfalls of this brave new world.

The U.S. and Taiwan, by delicate negotiation, have thus far reached a formula of mutual benefit: America receives jobs and security, Taiwan receives a more profound security commitment (and retains its R&D advantage), and TSMC receives political backing in its largest market. Though, the balance is precarious. If Trump's requirements escalate above Taiwan's or TSMC's patience – or Beijing concludes time is no longer on its side – things could fall apart, with TSMC squarely in the fault line.

For now, TSMC remains the world's most vital chipmaker, adapting to survive and thrive under Trump 2.0.

Its fate will have consequences not just for corporate fortunes but for the balance of geopolitical power in the Indo-Pacific. Under the shadow of great power rivalry, TSMC is no longer just a company; it is a geostrategic asset. And, as this case study shows, when geopolitics and technology converge, even a company in its prime must continually adjust to new political realities on the ground.

The coming years will see whether Trump's hardline policies ultimately solidify America's chip supremacy with TSMC's help – or whether they unintentionally accelerate the very fragmentation of the global semiconductor supply chain that TSMC stitched together in recent decades. Whatever the case, the implications for Taiwan's security and the future of the semiconductor industry will be profound, making TSMC's tale a model of 21st-century business and statecraft.

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THE PAST, PRESENT, AND FUTURE OF THE AMERICAN DREAM

BY BRIAN GRANT, MANAV DAROOKA, NOAH JAKEL, AADIT BHAVSAR, ARHAAN DATWANI, SIDDHARTH YERAPOTINI, BRETT COLÓN AND ELIZABETH BOLTON, DECEMBER 2024

THE FINANCE COMMITTEE

Famous astronaut and engineer Buzz Aldrin once said, “I think the American Dream used to be achieving one’s goals in your field of choice – and from that, all other things would follow. Now, I think the Dream has morphed into the pursuit of money: Accumulate enough of it, and the rest will follow.” In other words, the American Dream has changed over time. In the 1950s, lower class Americans had the vision of America helping them set the groundwork for a successful family life, housing situation, and generational wealth once the economy began to rise after decades of war. Compared to today, the American economy is currently facing rising costs of education, difficulty to save for retirement, and a housing crisis. All of which have decreased the feasibility for one’s attainment of the 1950s American dream. Overall, what particularly has contributed to the differences in visions between the past and current American Dream? Additionally, as a product of the past and present, what does the future hold for the American Dream?



PAST:

Introduction to the 1950s

1950s America was far different from today. It is often the time that many say the The American Dream peaked. Shortly after WW2 ended, the Cold War began, accompanied by the Truman Doctrine. As a result, America needed to prove that capitalism was on top. Given the political turmoil of this time period, why do people attribute the American Dream to the 1950s? Reasons for this attribution are the ability to buy or afford a home and optimism in America with the caveat of lack of equality.

Home Affordability

The American Dream is often attributed to the middle class. When one thinks of the middle class, they think of a nice house in the suburbs with a picket fence. This suburbs movement started in the 1950s, accounting for 75% of residential construction in the decade.

The Levitt Brothers are widely credited for founding the suburbs by decreasing housing costs drastically by making neighborhoods where the houses were the exact same.

Additionally, there were many tools available to the millions of veterans returning home allowing them to more easily afford homes. FDR signed the Servicemen Readjustment Act (aka GI Bills) into law in 1944, which prevented the American economy from entering a depression after the war. Perhaps the most pivotal of all the benefits was the inclusion of mortgages with low rates and down payments. Since favorable loans for veterans made it easier for them to buy a home in the suburbs, the GI Bills provided many tools to ensure veterans could continue to afford these homes, including educational and unemployment benefits. As a result, around 9.2 million veterans took advantage of these sorts of benefits, leading to the degrees awarded by US colleges doubling from 1940 to 1950.

Optimism in America

Another aspect to keep in mind when looking at the perfect image of the 1950s is what came before. When WW2 ended in 1945, experts estimate 60 million people died during that time, with 400 thousand of them being Americans. Before WW2 there was The Great Depression, one of the worst economic recessions in human history where unemployment peaked at 24.9%. During that time many Americans starved to death, and even those with money went hungry at times. Thus, after WW2, anything would be better than the past two decades. As a result, the economy boomed and Americans were more optimistic about the future than they were ever before, leading them to look forward to a new economic potential that they hoped to dream upon in the 1950s.

Lack of Equality

It is important to note that this prosperity seemed prevalent, but it was only available for some parts of America. Many minorities were left out of the boom that came post-war. For example, over 2.5 million African Americans served in WW2, but when they came home, many of the opportunities provided to the white veterans were not available to them. Thus, they faced difficulty getting loans. Even if they did get a loan, they were barred from living in the same suburbs as white people. In this instance, it shows that racial discrimination was also prevalent for nonveterans as well. Because of this, segregation was common across the US and Jim Crow Laws were taking away African American rights throughout the South. Similar circumstances prevailed for other minorities like Native Americans, Asian Americans, Latinos as well. It is easier to achieve the American Dream when not competing against everyone else for basic rights. Additionally, after working in the factories during the war, women returned to being housewives out of conformity, just one example of the neglect they faced during the time period. This led to a major societal pressure to get married earlier and bear children, which contributed to married women often lacking a voice since their decision was being made for them by their husbands. In addition, women were simply a tool that made it easier for the American Dream to be achieved. Overall, racial and gender discrimination during the time period made it more difficult for people other than white men to attain the American Dream. Thus, the 1950s was the peak of the American Dream because after decades of political and economic turmoil, the economy was booming, houses were affordable and the population was optimistic.

PRESENT:

There are several factors within the lifestyle of middle class families that work to further the problem of income inequality. The actual lifestyle of the average middle class family has not changed much in the past 50 years, but the factors within that lifestyle and the expenses attached to it have changed dramatically and this continues to perpetuate the decline in wealth of the middle class.

Rising Cost of Education

Firstly, the rising cost of education is a factor that substantially changes a middle class family's financial situation. According to the National Center for Education Statistics (NCES), the average price for undergraduate education has more than tripled in the past 58 years going from approximately \$4,000 to \$14,000. Due to the fact that this is an average figure, it does not account for the fact that most young adults may want to attend higher prestige universities that have a price far more than \$14,000 with our very own UW-Madison tuition being around \$23,000 for some students. Wages simply cannot keep up with this rapid increase in college tuition and as degrees become more of an expectation in the workforce, this trend of rapid increase won't stop anytime soon. With multiple children, and 8 semesters of this tuition pricing, this expense can easily be life ruining, either plaguing parents with hundreds of thousands in tuition payments or binding newly graduated students with a lifetime of debt as they enter adulthood and the workforce.

Retirement Savings

Another key factor that has changed for the average middle class family is the ability to adequately save for retirement. The pension plans provided by employers have significantly changed over the past 50 years, which greatly impacts any given family's ability to save for a secure retirement. In the early 1980s, employers commonly provided Defined Benefit (DB) plans which ensured that upon retirement, an employer would provide the retiree with a sum of money to support themselves. Companies offering DBs were expected to fulfill their promise meaning the risk tied with saving for retirement falls on the employer, not the individual. DBs were the norm and the expectation, allowing families to enjoy their retirement and focus on more important aspects of their lives. According to data from the National Bureau of Economic Research (NBER), in that time period, the portion of employees with a DB plan stood at 79%, representing a large majority. In the modern day, Defined Contribution (DC) plans are far more common.

These are plans where it is expected that the employee already is contributing to a retirement plan of their own and the employer may match the contributions they are making. While still helpful, the burden and risk of planning for a secure retirement falls almost entirely on the individual now. If the employee fails to grow their retirement plan or finds any complications for any reason, their retirement is now in jeopardy and the company holds no responsibility for it. This is a drastic change from the DB plans, where the company was able to ensure a safe retirement for its employees whereas now we see DC plans where the company bears no real responsibility for its employees' retirement. Thus leaving employees scrambling to navigate this difficult path. This often results in underfunded retirement accounts or misallocated retirement funds causing middle class families to struggle to find financial stability, even in retirement. As a result of this, an issue has risen among young adults aspiring to establish a sustainable lifestyle as well as seniors planning to save for retirement. That issue is the consistent decline in lifestyle that wages can support over the years. Why is this true, how did it come into effect, and what does this mean for the average middle-class household?

Wages

Despite worker productivity increasing significantly in coordination with greater technology, training, and competition, wages have not increased proportionally. According to the Bureau of Labor Statistics, in the three decades following the first World War, productivity increased by 96.7%, with the increase in wages close behind at 91.3%. This allowed for families to build healthy, sustainable lifestyles that matched the growth of the economy. However, in the thirty years prior to the coronavirus pandemic, productivity has risen 74.4%, while wages are up merely 9.2%. This also further perpetuates income inequality, leaving middle class and lower class Americans behind, unable to reap the benefits of the growing economy in the manner that the upper class does. The Congressional Budget Office highlights this with their data demonstrating that since 1979, purely as a result of the growth of inequality, the average household income of the broad middle class depreciated by nearly 20% in 2007 - a gap that continues to grow over time. In spite of the recent coronavirus pandemic and the global economic recession it generated, American wages have rebounded and seem to be on a better trajectory than before. Employment is rising, as the private sector employment rate is nearly at an all time high. Additionally, in contrast to the trend mentioned earlier, wages have grown much quicker than prices since the coronavirus pandemic.

For example, relative to the pre-COVID pandemic data, prices are up 21.3%, while wages have increased 26.3%. The fact that wages are increasing more than prices is a true reversal of the trend that seemed to set future American generations up for failure. This trend provides young Americans with hope for the affordability and productivity of their future.

Housing

However the cost of living crisis is not solely limited to wage growth, education, or retirement pensions; housing is a huge part too. At its core, the housing market is supply inelastic. In other words, housing supply does not tend to keep pace with demand. For example, according to the New York Times, from 2013 to 2021, the San Francisco area added 676,000 jobs but only 176,000 housing units. This is part of the reason the median listing home price is now \$1.2M in San Francisco, up from \$820,000 in 2013. One aspect commonly neglected about this statistic is the result of very intentional policies. Most big cities tend to be almost fully zoned with single family homes, not high density apartment complexes or duplexes. When there is an effort to change this, such as Measure D in California, it is immediately voted against by wealthy homeowners in the affected area, due to the concern of their home values decreasing. NIMBYism (not in my backyard) is not the only cause for concern here. The tax code is also set in such a way as to encourage homeownership, which is thought by governments to be a social positive. Through the mortgage tax deduction, the government provides an incentive to mortgage rather than to rent, forgoing 200 billion of potential revenue every year. While this is uncontroversial, David Blanchflower of Dartmouth College and Andrew Oswald of Warwick University have found that a sharp decline in home ownership in a state is also associated with higher unemployment. Thus, contributing to the problem of high housing prices. Another reason housing prices remain so high is an access to easy credit. Considering that the baseline interest rate in the 2010s was nearly zero, and in the midst of perverse incentives to be a homeowner, the creation of mortgage backed securities helped free up finance for young workers to buy up housing, while supply did not go up correspondingly. All of the above reasons combined make up why the median home price in America grew 41% faster than the rate of inflation between 1990 and 2016 (Harvard Joint Center for Housing Studies, 2018). While there have been some promising developments, such as single-family zoning being banned across California, or the rise in the provision of affordable housing in Seattle, there is still a long way to go in terms of addressing the present structural causes of housing affordability.

FUTURE:

The Effect of Expectations and Macroeconomic Theory

Past data and trends have made it clear that market expectations significantly influence an economy's outcomes. Macroeconomic theories including the Rational Expectations Theory, and Herd Mentality explain the inherent desperation of individuals to imitate the behavior of large groups in their own lives (Rational Expectations Theory Definition and How It Works). Americans' expectations regarding the feasibility of the American Dream may play a role in determining its future feasibility. Such optimism has been declining since the early 2010s – in fact, only 33 percent of survey respondents answered favorably in terms of the feasibility of the American Dream compared to more than 50% of respondents twelve years ago (The American Dream Feels Out of Reach for Most). Even more so, the feelings of optimism versus pessimism may vary across racial, gender, and ethnic groups depending on their minority statuses. Because the American Dream is largely based on social mobility, the declining access to resources results in an increase in the wealth gap leading to the 'economic ladder' becoming harder to climb. All in all, the current pessimism regarding the American Dream indicates its unattainability, but experts still maintain that "improvement" is still possible.

Expert Opinions and Projections

Despite this "wave of pessimism," Director of Economic Studies at the American Enterprise Institute – Michael Strain – cites the improvement of social mobility from the mid-twentieth century as hope for the future. Although Strain addresses that inequalities still exist in minority groups that limit their accessibility to resources to address their socioeconomic status, he also claims that there has been improvement no matter how small since the 1970s. To elaborate, in his 2024 debate at Dartmouth University, Strain claims that "Countries have moods, just like people, and America is in a bad mood," and that America "will do better." Strain's light-hearted comparison of America's current period of struggle to that of a "bad mood," indicates that there is an impending upward swing for the American economy (Experts Debate the State of the American Dream).

Threats to the American Dream

While the concept and idealism of the American Dream has lasted since the country's inception, there are many things that stand a threat to the achievement and possibility of its glory.

The first being economic inequality. Wages for many workers have not risen to combat inflation, leading to this continuation that could prevent low-income citizens from climbing the ladder to economic freedom. On top of that, the increase in the wealth gap between the rich and poor looms large. Higher education costs pose a problem since the costs of college and trade schools continue to rise which could prevent low-income students from receiving similar education as their wealthier peers, obviously hurting their chances in the job market. Other threats towards the American Dream include housing inequality, healthcare access, political polarization, and systemic discrimination. As our country progresses into an uncertain future, it is important to address these issues and make sure America can continue ensuring equal opportunities and resources for a chance at success.

Possible Optimism

While there is a significant number of topics that can threaten the idealism of the American Dream, there is hope for its continuation as the world goes forward. New economic opportunities and innovation propel our economy into the future which can lead to access to new jobs and business opportunities. Expanding access to education with the use of the internet and advancing technology is allowing more people to learn than ever before. This can help close the education gap between low and high-income citizens. Moreover, government and policy efforts can provide the idea of the "Dream" to continue as time goes on. Immigration policies as well as subsidies toward marginalized and low-income groups could also help these citizens thrive.

Given the past and present economic and social situations surrounding the American Dream, there is no doubt that the future of the American Dream is uncertain and complex. On one hand, the American Dream is in the hands of the people and their expectations. While on the other hand, it can be argued that America is in the troughs of its economic cycles. Only time will tell the future – or 'end' – of the American Dream.

ECONOMIC IMPACT OF THE FORMULA 1 LAS VEGAS GRAND PRIX

BY SIDDHARTH YERAPOTINI, APRIL 2025

THE FINANCE COMMITTEE

The introduction of the Las Vegas Grand Prix in 2023 to the Formula 1 calendar marked a significant addition to the city's portfolio of major events, promising a substantial boost to the local economy. Given its status as a city synonymous with entertainment and tourism, Las Vegas has long leveraged large-scale events to drive economic growth. The arrival of Formula 1, with its global appeal and high-spending fanbase, generated immense anticipation regarding its potential to enhance the city's economic landscape — the bright lights of Las Vegas and the glamour and popularity of Formula 1 were simply a match made in heaven. In this article, we'll dive into the multifaceted economic effects of the Las Vegas Grand Prix since its inception, discussing job creation, revenue generation, funding mechanisms, social media impact, long-term implications, and comparisons with other major events hosted in the city — of which there is no shortage of.

Quantifying the Economic Influx:

Overall Economic Impact in 2023 and 2024

The inaugural Formula 1 Las Vegas Grand Prix in 2023 generated a reported economic impact of approximately \$1.5 billion. This figure includes the significant initial investment by F1's parent company, Liberty Media, which amounted to \$500 million for the acquisition of 39 acres of land and the construction of the four-level pit building that now stands as Grand Prix Plaza. In its second year, 2024, the economic impact was reported to be \$934 million. The decrease in the overall figure can be largely attributed to the absence of the one-time infrastructure spending that characterized the first year. Despite this reduction, the 2024 economic impact still positions the Las Vegas Grand Prix as the largest recurring mega-event hosted in Southern Nevada and remains comparable to the estimated \$1 billion economic impact of Super Bowl LVIII, which was also held in Las Vegas in February 2024.

Year	Overall Economic Impact	Visitor Spending	Event-Specific Spending
2023	\$1,500,000,000	\$884,000,000	\$556,000,000
2024	\$934,000,000	\$336,000,000	\$556,000,000

Note: Visitor spending for 2023 is net visitor spending, while for 2024, it is also net visitor spending after accounting for displacement. Event-specific spending for both years includes vendor and employee wages and infrastructure expenses.



Direct and Indirect Revenue Streams

A significant portion of the economic benefit was derived from visitor spending on non-race-related activities. Attendees at the Grand Prix in 2024 stayed an average of 3.7 nights and spent over \$2,400 each on accommodations, food and beverage, shopping, local transportation, gambling, and entertainment. This expenditure does not include the cost of Grand Prix tickets, thus reflecting the direct economic benefits to Las Vegas from visitor spending outside of the race itself. Clearly, fans who traveled to Vegas to experience the thrilling Grand Prix also indulged in the various other activities that Vegas is iconic for, illustrating the widespread impact of the event. Examining the Grand Prix itself, event-specific spending in 2024 amounted to \$556 million, which included \$220 million spent on vendor and employee wages and the remaining \$378 million allocated to event infrastructure, operations, and hosting. Hotel occupancy rates during the Formula 1 weekend in 2024 reached 87 percent, an increase from the 80 percent recorded during the 2023 event. This rise indicates a growing appetite for Formula 1 within the city. However, it was clear that the economic benefits were not uniformly distributed across all resorts. Revenues were higher for properties located inside the 3.8-mile racecourse that ran on Las Vegas Boulevard, Koval Lane, and Harmon and Sands avenues, demonstrating that Formula 1 truly brought heavy tourism to Vegas - even more than the other facets that make Vegas such a popular destination.

Job Creation and Workforce Impact:

Direct Employment Opportunities

The Las Vegas Grand Prix has also served as a catalyst for job creation within the local economy. In 2024, the event supported 4,502 jobs in Southern Nevada. These positions encompassed a range of roles, including those in hospitality, security, logistics, and marketing, as well as jobs related to the infrastructure and operational aspects of the event. While specific job creation figures for 2023 vary across reports, with one mentioning over 7,700 anticipated jobs and another citing approximately 2,200 jobs related to race infrastructure development, the focus on 2024 indicates a significant ongoing contribution to local employment.

Type of Impact	Number of Jobs	Total Salaries and Wages (USD)
Direct	2,790	Included in total
Indirect	1,712	Included in total
Total	4,502	284,000,000

Note: The table reflects data from the 2024 Las Vegas Grand Prix economic impact report. From my research, the 2023 Grand Prix had even greater employment opportunities, given that it was the inaugural event.

Indirect and Induced Employment

Beyond the direct employment associated with the race, the Grand Prix also stimulates indirect and induced employment. The spending by Formula 1, the Las Vegas Grand Prix organization, their partners, and the visitors supports a network of suppliers and businesses within the local economy. This includes vendors providing goods and services for the event, as well as local businesses where employees of the Grand Prix and visitors spend their wages. In 2024, the total salaries and wages infused into the local workforce due to the Grand Prix reached \$284 million. This substantial figure highlights the broader economic impact on the community, extending beyond those directly employed by the event and into local businesses as well.



Funding the Spectacle - Investments and Resources:

Private Investment by Formula 1 and Liberty Media

Liberty Media, the parent company of Formula 1, has made substantial private investments to bring the Grand Prix to Las Vegas. This includes the purchase of a 39-acre site near the Strip for \$240 million in 2022 when the venue was announced as a future Formula 1 track and development began. On this land, they invested approximately \$260 million in 2023 to construct the permanent pit building and other infrastructure for the race, with total infrastructure investment potentially reaching close to \$1 billion. These investments demonstrate a significant long-term commitment to the event.

Furthermore, the development of Grand Prix Plaza is intended to be a year-round attraction, featuring experiences like F1 X, F1 Drive, and F1 Hub, which will continue to contribute to the local economy and maintain interest in Formula 1 even beyond the race weekend.1 Even if the Vegas Grand Prix were to be removed from the Formula 1 calendar at some point, these attractions would remain, generating economic activity for decades to come.

Public Sector Involvement

While most of the funding for the Las Vegas Grand Prix has been private, there has been some involvement from the public sector. Notably, there was a reported request in 2023 for \$40 million in public funds from Clark County to assist with an estimated \$80 million in infrastructure upgrades needed for the inaugural race. The Las Vegas Convention and Visitors Authority (LVCVA) has also played a role, reportedly entering into a three-year deal in May 2022, valued at \$19.5 million, to support the Grand Prix in 2023, 2024, and 2025.1

Additionally, Clark County provided the use of approximately 3.8 miles of public roads that constitute the race circuit at no cost to Formula 1. This public sector involvement highlights a collaborative effort to support this event, given its potential for significant economic returns for the region over several years.

The Social Media Halo Effect:

Celebrity Influence and Online Visibility

The Las Vegas Grand Prix has been widely viewed as a premier event attracting a high-profile audience, including numerous celebrities from various fields such as Hollywood, sports, music, and social media.

The presence of figures like Gordon Ramsay, Adele, Justin Bieber, Leonardo DiCaprio, Brad Pitt, Shaquille O'Neal, Rihanna, and many others generated considerable excitement and media attention. These celebrities often shared their experiences on social media platforms, reaching their vast followings and further amplifying the event's visibility and Las Vegas itself. The unique backdrop of the Las Vegas Strip, with its iconic hotels, vibrant lights, and the spectacle of Formula 1 cars racing through the heart of the city, provided visually compelling content that resonated widely online.¹ In addition, the utilization of the Las Vegas Sphere, which was used to play the Formula 1 Intro, creative videos “watching” the cars drive by, and special visualizations — all brought even greater attention and dazzle to the spectacular event.

One example is the celebration of legendary driver Max Verstappen's 4th World Championship (which he won at the 2024 race). This iconic combination of a globally recognized sporting event, a glamorous location, and celebrity endorsements created a significant social media buzz, enhancing the global profile of both the Grand Prix and Las Vegas as a leading entertainment destination that is poised to grow in the coming years of exciting Formula 1 action.

Media Impressions and Publicity Value

The social media impact of the Las Vegas Grand Prix has been substantial. From November 18 to 26, 2024, the event generated 33,700 stories and over 706 billion impressions, with an estimated publicity value of \$6 billion for the destination. Over the same period, social media reach related to F1, Las Vegas, and the race reached 3.9 billion. In 2023, the race week reportedly recorded 16 billion global social media impressions. The LVCVA calculated that the inaugural event produced 48.6 billion worldwide impressions.

These figures significantly surpass the typical annual media impressions for Las Vegas, which usually range between a relatively modest 3 billion and 6 billion. Some reports even suggested that the announcement of the Las Vegas Grand Prix generated four times more social media activity than the announcement of the 2024 Super Bowl in the same city.

Given how the Super Bowl is largely an American event while Formula 1 is still growing in the U.S., this figure illustrates just how immense the impact of the Vegas Grand Prix is. This level of online engagement underscores the Grand Prix's effectiveness in capturing global attention and generating significant publicity for Las Vegas.

Long-Term Economic Prospects and Challenges:

Sustainable Growth and Recurring Benefits

Formula One has expressed a clear intention to establish a long-term presence in Las Vegas, with reports indicating ongoing talks between the Las Vegas Convention and Visitors Authority and F1 regarding a long-term deal that could extend through the mid-2030s. This commitment suggests that the Grand Prix is envisioned as a recurring annual event that will continue contributing to the local economy for years to come.

The year-round operation of Grand Prix Plaza, featuring F1-inspired attractions, may also play a crucial role in sustaining interest in the sport and providing ongoing economic benefits to the city beyond the race weekend.¹ Furthermore, infrastructure improvements made for the race, such as road repaving and utility upgrades, can potentially enhance the city's infrastructure in the long term, benefiting residents and visitors alike.

Advantages Specific to the Las Vegas Track

Economically speaking, one of the most significant advantages of the Las Vegas track, even relative to other Formula 1 tracks, is that it is a “street track.” Essentially, unlike many of the other circuits around the world, such as Silverstone Circuit in England or Autodromo Nazionale Monza in Italy, which are permanent racetracks, the Las Vegas Strip Circuit is composed of the streets of Vegas itself — it is not a purpose-built racetrack. This entails that after the Grand Prix weekend is completed, while the other circuits can only be used for other racing series occasionally throughout the year, the Vegas circuit can be reverted to public roads and home for local businesses again until the next year's Grand Prix.

Additionally, relative to other Formula 1 street tracks, a significant advantage that the Vegas Strip Circuit offers is that it delivers a substantially more entertaining race experience filled with thrilling overtakes and ingenious strategies. An issue with many street circuits on the Formula 1 calendar, such as Circuit de Monaco and the Baku City Circuit, is that due to their reliance on regular streets, they are too narrow and lead to potentially boring races with little to no action or overtaking. Vegas is the exception to that, having provided thrilling races and nonstop action in both the 2023 and 2024 races.

In 2023, the historically dominant Max Verstappen won a hard-fought race, while fellow podium finishers Sergio Perez and Charles Leclerc battled until the finish line — with plenty of action behind them as well. In 2024, the action picked up where it left off, and Vegas was able to witness the crowning of 4-time World Champion Max Verstappen. These dramatic, action-packed races ensure that this race will never lose its appeal and will continue to provide the significant economic activity it has brought in its first two races.

Perhaps most importantly, during the Grand Prix itself, viewers of the race, both in-person and online, can easily observe local businesses as the cars traverse the circuit and approach famous buildings within the city, offering free advertising and enhancing the outreach of Vegas entrepreneurs.

Potential Drawbacks and Disruptions

Despite the significant economic benefits, the Las Vegas Grand Prix has also presented certain drawbacks and disruptions, particularly for local businesses and residents. The extensive setup and teardown phases, along with road closures during the race weekend, have been frustrating and have reportedly led to revenue losses for some businesses, especially those directly affected by the circuit layout. Several corporations even filed lawsuits against Formula 1 and Clark County, claiming millions of dollars in lost revenue due to the race.

Additionally, economists have raised concerns about the methodology used in economic impact reports, arguing that they often focus on gross spending rather than actual net gains and may not adequately account for negative spillover effects. While the inaugural year in 2023 faced some teething issues and logistical challenges, improvements were made in the second year to minimize disruptions.

However, as demonstrated by the statistics in this article, the gains from this exciting event more than offset these disruptions, and as Formula 1 returns to Vegas year after year, these processes will inevitably be smoothed out.

Las Vegas vs. the World - Comparative Economic Impact:

Benchmarking Against Other Major Sporting Events

The economic impact of the Las Vegas Grand Prix can be benchmarked against other major sporting events hosted in the city. Super Bowl LVIII, held in Las Vegas in February 2024, generated an estimated \$1 billion in economic impact.

the inaugural Las Vegas Grand Prix in 2023 reportedly surpassed this figure with its \$1.5 billion impact, proving that Formula 1 events can provide significant economic benefits through tourism, hospitality, and global exposure

Event	Year Held in Las Vegas	Reported Economic Impact (USD)
Las Vegas Grand Prix	2023	1,500,000,000
Super Bowl LVIII	2024	1,000,000,000
Las Vegas Grand Prix	2024	934,000,000

Contextualizing with Other Las Vegas Mega-Events

In addition to major sporting events, Las Vegas also hosts numerous large-scale conventions that contribute significantly to its economy. The Consumer Electronics Show (CES), an annual multi-day event, has historically reported a substantial economic impact on the city, with figures reaching billions of dollars over its history and hundreds of millions annually.

While the Formula 1 Grand Prix delivers a significant economic impact within a single weekend, the cumulative effect of various conventions held throughout the year is also a crucial component of Las Vegas's economic vitality. The nature and duration of these events cater to different audiences and generate varied patterns of economic activity.

Formula 1 is attempting to spread its influence into both fields, though, with its newly built attractions in Vegas that run year-round for fanatics to experience the thrill of the fastest cars in the world.

Tax Revenue and Community Contributions:

Generated Tax Revenue

The Las Vegas Grand Prix has proven to be a significant source of tax revenue for state and local governments. In 2024, the event generated \$45 million in tax revenues. This figure was higher in 2023, reaching \$77 million. The tax revenue generated in 2024 included contributions from live entertainment taxes, room taxes, sales and use taxes, gaming-related taxes, property taxes, and commerce taxes.

This revenue stream benefits various entities, including the state general fund, Clark County's general fund, and the Clark County School District, providing a positive social impact beyond tourism and jobs.

Allocation of Funds and Community Benefits

A portion of the tax revenue generated by the Las Vegas Grand Prix is explicitly allocated to community benefits. For example, in 2024, approximately \$15-16 million of the \$45 million in tax revenue was set aside for schools across the state. This is a slight decrease from the \$22 million allocated to schools in 2023, but it is still an admirable contribution that will continue for years.

Beyond tax contributions, the Grand Prix organizers have also engaged in other community initiatives, such as donating over 170,000 pounds of food and beverage items to local food banks and hosting local middle school students at the event to provide insights into STEM-related careers in motorsport.

The Grand Prix has also spurred investments in vocational training, collaborating with the Clark County School District and UNLV's School of Engineering to expose 600 students to behind-the-scenes operations and highlighting career opportunities in motorsport engineering and event management. Initiatives like these align with F1's commitment to fostering local talent and positively impacting the world aside from pure entertainment, ensuring the event's legacy extends beyond racing and immediate economic gains.

Final Thoughts About The Las Vegas Grand Prix's Enduring Economic Footprint

The Formula 1 Las Vegas Grand Prix has undoubtedly made a significant economic impact on the local economy since its debut in 2023. The event has generated substantial revenue, created thousands of jobs, and contributed tens of millions of dollars in tax revenue for state and local governments. The social media attention garnered by the race, amplified by celebrity attendance and the iconic Las Vegas Strip setting, has provided invaluable global publicity for the city.

While the initial year saw a more considerable overall economic impact due to significant infrastructure investments, the recurring nature of the event and the development of year-round attractions at Grand Prix Plaza suggest a promising long-term economic outlook.

However, the Grand Prix has also presented challenges, including disruptions to local businesses and residents, and the economic impact assessments have faced critical scrutiny. Balancing the economic benefits with these drawbacks will be crucial for the long-term success and acceptance of the event within the Las Vegas community. Great strides have been made in making this a reality in the second year of the Grand Prix, but there is still work to be done.

Comparing the Grand Prix to other major events like the Super Bowl indicates its status as a top-tier economic driver for the city. As Formula One looks to solidify its presence in Las Vegas and the overall United States with a long-term deal, the Grand Prix is poised to remain an integral part of the city's identity as a global leader in sports and entertainment, leaving an enduring economic footprint on the local landscape.

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THE EFFECT OF THE USD TO COP EXCHANGE RATE ON THE REAL ESTATE PURCHASING POWER OF COLOMBIANS IN MEDELLÍN

BY RACHEL WILLIAMS, APRIL 2025

FINANCE COMMITTEE, CHAIR

Why is the Colombian Peso so weak when compared to the United States Dollar?

At the time of writing this article, 1 United States Dollar (USD) is equivalent to 4,391.52 Colombian Pesos (COP) (Money Converter, n.d.). When hearing that statistic many may ask why? Why is the Colombian Peso so weak compared to the United States Dollar?

The Colombian economy has been struggling for decades for three main reasons: it depends on the exchange of unstable resources, has a history of unreliable political leaders, and is currently facing a big fiscal and commercial deficit (Universidad Nacional de Colombia, 2021).

Regarding the Colombian economy's dependence on unstable resources, the economy heavily relies on the exportation of a few products, especially oil (International Monetary Fund Western Hemisphere Department, 2023). Overall, this reliance is detrimental because the demand for these goods is variable and depends on seasonal trends and the economic situation of other countries. Since Colombia does not have a diversified export base, there is low global demand for the COP which weakens the currency.

In terms of Colombia's history with unreliable political leaders, the leaders of the Colombian government have a history of committing scandals. Take the May 2024 embezzlement of disaster relief funds by the regional development advisor (Worldview, 2024) for example. The corruption within the government spills into other institutions. For example, it is thought that bribery, money laundering, embezzlement, nepotism, extortion, and drug trafficking run rampant in Colombia because the police, military, and total government hierarchy are deeply corrupted. The political turmoil within Colombia enables uncertainty which generates less trust and demand for the COP.



Concerning Colombia's large fiscal deficit, after the COVID-19 pandemic, Colombia invested billions of COP into stimulus policies to decrease poverty, human capital, and climate challenges (World Bank Group, n.d.). The Colombian government did not have the funds to invest in such programs and is now facing a significant debt burden. The Colombian deficit situation further adds to the perception of instability around the Colombian economy which further decreases demand for COP.

Thus, Colombia's current economy is unstable because of its reliance on a small number of exports, its political instability, and high fiscal deficit. Due to the country's current state, the Colombian Peso has decreasing demand on the global market and is a weak currency.

What is the Impact on the Real Estate Purchasing Power of Colombians in Medellín?

Due to the instability of the Colombian economy and the weakness of the COP, the average Colombian makes a minimum wage of about 1.3 million COP or approximately 295.96 USD per month (WageIndicator, 2024). To give some context, the average American makes about 6,300 USD per month as a part of the middle class and the minimum wage is 1,300 USD per month. The average cost of a one or two bedroom house in Colombia is \$376 - more than the average Colombian makes in a month. In tourist cities, such as Medellín, housing is even less affordable for Colombians as many Americans purchase homes with their stronger currency to profit from tourist Airbnbs or VRBOs.

For example, if one looks on realtorinternational.com (n.d.) for housing for sale in Medellín here is what they might find:

- A 6 bedroom, 7 bathroom house worth 1.18 billion COP or around 269,000 USD
- A 5 bedroom, 2 bathroom house worth 430 million COP or around 100,000 USD
- A 3 bedroom, 1 bathroom house worth 113 million COP or around 26,000 USD (the cheapest house on the site on November 23rd, 2024)
- A 3 bedroom, 2 bathroom apartment worth 3 million COP per month or around 700 USD per month
- A 3 bedroom, 2 bathroom apartment worth 770,000 COP per month or around 175 USD per month (the cheapest apartment on the site on November 23rd 2024)

As one can see, only the cheapest apartment at 175 USD per month on realtorinternational.com (n.d.) is affordable for the average 1 income Colombian making 295.96 USD per month or the average 2 income Colombian family making 591.92 USD per month. In contrast, the bottom 3 options are affordable to the average American making 6,300 USD per month. This affordability has been attracting more and more Americans annually as word gets out (Macia, 2024).

Thus, the USD to COP exchange rate significantly influences the dynamics of the Medellín housing market and in turn the affordability of housing for Colombians. It is essential that Colombian policy makers recognize this correlation and attempt to revise policies that either increase the value of the COP, decrease housing costs, or increase wages.

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THE IMPACT OF INFLATION ON SAVINGS AND INVESTMENT

BY DEEPAK BADRI, NOVEMBER 2024

FINANCE COMMITTEE, CHAIR
SPORTS COMMITTEE

Inflation — the rise in prices over time — is widely regarded as a key puzzle piece of an economy. The correct amount of inflation can be effective in the growth of an economy, but an excessive amount is detrimental.

But how does inflation affect savings and investment? The purchasing power (or real value) of money goes down as inflation increases. This relationship shows how the fluctuation of inflation changes how people save and spend their money.

Specifically, regarding savings, inflation is a big factor in determining what method of saving is best for optimal value. For example, the pros of keeping money in a low-interest savings account are that it is a safe place to store money and for it to grow at a small interest rate. However, with higher inflation rates, this could mean that the inflation rate could be higher than the nominal interest rate of the savings account. So, according to the CFI, the Fisher effect says this change would lead to the real interest rate (interest rate adjusted for inflation) being below 0%, so one would actually be losing money by using low-interest savings accounts. This would lead to money holders finding it in their best interests to save their money in various inflation-protected assets instead. Depending on the preferences, some choices would include gold or real estate.

On the other hand, for investments, people's mindsets also change based on inflation. Their mindset — if looking to invest — should be based on real returns. So, like savings accounts, bonds are low interest rates, but safe options. However, the downside of both of these are that inflation erodes the value of the assets. Since both options come with fixed interest rates, money holders should look to invest in real assets because their value rises with prices. However, according to the Federal Reserve Board, inflation also creates uncertainty in capital investments and consumers' personal investments, which must be taken into

account. Overall, inflation reshapes financial priorities for companies and people, emphasizing the protection of purchasing power under changing economic conditions. This is through the effect inflation has on various interest rates, which basically determines if how much saving and investing should be done and with which assets. In the end, moderate inflation is part of a healthy economy, but too much of it is bad for everybody.



HOW SPORTS AFFECTS LOCAL ECONOMIES

BY SIDDHARTH YERAPOTINI AND AADIT BHAVSAR, APRIL 2025

FINANCE COMMITTEE



The sports industry is one that is growing in influence, and as a result, it is common to see substantial financial impact on the economy. From increased tourism to local business expansion, sports as a whole is now big enough to greatly impact a city's economy, but even further, it can also alter an entire country's economy.

There are several questions surrounding this topic, all of which will be investigated throughout this article. These questions can include doubts surrounding how large prestigious sporting events impact the economy in the short term and the long term, as well as how cities are impacted by the introduction of entirely new sports franchises over time.

In the sections to come, we investigate the impact of sports on local economies, examining job creation, venue construction, impact on local businesses, and more from the perspective of newly integrated sports franchises as well as individual mega-events in sports.

Sporting Events:

First, let's investigate the impact of major sports events around the world. Sporting events play a major role in the economy of many countries, leveraging the deep passion and everlasting loyalty of fans to peak excitement and hype during major events. Aside from the thrilling entertainment, many businesses see this as an opportunity to greatly expand on their profits, and many potential workers find lasting job opportunities. In this section, we investigate two of the greatest shows in the world - the Super Bowl and the World Cup!

Super Bowl LVI in LA

The 2021 Super Bowl LVI at SoFi Stadium in Inglewood delivered a mix of short-term economic gains and enduring debates about the value of mega-events. Hosted for the first time in Los Angeles since 1993 and featuring the hometown Rams - something that has only occurred twice in the Super Bowl - the game generated an estimated \$234-477 million in regional economic activity, driven by visitor spending on hotels, dining, and entertainment. Over 150,000-225,000 hotel room nights were booked, contributing \$12-22 million in local tax revenue, while small businesses in sectors like hospitality saw a much-needed post-pandemic boost.

The "Super Bowl LVI Teammate Program" created 2,200 - 4,700 temporary jobs in logistics, hospitality, and event operations, prioritizing local hires. While these roles provided immediate income, critics highlighted their short-lived nature and limited impact on systemic unemployment. Infrastructure investments centered on the \$5 billion SoFi Stadium, a privately funded project expected to generate \$670 million for Inglewood's general fund over 25 years. However, public costs emerged through municipal coordination for transportation and security, which diverted resources from other community needs.

The Rams' historic home-field victory amplified local engagement, with merchandise sales and watch parties spurring significant spending. This "home team effect" bolstered Los Angeles' reputation as a sports hub, aligning with its 2028 Summer Olympics preparations as well.

However, studies have noted that Super Bowls rarely produce sustained economic growth, as tourist spending often displaces regular visitors rather than creating net new revenue - after the Super Bowl and celebrations are over, much of this revenue goes away, decreasing to the levels of the regular NFL season for several years until the Super Bowl returns to that stadium.

Dr. Dre and Snoop Dogg's halftime show celebrated L.A.'s hip-hop legacy, driving a 600% streaming surge for performers and pop-up events in affluent areas like Hollywood. However, smaller businesses in underserved neighborhoods saw minimal gains, underscoring persistent inequities in event-driven economic distribution. Particularly in areas such as L.A., where there are a widespread range of neighborhoods in terms of economic status, this is a persistent issue.

Academic analyses reveal consistent gaps between NFL projections and reality. Economists Brad Humphreys and Victor Matheson estimate net impacts closer to \$92-150 million, far below league claims, due to substitution effects and revenue leakage. In Los Angeles, where tourism already generates \$40 billion annually, the Super Bowl's contribution represented a modest 1.2% sectoral increase.

While the game provided visibility and short-term stimulus, its legacy hinges on SoFi Stadium's ongoing use for concerts, soccer matches, and other events. As Los Angeles eyes the 2028 Olympics, in which flag football will make its first Olympic appearance, balancing mega-event investments with community-driven development remains critical to ensuring equitable, long-term prosperity.

World Cup 2022 in Qatar

The 2022 World Cup in Qatar is another case of a major sporting event having a major impact on a local economy in the short term and the long term. Spending in preparation for the World Cup is estimated to be \$200 billion across a decade. This money was used in developing every aspect of soccer that a nation can have. Qatar did not have stadiums that were able to handle the capacity of a single World Cup game, let alone an entire tournament's worth of games. The stadium construction costs alone were \$6.5 billion.

In addition to stadium construction, they had to do a full overhaul of the entire infrastructure of major cities to support tourism that would result from a World Cup. Qatar also put billions into the development of the players that would ultimately represent Qatar at the World Cup.

They funded the Aspire Academy that went on to produce 18 of the 26 players that would play for the Qatar National Team in 2022. Needless to say, an immense financial burden was taken on by Qatar to hold the honor of hosting a World Cup. The benefit to the country is most visible in its increased prestige, but the true impact to the local economies is yet to be seen.



Financial costs previously mentioned were not the only cost that Qatar would face to host this tournament. The human labor required to prepare Qatar for the World Cup resulted in unfair treatment, dangerous working conditions, and, in many cases, death. While the exact death count is unknown, it is estimated to be around 6,000 while some news outlets claim an even higher figure. Conditions for all workers were very poor with many facing delayed or unpaid wages and were unable to leave the country to find work due to their status as workers. Others noted forced labor combined with hours of work in temperatures soaring above 100°F. The costs of preparing the country for the World Cup go far beyond just the monetary expenses.

In the short term, the Qatar World Cup made a significant positive impact on the economy. Tourism spiked, advertisement revenue came in, brands flew in from all over the world, and local businesses had more customers than they could ever handle. Neighboring nations also saw a temporary benefit as tourism spiked in these countries as well. The UAE saw a significant increase in tourism as a result of this World Cup. Tourism spending and other related revenue is estimated to be almost \$4 billion accounting for 1% of Qatar's total GDP for 2022. The rate of hotel bookings was up 276% from the previous year. Overall GDP grew by 4% and the construction industry grew 20%. A total of \$20 billion was put towards the economy as a result of all factors surrounding the Qatar World Cup, showing that the money made is a major financial injection.

Understanding the long term impact of the World Cup on Qatar is not so simple. Building and maintaining infrastructure to accommodate a temporary tourism spike that results from an event such as the world cup, is not sustainable.

Qatar is planning on tourism tripling in order to be able to justify the costs of having such infrastructure. While this goal is not impossible, it is unlikely and if it is not met then it makes these costs unreasonable. The stadiums used to host all the World Cup games are now out of commission and essentially serve no purpose. Qatar was hoping the World Cup would lead to a spread of soccer in the culture of Qatar but it has not had such an effect meaning the sport is still stagnant in the country despite the billions of dollars poured into it. The effect of the World Cup long term looks marginally negative, with the cons outweighing the pros more year by year.

Relocation of a Team:

Another major sporting occurrence that can drastically change the local economy is the relocation of a franchise. The relocation of a franchise can dramatically impact the local economy and there are many factors that go into deciding where a team will go. Data is analyzed about how much of the population is in the target demographic, the median income of the area, whether or not there are other sports franchises in the area and more.

Furthermore, there are two big factors of the city that can impact how much the relocation of a franchise affects the local economy and that is whether it is a big market or small market city. Big market teams are teams in densely populated cities like Los Angeles, New York City or Boston. These teams are often better money makers as they have more of a population with more spent on merchandise, more advertising revenue and broader reach.

Small market teams are teams in less populated areas with less mass appeal like Oklahoma City, Charlotte, Green Bay and Buffalo. In these cities, the culture is often built around the team and the fans are very loyal as it feels more personal in these smaller areas. With that foundation in mind, we can begin to understand how the impact of sports franchises in these two types of cities can differ with two cases examining each situation. The Oklahoma City Thunder being the small market, and the Las Vegas Raiders being the big market.

Oklahoma City Thunder

In 2008 the Seattle Supersonics underwent a complete rebranding and relocation moving from Seattle to Oklahoma City becoming the Oklahoma City Thunder. Being a small market team, fans in Oklahoma welcomed this move with open arms, even voting in a tax that allows public funding to contribute to the building costs of a new stadium. The fans are loyal and care deeply about the team and it shows in attendance and in the numbers.

The impact of this franchise on the city is not to be taken lightly. Moving out of Seattle cost the city more than \$12 million directly from the loss. Seattle lost revenue that was directly picked up by Oklahoma City and it has completely changed the way Oklahoma City identifies itself culturally and through their economic output. As a result of the operations of the Thunder and the maintenance of Paycom Center, the Thunder's arena, we see an economic impact of \$590 million. This includes over 3,000 jobs created with nearly \$300 million in labor income being supported.



Tax revenue created alone is \$30 million through arena, county, school district, and state taxes. The annual impact from tourism and visitor spending is estimated at \$77 million, bringing substantial tourism revenue to a place that previously would receive very little.

If the Thunder reach the playoffs, the fans show out arguably more than any other fan base in the league. In the 2012 NBA Finals, the Oklahoma City Thunder took on Miami Heat and the fans showed out in such strong fashion they earned a reputation for being a very tough crowd to play in due to being the loudest fans in the league. Despite the Thunder losing that series, the fans showed their strength through the aforementioned crowd environment and economic benefit. In home playoff games, they experience an economic boom of \$1 million per game as a result of stadium attendance, merchandise sales and visitor spending. Being a team in a small market, you may not generate the mass appeal but one thing is for sure, your local fans will be loyal to the bone and that will bring you sustainable revenue.

Long term, this relocation decision continues to be an undeniable success for Oklahoma City. Oklahoma City has seen a 7% increase in economic activity compared to pre-Thunder numbers and this figure is expected to continue to grow as the team becomes more established in the community. The introduction of the Thunder has benefited the community in different ways including the retention of young high earners, and the expansion of local businesses.

With substantial economic growth we see talented young workers opt to stay in Oklahoma City making the city a more appealing destination for other young workers and companies. Previously, the city had a problem of top talent consistently leaving the city in pursuit of more lucrative cities to live and work but that is being solved, in part, by the Thunder. With rising tourism, local businesses see sustainable growth in revenue leading to more businesses being created and more economic impact. All these factors snowball together to completely change the economic status of Oklahoma City making it more impactful, both financially and culturally as a residential and commercial hub.

Las Vegas Raiders

The relocation of the Las Vegas Raiders from Oakland to Las Vegas has brought about a significant economic transformation for both cities. Las Vegas has experienced a considerable economic boost, primarily driven by the \$1.9 billion Allegiant Stadium.

The stadium's construction phase generated approximately 18,700 job spots, and its ongoing operations are projected to sustain or create around 6,000 permanent jobs in Southern Nevada. This job growth has contributed to an 11.7% increase in Las Vegas's resident population between 2018 and the end of 2022. Although other factors may have contributed to this immense increase, it cannot be denied that the job creation by the Raiders played a significant role.

Tourism in Las Vegas has also surged. Allegiant Stadium ranked as the top stadium in the U.S. and second globally for live events in 2024. In the past year, it attracted 657,000 fans across 15 major events, generating \$119 million in ticket sales. Since opening to full capacity in July 2021, the stadium has been linked to \$2.29 billion in revenues and out-of-town visitor spending. This includes direct spending at the stadium and visitor expenditure at hotels, casinos, and restaurants. Overall visitor volume to Las Vegas reached 41.7 million in 2024, a 2.1% increase from the previous year. Hotel occupancy rates averaged 83.6% in 2024, which is among the highest figures in the nation.



In contrast, Oakland has faced economic setbacks. Following the Raiders' departure, the labor force population in Oakland's accommodation and food services sector decreased by 9.68%. By June 2020, Oakland still had nearly \$190 million due from the Raiders for an unpaid loan from 1995. While the immediate economic impact was negative, Oakland is focusing on redeveloping the Coliseum site, with a potential \$5 billion project that includes housing, a convention center, hotel, restaurant, and a sporting arena. The city sold its 50% stake in the Coliseum to the African American Sports and Entertainment Group (AASEG) for \$105 million, with plans for AASEG to acquire the remaining 50% from the Oakland A's. With the departure of the Raiders, the Oakland Athletics, and the recently-dominant Golden State Warriors, Oakland's sports scene has taken a dramatic hit, and the city has a lot of work to do to regain the revenue they previously earned through sporting events.

The long-term implications suggest continued growth for Las Vegas, aiming to diversify its economy beyond tourism by leveraging its new status as a sports and entertainment capital. Oakland, while facing an immediate economic void, is looking towards redevelopment and attracting new businesses to revitalize its economy. The Raiders' move has undeniably created a tale of two cities, with diverging economic trajectories.

Conclusion

Sport is at the heart of culture in America. We play sports as kids and we love the game far into our adult lives. The love for the game is something that will persist in America and as a result, it will always have significant financial impact.

It is clear that sporting events are significant enough to people that it causes a substantial spike in jobs, revenue and the overall economy in the short term. For events like the Super Bowl where the infrastructure to host is already in place, we can see that these short term benefits to the economy tend to be the main impact left behind even in the long term. In these cases, the prestige is worth the cost because there is also significant financial return.

For events like the World Cup, however, the infrastructure required for this is very specific to this event and cannot be utilized the same after. This means in the short term there is great financial benefit but in the long term the costs are no longer justified and the impact is less positive. In these cases, it is a double edged sword and the short term financial gain may not be worth the long term loss.

In the case of franchise relocations, we've seen that the relocation of a team greatly benefits the recipient city and sees the city that was left behind lose millions of dollars. This was the case in Seattle and Oakland, as we previously mentioned. Sports fans can essentially sustain local economies by passionately supporting their favorite teams because the love for the game does translate to economic benefit, whether it's a small or big market.

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THE EFFECT OF SOCIAL MEDIA ON HERD MENTALITY AND MARKET EFFICIENCY

BY ELIZABETH BOLTON, APRIL 2025

FINANCE COMMITTEE

Information Asymmetry addresses the discrepancy of information available to different parties in a decision-making process. In relation to the stock market, information asymmetry refers to some investors having more access to information that is relevant in valuing than other investors – a condition that this results in market inefficiency.

The introduction of social media in the early 2010s has made information more readily available to broader audiences. While social media may help reduce information asymmetry, its tendency to promote herd mentality amongst uninformed investors may have adverse consequences on market efficiency.

Herd Mentality

Herd mentality is the human impulse to follow the actions of others as a form of “fitting in” – in other words, it’s an extension of every college student’s “fear of missing out” (FOMO). The implications of this thought-process is nothing new – especially in terms of the stock market. In fact, herd mentality has played a significant role in many previous financial crises including the 17th-century tulip fever, and the internet bubble of the early 2000s.

Social media enhances this “so-called” herd mentality effect because of each platform’s algorithms designed to keep users on the app. At the most basic level, this means that users will receive a feed of videos based on previous videos that they have viewed, and/or liked; this can create a type of “echo-chamber.” An echo chamber – an environment that reinforces an individual’s confirmation bias and limits exposure to diverse perspectives. In short, users are only exposed to content that they want to view, rather than content that reflects objective truths. This influx of biased information can exacerbate perceived market risks, potentially leading to widespread panic and uninformed investment decisions.

Effect on Market Efficiency

The online presence of herd mentality can have negative impacts on the market’s efficiency. Market efficiency is the ability of market prices to accurately reflect all relevant information. There are three recognized forms of market efficiency: weak, semi-strong, and strong. In weak form markets, the use of past pricing information is not helpful in predicting future pricing trends. Semi-strong market prices reflect all public current, and past information – note that private information is not included in these markets. If all markets were strong-form, this would mean that all information – past, present, public, and private – would be reflected in the market prices, and therefore, there would be no way to gain an unfair advantage in the markets ([Investopedia](#)). Although there is much debate over the current form of market efficiency, many claim that the semi-strong form is the most common.

However, as social media increasingly fosters environments in which investors are subject to increasing amounts of misinformation and extreme views, market efficiency is at risk of worsening. Moreover, how social media affects market efficiency may disproportionately affect retail investors. Retail investors are individuals that invest for personal gain, and future financial gains, but do not have any professional backing.

In contrast, institutional investors, and accredited investors are individuals with a high net-worth, and/or licensed financial professionals that have extensive experience dealing with investments and the financial world in general. Given this information gap between institutional and retail investors, retail investors are more likely to be affected by the negative impact of social media on market efficiency, because of their lack of experience in market settings and tendency to be influenced by fake news online from non-accredited sources.

Conclusion

All in all, in an effort to connect individuals with similar interests – spawning thousands of online micro-communities – social media holds the unintended power of having adverse impacts on financial markets in terms of

market efficiency. Market inefficiencies – such as those like information asymmetry – can affect uninformed, inexperienced retail investors, leading to poor financial decisions and diminished trust in the market.

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KLARNA'S IPO AND EXCLUSIVE DEAL WITH WALMART

BY IRIS SKLAVOUNOU, APRIL 2025

FINANCE COMMITTEE

Klarna, a Swedish fintech company, will replace Affirm and become the exclusive provider of buy now, pay later (BNPL) services for Walmart's fintech startup, OnePay. This partnership follows closely after Klarna's announcement of its preparations for a U.S. Initial Public Offering (IPO).

Under this agreement, Klarna will offer loans to Walmart customers both in-store and online, with terms ranging from 3 to 36 months and interest rates between 10% and 36%. OnePay will manage the customer experience through its app, while Klarna will handle the loan underwriting. They anticipate that this new service will be implemented in the coming weeks, and there are plans to expand it across all Walmart platforms by summer.

Klarna hopes that this strategic move will enhance its market position and potentially increase its valuation, which has experienced fluctuations in recent years.

Moreover, as part of the agreement, OnePay has the opportunity to invest in Klarna by acquiring over 15 million shares at an average price of \$34 each through warrants.

The partnership between Klarna and Walmart, paired with Klarna's upcoming IPO, highlights the dynamic nature of the e-commerce and fintech sectors. Looking forward, we might see increased competition in the BNPL space, either through more partnerships between retailers and fintech companies or through greater innovation in consumer lending products.

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THE EVOLUTION OF MEZZANINE DEBT AND MARKET CYCLES

BY CHARLIE PIHART, APRIL 2025

FINANCE COMMITTEE

Since the 2008 financial crisis, regulators have imposed stricter capital requirements on banks. As a result, traditional lenders have chosen a more risk-averse path, leading to lower loan-to-value (LTV) ratios across the traditional lending board. This has led to notable growth in private credit markets, a trend that isn't likely to slow down any time soon. According to Morgan Stanley's 2024 Private Credit Outlook, the private credit market is projected to grow to a staggering \$2.8 trillion by 2028, a significant increase from the 2024 \$1.5 trillion market, which was already an increase from the 2020 \$1 trillion market. Additionally, current market conditions, most notably high interest rates, have resulted in an increase to the overall cost of debt, making typically more expensive private debt relatively less expensive than before compared to higher rate traditional loans. This reality has resulted in an increased demand for mezzanine debt, providing private lenders with a unique opportunity.

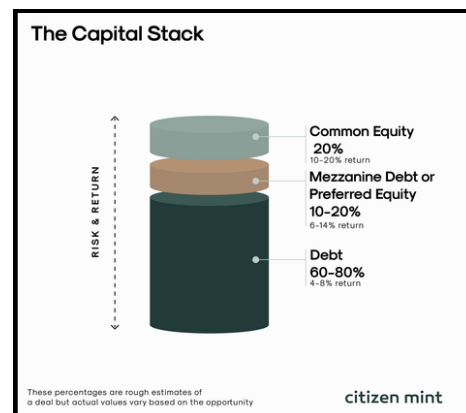
It's important to note that private credit is unregulated capital, currently a sort of 'wild west'. As Howard Marks, co-founder of Oaktree Capital Management, explains in the April 7, 2025 podcast episode of "Capital Allocators", private credit is the most recent addition in the alternative investment world. Historically, the market has acted in cycles, resulting in new ways to invest, alternative investments, and adaptation. As explained in the same podcast episode above, the below graphic explains the timeline of previous market cycles and how we've gotten to where we are today.

Year(s)	Event / Trend	Impact / Turning Point
late 1960s-Early 1970s	Nifty Fifty Era	Investors believed dominant companies justified any price, seen as "one-decision" stocks.
1973-1975	Nifty Fifty Crash	Market learned that it doesn't matter what you buy, it matters what you pay.
1976-1978	High-Yield Bond Market Opens	Before 1976, non-investment-grade companies couldn't issue bonds. By 1978, high-yield bond issuance began to flourish.
1984-1985	Rise of LBOs	Companies borrowed up to 95% LTV to acquire others. LBOs became hot.
1990-1991	S&L Crisis & LBO Collapse	Many leveraged deals failed. LTVs dropped to around 75%. The industry rebranded as Private Equity.
1995-1999	Senior & Leveraged Loan Boom	Institutional leveraged loan market takes off, increasing access to flexible credit structures.
2001-2002	Tech Bubble Burst	Fed cut rates to stabilize the downturn. With stocks and bonds out of favor, interest in alternatives surged.
Early 2000s	Rise of Hedge Funds	Hedge funds boom as the next "smart money" alternative, later becoming too large to consistently outperform.
2005-2022	Private Equity's Golden Era	Private equity dominates institutional portfolios and becomes the "can't miss" strategy.
2008-2009	Global Financial Crisis	Major banking reform (Dodd-Frank, Basel III) leads to reduced bank lending and stricter credit oversight.
2010-2011	Rise of Private Credit	Private lenders fill the post-crisis lending gap. Growth of direct lending, mezzanine, and opportunistic credit.
2022-2023	Interest Rate Spike & Credit Reshuffle	Fed hikes rapidly to combat inflation. Public markets correct; private credit becomes even more attractive.
2024-2025	Private Credit Matures, Crowd Concerns Rise	Private credit surges, but concerns emerge around valuations, risk concentration, market transparency.

Mezzanine Debt Overview

Mezzanine debt, or "mezz debt," is subordinate debt or a second loan that increases total LTV and decreases the total amount of equity needed for a project. Because of the subordinate position to senior debt, mezz debt carries a higher risk, resulting in a demand for higher returns. This debt is typically issued by private lenders (private credit funds, business development companies, mezzanine-specific debt funds, or private equity backed credit arms). These loans demand higher rates than senior debt but are secondary in priority regarding payment (senior debt is paid first, then mezz debt, then equity payouts). Mezz financing essentially bridges the gap between debt provided by senior lenders and the equity a sponsor is willing and/or able to raise.

Preferred equity, by contrast, is an equity investment that sits below all debt (including mezz) and doesn't require regular payments. Instead, it pays distributions only when the project performs and has no collateral rights, but may offer more upside. Preferred equity is different from common equity in that it has priority in payouts but usually no voting rights. Preferred equity holders receive fixed dividends before common shareholders get anything, but they typically don't participate in the full upside like common equity holders do. Preferred equity sits in the middle, less risky than common equity, but with less control and upside. The capital stack figure below shows an example (in real estate) of priority and returns.



From the perspective of the mezz lender, it's possible to get significant returns, higher than senior debt rates and sometimes even higher than equity investors. This is important because mezz debt has a higher priority (lower risk) than equity payouts. It's not uncommon for mezz debt to carry interest rates in the mid to high teens, sometimes even greater than twenty percent. Sponsors are willing to pay such a high price because it's still cheaper than raising additional capital. This gives sponsors the ability to use their saved equity in other areas, increase their total return on equity, or do deals they otherwise wouldn't have had the total equity to do.

Mezz debt is used by borrowers who've usually already exhausted the maximum senior debt possible but want to avoid diluting equity. Currently, mezz debt has provided a significant opportunity to borrowers, specifically in real estate, LBOs, corporate expansion, and major infrastructure/energy projects. In all cases, mezz debt fills a major financing gap left by the lower LTVs of senior debt.

With this in mind, mezz debt can carry significant risk. Because of the subordinate position, in a default, the mezz lender will only recover value after the senior debt is paid off. This may result in mezz capital being completely wiped out if the value only covers the senior debt. Mezz debt is typically unsecured, unlike senior debt, meaning it's not backed by specific collateral and instead only backed by the cash flows of the asset. Additionally, senior lenders aren't always comfortable with equity investors using mezz debt on top of their loan, as a major reason they originally lent a lower LTV loan was so equity investors would put up significant equity to prove they have skin in the game, reducing risk. Senior loan agreements are well within their rights to restrict additional borrowing within the original loan terms, sometimes resulting in less favorable terms for mezz lenders or a total denial of additional borrowing.

Overall, mezz debt provides a creative opportunity for sponsors to secure additional financing and a higher LTV. For lenders, mezz lending allows them to get equity-like returns with debt-like protections. In the following sections, we'll break down the benefits, drawbacks, and current market opportunities in four key sectors. Each sector has a current use and need for mezz debt providing an opportunity for both lenders and borrowers.

Real Estate

Benefits: Mezz financing in real estate enables developers and property owners to secure higher overall LTVs. By using mezz debt, sponsors can decrease their equity contribution.

As a result, this saved equity can be put towards additional deals, renovations, or developments. This can enable investors to enhance returns when property values appreciate because they maintain greater ownership using borrowed capital. Real estate loans are almost always non-recourse, meaning that in case of default, the senior lender gets the real estate asset and only the real estate asset as payment. Senior lenders aren't in the business of running assets, so default can usually result in a fire sale of an asset at a significant discount. Many real estate mezz lenders (think real estate private equity firms backed credit arms) are often also in the business of private equity and asset management. Because of this, and the fact that mezz lenders are in between the senior lender and equity investors, they often act as a reserve operator in case of default. This gives the mezz lender an opportunity to take over a distressed property at a discount. This scenario, considering the mezz lender is a seasoned operator, is also beneficial to the senior lender. It's important to note that this can also be a drawback, especially if a mezz lender doesn't have the resources or experience to properly act as back-up operator.

Drawbacks: Mezz debt is expensive, with interest rates typically ranging from 10-15%, significantly more expensive than senior loans. This increased debt service can strain a building's cash flow, resulting in more risk, especially when weaker market conditions arise. Mezz lenders are also taking on risk by being subordinate lenders. If property values decline or an asset fails, mezz lenders may lose all of their investment. Senior lenders can also complicate deals for mezz lenders by imposing restrictions in the original loan terms. Mezz debt can also attract risky lenders, creating a snowball effect of risk and potential losses.

Opportunity: Bank lending standards are tightening, resulting in an inability for real estate borrowers to secure significant senior financing. LTV ratios are lower right now, generally closer to 60%, leaving a large financing gap. This results in a great opportunity for mezz lenders, as property owners facing refinancing difficulties are willing to pay a premium for additional capital. As commercial real estate markets remain in flux and interest rates remain high and uncertain, mezz lenders can act now, receive favorable terms, and even get stronger protections compared to previous market cycles, as borrowers are willing to do it. Equity is scarce and senior debt is both relatively expensive and not sufficient. One example is a \$57.5 million loan from CIM Group's Real Estate Debt Solutions to refinance a four-building industrial property portfolio.

LBOs & Private Equity

Benefits: In LBOs, mezz debt can be a valuable tool for private equity firms to enhance returns by minimizing equity investment. Mezz debt can also offer higher flexibility of repayment, such as deferred interest payments or payment-in-kind (PIK), which allows interest to be capitalized (added to the principal) and paid later, typically when the firm sells the company or refinances the debt. This helps preserve cash flow, which can be necessary when acquiring a company that may not generate immediate excess cash to service high-interest mezz debt payments on top of senior debt payments.

Drawbacks: The high cost of mezz debt makes it more expensive than traditional senior debt. To compensate for higher risk, mezz lenders may require an equity kicker (most commonly warrants or profit participation), which is an additional financial incentive giving the lender upside if the company performs well. Warrants allow the lender the right to purchase equity shares in the future at a set price, typically based on today's value. Profit participation allows a mezz lender to negotiate a percentage of future profits upon a sale or IPO of the company. These kickers are dilutive to the sponsor's ownership stake, but provide mezz lenders a great opportunity for additional profit if a company succeeds. Subordination risk makes mezz lending more risky, because these lenders aren't the number one priority to get paid back. Excessive use of mezz debt can also lead to overleveraged deals, increasing the risk of financial distress.

Opportunity: Similarly to real estate, the fact that banks are scaling back on higher leveraged loans means many private equity firms are turning to private credit and mezz lenders. This has created a strong market for mezz investors, as we see demand for alternative financing remain high. The spread between senior loan rates and mezz rates has decreased, resulting in relatively cheap mezz debt options for sponsors. As private credit becomes a more popular option, competition among mezz lenders is leading to more flexible deal structures, benefiting borrowers. One example is Olympus Partners' acquisition of AmSec Holding Corp using mezz debt.

Corporate Expansion & Growth

Benefits: Compared to issuing new equity, which reduces ownership stakes, mezz financing is a non-dilutive way for growing companies to raise capital. This can be beneficial for businesses looking to expand without bringing in external and additional equity investors. Mezz financing is also beneficial for these growing businesses that tend to have limited tangible assets. This is beneficial because, as discussed earlier, mezz lenders typically rely on cash flow as collateral as opposed to hard assets.

Drawbacks: The largest downside is the high cost of borrowing. These high rates can put pressure on cash flow if growth isn't meeting expectations. Increased leverage can be especially risky for less distinguished companies, as taking on too much mezz debt can result in a higher likelihood of default, particularly if market conditions weaken. Additionally, if a company can't repay the mezz loan at maturity, they may be forced to refinance at an even higher cost or issue equity in the form of equity kickbacks.

Opportunity: The most general opportunity is again, an increase in demand for capital. Like every other example, mezz lenders are filling this gap. On top of banks scaling back on lending in general, senior loans typically require tangible collateral. On the other hand, mezz lending structures collateral around cash flows, providing a beneficial opportunity for both growing companies with fewer tangible assets to access more capital, and strong demand for mezz lenders to lend to these companies. One example is Liquidity Capital's \$450 million investment in expansion, including significant mezz debt.

Infrastructure & Energy

Benefits: Infrastructure and energy projects require significant upfront capital investment. Mezz debt can play an important role in reducing the equity burden of this investment. By adding mezz financing, developers or investors can better fund these massive projects with less equity dilution. Further, mezz debt aligns well with long-term project cash flows. Senior development loans, often with higher rates than traditional loans, are usually interest only during the development period and repaid after stabilization, during a refinance transition to a traditional loan. Mezz debt doesn't need to be paid off at stabilization and often includes PIK interest until stabilization. This creates flexible options during both the development process and into the hold-period of the asset.

Drawbacks: High leverage is also a major risk for the development and investment of infrastructure and energy projects. If a project faces cost overruns, delays, or revenue falls short of expectations, mezz lenders face significant risk. Infrastructure financing is also very complex, often including multiple layers of debt and equity as well as major regulatory inspection. Refinancing during distress can be a challenge considering this complex structure. Lastly, because these projects are often so massive, they require a significant amount of capital that lower-scale mezz lenders typically won't be able to provide.

Opportunity: Investment in infrastructure, data center demand, and clean energy transition projects are all at an all-time high. According to a 2025 Goldman Sachs report, global demand for power, largely driven by AI, will result in a 165% increase in data center power demand by 2030. According to a S&P Global 2024 report, the U.S.'s data center power consumption is expected to grow at an annual rate of 12% through 2030. And according to a 2025 Reuters report, to align with global net-zero targets by 2050, annual global investments in energy transition must average about \$5.6 trillion between 2026 and 2030. Considering this and the trend of traditional banks scaling back, these projects will likely require structured financing solutions that combine senior loans, mezz debt, and equity. Major government incentives (ex. Investment Tax Credit, Production Tax Credit) for renewable energy and large-scale infrastructure, often reduce the cost of development but don't provide upfront capital, creating a strong demand for mezz financing to fill the gap without diluting the equity of these massive projects. One recent example of this is in 2021, during development, Mainstream Renewable Power secured a \$280 mezzanine finance facility from AMP capital with very unique and flexible terms. The Stargate Project is another major example (\$500 billion data center initiative financed with 90% debt including mezz and preferred equity).

Final Thoughts

Tighter bank lending, persistently high interest rates, and a surge in demand from private equity, real estate, infrastructure, and energy sectors have collectively driven mezzanine debt from a niche and cyclical product into a more permanent fixture in modern capital structures. What was once used opportunistically during specific market windows is now seen as a flexible, non-dilutive tool for sponsors and companies navigating capital-intensive growth, acquisitions, and refinancing needs.

However, the increased recognition invites scrutiny. As capital floods into private credit markets (tripling globally since 2007) the risk isn't just in overuse, but in complacency. The real danger lies not in mezzanine debt itself, but in how it's underwritten. In Howard Marks' words, "it [the race to the bottom] is on today, but I don't think it's terrible today, it's just the markets are a little bit generous." And while today's generosity might not mirror the recklessness of the 2008 financial crisis, the warning signs are familiar: looser covenants, aggressive leverage, and the false safety of unmarked valuations.

Unlike public credit, private credit doesn't require mark-to-market adjustments. That's part of its appeal to investors, stability in pricing even during turbulence.

In a downturn, inaccurate write-downs in private credit, particularly in mezzanine structures, could mask deeper systemic risks. This risk is amplified in pooled mezzanine debt vehicles, private funds that aggregate mezz loans across sectors. While they offer diversification, they also dilute transparency. Investors often don't fully grasp the credit quality or concentration risk they're exposed to. If underwriting standards continue to slip, a single underperforming loan cycle could echo across portfolios, affecting returns far more than expected.

So, what's next for mezzanine and alternatives? With the public markets still volatile – and traditional lenders cautious – mezzanine debt will remain attractive, but survival will depend on discipline. The winners in this next chapter won't be those who chase every deal, but those who can say "no" more often than "yes." It could be that we see greater differentiation among lenders, more rigorous deal scrutiny, and different divisions of mezz lending (institutional-quality mezzanine debt vs. speculative mezz in murkier parts of the market).

Beyond mezz, the future could likely hold greater investor interest in structured equity, hybrid debt instruments, and asset-backed private credit. In the end, it comes down to judgment, luck, and sometimes just being first, because in every cycle, and as Warren Buffet often says, "what the wise man does in the beginning, the fool does in the end."

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US PROTECTIONIST POLICIES COULD HURT GERMAN ECONOMIC GROWTH

BY IRIS SKLAVOUNOU, MARCH 2025

FINANCE COMMITTEE

A recent report highlighted concerns raised by the President of Germany's Central Bank, Joachim Nagel. In the report, Nagel discussed the potential economic consequences of U.S. protectionist policies. He also emphasized that the proposed tariff increases, corporate tax cuts, large-scale deportation of immigrants, and retaliatory trade measures could create significant macroeconomic instability and reduce Germany's GDP growth by up to 1.5% as soon as 2027.

The Central Bank's 2027 forecast projects 0.9% growth, not accounting for these trade restrictions or other policies. Therefore, the German economy faces significant risks, especially in its export-driven sectors. This forecast of slower growth suggests that the greater volatility in global financial markets will have direct implications for commercial banks' credit portfolios, risk assessments, and lending strategies.

This issue is especially relevant to the commercial banking industry as banks play a key role in financing global trade by managing currency risk and underwriting corporate expansion. If German businesses struggle as a

result of reduced access to U.S. markets, defaults on loans could rise, forcing banks to reevaluate their risk models and tighten lending criteria. Additionally, U.S. commercial banks with international exposure will need to adjust their credit risk pricing since weaker trade relations could increase losses on loans and reduce investor confidence.

As the threat of economic slowdowns grows, banks should focus on stress-testing their loan portfolios, diversifying revenue streams, and exploring growth opportunities in alternative markets. An even greater implication is that commercial banks must anticipate policy changes and position themselves strategically to navigate volatile markets and uncertain economic conditions.

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HOW THE TRUMP'S BITCOIN RESERVE MARKS A NEW DIRECTION FOR DIGITAL ASSETS

BY MADHAV GOWDA, APRIL 2025

FINANCE COMMITTEE

Just weeks ago, President Donald Trump's executive order, which established a Bitcoin Strategic Reserve and a U.S. Digital Asset Stockpile, ignited a whirlwind of hypothesis and analysis across the cryptocurrency sector and beyond. This move is far from being a straightforward policy adjustment and instead, is a calculated geopolitical and economic initiative strategically implemented ahead of the White House Crypto Summit to seize U.S. leadership in the rapidly evolving digital asset landscape. The administration's strategic shift, placing digital assets at the forefront of national economic planning, needs a critical review of its statistical basis, potential market effects, and long-term geopolitical implications. The objective is clear: to make America a front-runner in the new digital asset economy. This order not only represents a change in domestic policy but also sets the stage for a potential global restructuring of finance, with digital currencies as a key element in international trade and economic equilibrium. By making this shift on the eve of the summit, it provided a chance for immediate discussion of the implications of this executive order, setting the terms of the debate and the agenda. The implications of the action extend beyond near-term market reaction.

The strategic action of establishing a Bitcoin reserve and digital asset holdings marks a long-term vision of integrating digital assets into the core of the U.S. financial system. This forward-thinking action may have profound influence on worldwide regulatory directions, as other nations observe and potentially trail the U.S. course of action. The summit thus becomes a significant forum for balancing domestic policy and international standards, building a collaborative approach to regulating digital assets. Further, this move forces the US to confront the risk of regulatory arbitrage, where companies and individuals may seek out more favorable regulations in other jurisdictions.



The Bitcoin Reserve

At the core of this executive order is the creation of the Bitcoin Strategic Reserve, a clear indication of the U.S. government's evolving perspective on Bitcoin as a strategic asset, akin to gold. By actively prohibiting the sale of an estimated 200,000 BTC, and commanding further acquisition, the administration is signaling a long-term accumulation strategy. Given the circulating supply of Bitcoin is around 19 million BTC, these reserves represent over 1% of supply. Nations have historically kept strategic reserves of assets like gold; this move puts Bitcoin on the same level as such critical reserves. Studies show that government accumulation pressures price upwards by reducing available supply. The El Salvador example, despite being volatility-plagued, showed this effect. On-chain analytics firms' metrics reliably show that the periods of decreased exchange inflows and high accumulation among large holders have preceded large price rallies. Additionally, the subtraction of 200,000 BTC from the market removes potential sell pressure, with immediate implications for price discovery, as seen in historical trading volumes. This strategy not only influences short-term market dynamics but also creates a precedent for other nations to consider Bitcoin as a viable reserve asset, which can lead to a global shift in reserve asset strategies.

The reserve size is sizable when considering the tiny and finite quantity of bitcoin that will ever exist. The decision to hold rather than sell represents a long-term strategic view, which may influence monetary policies and world trade in years to come. It also reflects a growing recognition of Bitcoin's resilience and value as a hedge against traditional economic uncertainty, and an attempt to prevent the potential undermining of U.S. dollar hegemony.

The U.S. Digital Asset Stockpile

Outside of Bitcoin, the creation of the U.S. Digital Asset Stockpile, such as altcoins XRP, SOL, and ADA, represents a broader acceptance of the altcoin market. While the reported initial value of seized altcoins might not represent a significant portion of the \$2.5 trillion cryptocurrency market, being stored in a government stockpile means regulatory clarity potential, which historically boosts investor confidence. For example, after SEC clarifications about specific altcoins, huge price rallies (more than 20% daily in some instances) were witnessed. This step may lead the way for more structured regulatory environments, promoting innovation in Decentralized Finance (DeFi) and Web3 infrastructure, domains with total value locked in excess of \$500 billion by early 2025.

This move not only legitimates these assets but also shows the government's recognition of their potential to reshape various segments of the economy, from financial services to digital content creation. The inclusion of these altcoins can also be seen as an attempt to diversify the government's digital assets, and to keep an eye on the several technologies each altcoin brings. This diversification results from an intentional attempt to grasp and, if opportune, leverage the different applications of blockchain technology, maintaining the U.S. in position to reap future breakthroughs in the digital economy. This is also a commentary on the attempt to maintain parity with other nations examining these technologies.

The Crypto Summit

The White House Crypto Summit promises to be a policy-making tipping point because it convenes key stakeholders in the cryptocurrency space and government agencies in one forum. The dialogue ignited at the summit could lead to the development of clearly established regulatory structures that consider the particular issues raised by digital assets. This involves establishing stablecoin regulations, which can revolutionize payment systems, and imposition of tax policies that foster innovation while ensuring compliance. The summit's proposals could contribute significantly towards charting the fate of the U.S. cryptocurrency market, determining its role in the international financial order.

Harsher regulations have generally been associated with greater institutional investment. Q4 2024 saw a 114% increase in institutional holding of U.S. Bitcoin ETFs, \$27.4 billion. Stablecoin and tax policy debates may release institutional capital further. EU's MiCA regulation shows how much transparent rules mean to market participants.

Statistical models project a potential \$1 trillion institutional capital influx with full U.S. regulation within five years. The summit will also be where the government takes a measure of the industry's reaction to the executive order, thus ensuring that its policies reflect the dynamic demands of the market, as well as addressing concerns about national security issues that arise from unregulated digital assets.

Global Adoption and Market Dynamics

The industry response to the executive order illustrates the revolutionary power of digital assets. The establishment of a Bitcoin reserve is seen as a catalyst for global adoption and institutional investment. Early 2025 analyst projections place Bitcoin price targets between \$145,000 and \$350,000 on the basis of ETF inflows (projected >\$70 billion), the halving event, and favorable regulatory environments. Historical data show Bitcoin's price appreciation from halving events. US government approval would go to further this, encouraging other nations and large institutions. Research in global markets shows a link between sovereign Bitcoin adoption and appreciation in price.

This move not only impacts market forces but also signals a potential shift in the global financial landscape, where digital assets play a more central role. US government approval of bitcoin will also result in a sudden increase in public awareness of bitcoin. This increasing trust in bitcoin and other cryptocurrencies will leave a permanent mark on the crypto market. This is also an effort not to lag behind the curve of technological advancement.

Challenges and Future Trajectories

The path ahead includes navigating complex regulatory challenges and building interagency collaboration. The final impact of the executive order relies on creating a favorable ecosystem for digital assets. More precise regulations have been found to be linked with more blockchain innovation. The U.S.'s first-mover advantage could seize important talent and investment in the multi-trillion-dollar estimated size of the global blockchain market by the close of the decade. Economic modeling puts trillions at stake in value creation from blockchain adoption.

Such a strategy not only positions the U.S. as a leader in the digital asset market but also opens the door to a potential revolution of the economy, in which blockchain technology plays a principal role across a wide range of industries. The regulatory challenges, while considerable, are considered necessary steps to enable the responsible growth of the cryptocurrency market.

The success of this project will be in the ability of the government to coordinate and consolidate regulatory efforts, while simultaneously balancing the needs of security, and innovation.

Diversifying the Digital Asset Portfolio

The inclusion of altcoins like XRP, SOL, and ADA in the U.S. Digital Asset Stockpile has significant strategic implications. Each of these digital assets, with their own unique technological underpinnings and uses, represents a broader acceptance of the diverse potential in the world of cryptocurrencies. For example, Solana's high-throughput blockchain technology has been instrumental in facilitating the spread of decentralized applications and NFTs, while XRP's focus on cross-border payments positions it as a future disruptor to traditional financial infrastructure. That the government is holding such assets shows that it is willing to embrace the technological leap they represent.

This portfolio diversification of digital assets not only mitigates risk but also positions the U.S. to capitalize on the various applications of blockchain technology. The addition of these altcoins by the government also indicates a willingness to experiment with the various technologies the blockchain community has to offer. This methodology will permit an overall appraisal of the digital asset market, so informed policy choices and investments can be made and the US remains competitive in the international technology arena.

The White House Crypto Summit

The White House Crypto Summit will be a pivotal moment in policy-making with the coming together of top industry players from the cryptocurrency space and government agencies. The discussions that were held during the summit could lead to the creation of clear regulatory steps that address the unique challenges posed by digital assets. This includes developing guidelines for stablecoins, which can revolutionize payment systems, and the implementation of tax policy that encourages innovation while ensuring compliance. The summits' resolutions could have far-reaching effects on the future of the U.S. cryptocurrency market and its position in the global financial system.

This collaborative approach not only brings forth innovation but also harmonizes regulatory guidelines with evolving industry requirements. The summit also facilitates direct feedback by industry players to the proposed actions by governments, which fosters understanding and transparency between the parties.

This open exchange of opinions is most crucial in the context of building mutual trust and facilitating a successful collaboration between the government and the cryptocurrency world and in facilitating the government to obtain first-hand accounts on potential security threats.

Reshaping Global Financial Power Dynamics

The establishment of a United States government Bitcoin Strategic Reserve has significant geopolitical implications. By declaring Bitcoin a strategic asset, the United States is sending out a signal of a potential reshuffling of the global power dynamics because other nations may begin to stockpile their own reserves of Bitcoin. Such a move would lead to the redetermination of traditional reserve currencies and accelerate the adoption of digital assets in trade and finance globally. The U.S. is taking the initiative to coordinate this change, potentially gaining a competitive advantage in the new digital era.

This move not only impacts market conditions but also indicates a potential shift in the global financial landscape, where digital assets play a more central role. The moves of the US government will be observed by other nations, and can trigger a world-wide adoption of bitcoin. This would lead to a revolutionary transformation of global trade and finance systems, with digital assets taking the lead, and also a reconfiguration of the current global power structure.

Integrating Digital Assets into the Mainstream Financial System

The Trump administration's executive order is not a short-term policy decision but a long-term vision to integrate digital assets into the conventional financial system. The vision encompasses the establishment of a holistic regulatory framework, the promotion of technological innovation, and the formation of public-private partnerships. The goal is to create an environment that encourages the responsible growth of the cryptocurrency industry, thus maintaining the U.S. at the forefront of this revolutionary technology.

This forward-looking approach not only fosters innovation but also ensures that regulatory regimes are aligned with the evolving needs of the industry. The executive order will also have long term consequences for future generations, shaping the future of technology and finance in the United States and the world. This will also enable the US to maintain technological and economic dominance in the 21st century.

New Era for Digital Assets

President Trump's executive order is a milestone, looking to be a “paradigm shift” in the U.S. approach to digital assets. By establishing a Bitcoin reserve and high-level industry participation, the U.S. is moving toward being a world leader in the digital asset revolution. Backed by quantitative evidence of market responses to regulatory openness and institutional adoption, this move can redefine the global financial system, ushering in a new era of digital asset inclusion and economic transformation.

This strategic move not only impacts the local market but also sets itself up for a potential global financial restructuring, where digital assets are an essential driver of global commerce and economic stability. The actions of the United States will be observed by other nations, and may result in a global adoption of digital assets. This action has the potential to redefine the future of finance and technology globally, and make the US a global leader in the digital age.

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ANTITRUST LAWSUITS IN BIG TECH

BY NOAH JAKEL, DECEMBER 2024

FINANCE COMMITTEE

This company is one of the most valuable in the world. Their browser owns 63.87% of the global market share. Their search engine, besides being used 99,000 times per second, is a verb, and they are the subject of one of the greatest comedies of all time, “The Internship”. The company I am talking about is Alphabet, and more specifically, Google. Google/Alphabet plays a role in everyone’s life. Besides Chrome and the search engine, they also own YouTube and are major investors in AI. Google is a company that we will continue to rely on in the future, and the US Department of Justice does not like this.

Background on Google Lawsuit

In 2020, the Department of Justice filed a lawsuit against Google. They alleged that Google violated section 2 of the Sherman Act by creating barriers to entry to the general search market. The Sherman Antitrust Act’s goal is to prohibit activities that restrain competition. One of the main things that the Sherman Act prevents is monopolies. Early August this year, courts found that Google did violate antitrust laws by maintaining a monopoly in the search engine market. The DOJ’s initial solution has been for Google to divest Google Chrome, prevent exclusive and default agreements with third parties, and acquisitions of emerging competitors. All of these sound nice in paper, but it is unlikely all of this will get done.

Likely Outcome

Most likely, far less of the DOJ’s proposed solutions will be enacted. Legal experts predict the only thing Google will have to do is get rid of exclusive agreements, like the one they have with Apple. A similar antitrust lawsuit occurred in 1999 involving Microsoft. Microsoft was determined a monopoly, and the DOJ initially proposed splitting the company. After appeals, however, the court overturned the initial solution. A lesser antitrust penalty was determined, which forced Microsoft to share some information about its programming interface with competitors.

Company is Split Up

In an alternate universe, Google could end up like Standard Oil. Standard Oil was broken into 34 different companies in 1911. Investors benefited from this as their Standard Oil stock became a fraction of the new companies, and some of these new companies became the major oil companies we see today such as Exxon, Chevron, and bp. If Google is split up, it is not likely to become 34 separate companies. Some predict Google could be split into three different companies, Search, Android, and Media. Investors in Google’s stock could become stock in each of these new companies, but Google’s outlook if this happened is uncertain.

A breakup in Google’s advertising dominance would likely reduce other firms’ advertising costs. Lower advertising costs would help bring many smaller companies to light, which should spur innovation and competition. Simultaneously, however, the three companies should be able to innovate faster, as all of their assets are devoted to one area, rather than diverting their attention into three divisions under one parents company. This should promote efficiency among the new companies allowing them to prosper.

It is important to remember that all of this is in the air. Google will appeal the decision, meaning the solution likely will not come for a few years. However, it will be interesting to see what comes of it. I became interested in the story when Alphabet fell 5% after the DOJ’s recommendation to divest Chrome, as we all know that appeals and other things will prevent anything from happening soon. Regardless of what happens, it would be cool to see three new companies pop out of Google. At a minimum, we should see more innovation in the search engine market, which will improve all of our lives.



THE \$250 TRUMP BILL: NEW CURRENCY OR MYTHICAL NONSENSE?

BY DEEPAK BADRI, APRIL 2025

FINANCE COMMITTEE, CHAIR



While there have been many legislative policies passed under President Donald Trump's second term, there is one supposedly in the works that could top all others. In February of 2025, Representative Joe Wilson proposed legislation to introduce a \$250 bill featuring Trump's face. With the bill, Wilson is seeking to revise the current laws that prohibit living individuals from appearing on U.S. currency. Despite the uncertainty of the bill being passed, the dubbed "Donald J. Trump \$250 Bill Act" has complex implications regarding inflation concerns, the role cash may play in a digital economy, and the politicization of money.

High-denomination currencies are not new to the U.S. monetary system. Previously, \$500, \$1,000, and even \$10,000 bills were once in circulation before being recalled in 1969 due to their association with illegal activities and the emergence of electronic banking, which rendered larger denominations obsolete for large bank-to-bank transfers. Thus, the reintroduction of a high denomination bill for the first time in over 50 years is bound to raise eyebrows due to the limited functional advantage of a potential \$250 dollar bill.

Along with such high-denomination bills, frequent involvement in crimes, such as drug trafficking and money laundering, may be of equal concern regarding the new bill's impact on inflation. This is due to the lack of transaction records they offer and ease with which they can be transported. Furthermore, implementing a \$250 dollar bill would increase the money supply, potentially leading to inflation. However, this could be avoided if a redenomination process occurred, in which the government would revoke a percentage of some lower-denomination bills in circulation to balance the money supply.

Despite this solution, these new currencies affect how the public may perceive and spend money. For example, introducing a \$250 bill could subtly cause shifts in consumer expectations about norms in spending, such as overspending or higher price points on various items, which would likely push inflation up slightly in certain markets. Regardless, given the current inflation rate, a big increase in inflation could lead to a national disaster, while a small increase might be much better.

Now for perhaps the most controversial aspect of the bill, the proposition of putting President Donald Trump's face on the new note foreshadows a change in legislation. Since 1866, U.S. law has forbidden living individuals from appearing on currency to preserve historical distance and avoid political favoritism. Being a highly polarizing political figure, Donald Trump's picture on currency could establish a dangerous precedent, given the floodgates it would open for future administrations to politicize currency design in a similar fashion. Given the U.S. dollar being an important symbol of national unity, figures on the bills are often selected with great deliberation and care to avoid an uprising, so setting such a precedent is extremely dangerous.

All in all, the proposed \$250 note may never reach the public's hands, but the introduction of the idea from Representative Joe Wilson signals a new use for currency, political expression. Despite the evident practical and inflation worries, maybe the biggest problem involves the very existence of the note with Donald Trump's face, as it would spark huge debates over partisanship in public symbols. Turning currency into a platform for political branding can damage the unity and neutrality the dollar holds on the global stage. Whether symbolic or circulating, this proposal asks us: What should our money say about America?

THE “BANNED” MASTERCLASS

BY ARHAM SHAHZAD, APRIL 2025

FINANCE COMMITTEE

It's safe to say that the Air Jordan 1 “BRED” is a staple in each and every sneakerhead's collection out there. The Black, Red, and White colourway was originally released in 1985 as the first ever Jordan that was ever created where it has been re-released six times. Since then, this 2025 release became the eighth overall release of the “Banned Sneaker”. Thus, this article will explore how the Air Jordan Brand used the “Banned Promo” to sell the shoe out for the eighth consecutive time.

Unlike Nike's dominance in the basketball world today, they were struggling in the 1980s to stay afloat. As of 1984, Converse dominated the marketplace with a 54% share, Adidas had a 28% share with many notable superstars on its roster, and Nike had a measly 15% share where they were struggling to find top superstars within their budget to help endorse their shoes. That's when Sonny Vacaro saw the potential in Jordan to be the face of Nike's Basketball shoe line. During that time he was foregoing his senior year in College to play in the NBA and had already established himself as a remarkable player helping Chapel Hill win the NCAA as a freshman. The journey to sign him “Wasn't Pretty” but it led to Nike creating an all new shoe for Jordan which violated the NBA's 51 percent colour rule, leading to them paying a \$5000 fine in every game.

The “Banned” Promo

The promo explores this very fact to increase the hype around sneaker releases and there couldn't be a better opportunity to do so. According to the 2024 Sports Business Journal Execs warned that “demand for new models remains low”, “launches are still underperforming”, and that Jordan was to see a sales decline in the upcoming year. With the expected decline in sales, it only made sense to release this promo by the start of 2025 since it was also this sneaker's forty year anniversary which could strengthen the Jordan hype and perhaps change the upcoming year's trajectory.



The promo revolves around the idea of how the world would be if Nike decided not to pay the fine. It's ludicrous to think the sneaker giant would simply not exist. To further reiterate this effect, they put a black box around multiple Jordan 1s on their websites and apps, and fined their own employees for wearing Jordan's? Moreover, they also blocked out multiple Jordans on the Nike and SNKR's website. As a result, this effectively built a certain curiosity within its buyers who wondered why Nike was doing this while also getting the attention of news outlets around the world who covered these minor intentional flaws and helped promote the Jordan Brand even more.

Lastly, the promo was extremely successful because it catered to all types of audiences as it had a sense of nostalgia while also trying to reiterate that it is still the best sneaker in the game mentioning the Jordan brand's dominance in all types of industries whether it be basketball or not. The promo also collaborates with multiple celebrities such as Travis Scott and DJ Khaled to appeal to an even larger fan base. This coupled with the fact that Jordan only released 10,000 pairs made it seem extremely exclusive which helped sell it out instantly, concluding that the promo certainly helped raise hype and demand for other shoes too.

BRICS PAY: A SLAM DUNK ON THE US DOLLAR?

BY MANAV DAROOKA, DECEMBER 2024

FINANCE COMMITTEE



In recent years, the BRICS nations – Brazil, Russia, India, China, and South Africa – have emerged as a formidable bloc with economic ambitions to reshape the global financial architecture. The bloc, which previously undertaken important initiatives like the New Development Bank, now consists of nine countries. One of their most ambitious projects is BRICS Pay, a unified payment system aimed at fostering economic collaboration, reducing dependency on Western-dominated financial systems, and promoting intra-bloc trade. While nascent, BRICS Pay has the potential to challenge the long lasting dominance of the US dollar in foreign exchange transactions and reshape the global financial landscape.

What is BRICS Pay?

BRICS Pay is envisioned as a digital payment platform that enables seamless transactions between the member states. It aims to integrate existing payment systems and utilize a digital or reserve currency backed by the BRICS nations. The initiative stems from frustrations over reliance on the US dollar, which accounts for over 88 percent of global trade settlements, and concerns about the dominance of US-led institutions such as SWIFT.

The payment platform could feature:

A Common Digital Currency: A stable coin or digital currency, potentially backed by a basket of BRICS currencies or commodities such as gold or oil.

Reduced Trade Barriers: Facilitation of cross-border transactions without reliance on third-party currencies, particularly the US dollar.

Enhanced Financial Autonomy: Providing an alternative to global systems dominated by the US and its allies.

Motivations Behind BRICS Pay

The motivations for creating BRICS Pay are both economic and political:

Reducing Dollar Dependency: The dollar's status as the world's reserve currency gives the US significant leverage over global trade and finance.

By developing BRICS Pay, all member nations can bypass the dollar and minimize exposure to US sanctions or economic pressures. The entire world watched as The United States, amidst the Ukraine-Russia war, placed economic sanctions and froze nearly one-half of Bank of Russia's foreign reserves, demonstrating the economic control and level of power the US exercises. This fueled discussions for dollar alternatives i.e. BRICS pay.

Increased Trade Among BRICS Members: BRICS nations account for about 25 percent of global GDP and nearly 40 percent of the world's population. A unified payment system could facilitate trade and investment among these countries, enhancing economic integration.

Geopolitical Considerations: The rise of multipolarity in global politics has encouraged emerging economies to seek alternatives to Western-dominated systems.

Potential Effects on the US Dollar

If successfully implemented, BRICS Pay could have significant implications for the US dollar:

Reduced Demand for the Dollar

The dominance of the dollar in global trade and foreign reserves is partly due to its use in transactions even between non-US parties. If BRICS Pay gains traction, the fact that it involves some of the most significant economies in the world it could reduce demand for the dollar in BRICS-related trade, weakening its status as the world's reserve currency.

Diversification of Reserves

Central banks, particularly in BRICS nations, might diversify their foreign exchange reserves by holding more BRICS currencies or assets tied to the BRICS Pay system. This shift could impact the dollar's exchange rate and influence US borrowing costs.

Challenges to SWIFT and Sanctions

BRICS Pay could provide an alternative to SWIFT, the US-dominated financial messaging system. This would undermine the effectiveness of US sanctions, a key tool of American foreign policy, as targeted countries could use BRICS Pay to conduct international transactions.

Ripple Effects on Global Trade

Countries outside BRICS could adopt the system, especially if it offers lower transaction costs and greater financial independence. This could further erode the dollar's role as the default currency in global trade.

Challenges and Limitations

While BRICS Pay has transformative potential, several hurdles remain:

Technological Integration: Creating a seamless system that integrates diverse financial infrastructures across BRICS nations is a complex task.

Trust and Coordination: The BRICS bloc is not a monolithic entity. Divergent national interests, economic disparities, and geopolitical tensions could hinder cooperation.

Global Acceptance: For BRICS Pay to challenge the dollar, it must gain trust and adoption beyond the BRICS nations, which may be difficult given the dollar's entrenched position.

Conclusion

BRICS Pay represents a bold attempt by emerging economies to rewrite the rules of global finance. While its success is far from guaranteed, it reflects a broader shift toward multipolarity in the international economic order. For the US, the rise of alternatives like BRICS Pay underscores the need to address vulnerabilities in the dollar's dominance, maintain economic competitiveness, and engage constructively with rising powers.

Whether BRICS Pay becomes a viable challenge to the US dollar or remains a regional initiative, its development is a clear signal: the era of unquestioned dollar supremacy may be coming to an end, and the global financial system is entering a phase of profound transformation.

Advertisements



THE SHIFT TO NUCLEAR ENERGY

BY NOAH JAKEL, DECEMBER 2024

FINANCE COMMITTEE

Increase in Energy Demand

The energy industry is at a crossroads. Calls for clean energy are at an all-time high with major hurricanes happening every year and severe storms occurring more frequently than ever. Yet, energy demands are speeding up as people need more energy to combat the severe weather, and large data centers owned by tech giants are using as much power as 50,000 homes. This demand has led to high energy prices that will only increase. This scenario prompts the question: should we double down on our commitment to clean energy or increase our investment in original energy products like oil, which are cheaper?

Big technology companies like Google, Microsoft, and Amazon have answered this question, as they are investing directly into nuclear energy. This has been done through agreeing to energy contracts with a contingency that it will be sourced from nuclear energy. These contracts will ensure that data centers will have the energy needed to operate without using harmful energy sources.

There are numerous benefits to nuclear. Nuclear produces clean energy through nuclear fission, during which a nuclear atom is split, releasing a lot of heat. This then creates steam that spins a turbine and produces energy. This process avoids the harmful products released when fossil fuels are burned, though it does produce small amounts of highly-radioactive nuclear waste.

There are key differences between nuclear and other clean energy sources. First off, unlike wind and solar, it is a constant energy source. Though wind and solar are great sources of clean energy, they do not run throughout the day and are dependent on the weather. Additionally, nuclear power plants are far more efficient than wind and solar. A wind farm that would make the same amount of energy as a nuclear power plant would currently require 360 times more land, and a solar farm would require 75 times more land. Thus, nuclear satisfies data centers' energy demand best.

Why is this a new trend?

If nuclear power is so great, why did we not expand into it in the past? This is mainly due to its downsides, first being its safety. Nuclear energy is dangerous. In 1986, the Chernobyl reactor exploded, resulting in 28 deaths at the time of the meltdown. Additionally, people exposed to the radiation from the explosion and their future children are at higher risk of cancer and other serious illnesses. The radiation also polluted the local environment and wildlife. Scientists predict Chernobyl will be inhabitable for 20,000 years. The Fukushima Accident is another power plant disaster that happened in 2011. Fukushima was a far higher quality power plant than Chernobyl, and proper safety measures were in place. They did not account for the possibility of the tsunami created by the Tohoku Earthquake. This tsunami damaged the plant, releasing radiation into food and water around the plant. Luckily, no one died directly from the radiation, but it did give the world another bad impression of nuclear energy. While there are other examples such as these, more present threats are nuclear waste, the fact that uranium is not renewable, and that it takes a long time to construct a plant.

Is Nuclear the Solution?

The energy market faces many novel challenges with rapidly rising prices and many calling for a decrease in cheaper fossil fuels. Nuclear is a solution to this problem, as it is a consistent source of energy while requiring very little space. It is promising that big tech companies are investing in nuclear, as it will increase the energy supply and thus reduce the price. However, nuclear may not be the end-all-be-all solution as, while nuclear power plants are safer than ever, the world is changing drastically. It will be interesting to see how plants will deal with more frequent and severe weather due to climate change. Furthermore, even if there is a one in a billion chance an accident happens at a power plant due to the dangers of nuclear energy, it is something we must always be thinking about.

Nuclear energy may not be the ultimate answer, but its resurgence marks a pivotal step toward meeting the world's growing energy needs while addressing environmental concerns.

EXPLORING TRUMP MEDIA'S VENTURE INTO THE FINANCIAL SERVICES INDUSTRY

BY IRIS SKLAVOUNOU, MARCH 2025

FINANCE COMMITTEE



Recent moves by President Trump included an announcement by his social media company that intends to launch various exchange-traded funds (ETFs) and separately managed accounts (SMAs). The targeted ETFs are "Made in America," "Energy Independence," and "Bitcoin Plus", and are designed to appeal to the growing investor base interested in American industries, energy independence, and cryptocurrencies. This also underlines how Trump is expanding from the cryptocurrency market into traditional financial services, and how he is capitalizing off the popularity of ETFs which are one of the most successful recent investment products to add to a portfolio. Without the detailed information about investment strategies and fees, Trump Media is depending on attracting investors who are looking for alternatives to what it calls the "woke funds" in the market.

This is important from an investment management perspective as it shows how new financial products are being created to meet the ever changing preferences of investors. ETFs are a popular investment for cost-efficient

portfolios and are widely used in portfolio management. Launching these funds highlights the growing trend of niche investment products tailored to specific political or social ideologies, and this could resonate with a part of the market that seeks investments aligned with their personal values. Whether these funds will succeed depends on their ability to compete against already established products while also remaining compliant and maintaining investor confidence. This is very important as such funds often face many challenges after launching without the typical pre-launch regulatory filings.

The financial services sector is new for Trump Media, which stands to be more profitable if its funds gain popularity in the competitive world of ETFs. However, these funds will also have to achieve stellar financial performance if they are to gain confidence in the investment management sector.

INTERNATIONAL BUSINESS

Contributed by Aiden Dauk, Jason Li, Alex Ariker, Angely Xiong, Matteo Dalessandro, Evelyn Lee, Bertha Liao, Jelina Li, Samantha Li, Chaired by Samantha Li



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POPULATION CRISIS IN EAST ASIAN COUNTRIES

BY SAMANTHA LI, JASON LI, APRIL 2025

INTERNATIONAL BUSINESS COMMITTEE CHAIR
TECHNOLOGY COMMITTEE CHAIR

According to the U.S. Census Bureau, by the turn of 2024, the U.S. population is projected to grow to just over 335 million people, with the global population projected to reach eight billion. Speaking more categorically, global births and deaths are expected to be 4.3 and 2.0 every second, respectively.

Figure 1 illustrates a more comprehensive composition and forecast of the world population, grouped into regions, over the course of 150 years. A few points can be extrapolated from Figure 1; first, the Europe, North America, Latin America, and Oceania regions are projected to have relatively stable and consistent population growth. Second, the Africa region is expected

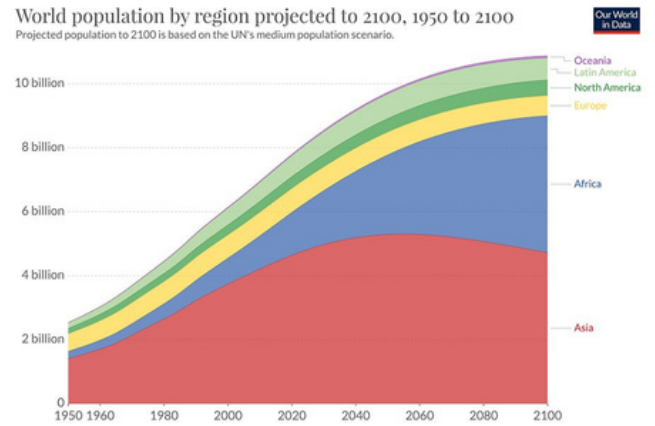


Figure 1 (United Nations)



to see the largest population growth over the next 80 years. Lastly, and the most alarming, is the Asia region, which is projected to make up roughly half the global population by the next 20 years, yet drastically decline in the 50 years following that.

Fear and intense discussion arise from these projected trends, specifically on how major changes in a population can be related to economic volatility, climate disasters, drastic demographic shifts, and more. Hence, the population crisis poses two problems; overpopulation and underpopulation. Overpopulation, according to Merriam Webster, is “the condition of having a population so dense as to cause environmental deterioration, an impaired quality of life, or a population crash.” In particular, overpopulation has been closely associated with resource scarcity, accelerating climate change, as well as economic strains. That being said, the focus of this article will be on the other side—underpopulation, specifically relating to the rate of population decline found within certain East Asian countries.

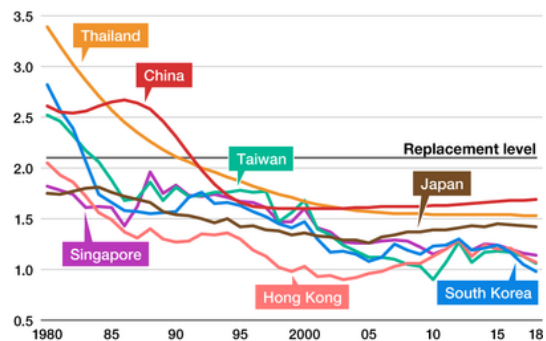
First, there needs to be a critical distinction made between underpopulation and population decline. Underpopulation is defined to be when a population is below a certain threshold in which they are not fully utilizing their local resources and productivity. On the other hand, population decline is focused on the rate in which a population is falling. When the population falls too fast, there have been drastic and dire socioeconomic effects on the national and global level.

Most European countries, as well as Australia and New Zealand, are currently underpopulated yet are not within a population crisis, due to a relatively stable and stagnant population curve. In contrast to East Asia, however, we find a batch of countries that are each experiencing a population crisis—each similar but unique in their own right. These countries are Taiwan, South Korea, Japan, and China. From our analysis of each country, we hope to understand the forces causing these population crises, identify the effects it has on society, and put forward meaningful resolutions.

Although overpopulation is seen as a global issue, the triggers of population decline and a population crisis are generally considered within a national scope, particularly in East Asian countries. China, Taiwan, Japan, and South Korea all are seeing a declining population. China's birth and death rates in 2023 were a record-low 6.39 births per 1,000 people, and a death rate of 7.87 deaths per 1,000 people, the highest since 1974. For Taiwan, their birth rate

was 5.82 births per 1,000 people, and a death rate of 7.90 deaths per 1,000 people. Japan's birth and death rates were 5.8 births per 1,000 people and a staggering death rate of 12.7 deaths per 1,000 people. And in South Korea, their birth rate was a record-low 0.72 births and the death rate of 6.9 deaths per 1,000 people. For context, the global birth rate in 2023 was 17.4 births per 1,000 people while the death rate was 8.1 deaths per 1,000 people.

Total Fertility Rate in Leading Asian Economies



Created by Nippon.com based on World Bank and Government of Taiwan statistics. nippon.com

With these concerning statistics, there are many factors that are involved in triggering this crisis. These include educational competition and devaluation, the cost of living, work life conditions, social gender dynamics, and more. With all these contributing factors, they produce multifaceted and complex effects that are intertwined with one another.

China and Higher Education

One trigger for a declining population comes from intense competition within higher education that then inhibits the job market. A country that illustrates this competition is China. Local residents view higher education as the key to a brighter future. Getting into higher education has become the norm for almost everyone. According to the latest data released by the Ministry of Education of China, in 2022, the number of applicants for master's degrees will reach 4.57 million, a new record with an increased rate of 21.3%. Employers now have an increased demand for higher educational credentials, leading to escalating academic competitiveness. However, the rapid increase of college graduates with a bachelor's, master's, or PHD, has led to the devaluation of academic qualifications within the job market. This sort of situation produces a vicious cycle between academics and the job market where residents try to invest more on their academics to be more qualified in the workforce. In 2023, the number of university graduates postponing entering the workforce

surged from 15.9% to 38% in 2015. Another survey from the National Bureau of Statistics in 2023 shows that 84% out of 4,000 university graduates in China cited pursuing further studies as a reason to delay getting a job. This implies that many future employment opportunities will not be able to accommodate newcomers in securing their employment after graduation. Compared to the United States youth unemployment rate of 9.8% in July 2024, China's youth unemployment peaked to a record 21.3% in June 2023 according to the Wall Street Journal. This reflects the delay of joining the workforce and the continuous devaluation of academics. Between this unsustainable employment rate, the cycle of academics, and the job market, the situation doesn't align with many people's aspirations or financial needs when it comes to finding the job they prefer, resulting in a delay for marriage and starting a family.

Japan and the Workplace

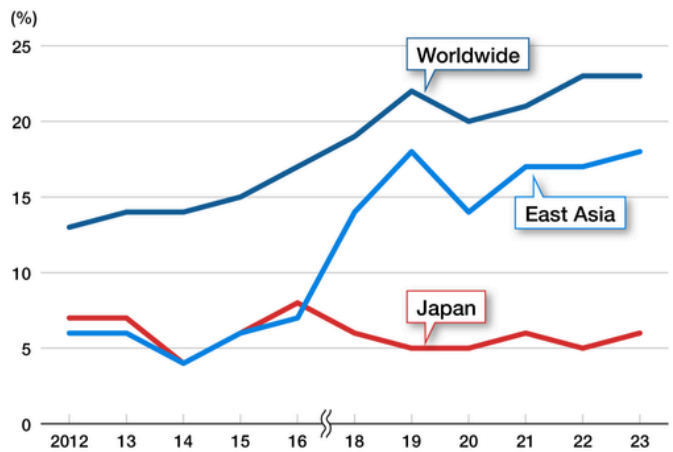
Japan is particularly egregious with regard to workplace conditions and company culture. The standard workweek spans five to six days, yet it is common for employees to surpass the legal limit of 8 hours per day to work 50-60 hours per week. Japanese employers also offer the least annual vacation time compared to other G7 countries, with a minimum of 5 paid days off per year. While the US does not have a legal minimum, US employers provide an average of 10 paid days off per year.

Japan has also built a reputation for a culture that prioritizes dedication to work and loyalty to your respective company. This culture is highlighted by two popular terms; *shuushin koyou*, "lifetime employment", and *karoshi*, "death by overwork." While the practice of lifetime employment has fallen drastically since the 1990s, 20-30% of employees in Japan are still working under a lifetime employment commitment (where they are expected to remain with the company until retirement(65 and a minimum of 25 years of service)), primarily for large corporations. Non-regular employment, such as contract and part-time work, now makes up approximately 37% of Japan's workforce. This reflects both cost-cutting measures by employers and changing employee preferences for flexibility.

The phenomenon of *karoshi* has highlighted the extreme consequences of Japanese loyalty. A 2022 government survey from the Ministry of Health, Labour, and Welfare found that around one in 10 Japanese workers put in more than 80 hours of overtime per month, with one in five at risk of *karoshi* – whether through stroke, heart attack or

stress-induced suicide. The last major legislative reform against *karoshi* was in 2018, when Prime Minister Shinzo Abe presented the "Work Style Reform" bill, forcing employers to "compel employees to take holidays" and introduced a cap of 80 hours a month in overtime. That averages to a 60-hour work week including overtime, and 12 hours a day if split evenly across five days.

Engagement Among Employees



Created by Nippon.com based on data from Gallup. No data for 2017. nippon.com

Figure 3 (Nippon/Gallup)

As seen in Figure 3, this workplace culture and ineffective legislative response has tangible effects on the Japanese population. According to a 2023 Gallup report, only 6% of Japanese workers reported that they were engaged at work, meaning they are involved in and enthusiastic about their workplace. Japan's engagement rate has fluctuated around 4-8% since 2009, contrasted with a global average of 23%.

Taiwan and Household Income

Likewise, for those who are financially strapped when it comes to affording a family, it generally applies to the initial housing crisis, particularly in Taiwan. According to The Diplomat, Taiwan's house-price to income ratio is 9.82, equivalent to the average house cost for 10 years of average household income. As a result of this, its household prices are one of the highest among developed countries. Low wages are a significant factor to the unaffordability of housing.

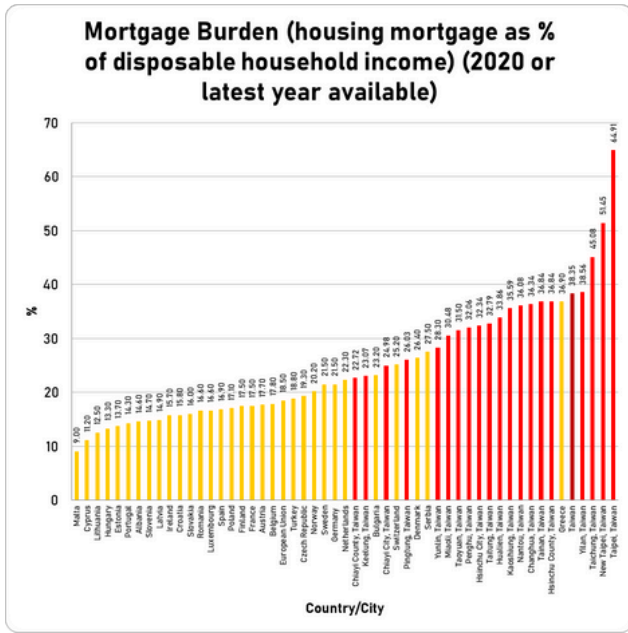


Figure 4 (Numbeo)

Coming from Figure 4 above, Taiwan’s housing prices are as high as those of countries like Norway, the Netherlands, and Finland. However, due to higher wages in European countries, they have lower housing costs due to the mortgage burden that brings about 20% of the household disposable income. According to the UN (United Nations), the mortgage burden needs to be below 30% for housing to be considered affordable. Yet Taiwan’s mortgage burden makes up 38.35% of disposable income. As a result, it’s not only housing prices that have skyrocketed but also debt. This situation creates a domino effect that negatively impacts birth rates because unaffordable housing results in a decline in marriage rates and high cost of raising children.

Even though East Asian countries are considered to be patriarchal, the social environment within these countries doesn’t help in reversing the population crisis, specifically in South Korea’s case. According to The Economist, South Korea is facing a crucial gender war between incel and feminism based on the changing social and economic norms from women. This mainly includes women’s lives having overall improved independently because of higher college enrollment than men and outperforming men in the workforce. As a result, this challenges men’s inferiority even though the country still has one of the biggest gender pay gaps (women earn 31% less than men). Furthermore, feminism in South Korea has seen a drastic rise with involvement of the 4b movement, where women are in protest by abstaining from dating men and from sexual intimacy with men. With this situation, South

Korea’s dating market has become a competitive sport rather than a social network. This may negatively impact future marriage rates and is a major reason for one of the lowest birth rates in East Asia at 0.72. In particular, a survey by a dating app emphasized that of divorced singles, where 37% of Korean women said a “patriarchal” man would be their least favorite date, a similar share of men said they didn’t want to date feminists. At this rate, men becoming more conservative and women becoming more liberal creates a conflicting clash between feminism and anti-feminism.

Enacting Counter Policies

Although it seems that the declining population is an inevitable crisis, there are some policies that these East Asian countries have introduced to mitigate and reverse the population crisis. The Japanese government provides subsidies for low-income families that may facilitate marriage, helping newlyweds pay childbearing care and providing education for children. One of the biggest policies that Japan implemented was the Angel plan which was passed in 1994. Its aim was the expansion of child care centers and partial payment of salary for child care leave. To further their goal, the government took additional measures on providing an environment within firms that would incentivize future parents to take child care leave, and support mothers’ re-entry to the workforce.

Taiwan provides similar policies to Japan through their Social Welfare Program of 2006 and the Population Policy of 2008. These policies also tried to tackle the low fertility issues by providing maternal and paternal leave benefits where women would receive half pay, providing a subsidy system on child care and early childhood education. This would be covered by labor insurance where employers are required to cover 70% of the cost. However, Taiwan is also pushing its immigration policy in order to slowly stabilize the population. These policies’ goals are most importantly to maintain economical and human capital growth in the long run, not just in stabilizing the population, but also to promote economic growth and prosperity.

South Korea has also provided subsidies on prenatal care and monthly payments for families. They have brought more overseas nannies to further baby-boosting incentives and have taken steps to stabilize the population by increasing public access to dating apps and matchmaking services. Coming from Bloomberg, due to the gender war issue in South Korea, the government has

encouraged more single participants to form relationships with each other during matchmaking events. As a result, the matching rate is 40%, where 78% out of 130 couples have been more positive towards marriage.

Even though these policies seemed to have a direct impact in resolving the population issue, there are many drawbacks when it comes to passing these resolutions and policies. For instance, when Taiwan introduced their subsidies and programs to provide affordable child care for families, feminists argued against “buying of feminine wombs for cash” prevailing against payment of birth allowances. Another criticism would be South Korea’s matchmaking events, where many seem to believe they neglect the root causes of fertility challenges and the purpose of having children. It’s also argued that it’s invasive for governments to cross the boundaries on people’s personal lives, specifically within their personal romantic relationships.

Conclusion

Population crises, particularly within the specified East Asian countries of Taiwan, Japan, China, and South Korea, are grappling with the effects of a drastically falling population. With each crisis unique, we have drawn parallels between confounding causes. From higher competition and devaluation of education to grueling workplace conditions as well as staggering household cost relative to income, controversial gender dynamics, and an aging population.

East Asian countries have to be more flexible and inclusive with their policies in order to reverse their population crisis. Looking at the policies implemented, these governments need to be more precise when creating directive policies, resolving housing issues, tackling the high pressure work environment, and mitigating the social environment within their countries. Otherwise, the population crisis will become more economically devastating and more difficult to get out of.

RUSSIAN-UKRAINE WAR: GLOBAL DEFENSE IN TRANSITION. HOW THE UKRAINE-RUSSIA CONFLICT IS RESHAPING MILITARY SPENDING, TECHNOLOGY, AND GLOBAL DEFENSE MARKETS

BY SAMANTHA LI, AIDEN DAUK, ALEX ARIKER, ANGELY XIONG, APRIL 2025

INTERNATIONAL BUSINESS COMMITTEE

The whir of a 'Goida' drone is heard overhead, controlled with first-person VR-like goggles by a Ukrainian soldier miles away, before it finds its target, exploding and disabling a Russian-made T-90 tank. This common scene from war in Eastern Ukraine underscores not only the tragic loss of life, displacement of people, and capturing of territory, but also changes in the defense industry in Ukraine, Russia, and around the world.

The size of the war unleashed in 2022 exposed western defense establishments' lack of preparedness as they have spent most of their recent efforts defeating smaller militaries and terrorist organizations. Western countries struggled to meet the output demands of the large-scale conflict particularly in producing artillery shells. However, this modern conflict brings military officials valuable experience and insight to what future conflicts of this scale could require.

The global defense industry has been greatly shifted by the war in Ukraine with the top 100 global defense contractors earning \$632 billion in revenue in 2023 alone, a real-term annual growth of over 4%. This number is up from 2022 when the defense industry took a slight hit, and projects further growth in the future as the many conflicts around the world continue to escalate and demand for arms rises. Of the 100 largest companies in the United States, 41 of them have a large increase in revenue of 2.5% across the entire defense sector in 2023 while Russian firms enjoyed 40% growth in revenue from 2022 to 2023. As seen, changes in defense industries differed across regions and is broken down further below.

Ukraine

Ukraine's manufacturing landscape has shifted broadly towards defense contracting since the war began in August 2022, when Ukroboronprom, their leading defense contractor exported just \$1.2 Billion in arms annually.

Ukraine's tech sector has shifted to focus primarily on defending the invasion and has been a primary factor in the country's successes. Specifically, Ukrainian defense companies have made breakthroughs in producing military drones. In 2022 the country had just 35 drone manufacturers, but the field will explode with hundreds in 2024. Local companies are now capable of producing up to 4 million drones and robotic systems annually and will produce an estimated 2 million in 2024.

Additionally, in late 2023, the Ukrainian Minister of Strategic Industries Oleksandr Kamyshin stated that the production of mortar rounds increased by 42 times and the production of artillery shells by 2.5 times in 2023, as the country aims to be a leader in defense manufacturing and partner to the west.

Government spending is also helping to fuel growth from Ukrainian defense contractors. Weapons procurement funding soared to \$6 billion in 2024, a 50% increase from 2023, and a figure that is pushing local firms to potentially surpass \$20 billion in production value.

Joint production, development, and military equipment partnerships with at least 10 European countries and six NATO members have further helped propel Ukraine's defense industry forward.



Eastern Europe

Russian aggression in Ukraine threatens not only Ukraine itself, but also the neighboring Eastern European countries that have historically had conflicts with Russia and belonged to the USSR. In 2023, Poland almost doubled its military spending from 15 to 27 billion US dollars. Russia's neighbor, Finland, raised its military defense budget from 4.5 to 6.9 billion US dollars in 2024. Finland joined NATO in August of 2023 and since then, the Finnish government has promised to increase efforts to secure the Finnish-Russian border.

Ultimately, the Ukraine-Russia War is reshaping the defense and technology industries in their Eastern European neighbors. In Latvia, tech companies are releasing and experimenting with new tech by putting them in play in Ukraine. Kaspars Pollaks, who serves as the Director of LMT Defense, a state-owned technology defense company, said, "[Ukraine], unfortunately, is the best defense technology experimentation ground in the world right now. If you are not in Ukraine, then you are not in the defense business."

In the Balkans, Balkan arms-makers are booming with Ukraine as its greatest market. Compared to 2020, Serbian arms exports have nearly quadrupled while exports from Bosnia nearly doubled in 2024. In fact, roughly \$890 million worth of ammo from Serbia has gone to Ukraine since the 2022 invasion. To keep up with this demand, Bosnian ammunition factories are in production almost 24/7. At the Balkans Summit held in February, President Volodymyr Zelensky made remarks stating that joint arms production was essential in the fight against

Russia.

At the beginning of this war, Ukraine was highly dependent on defense technology from countries abroad such as Turkiye, the United States, and China. With these advancements in Eastern Europe and technological aid from its neighbors, Ukraine has greater and quicker access to vital instruments that make a difference in this war.

In contrast to most of Russia's neighbors supporting Ukraine, Belarus has made its support clear for Russia. The country has maintained close ties with Russia, including the fact that Belarus allows Russia to go through the Belarusian-Ukrainian border to invade Ukraine. Currently, the Belarusian defense industry is almost entirely dependent on Moscow as its primary customer, receiving more than one-thirds of its exports. Russia is dependent on Belarusian arms companies for certain arms components, as well as outdated Soviet equipment which has been modernized by Belarusian manufacturers for Russian usage.

Russia

Russia's defense industry has also had a stark shift since the start of the invasion. Domestic military production has grown massively, fueled by defense spending that has risen to an estimated 7.5% of GDP with around the clock production and at-times mandatory 12-hour shifts.

Russia's sprawling military-industrial complex is now a central part of their economy and created 520,000 new jobs since the start of the war, and now employs an

estimated 3.5 million people, or 2.5% of the population. For example, the Kazan gunpowder plant, hired more than 500 workers in December of 2023 hiring that tripled average monthly salaries.

Despite a planned 70% increase in defense spending to \$121 Billion in 2025, Putin war machine financing faces headwinds from maintaining social spending and avoiding a large increase in inflation. Putin's job is made easier, if only a little, from help committed by ally's North Korea, China, and Belarus. Refraining from outright support, China has continuously exported dual-use technology, items that can be used for both civilian and military uses.

America

The United States is the largest single country monetary supporter of Ukraine, committing more than \$125 Billion to their support since February 2022. Despite the divide among Americans over outflows of aid to support Ukraine, a large portion of money allocated for Ukraine by Congress, \$68 Billion of the \$113 billion appropriated is to be invested in America, helping revitalize the US defense industry.

American aid to the tune of \$24 billion is also transferred to Ukraine directly via equipment transfers from US weapons and equipment inventories. Of the almost \$26 Billion appropriated by congress to restock US stores, \$16.8 billion has been assigned to replace equipment from US stores, channeling more money into American defense manufacturers.

Additionally, the Department of Defense has committed \$3.3 billion in funding across 18 states to modernise defense contractor assembly lines. American money earmarked for Ukraine is helping to revitalize and boost factories. As a result of increased government support, revenue for US defense contractors increased 2.5% in 2023.

Trump's Future Impact on Aid to Ukraine and Consequences for Europe

With each and every country contributing to its military spending on Ukraine, how would Trump's reelection as president affect this in the future? Based on his current agenda, Trump has consistently abided by his claims in withdrawing defense expenditure for Ukraine due to the United States as the largest military spender providing too much massive spending to NATO. According to ABC News, his reason for this would be that many European

countries who are also involved in the war don't contribute as much as the US based on their expenditure amounts on defense, which he believes is economically unfair. In general, he's prioritizing more on domestic affairs to leverage the US economy, yet the consequences of neglecting international affairs would produce struggling diplomatic relations with Europe by extending the war in Ukraine even further.

As a result, this may target many European countries to have pressure on increasing their military defense spending, particularly countries with higher taxes than the US. Thus, with these countries such as Canada, Belgium, Spain, as well as France and Germany, they may potentially be economically vulnerable in meeting the 2% target on defense spending on NATO coming from their own pockets. According to the Economist, the continent's NATO members have already increased defence spending by 0.26% of GDP. All together, this reached a new average of 1.7% of GDP last year.

With these countries providing inadequate spending on defense with economical vulnerability, they will find other ways to scrape in more funding to accommodate their defense spending shares. One of these ways would be to rearrange their spending by withdrawing some amounts such as their health and welfare in order to reach their shared percentage to NATO. Another resolution they could turn towards is to rely on borrowing. However, this may be a gamble for many countries to consider since this would lead to larger deficits and debt for them to face in the future. Some countries like Italy and Spain have faced this sort of consequence where they both spent more on interest payment than the armed forces. Lastly they may also turn to European Union funding. The drawback with this is that the funding would benefit more on Eastern European countries and the funding has to actively occur and aid other countries if there's another shock that happens within Europe.

What's Next?

The trend is clear: a surge in government spending has led to increasing growth for defense contractors regardless of nation or region. It's unclear whether this growth will be sustainable or transient in light of war in Ukraine passing the 1,000 day mark and continued conflict in the Middle East. However, one thing is for certain: Trump is a wildcard. His future plans and unpredictable changes may put more economic pressure and vulnerability on both European and American defense contractors.

TRADE WAR II: TARIFFS STRIKE DOWN THE ECONOMY

BY SAMANTHA LI, AIDEN DAUK, BERTHA LIAO, MATTEO DALESSANDRO, EVELYN LEE, JELINA LEE, APRIL 2025

INTERNATIONAL BUSINESS COMMITTEE

Introduction

Since its recent re-election, the Trump administration has been making headlines for their activity in foreign policy imposing protectionist policies, specifically, tariffs. Tariffs are principally taxes placed upon goods and services coming into a country with an effect proportional to the value of the good or service. Historically, tariffs levied on imports were vital sources of revenue; however, today they remain insignificant to federal governments of developed countries and are utilized primarily as a means to promote domestic markets, push foreign policy goals, and as leverage in trade negotiations. In the United States, the Constitution originally grants Congress the authority to manage foreign commerce and levy tariffs. Congress has since posed laws providing the President this power under specific circumstances. Over the past century, the United States has continued efforts to reduce many tariffs especially with their involvement in the World Trade Organization, but other countries have not always followed suit. Since President Trump first took office in 2017, his administration openly disapproved of the low-tariff approach and used Presidential authority to increase them. Tariffs comprise a central component of Trump's economic strategy and goal of protecting domestic employment and manufacturing while raising tax revenue and growing the economy. In recent news, the threat of Trump tariffs and retaliation have caused global stock markets to plummet and United States consumers to panic anticipating their prompt effects on prices while the long term effects remain uncertain.

Goals on Supporting Domestic Firms

Tariffs are a policy tool to strengthen U.S. industries by reducing import competition, protecting critical sectors, and funding long-term economic development. The 2025 Trade Policy Agenda underscores these objectives, but businesses face both benefits and challenges as they adapt to changing costs and supply chain dynamics.

By raising the cost of foreign goods, tariffs encourage

domestic manufacturing, particularly in industries where import reliance has historically threatened competitiveness. After the reinstatement of a 25% tariff on steel and aluminum, U.S. steelmakers, including Nucor, raised prices multiple times in early 2025, with hot rolled coil prices surging 12% to \$839 per short ton within two weeks, while some buyers struggled to secure quotes as suppliers canceled or delayed orders (Reuters, 2025).

Although these tariffs have created breathing room for U.S. metal producers, industries that rely on imported raw materials, such as automotive, construction, and heavy machinery manufacturing are now facing severe cost pressures. A Bain & Co. survey found that 40% of U.S. manufacturing executives anticipate double-digit cost increases, leading 80% of firms to adjust financial plans (Reuters, 2025). Some businesses, particularly small manufacturers, are squeezed between rising input costs and customers' resistance to price hikes. For example, HCC, a farm equipment parts producer, reported difficulties in obtaining price quotes from suppliers, while its customers resisted absorbing the increased costs.

In addition to shielding domestic manufacturers, tariffs have become a strategic lever in reshaping U.S. energy and technology supply chains, particularly those crucial to national security. By increasing the cost of imported materials, tariffs encourage domestic production of essential components such as steel, aluminum, and vital minerals used in clean energy technologies. The Department of Energy (DOE) has actively worked to enhance domestic manufacturing capabilities through initiatives like the Advanced Materials & Manufacturing Technologies Office (AMMTO) and the Office of Manufacturing and Energy Supply Chains (MESOC), which provide tax credits, loans, and grants to support U.S.-based energy production (DOE, 2025). However, tariffs also introduce challenges. While duties on foreign aluminum and steel support domestic producers, they simultaneously raise the costs of renewable energy projects that depend on those materials, including wind turbines and solar panels. Similarly, retaliatory tariffs, such

as Canada's response to U.S. aluminum tariffs, have disrupted exports of American agricultural and industrial goods, demonstrating the geopolitical risks of protectionist trade policies. As the U.S. seeks to strengthen its clean energy manufacturing base, policymakers must balance trade protections with the need for stable supply chains, ensuring that tariffs do not undermine broader energy and industrial goals.

Tariffs not only reshape domestic industries but also trigger international trade retaliation, influencing global supply chains and market dynamics. For example, when the U.S. imposed tariffs ranging from 10% to 15% on \$21 billion of agricultural goods, China responded by seeking alternative suppliers. This shift is expected to benefit Brazilian exporters, European pork suppliers, and Australia's wheat industry, reflecting a broader trend to reduce reliance on American agriculture. Such retaliatory measures are standard, as seen with China's tariffs on U.S. goods in response to U.S. steel tariffs ([MSN News](#)).

Moreover, the U.S. trade deficit recently experienced a notable contraction, attributed to a significant decline in imports—the most substantial since late 2022. This reduction positions trade to potentially contribute positively to economic growth in the upcoming quarter. However, businesses remain cautious, with concerns over potential tariff implementations influencing future import patterns and economic dynamics. These trade tensions and tariff-induced disruptions reveal the complexity of managing supply chains in a globally interconnected economy ([Supply Chain Report](#)).

Trump's Administration Motives on Tariffs

Tariffs are just a tool for Trump to win. Trump said, *'Trade wars are good, and easy to win'*. Undoubtedly, Trump's tariffs' war is targeting to implement tariff deficits. Meanwhile, there are different motives that Trump has behind the scenes. This tariff war is more than implementing tariff deficits. While on the surface, his tariff wars appear focused on reducing trade deficits, deeper motives suggest a broader agenda: strengthening geopolitical leverage, asserting control, and fulfilling campaign promises through economic conflicts. Looking over his previous term depicts how he needs to gain his power over the world to initiate his promises.

A closer look at Trump's first term (2017-2021) reveals how he used tariffs to negotiate from a position of strength. Trump imposed tariffs on up to \$60 billion of Chinese imports, targeting approximately \$50 billion

worth of products with a 25% tariff. The official justification centered on intellectual property theft, forced technology transfer, and structural trade imbalances. According to the White House government fact sheet, "In response to China's intellectual property theft, forced technology transfer, and other unreasonable behavior, President Trump acted with conviction to impose tariffs on imports from China, using that leverage to reach a historical bilateral economic agreement."

Indeed, these aggressive moves yielded partial successes. Trump won agreement over intellectual property from China by imposing tariffs. Another key initiative was the steel and aluminum tariffs, where Trump imposed 25% tariffs on steel and 10% duties respectively under Section 232 of the Trade Expansion Act, citing national security concerns. By mid-2019, these tariffs were lifted for Canadian and Mexican imports, which accounted for a significant portion of U.S. steel and aluminum imports. As one of the results, Hyundai in South Korea decided to build a steel plant in the United States. This could lead to help unemployment and investments from foreign countries into the U.S. industry while improving the U.S. trade balance. As Trump gained much power and deals from the previous tariff war, people expect that he has different motives behind his current tariff war.

Recently, Trump has already announced tariff moves towards U.S. allies, Mexico and Canada to stop illegal immigration, poisonous fentanyl, and other drugs. According to the Fact Sheet of the White House, they addressed this as an emergency situation under the Emergency Economic Powers Act (IEEPA).

According to Tax Foundation research about Trump Tariff by York and Durante, beyond drugs, Trump is also trying to combat illegal immigration and address trade imbalances. As a whole, Trump is expecting the safety and security of the American people and the sanctity of our national borders. Trump's tariffs have raised public concern, as they were never discussed through the International Trade Administration, and have been a significant cause of plunging stock markets.

Effects on American Consumers and Produces

Trump's tariffs are a tax that the U.S. government put on products imported from other countries. President Trump aims to use these tariffs in an effort to help American companies compete with businesses abroad that often sell items at low prices. The Trump administration's main goal was to make foreign products cost more so people would

choose American made products instead. This policy was put into effect to create more jobs and protect American workers, though many experts say it has both positive and negative effects on the overall economy ([Reuters, 2025](#)).

One of the biggest effects of these tariffs is that the prices of everyday items have increased. According to [CNBC](#), when companies import goods such as electronics, clothing, or toys, the extra cost from the tariffs is usually passed on to consumers. As a result, many families are facing higher prices on everyday items. A prominent drawback of Trump's tariffs is the strain it has put on consumer's budgets, making it difficult to cover mundane expenses. This shows how a policy designed to help domestic business can sometimes hurt the buyers of these products ([CNBC, 2025](#)).

Tariffs haven't just affected consumers but also producers, specifically in the way that businesses operate. The [New York Times](#) reported that companies relying on imported materials have been forced to adjust and reduce their costs. Some businesses are looking for new suppliers in countries that are not impacted by the tariffs, while others are moving parts of their production back to the United States. According to the [New York Times](#), these adjustments have made it more difficult to import goods by adding extra steps, such as finding creative ways to outsource materials or services at a reasonable cost. Businesses in the U.S. are hindering the flow of goods and making international trade more difficult due to the hurdles imposed by tariffs.

It is fair to say that Trump's tariffs have produced a mix of outcomes for the United States. On one hand, these taxes are designed to protect American jobs and support the growth of American businesses. On the other hand, they have increased prices for consumers on everyday items and forced companies to change their business models, adding extra costs and slowing down business processes. According to the [Wall Street Journal](#), this combination of advantages and challenges shows that while government policies can positively affect certain parts of the economy, they can also create difficulties for consumers and businesses alike.

Long-term Impacts

Although the current motives behind implementing tariffs in these economic conditions for the US seem reasonable for Trump's administration to leverage the US economy, academic studies have debunked the benefits of tariffs where it may be seen as economically inefficient. Thus,

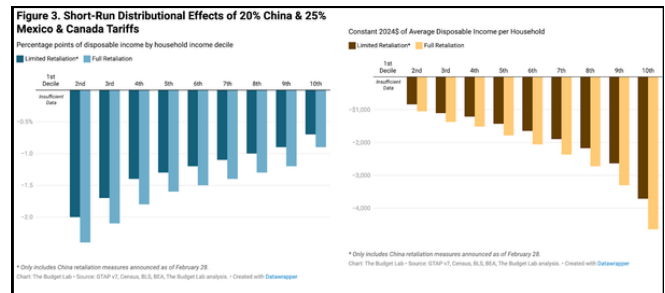
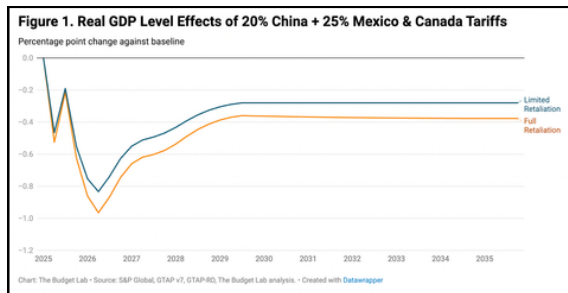
many economists have been against the goal that tariffs aren't feasible in resolving trade deficits since countries with higher tariffs tend to have larger deficits. Jon Pevehouse, a professor at UW-Madison with research and expertise in international political economy and trade, emphasized that very few economists believe that tariffs would provide economic recovery long term and that only in theory it could reduce the trade effect. "If you're cutting imports, that helps the trade deficit, but if you're then cutting exports abroad because of reciprocation then you're not helping your trade deficit." He furthers his statement in detail that in equilibrium it may go down a little bit. Pevehouse continues that it's not clear what the trade deficit is an indicator of, yet Trump thinks it's an indicator of unfair trade deals or consumer demand. "If the goal is to cut the trade deficit, then what you have to hope for is that the depressing effect of the tariffs on imports exceeds the depressing effect on exports. If it doesn't, then it's not going to do much for the trade deficit."

Pevehouse further clarifies the long-term impacts of how tariffs are an inefficient economic tool for the US, especially globally as a whole. "If [tariffs] stay on for a while they're really likely to tamper such as economic growth, job growth, raise consumer prices, you kinda enter this world of stagflation, where prices are going up causing inflation but wages are not going up because there's no jobs, because jobs are going down." With his statement, tariffs are considered a restrictive barrier on international trade that would result in reducing economic output, trigger lower incomes, and involve reduced standards of living from reduced consumption on high prices. Hence, tariffs not only raise prices to disincentivize consumption, it also diverts resources and choices away for consumers that would eventually give them limited options regardless of their purchasing power.

With these sorts of factors that Pevehouse has listed coming from stagflation, this would reflect on the GDP output in the long run. "Tariffs create deadweight loss." Pevehouse commented, "you're gonna have higher prices, both because imports are more expensive, you'll have export market cutbacks because states will retaliate for not buying, and you also will have domestic producers increasing prices as well." One great example is the U.S. auto industry, which relies heavily on Canadian car parts in the automobile manufacturing process. Modern vehicles are not assembled using parts from a single country. Instead, they are the result of complex global supply chains that involve the free flow of goods across borders. For instance, a car manufactured in Michigan might have an engine built in Ontario, electronic systems from

Mexico, and steel from South Korea. Tariffs imposed on imported auto parts disrupt this supply chain by increasing the cost of essential components.

that price hikes were likely for goods like backpacks, bicycles, and school supplies, which directly affect working-class families.



With the support of Pevehouse’s statement of how tariffs affect the GDP output, the graph above reflects US output would be still -0.3% lower with limited retaliation and -0.4% with full retaliation in the long run towards China, Mexico, and Canada. Accordingly, this would equal the US economy being smaller by \$80-\$110 billion yearly in 2024 dollars.

Based on the two graphs above, it is clear that tariffs impact the percent change in disposable income by almost three times as much for households in the second decile compared to households in the top decile. Therefore as income rises across the distribution more steeply than the tariff burden falls, the tariff burden in dollar terms is higher at higher incomes.

Moreover, tariffs would also go further down the road by being distributionally-ambiguous across households in reducing labor income and returns to capital. Pevehouse adds to his response to this statement claiming that latest research suggests that for the income side, tariffs acts as a regressive tax since it harms the socioeconomic status of individuals more than those of higher socioeconomic status. As a result of this, it produces uneven labor and income effects across income groups in the United states. Consequently, as the income rises across the distribution more steeply than the tariff burden falls, the tariff burden in dollar terms becomes higher at higher incomes. A clear example of this occurred during the U.S. – China trade war under the Trump administration, particularly in 2018–2019, when tariffs were placed on hundreds of billions of dollars’ worth of Chinese imports. According to a study by the Federal Reserve Bank of New York, Princeton, and Columbia University, American consumers—not Chinese exporters—ended up shouldering most of the cost of these tariffs.

With the situation of market competition domestically and internationally in applying tariffs, taxes in general delays the economy’s growth and depresses markets. Pevehouse reflects by saying, “Anything that creates a deadweight loss is gonna create more market frictions and probably slow things down.” Therefore, although Trump assumes that making foreign goods more expensive will benefit domestic producers, this assumption doesn’t hold in today’s economy. Supply chains are so interconnected that ‘Made in’ labels have lost much of their meaning. Most products rely on foreign intermediate goods and components, even when the final product is assembled domestically. Hence, Pevehouse provides two problems when it comes to some domestic firms in the long run. The first problem is that tariffs would increase the leverage of depressing intermediate inputs for producers. Thus, this follows up to the second problem where despite firms being aware that tariffs would hurt them and their competition, it leads to them putting higher prices as a benefit in order to push for competitive goods with better market share. Moreover, given globalization and supply chains on other countries in the long run, a lot of goods that are being tariffed both on the import and export side with countries outside of the US, Canada, and Mexico such as those in South Asia or Southeast Asian have all kinds of intermediate goods. As a consequence, their intermediate inputs with tariffs would lead to delitary effects on those countries’ third party economies. Pevehouse adds that tariff wars undermine global confidence in American economic leadership since

American policies have allowed globalization in the long run that has been built over decades. With tariffs, it would be an indication of severing diplomatic ties with other countries that economically rely on USA's imports from them in that case as a result of the change of trade. "Once you break that, it's hard to fix it." Jon Pevehouse concluded.

leadership, with long-term consequences for diplomatic and economic stability.

Conclusion

At current, tariffs remain a persistent and integral aspect of President Trump's economic strategy, which are seemingly here to stay. This protectionist policy has already instigated trade retaliations from others and caused massive waves in the global economy including possible foreign shifts away from United States products with higher prices for American consumers, especially working families, but also promotes domestic manufacturing. With recent tariffs rising, steel prices jumped, helping United States steel manufacturers, but hurting other domestic firms down the supply chain. Beyond reducing the trade deficit, tariffs are being used for a variety of different reasons pushing specific actions and fulfilling campaign promises. More recently citing illegal immigration, drug control, and intellectual property theft as issues linked to the tariffs. Economically, tariffs produce a deadweight loss which hinders economic growth and disrupts global trade dynamics making many economists skeptical of their long term effectiveness. The recent Trump tariffs have revolutionized America's approach to international trade and displayed a conscious move toward protectionism not seen in the past few decades. Considering this, the future of the United States economy and foreign relations remains uncertain, with many questions still remaining about the effectiveness of the recent tactics being employed and if their motives are strictly political without goals of fostering economic growth.

While tariffs may offer short-term protection, most economists argue they are inefficient long-term. Professor Jon Pevehouse explains that tariffs can reduce GDP, raise consumer prices, and create stagflation—higher prices without job growth. Tariffs disrupt global supply chains, particularly in industries like auto manufacturing, where parts cross multiple borders. Research shows that consumers, especially low-income households, bear most of the cost.

Overall, tariffs cause "deadweight loss," slow economic growth, reduce incomes, and strain international relations. They also risk damaging the global trust in U.S. trade

BIRD FLU OVERVIEW: WORLDWIDE ECONOMIC IMPLICATIONS AND FUTURE OUTLOOK

BY AIDEN DAUK, APRIL 2025

INTERNATIONAL BUSINESS COMMITTEE

As farmers worldwide turned the chapter to 2025, a difficulty from recent years continues to grip the agriculture industry. Avian influenza, also known as bird flu, is a contagious respiratory disease that generally affects poultry and wild birds, but has recently been found in cattle and humans as well. The initial strain of bird flu presence reached the US in 2022, and by the end of 2023, it was in all 50 states. Then, it began to spread to cattle and other mammals in 2024 with the first human case confirmed in April following its progression. By December of 2024, there were human cases in 10 states. Most human cases occurred after unprotected contact with infected animals, their mucous, saliva, or feces. Considering a broader context, bird flu presents various challenges and negative economic impacts including culling.

By definition, culling involves removing an animal from the herd or flock to stop the spread of a virus, manage livestock populations, or improve the health of a genepool. In the case of bird flu, this typically calls for the euthanization of animals to prevent the spread. Moreover, the practice has been employed regularly since the beginning of the outbreak as a necessary sacrifice to not only prevent the needless suffering of a large flock from bird flu but also stopping the virus from spreading even further. Mass culling, while often necessary and required via regulations, does cause supply shortages and rising food prices globally. Even though the economic cost of culling hits poultry farmers hard, it also indirectly affects similar industries like feed mills and traders. Since the strain made it to the United States in 2022, over 148 million birds have been euthanized with around 23 million birds culled between February 7 and March 6, a 30 day period.

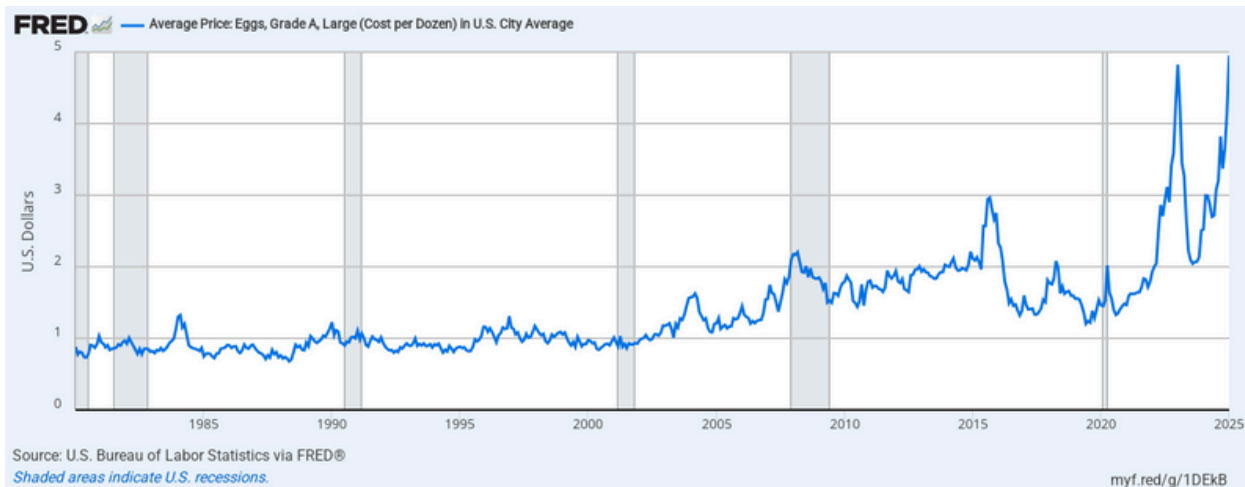
While most recent mass cullings have occurred in the United States, the bird flu outbreak forced poultry industries around the world to resort to culling. In the United Kingdom, around 1.8 million birds in captivity were killed in a three month span across 33 farms. This measure comes at a slight cost to the UK's poultry

industry which typically outputs around 20 million birds per week. Since 2021, Canada has similarly struggled with bird flu culling over 15 million birds. Many of their cases included wild birds from bald eagles and swans to mallard ducks while also infecting several large farms in southern Ontario and British Columbia. Specifically, Northern Ireland has also dealt with recent outbreaks and precautionary cullings just weeks ago removing around 64,000 birds at a farm near Dungannon and cutting into the poultry industry's worth £0.6 billion.

Bird flu around the world decimated poultry populations, and with that many egg-laying chickens resulting in a major egg shortage. With the dramatic decreases in supply yet still high demand, prices globally and especially the United States are continuing to climb. Of the 23 million birds culled in January, around 18.8 million were raised to produce eggs contributing to Grade A eggs jumping to a record \$4.95 on average in U.S. cities. With chances of these prices sinking back to normal soon, they remain slim. Since this was a 13.8% increase in January alone compared to 8.4% in December. Thus, the U.S. Department of Agriculture forecasts prices to rise 41.1% across 2025 along with prices for all food increasing 3.4%. Bearing the impact of these price hikes are many small businesses and low income families who depend on eggs.

"Retail egg prices continue to experience volatile month-to-month changes due to an outbreak of HPAI that began in 2022," - USDA

However, rising prices are not exclusive to the United States. Rather, many countries nearby are similarly hiking prices as a consequence of bird flu and the struggles faced in the U.S. For example, Mexico chicken prices have substantially jumped as much as 43% in some areas in the past year due to the outbreaks from the United States, one of Mexico's largest chicken suppliers. Although egg prices have also risen up to 27% in Mexico, they still remain lower than the United States. However, not all nations in close proximity to the United States are



struggling with egg prices. Another case is Canada, since it has been able to keep their food prices relatively stable throughout the bird flu outbreak with small increases in the price of one dozen eggs from \$4.66 in September 2024 to \$4.89 in January 2025.

This stability is likely attributed to Canada's different egg industry which consists of mainly smaller farms with an average of 25,000 laying hens on each as opposed to the United States which utilizes bulk producers that can have several million hens. When bird flu outbreaks hit the United States, these massive flocks in close proximity promote the spread of avian influenza and require culling greater numbers of hens. In periods without bird flu as a major concern, this system is designed to produce eggs cheaper than the smaller farm method seen in Canada, but makes prices more susceptible to spikes when bird flu hits.

In Europe, countries are also feeling the economic squeeze from bird flu which continues to affect poultry markets. A year from February 17, the EU reported industrial egg prices rising 10%, with average prices spiking 28% in Belgium, 18% in Spain, 24% in the Czech Republic, and by 17% in Poland. In addition to these price increases, bird flu continues to plague the continent with 20 newly confirmed outbreaks, affecting commercial poultry flocks in Hungary in the last week of March. So far in 2025, 167 HPAI outbreaks in commercial poultry flocks were registered spanning across 14 countries with the most coming from Poland and Hungary.

In response to this massive economic event, countries, especially the United States, are scrambling to meet the stable demand for eggs. The United States approached many countries including Poland, Finland, and Denmark aiming to secure a

steady stream of egg imports to reduce the shortage and lower prices, but were turned away due to worries about each country supporting their own domestic markets. However, they were able to find relief in South Korea who started exporting to the US in March along with 71 million eggs from Turkey, one of the top egg exporters, last year, and hopes to import 420 million eggs this year with 240 million set to arrive by July. As well, in March, South Korea started exporting to the United States. However, there remains notable shortages, and many markets are implementing limits and added surcharges in response to the lack of eggs.

At this point, bird flu continues to wreak havoc on the agriculture industry and the global economy as a whole with little signs of slowing down. In fact, the virus continues to adapt, infecting various animals including cats, dogs, wild birds, and recently a fox was discovered to also be infected as well. What's also concerning is the spread among dairy cows in the United States. Across the entire outbreak, 1,005 herds were affected in the US as of April 9, stretching 17 states. With research showing that milk production drops after infection, the outbreak remains especially concerning to dairy farmers.

"CDC considers the risk to the general public associated with the ongoing U.S. HPAI A (H5N1) outbreak has not changed and remains low. The detection of a severe human case with genetic changes in a clinical specimen underscores the importance of ongoing genomic surveillance in people and animals, containment of avian influenza A(H5) outbreaks in dairy cattle and poultry, and prevention measures among people with exposure to infected animals or environments." -CDC

As of now, humans are at low-risk, but the situation is continually changing with Mexico registering their first human death related to the illness. Despite the risk to humans remaining low, scientists are still concerned that

avian influenza potentially evolves into the next pandemic. As a result, the US and Canada have been steadily stockpiling vaccines in preparation. Currently, the US has three licensed vaccines to combat H5N1 among others around the world, but not necessarily the new deadly strains. These vaccines are intended mainly for use in people who work in direct contact with poultry or cattle, and so far, Finland has been the only country offering these vaccines as of early March. As far as livestock are considered, several countries do vaccinate against bird flu regularly including China, Egypt, France, Bangladesh, and Vietnam. Even though the United States has historically not vaccinated poultry, the USDA presented a strategy in February that included providing \$100 million to vaccine research along with \$500 million for biosecurity procedures, and \$400 million relief to farmers.

Overall, while the situation might seem grim, bird flu outbreaks are not a novel circumstance, and since 1959, most have been solved through implementing biosecurity measures and vaccines. While expensive, it is still safe to consume poultry products, and rest assured that there will be eggs available for Easter. With human cases scarce, though there is no need for panic yet, we will continue to closely monitor the situation as it evolves.

THE RISE OF AGRICULTURAL DRONES

BY AIDEN DAUK, DECEMBER 2024

INTERNATIONAL BUSINESS COMMITTEE

With the world population continuously growing, increasing pressure is placed on agricultural producers to generate more food than ever before. One way that farmers are keeping up with the demand is by implementing the newest technology to maximize efficiency, output, and ultimately profits. Specifically, unmanned air vehicles (UAVs), commonly referred to as drones, have quickly become necessities to some farms, and are helpful tools for a positive harvest while also becoming a rapidly growing industry themselves. As of 2022, the agricultural drone market reached \$1.1 billion, and by 2032 many project that number will increase to \$7.19 billion.

Agricultural drones are essentially flying, remote controlled robots designed to assist farmers with various tasks. For example, many decisions on a farm are influenced by data. One of the major applications of agricultural drones is to enhance this collection of data providing it quickly and accurately.

From the low-flying drones' cameras and sensors, farmers receive easily accessible information on crop health, plant development, field conditions, and field mapping. The precise data provided by drones helps farmers get the most out of each field and ultimately maximize production and profits while minimizing waste and promoting sustainability. Furthermore, drones can be used to spray chemicals onto fields, replacing larger manned aircrafts or ground rigs, and can recognize and pinpoint specific areas where fertilizer, herbicide, and pesticide application is necessary.

In the past, the majority of spraying in the United States has been done using ground sprayers and piloted aircrafts because of the large fields and flat terrain experienced across the country. However, in recent years, many farmers are turning to unmanned drones to do the spraying. According to a company providing spray drone services, acres sprayed with drones were just 1,000 in 2019, and exploded to around 200,000 acres in 2023. The use of agricultural drones, however, is not limited to strictly crop production. They can also be utilized to monitor and count livestock, easily identify specific individuals and spot sick animals, keep up with farm

maintenance by observing buildings and fences that may need repairs, feed fish and shrimp or locate large schools of fish for harvesting, or even keep track of forest health.

Despite the already impressive features and uses for agricultural drones, innovations are continuing to be made around the globe in efforts to further improve drones. Japanese developers are working currently to develop drones that can pollinate flowers like bees and can fit in the palm of your hand. Some drones are also starting to be used to plant trees in an effort to assist in reforestation. Simultaneously, though small, unmanned drone usage in other countries (especially east Asia) was established earlier, it is also continuing to rise there. Both Japan and Korea commonly utilized single rotor drones with remote controls for years. In Japan, drones have been widely used with around 2,800 unmanned helicopters registered in March of 2016, which helped to spray a third of their rice fields. Both of these countries are now beginning to involve use of multi-rotor spray drones, continuing to evolve technology. China has historically used the most small multi-rotor drones in the world, and in 2021 they sprayed 153 million acres, which was a massive jump from 2020 during which they sprayed 64 million.

As far as manufacturing these agricultural drones that are in increasing demand, many of the top companies derive from common manufacturing giants. A few of these being DJI, TopXGun, Eagle Brother, and XAG all from China, Garuda Aerospace and IO TechWorld from India, and Xrobots out of Brazil. The largest of these drone companies is DJI, which claimed 70–80 percent of the market share as of 2024, totally dominating the market.

Their consistency in innovation-leading technology and high quality products with various low cost options makes DJI a heavy favorite amongst many drone users; however, with the influx of airborne DJI drones also came questions of the true motives of the company. Many U.S. lawmakers have been concerned about the possible security risks associated with the Chinese company's drones operating in the United States and the possibility of data sharing with the Chinese military.

TECHNOLOGY

Contributed by Joshua Saji, Kyle Hooten, Sami Beg, Dheer Sheth,
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“ANY SUFFICIENTLY ADVANCED TECHNOLOGY IS INDISTINGUISHABLE FROM MAGIC.”

— ARTHUR C. CLARKE

In the Technology Committee, we recognize we’re living in a time of extreme disruption, driven by the fervor of artificial intelligence, in an increasingly multi-polar environment, amplifying the discussion and debates we have. Through our articles, we hope to shine light on patterns and intersections we see as important, and to answer the question of what technology can and should be in our societies.

In a sector that is highly volatile, hard to predict, and at times controversial, we decided to focus on central, reoccurring themes. We compare machines and humans through the lens of analytical efficiency and creative art, analyze the ability of specialized artificial intelligence programs, and understand

the interests of corporations on the consumer, educator, and energy markets.

Our writing serves as an individual and shared exploration of developing and dynamic topics, and in many ways, of personal conviction in a backdrop of chaos and uncertainty.

As technology continues changing, our work will remain and ourselves evolving. We invite future generations to build on top of our work, correcting the mistakes with the luxury of retrospect, and to make their own opinions and arguments, however reckless or safe they choose to be.

*Jason Li
Chair, Technology Committee*

RATIONAL MACHINES; IRRATIONAL STANDARDS

BY ZACH LIGHTMAN, APRIL 2025

TECHNOLOGY COMMITTEE

Introduction

Self-driving cars already outperform human drivers. They see better, never get tired, and never get distracted. But even though the objective data shows that we would reduce injuries and fatalities by increasing our use of self-driving cars, we are implementing higher standards for automated vehicles. Simply put, we aren't ready to trust self-driving vehicles as much as we should. Our mistrust grows from the fact that we often don't understand how these vehicles fail. We can easily explain how a human driver got into an accident, but we cannot understand how a self-driving car made a mistake that a human driver probably wouldn't have made. So if we want to speed up adoption of self-driving vehicles, capturing this tremendous opportunity to reduce injuries and fatalities, we need to focus more on AI systems that can explain their thought processes, and on educating the public on how these amazing systems work. Enhanced trust will lead to increased adoption, saving lives.

An Empirical Case For Autonomous Safety

The corpus of empirical data substantiating the superior safety profile of autonomous vehicles continues to expand. In 2024, comparative analyses reveal that Waymo-operated systems exhibit an 85% diminution in injury-inducing collisions and a 57% attenuation in aggregate crash incidence relative to human drivers. Quantitatively, this translates to a mere 0.41 injury events per million vehicle miles traversed, compared to a markedly higher human baseline of 2.78 incidents per equivalent distance. (Time & Cornell, 2024) An incisive investigation published in Nature Communications offers further corroboration. In an estimated 79% of rear-end collisions implicating autonomous systems, culpability was ascribed to the human-operated vehicle. This asymmetry underscores the enhanced perceptual acuity and situational responsiveness embedded within autonomous driving architectures under normative traffic conditions. (Nature Communications, 2024).



However, we must acknowledge current limitations. The same research revealed vulnerabilities during twilight conditions, where autonomous vehicle crash rates exceeded human rates by a factor of five. Similarly, complex turning maneuvers remain challenging for autonomous systems (Nature Communications, 2024). These significant shortcomings represent technological hurdles rather than insurmountable barriers to the broader safety advantages offered by autonomous systems.

The Psychological Underpinnings of Algorithm Aversion

Despite compelling evidence favoring Artificial Intelligence's safety, public acceptance remains elusive. A healthcare survey conducted by the National Institutes of Health demonstrated that respondents tolerated human error rates of 11.3%. In contrast, their threshold for Artificial Intelligence plummeted to just 6.8% – a striking illustration of our inherent bias toward human judgment. (NIH, 2024). This phenomenon of algorithm aversion persists even when confronted with overwhelming evidence of algorithmic superiority because we crave the emotional intelligence and contextual understanding that human decision-makers provide. The opacity of Artificial Intelligence decisions creates discomfort with outcomes that feel simultaneously impersonal and unpredictable.

A 2023 Pew Research Center study found that 52% of Americans report feeling more concerned than excited around the idea of growing Artificial Intelligence implementation, while only 10% feel more excited than concerned. This unease is not necessarily grounded in evidence but reflects a broader mistrust of machines making consequential choices without human oversight (Pew Research Center, 2023).

The Foreign Nature of Algorithmic Error

The qualitative character of AI errors differs fundamentally

from human mistakes. Human errors follow predictable patterns—caused by fatigue, inattention, or knowledge gaps, patterns we have evolved to recognize and understand. By contrast, Artificial Intelligence errors can appear jarringly counterintuitive, lacking the logical coherence we expect from rational actors. This unpredictability profoundly undermines trust, as humans instinctively seek narrative coherence even within failure (IEEE Spectrum, 2024).

Our moral cognition further complicates this dynamic. We possess an innate tendency to attribute intention to mistakes—a framework that makes little sense when applied to machines. This mismatch renders AI errors seemingly more unjust, even when the statistical outcomes overwhelmingly favor automated systems. This emotional dimension cannot be discounted; it fundamentally shapes public perception.

Fostering Trust in Artificial Intelligence

We must take a multifaceted approach to addressing the trust deficit surrounding Artificial Intelligence:

First, we must prioritize transparency. Developing genuinely explainable AI systems that can articulate their decision-making processes in accessible terms represents a critical step toward demystifying algorithmic outputs and building public confidence.

Second, we should emphasize complementarity rather than replacement. AI systems that augment human judgment rather than supplanting it entirely may prove more readily acceptable to a public wary of wholesale automation.

Third, educational initiatives must move beyond technical literacy to foster a more nuanced understanding of AI's capabilities and limitations. Such efforts enable citizens to form informed opinions regarding Artificial Intelligence technologies and their appropriate applications, empowering them to make sound decisions. For example, with the data from Waymo, we can make the appropriate decision to use it only during the daytime when the system outperforms human capability.

Fourth, robust regulatory frameworks remain essential. We must ensure they are not impediments to innovation but safeguards ensuring ethical deployment, clear accountability, and public safety.

Finally, we must recognize the cultural dimensions of AI acceptance. While American skepticism toward autonomous vehicles remains pronounced, Chinese cities

like Shenzhen have embraced autonomous taxis integral to their public transit infrastructure. European nations have charted a middle path, emphasizing stringent regulatory oversight while prioritizing transparency and ethical design principles in autonomous vehicle implementation.

Conclusion

The tension between Artificial Intelligence's demonstrable safety advantages and society's heightened scrutiny reveals important psychological and cultural dynamics at work. However, it is important to remember that AI has the potential to enhance safety significantly. If we demand that Artificial Intelligence systems dramatically outperform human capabilities before granting acceptance, we are knowingly choosing a path that results in avoidable injuries and fatalities.

Addressing algorithm aversion requires more than technical solutions; it demands a holistic approach encompassing transparency, thoughtful collaboration, robust public education, and principled regulatory frameworks. Understanding the subtleties of Artificial Intelligence allows us to capitalize on its strength, enhancing safety and efficiency while keeping risks at bay.

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SELLING DESTRUCTION: HOW BIG TECH BENEFITS FROM FEARFUL AI PREDICTIONS

BY KYLE HOOTEN, APRIL 2025

TECHNOLOGY COMMITTEE

Silicon Valley trades on optimism. Even with venture activity relatively depressed since its early-Covid peak, investors are still leaning hard into seed rounds, infusing the least stable startups with capital that values them far beyond an ordinary revenue multiple. For evidence of this, look no further than Y Combinator's Winter 2025 batch, which included quirky ideas like "Roomba for weeds on a farm," "GPS satellites for lunar navigation," and "fusion reactors for [commercial] ships." Ideas like this that attract investment show that the San Francisco spirit of optimism and a willingness to experiment with unorthodox concepts is still alive and well.

However, over the past few years, a new sentiment has gained popularity in the Bay Area and beyond. Rather than marketing novel technologies as forces for good, driving the human experience to new heights, the current frontier is frequently represented as dangerous. Conversations about artificial intelligence often sound more like discussions on nuclear proliferation than the latest chatbot. Ironically, this discourse is driven in large part by men and women at the forefront of AI development, whose companies stand to benefit the most from a rise in public awareness of their work.

Genuine Concern, or Marketing Tactic?

Things that are dangerous are powerful. Anything that's powerful can be profitable. Therefore, representing a technology as dangerous can do as much (if not more) than optimism to describe its transformative potential, attracting new users and investment.

This all begs the question: How genuine are concerns over AI's danger, and where do these concerns come from? Since founders, their backers, and leaders of established companies have so much to gain by driving "AI hype," as it's often described, can the public trust their "10-minutes-to-midnight"-style assessments of the current market? Is it possible that the oft-heard warnings about AI's apocalyptic power are issued, at least in part, for marketing purposes?

"AI doomers," as legendary venture capitalist and technologist Marc Andreessen describes them, have long been the target of critique in tech discourse. "There is a whole profession of 'AI safety expert,' 'AI ethicist,' 'AI risk researcher,'" he observed via a widely circulated post on his Substack in 2023. His view is that these types of figures "are paid to be doomers, [pessimists]," and function as scare merchants for media outlets to cash in on.

Andreessen also identifies another, more insidious, faction he calls the "bootleggers;" people who spread AI fear in hopes they can "financially profit by the imposition of new restrictions, regulations, and laws that insulate them from competitors."

While widely celebrated by both tech and popular audiences, Andreessen's years-old assessment of the situation falls short of considering a third, marketing-driven, motive for AI pessimism, which has seemingly emerged recently, since he penned his 7,000 word takedown of artificial intelligence skeptics a few years ago.

Less than a week before Anthropic closed a \$3.5 billion raise earlier this month, valuing the company at \$61.5 billion, its CEO Dario Amodei literally compared generative algorithms as "easier to build nuclear weapon[s]."

"A new breed of danger has come into play," he warned, ominously foreshadowing that the public will experience "shock" as the magnitude of this danger comes into focus within the next two years.

Anthropic makes money selling access to its generative chatbot, Claude, which just released a [new model](#) (Claude 3.7 Sonnet). What could possibly underscore the potential impact – and therefore value – of Amodei's growing product line more than comparing it to nuclear weapons, one of the most impactful and civilization altering technologies ever developed? Further, the CEO's choice to offer a time frame (less than two years) provides a signal to investors and analysts that he sees large

advancements or paradigm shifts on the near horizon. Who wouldn't want exposure to that?

Amodi is not alone. The CEO of Google DeepMind, Demis Hassabis, issued a similar warning in recent weeks. Though not as dramatic as Amodi's remarks, Hassabis's recent interview with Axios centered around AI related danger, also concluding that these foreseen harms may manifest on "relatively short timelines."

Perhaps the most famous living technologist, Elon Musk, is yet another figure who has recently issued dire warnings about AI danger – while profiting from AI development. "We are on the event horizon of the singularity," he posted on X in late February, shortly after the release of his Grok 3 model. While taken on its own, Musk's post doesn't convey much about his feelings regarding the "singularity," this statement has been interpreted as a warning by many who remember his 2024 statement that a "singularity ... [poses] some chance it will end humanity."

Describing a product as an existential threat to civilization goes directly against traditional ideas of salesmanship. Typically, companies extol only the positive aspects of their creations. Instagram, for example, was sold as 'a revolutionary technology that stands to change the way people connect with their friends, sharing their photography and important moments from their lives.' It was not billed as 'a dangerous network that will forever disrupt the way people socialize, playing a role in millions of young people developing depression, anxiety, eating disorders, and social image issues,' although this potential was well understood very early in social media's rise.

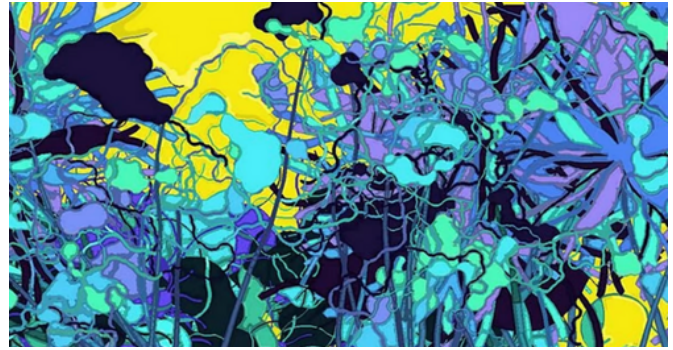
However, it seems an inverse dynamic has evolved around AI salesmanship. AI is pitched to consumers and investors in a darkly futuristic 'join or die' fashion that runs contrary to the usual Silicon Valley ethos. The heads of these companies aren't selling the hottest new tech, they're selling the end of the world, but with the chance for you to be on the team that enters the final launch codes – or at least invest in the team that knows them. Whether or not these claims are accurate, they're certainly compelling, which warrants a second, slow and sober look at why they're being leveled.



THE PARADOX BEHIND GENERATIVE ART

BY JOSHUA SAJI, APRIL 2025

TECHNOLOGY COMMITTEE



Introduction

Within the past five years, Artificial intelligence has taken the world by storm. Today, it's an integral part of many people's daily lives, as people take advantage of the various chatbots to perform menial, everyday tasks. However, arguably the most interesting aspect of these models is their capability to generate art. With just a few words, a user can have an AI chatbot produce an aesthetically pleasing piece of art based on their specifications. While this certainly seems like a remarkable achievement in technology, there are numerous ethical considerations surrounding the discussion of generative art. Who owns the art piece? What are the copyright considerations involved? However, the topic we'll explore today is whether AI-generative art can truly be considered art.

Origins of Generative Art

Before we delve into this question, we need to discuss the origins of generative art, starting with Harold Cohen in the 1960s. Cohen was a computer scientist and artist, and was a professor in the Visual Arts department at the University of California – San Diego. Most notably, however, he was known for his creation of AARON, recognized today among computer scientists as the first artificial intelligence model to achieve generative art.

The way AARON works makes it stand out strongly from other models capable of generative art. In particular, AARON isn't a piece of software – it's a small device that acts like a human drawer. Cohen built his own plotters that could translate machine instructions into lines drawn on paper. He also included brushes for AARON to add color to its generated art. On the other hand, models such as Midjourney or DALL-E are strictly software, where any user can prompt the model with their desired illustrative piece, and the model will produce it based on the user's needs. Through the prompt, the model takes millions of images of illustrations as data points, feeds them into its mathematical model, and then spits out its own piece.

Discussions about generative art will naturally delve into the true nature of it. It's safe to say that Harold Cohen's beliefs on what constitutes art heavily influenced his creation of AARON. In his essay, "Parallel to Perception", he believed that among everything that humans have made, the computer had the most potential to perform tasks parallel to the capacity of the human mind. One of these tasks included generating art autonomously. At the same time, he believed that art's significance was beyond the superficial, visual aesthetics, and laid within the meaning the artist put forth in the creation of their pieces. These views can be reflected in AARON – although the artmaking process is largely removed from the artist, it is still up to the artist to have a vision and intended meaning behind the piece they want. Whereas in models such as DALL-E, meaning or any sort of vision behind the piece isn't necessarily included or required.

However, it's not just meaning that sets human-generated art apart from AI-generated art. In fact, one may still argue that meaning may not be fully lost with AI, so long as the user of the generative AI model purposely includes the meaning within their prompts. But, arguably the most important aspect of human-produced art, and creativity in general, is the fact that ultimately, any intentional decisions behind the art they produce, or any inspiration they find, or any meaning or vision they want to convey through art, stems from nature and direct observations of the physical world.

This crucial aspect of art is what artificial intelligence models lack. The biggest observations that these models make are from the millions of previously-produced works from artists throughout human history. Outside of that, these models solely rely on mathematical instructions and data provided by their developers. They have no true senses or experiences of the same world that artists live in. It's equivalent to someone claiming to have visited Paris because they've seen pictures online – they may have an idea of what the city looks like, but they've never experienced it for themselves and never will until they actually step foot into it.

To explore this idea even further, we can take a look at ChatGPT's new feature which allows users to produce graphics in the style of films made by Studio Ghibli. This new capability has taken social media by storm, with influencers, celebrities, and active users posting portraits, iconic movie scenes, memes, and more – all under this style.



ChatGPT & Studio Ghibli

Studio Ghibli is an animation studio based in Tokyo, Japan that creates films. The studio is directed by Hayao Miyazaki, and is most noted for its heavy use of traditional drawing techniques. Each frame of every film the studio has produced is hand-drawn by Miyazaki's team of artists, leading to the colorful, smooth and vibrant films that millions of viewers enjoy today. However, the beauty behind Ghibli films, and much like millions of art pieces created in human history, doesn't lie solely in its visuals – rather, it's emotional and captivating storytelling. The visuals only help make the director's vision come to life.

There's no doubt that ChatGPT is capable of producing stunning visuals. DALL-E, the AI artist that's integrated into ChatGPT, has been shown to create pieces possibly beyond what the human mind could create. ChatGPT's Ghibli-style production is certainly no exception. Yet, no matter how stunning the visuals may appear, ChatGPT's generative art capabilities should not be treated the same as the human's capabilities.

Firstly, ChatGPT does not, in any way, shape or form, follow the principles laid out by Miyazaki for his films, where each frame is hand drawn. Much like how other AI models generate art, ChatGPT simply takes a set of data points, and outputs its own piece based on the user provided prompt.

Secondly, and as discussed above, the pieces the model produces don't contain intrinsic meaning. As discussed above, and noted by Harold Cohen, the meaning behind something visual is critical. Studio Ghibli's films used art as a conduit to convey the vision outlined by Miyazaki and his teams. Every decision behind the creation of Studio Ghibli's films were done to convey some sort of meaning to the viewers. There isn't an active decision-making and creative process behind ChatGPT when creating these pieces. The art produced by ChatGPT lacks the charm that the Studio Ghibli films have.

ChatGPT's intervention with Studio Ghibli and Miyazaki is far from anything we haven't seen before. In fact, Miyazaki strongly condemned the use of AI almost a decade ago. A team of developers developed a machine learning model to create unique, animated character movements that may be difficult or even impossible for humans to replicate. Some of these movements were grotesque and were expressive of agonizing pain, which could apply not only to Studio Ghibli films, but other modes of media, such as video games. When this team met with Miyazaki, he took grave offense, as he believed that AI will never capture the essence of human pain.

Conclusion

The issue of AI-generated art doesn't only lie in visual pieces, such as paintings, drawings, or animated films. One could extend this question to other forms of art or modes of human expression and creation, such as literature and music. Regardless, the point still remains – whether AI can generate novels or exquisite illustrations, they still lack the soul and humanity that human-curated art has. There's no intrinsic meaning behind what a computer generates or what it could generate, and there never will be. And if we continue to treat computer and human-generated art as the same, then society will surely lose its own humanity.

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STARTUPS V.S. SCHOOLS: THE BUSINESS BATTLE FOR THE FUTURE OF EDUCATION

BY DHEER SHETH, APRIL 2025

TECHNOLOGY COMMITTEE

In a world where AI can walk you through a calculus problem and an app like Duolingo can teach you Spanish faster than many classrooms, the age-old question resurfaces: what is the future of education?

The \$7 trillion global education market is at crossroads. The rise of AI-powered EdTech startups has sparked a new era of competition, one where traditional educational institutions must re-evaluate not only how they teach, but also how they do business. The clash is more than just technological; it's economic as well. As AI companies scale rapidly and rethink the economics of learning, legacy institutions must choose between adaptation and irrelevance.

The Business (Model) of Traditional Education

For the longest time, schools and universities have operated on a model that combines tuition revenue, government funding, endowments, and donor contributions. And the product has traditionally included learning from credible experts and access to a classroom experience. However, this model is now straining under immense financial pressure.

In the United States alone, total student loan debt exceeded \$1.7 trillion as of Q4 2024. As tuition continues to rise, skepticism around the return of investment on a college degree grows louder, particularly among the youth.

To think from a business standpoint, universities are legacy institutions; highly respected and regarded but operationally expensive, slow to pivot, and deeply rooted in tradition.

How AI EdTech Startups are Scalable, Profitable & Disruptive

On the other side of the spectrum are the AI powered companies, which are lean, scalable, and designed as digital-first businesses. However, they're not geared towards replicating the college experience but rather

aimed at redefining learning itself.

Duolingo, for example, operates as a freemium subscription model and AI-enhanced learning paths. The company grew its daily active users to 31.4 million and achieved a 45% revenue increase in Q1 2024, reaching \$167.6 million.

Khan Academy, a non-profit company, is now introducing Khanmigo, an AI-powered GPT tutor and classroom assistant which is developed in partnership with OpenAI and Microsoft. With no tuition and global accessibility, they are positioning themselves as a powerhouse in education.

In China, Squirrel AI exemplifies how adaptive learning can be achieved through AI, and at unprecedented rates. The company combines real-time personalization algorithms with human instruction and recently set a Guinness World Record for most users in a single online math class with over 110,000 students.

This goes to show how these AI-powered disruptors do not require classrooms or faculty payrolls. Thus, they are able to scale globally with heavy private funding at minimal marginal cost, making them both financially appealing and operationally efficient.

Traditional Education vs. AI

At the end of the day, traditional institutions are traditional institutions. They offer community, credibility, mentorship, networking- factors not easily replaced by mere algorithms and models. Yet, even these core strengths are being tested.

Micro credential programs offered by platforms like Coursera & Udemy, AI tutors, and self-paced certifications are unbundling the traditional degree. Instead of a four-year all-in-one product, learners are now opting for modular learning experiences, picking only what they need and when they need it.

From a business and economic lens, this is product-market fit at its peak. AI education platforms are listening to consumer behavior and iterating quickly. Universities, in contrast, face bureaucratic challenges and reputational friction in pivoting or adapting.

Yet, startups face their own headwinds. They truly lack formal credentialing power, the great institutional trust, and the “college experience” that universities will carry. A Coursera certification might give you the necessary skills, but it won’t replace a diploma in a job interview, yet.

Convergence, Not Replacement: A Potential Business Strategy

Rather than having a singular winner, the most sustainable path for the future may be hybridization where:

- Universities license or build AI tools to enhance teaching while preserving in-person experiences
- EdTech startups partner with universities to gain legitimacy, access research, and expand their own reach.

The real opportunity lies in convergence: combining the human-centered value of traditional education with the data-driven efficiency of AI. Perhaps for the business, whether it be institutions or corporate companies, those that find the right balance will lead the new era of education, one that is economically scalable and educationally impactful.



THE FLUTTER PHENOMENON

BY **SAMI AHMAD BEG**, APRIL 2025

TECHNOLOGY COMMITTEE

When entering the world of software development, one of the biggest decisions developers face is whether to pursue native app development—offering superior speed and efficiency—or opt for cross-platform development, which, while often considered less optimized, allows for the creation of both iOS and Android (and sometimes web) apps from a single codebase. For years, React Native dominated the cross-platform space, but the landscape is shifting. Major companies like Supercell, Universal Studios, Alibaba, eBay, BMW, Google Pay, and Toyota have embraced Flutter for several projects, redefining the future of cross-platform development.

Google introduced Flutter in 2015 under the codename Sky Engine at the Dart Developer Summit, officially launching it as Flutter 1.0 in 2018. The framework's key advantage lies in its ability to deliver high-performance, visually consistent apps across multiple platforms, all from a single codebase, while still maintaining near-native performance.

Unlike most other frameworks, Flutter doesn't rely on native UI components. Instead, it uses its own rendering engine, Skia, to draw every pixel on the screen. This approach gives developers complete control over the UI, ensuring greater efficiency. Additionally, Flutter offers a more accessible learning curve compared to its top competitors.

While React Native has long been the industry standard with little competition, by 2024, Flutter had already cemented its place among the most widely used frameworks. A global developer survey by Statista found that 9.4% of developers now use Flutter, surpassing React Native's 8.4%. Furthermore, Flutter remains the fastest-growing software development framework year-over-year.

Performance is a key factor driving Flutter's rise. A comparative study at Umeå University found that Flutter consistently achieves near-native 60 FPS rendering, whereas React Native often drops to 30–40 FPS on



complex animations, particularly on lower-end devices. This results in smoother animations and a more responsive UI in apps built with Flutter.

Another study, conducted at the University of Jyväskylä, further highlights Flutter's statistical advantages over React Native in CPU, GPU, and memory performance. On iOS, React Native was found to consume 8.6% more CPU when scrolling, 17% more when opening a web view, and a staggering 87.4% more during filtering tasks. GPU benchmarks revealed that Flutter rendered 8.4 frames per second faster than React Native under UI-intensive operations. On Android, while React Native performed better in some areas, Flutter excelled in list rendering and filtering, proving it to be a superior framework in most cases.

Flutter's future looks incredibly promising, driven by its growing community, constant updates, and the rise of complementary tools like FlutterFlow, which enable the creation of high-quality apps with minimal code, making development faster and more cost-effective for businesses and startups.

At the rate Flutter continues to grow, it wouldn't be surprising if it becomes the new industry standard, setting the benchmark for cross-platform development. And with the rapid advancement of artificial intelligence, the future holds even more potential for optimized and intelligent approaches to software development, with Flutter and React leading the way.

NUCLEAR ENERGY AND REACTORS—THE KEY TO A.I.'S ENERGY CONSUMPTION CRISIS?

BY JASON LI, APRIL 2025

TECHNOLOGY COMMITTEE, CHAIR

It is no secret that the new 8th wonder of the world, artificial intelligence, takes up a lot of energy.

According to senior researcher Jesse Dodge of the Allen Institute for AI, "One query to ChatGPT uses approximately as much electricity as could light one lightbulb for about 20 minutes. So, you can imagine with millions of people using something like that every day, that adds up to a really large amount of electricity."

This extreme level of energy consumption translates to an expensive bill for the top technology companies—with a leading company, OpenAI, spending over \$700,000 a day to run the popular ChatGPT software.

While OpenAI transitioned from a non-profit to a "capped-profit" for-profit organization, it's currently experiencing significant losses, with projections indicating a \$5 billion loss in 2024 despite \$3.7 billion in revenue. OpenAI is projected to lose around \$5 billion in 2024, even with \$3.7 billion in revenue.

OpenAI expects revenue to triple to \$12.7 billion in 2025. OpenAI is in discussions to raise \$40 billion in private markets, valuing the company at around \$300 billion. OpenAI is working to restructure itself into a fully for-profit company, which is a requirement to secure the full \$40 billion in financing from SoftBank.

Why does A.I. need so much energy?

The answer lies in the software. A.I. models, such as ChatGPT, are inherently software. They function by digesting and identifying patterns within datasets, creating a statistical framework from said data, and then outputting a logical response to the prompt that is given.

Let's put this into an energy context. Every time a prompt is given to, say, ChatGPT or Gemini, the software expends energy to scan its large database of information and produce a response. That's not to mention the up-front training an A.I. program needs before commercial use,

which requires even more.

According to ChatGPT itself, and corroborated by the World Economic Forum, Version GPT-3 of ChatGPT consumes around 0.0003–0.001 kWh per query. This is equal to lighting one lightbulb for about 20 minutes. GPT-3 is estimated to have used around 1,287,000 kWh of energy during training, which is roughly equivalent to the electricity consumption of 120 U.S. homes for a year.

While larger, more complex AI models could drive energy use higher in the short term, efforts to develop more efficient algorithms, specialized hardware, and the use of renewable energy may counterbalance this trend. It's likely that future models could be both more powerful and more energy-efficient than current ones, though the net energy use may still increase due to wider deployment and more intensive applications.

How can nuclear energy help?

Artificial-intelligence workloads crave huge volumes of electricity that is available all the time, not just when the wind is blowing or the sun is shining. Conventional fission reactors—and, soon, small-modular reactors (SMRs)—offer that round-the-clock, zero-carbon baseload. A single gigawatt-scale nuclear plant can deliver roughly 8 terawatt-hours of electricity per year, enough to satisfy the annual consumption of several hyperscale data-centre campuses. Even a 50-megawatt SMR could cover the needs of a cluster of GPU farms while slotting into an existing industrial park or retired coal site.

Big Tech is already making moves. Microsoft is evaluating SMRs and micro-reactors for future Azure and AI facilities, while Google and Amazon are signing first-of-their-kind power-purchase agreements that bundle new nuclear with large blocks of renewable power. Sam Altman, OpenAI's co-founder, chairs the advanced-reactor start-up Oklo, whose planned 15-megawatt fast reactor is designed from the ground up to power energy-hungry data centers.



From a climate perspective, the argument is equally strong. Nuclear plants run at capacity factors above 90 %, meaning they displace fossil-fired generation every hour of the year. The International Energy Agency (IEA) estimates that data-centre demand will at least double by 2030, surpassing 940 TWh—about the current electricity use of Japan.

Without a massive build-out of clean, firm power such as nuclear, that extra load risks locking in natural-gas plants and undermining global decarbonization targets.

Socio-economic ripple effects

Regional revitalization: retrofitting legacy coal or industrial sites with SMRs keeps transmission lines and skilled labour pools in use, injecting high-salary engineering and operations jobs into areas that have grappled with de-industrialization.

Grid resiliency: pairing nuclear with AI data centres can anchor micro-grids that also serve nearby communities, enhancing energy security during extreme-weather events—a growing concern as climate change accelerates.

Technology spill-overs: AI itself accelerates reactor-core modelling, predictive maintenance, and fuel-cycle optimization. Conversely, dedicated nuclear power unlocks aggressive AI scaling without straining existing grids, supporting downstream productivity gains across sectors.

Capital re-allocation: the search for clean, reliable power is pushing tech companies into long-duration infrastructure finance, a space historically dominated by utilities and sovereign investors. Successful deals could lower the cost of capital for the entire advanced-nuclear industry.

The bottom line

Artificial intelligence will not slow down; its electricity

appetite is set to triple over the next five years. Efficiency gains—better chips, smarter algorithms, liquid cooling—will help, but they will not close the gap alone. To keep ChatGPT, Gemini, and the next wave of generative models running without torching climate goals, the world needs vast quantities of clean, always-on power. Nuclear energy—especially new, modular formats—offers one of the few proven paths to deliver that scale at the required reliability. Betting on fission is not risk-free, yet the alternative is a future where the “eighth wonder of the world” is fuelled by yesterday’s fossil fuels.

SPORTS

*Contributed by Deepak Badri, Siddharth Yerapotini, Cole Wisnefski,
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FROM SCOREBOARDS TO BALANCE SHEETS: HOW SUCCESS SHAPES SPORTS FINANCES

BY **DEEPAK BADRI**, NOVEMBER 2024

FINANCE COMMITTEE, CHAIR
SPORTS COMMITTEE, CHAIR

Ever since I was a little kid, I have been enthused by sports. At the time, I thought that when a team won the championship in one of the three big leagues — NFL, NBA, and MLB — there was a cash prize that went with the championship. This reward system is how it works for a lot of individual sports like tennis and golf, thus, I always questioned why it should be any different in leagues like the big three.

While there is a single prize that is split by the players, success impacts sports franchises' financial situations in more indirect ways that should be considered. Some of these ways are much bigger than the direct cash prize received when winning the championship.

In all of the three leagues, there is a prize pool which is divided based on how far each team advances any time that qualifies for the playoffs is eligible for it. This pool is then divided between the players. Based on how much money star players make nowadays, those players are more likely to be in it for the success and championships rather than the extra money.

However, for those players who are on the team and don't have big contracts, this money likely helps them substantially in comparison to the millions that the best players make. So, regardless of whether they are in the [NBA](#), [NFL](#), or [MLB](#), the cash prize situation is quite similar. However, there are more monetary effects than just this cash prize.

If you have ever taken an introductory macroeconomics course, you are probably familiar with the multiplier effect, which states that initial spending can lead to a multiplied increase in economic activity. This applies to the prize pool discussion because winning raises sports franchises' revenue in other ways — such as increased

streams, sponsorships, and more. Specifically, winning championships is an easy way to draw attention to your franchise to get more tickets (essentially, free advertising). Brands are also going to want to build off that attention and partner with successful teams in order to boost their revenue. Conjointly, all of these factors boost the valuation of a sports franchise as they become more revered. While these effects of winning benefit the shareholders of franchises more than players for the most part, they are still a way that winning impacts sports finances.

Ultimately, winning has direct financial incentives for professional athletes and franchises. It is important, however, to note the more subtle benefits that are better in the long run for the financial prosperity of sports franchises.



SID'S NBA EARLY SEASON SURPRISES 2024-2025

BY SIDDHARTH YERAPOTINI, DECEMBER 2024

SPORTS COMMITTEE

Golden State Warriors

Last season, the Warriors finished as the 10th seed in the Western Conference, in what was an ugly season filled with constant heartbreak, choked leads, no consistent lineups, and player frustration. In the following offseason, they lost Warrior legend Klay Thompson, a move that truly cemented the end of their dynasty and winning ways...or did it?

Despite their current slump, the Warriors have had an overwhelmingly positive start to the season and have emerged as one of the surprises of the year. Even after the slump, the Dubs are seventh in Offensive Rating, fourth in Defensive Rating, and fifth in overall Net Rating. That's a significant improvement from 11th, 14th, and 15th, respectively. Additionally, they became the first team this year to qualify for the NBA Cup knockout stage – a stark contrast from their abysmal collapse in their final group stage game last year, in which they brutally choked a double digit lead against their rival, the Sacramento Kings, losing both the game and any chance of advancing.

Much of this success can be attributed to their deep 12-man rotation that Steve Kerr has masterminded. The Golden State bench is scoring an unbelievable 52.7 points per game – among the best in NBA history – with several players like Jonathan Kuminga, Buddy Hield, and others providing valuable boosts. The Dubs have also been moving the ball well, logging an incredible 30 assists per game, with 70.2% of their points coming off of assists. Their defense has been formidable as well, as they are consistently among the top in all major defensive stats like steals, blocks, turnovers, and points off turnovers. Their ability to consistently pressure opposing teams into losing the ball and unload low-percentage shots (enabled in large part due to their 12-man rotation that keeps every player fresh) has transformed outcomes and led to many dominant stretches for the team.



However, despite these positive stats, the Warriors have some significant weaknesses that put into question the validity of their hot start to the season. They shoot an abysmal 69% from the free throw line, and have lost games due to free throw shooting alone. They have also shown remnants of last year's team in their late-game meltdowns, as they have had recently with mediocre teams in the San Antonio Spurs and Brooklyn Nets. The Dubs also have a clear second star also has not developed yet in Andrew Wiggins, which is something every title contender needs. There's a good chance Wiggins may emerge as this strong number two, but his lack of consistency puts this into question. Another clear issue lies in the Warriors' complete lack of size – a move for a 6'11" or taller big man seems imminent.

If the Warriors can resolve these issues, who knows? Maybe we will see the revival of a fallen dynasty! They did it once in their magical 2022 championship run – can they dig deep to find their championship DNA once more?

Cleveland Cavaliers

The Cavs are the team that has caught everyone's attention in this early part of the season. After a late-season struggle last year followed by a loss in a gentleman's sweep to the Boston Celtics in the playoffs, the Cavaliers looked lost – every year, they were good enough to make the playoffs, but never positioned to make any real progress. Team chemistry between All-Star guards Darius Garland and Donovan Mitchell was put into question, and the Cavs sought to rebound coming into this season.

And rebound they did. They had a historic start to the year, setting a new franchise record with a staggering 17-1 record, picking up wins at the rate of the legendary Warriors' dynasty. They have an incredible offensive rating of 122.8 (1st in the NBA), top 10 defense, and the number one net rating at a dominant +11.8. They boast

an extremely balanced attack, with several role players being able to catch fire at any moment and put the game away, such as when guard Ty Jerome scored a staggering 27 first-half points. Their ball movement and playmaking also stand out, throwing defenses off nearly every possession and demonstrating an ability to get quality shots in almost any situation against any coverage. If the Cavaliers can stay healthy and maintain this level of dominance, for the first time in this iteration of their franchise, they could be serious championship contenders. Given the state of their franchise following LeBron James' departure in 2018 – falling to last place in the Eastern Conference – this is a remarkable turnaround that would surely rank among the quickest rebuilds in the history of the NBA. That being said, they have little positive playoff experience, so it remains to be seen if their potential regular season success can translate to playoff wins.

Houston Rockets

Last season, the Rockets finished a disappointing 11th seed in a tough Western Conference. They were a young team that made significant improvement over their previous season, in which they were tied for the worst record in the West. Despite this, expectations were not high for them this year – they surely were not expected to be near the top of the standings, with so many contenders in their conference. Surprisingly, they have surpassed all expectations, and now currently stand an incredible 2nd seed, just 1 game behind the #1 seed in a historically competitive Western Conference! It's been mainly their defense doing the work, with their 2nd ranked defense propelling them to a 4th ranked net rating. Future outlook is very positive for this young Rockets team, as they have many potential stars such as flashy guard Jalen Green, playmaking big man Alperen Sengun, a developing Jabari Smith Jr., and more. Just like the Cavaliers, the Rockets' turnaround following James Harden's controversial departure has been ahead of schedule, albeit not as extreme. It remains to be seen whether they can retain all of their young talent and develop their squad into a championship-worthy team in the coming years!

Memphis Grizzlies

The Grizzlies had a tough 2023-2024 season (to say the least). Following two successful regular seasons in 2021-2022 and 2022-2023, in both of which they finished as the second seed in the Western Conference, the Grizzlies finished a lowly 13th seed last year. They faced problems from the start with superstar Ja Morant's 25-game suspension for controversial off-

court activity. Then, even after Morant returned, he suffered a labral tear and underwent shoulder surgery, sidelining him for the final 47 games of the season and limiting him to just 9 games played all year. Morant wasn't the only one, either – the Grizzlies' injury situation became so bad that they set the unwanted record of the most players used over the course of the season in NBA history, with 33. That's over two full rosters. They also broke the record for the most different starting lineups, with 51, and another record for the most games lost due to injuries with 578 (total number of games players missed).

The point is, the Grizzlies had severe injury problems last season which some believe will influence their production this season, as they have completely lost their identity as a team and have nearly zero chemistry or knowledge regarding how to play together. As a result, heading into this season, questions arose regarding the Grizzlies' ability to recoup and return to the brand of basketball that brought them success in years prior.

They have answered all doubts to start this year, as they are currently in the 4th seed of the Western Conference despite Morant missing several games (he is healthy again and has made his return in an NBA Cup win), just two games behind the 1st seeded Oklahoma City Thunder. They are extremely consistent on both sides of the ball, with the 5th best offensive rating and 6th best defensive rating, amounting to the 6th best net rating in the NBA. Their demonstrated strength on both sides of the ball despite their superstar's injury bodes well for their rest-of-season outlook, as they possess the ability to beat teams through a multitude of ways. With Morant back in the lineup, they aspire to continue their strong form and rebound from their struggles last season, hoping to rebuild their team identity and get prepared to make a deep playoff run.

Competitiveness & Parity throughout the NBA is Exciting!

Every year, the competitiveness across the NBA seems to grow, bringing action-packed games throughout the regular season and gritty battles in the playoffs! This trend seems to have continued this season. As players around the world become increasingly skilled, teams are able to find role-player gems that turn into stars when needed, bringing unexpected results and truly competitive games. Across the NBA, even teams generally regarded as lottery-locks have been competitive – the Pistons, who had a record-breaking 28 consecutive losses last year, already have 9 wins (and are 3-0 in the NBA Cup, leading their group)! Every

single team in the Association is clearly capable of beating every other team on any given night, and the standings in both conferences are shuffling around on a daily basis, bringing high stakes and intensity to each and every game.

The NBA has had an unprecedented run of parity in recent years, with 6 different champions consecutively – will that continue this season? With how much talent is around the league this season, it's very possible!

That wraps up the recap of the NBA's early season surprises. Will these overachieving teams continue their brilliance, or will reality set in and restore the order NBA fans around the world expected heading into the season? Stay tuned, as it's all to play for in this ever-competitive state of the NBA!

Reach out with any questions, comments, or concerns at yerapotini@wisc.edu.

DRAFT DOMINANCE: HOW THE NFL MADE THEIR DRAFT ENTERTAINING

BY COLE WISNEFSKI, APRIL 2025

SPORTS COMMITTEE, CHAIR

Last April, roughly 775,000 fans poured into Detroit for the NFL draft. Pulling in crowds that large for a draft is unheard of, even by NFL standards. Over three-quarters of a million people gave up their weekend, starting on Thursday, to watch the draft in person – not to mention another 12.1 million people who tuned into the first round on TV. So why do so many people pay attention to the NFL draft while leagues like the NBA, NHL, and MLB are all in their regular seasons? The reason is that the NFL has developed the perfect offseason entertainment plan to keep fans engaged even when no football is being played.

It all starts with the incredible job the NFL does during the regular season. They dominate other sports leagues in viewership numbers, and for good reason. The league perfectly caters to the fan viewing experience. They put extra effort into “primetime” games where the production quality increases significantly. They have commentators everywhere, pre- and post-game shows, new graphics for every game, and so much more. There is also NFL RedZone which allows fans to watch the live highlights of every game for seven hours without commercials. Redzone specifically caters to fans who play fantasy football, which is another way the NFL gets fans engaged. Fantasy football allows fans to cheer for superstars across the league, and not just for their favorite team, which increases the attention that fans give the game. So if the NFL is so popular during the season, one might assume that they lose some attention during the offseason...?

This is true, but the NFL does not go away. One month after the Super Bowl, the offseason officially kicks off with free agency. This is the time period when NFL teams are allowed to sign players who are not under contract with another team. The day free agency started, the NFL media and fans crashed X – formerly known as Twitter. Their online presence was too much for a leading social media company to handle. Free agency technically has nothing to do with the draft as no

college players are being signed, but it still signifies the start of the pre-draft period. Next, the NFL hosts the Draft Combine, which is a broadcasted event where the top college prospects complete measurements and drills for scouts to evaluate. According to NFL media, 5.1 million people tuned in across the four-day event. This event begins to raise the hype around the draft as it's the first time fans get to see draft-eligible players since their last college games. After the combine, the NFL launches its pre-draft media hype campaign.

Every single day, for nearly a month straight, the NFL media talks about the draft. They do in-depth analysis of every team, every player, and every pick through articles, TV segments, and mock drafts. It's overwhelming how much content the pre draft hype produces, but it gets fans engaged and excited for the draft. Fan hype is exactly how the NFL gets those staggering viewership numbers for the draft. The actual draft is a spectacle itself. Fans pile into a giant amphitheater where they watch as each team selects their pick. There is food and activities spread around the draft for families and children to enjoy. The broadcast of the draft is well produced and they have cameras covering all of the players. The NFL has perfected the formula to make even the offseason entertaining. Through its elite marketing and production strategy, the NFL has turned the Draft into a massive event generating revenue even while their players are resting.

No other sports league has been able to do this during their offseasons. The NBA draft is the next biggest, but even that pales in comparison to the NFL. The NFL continues to dominate the sports media market in every single way, and shows no signs of slowing down. The NFL draft is the clearest example of their popularity. Though the NBA and NHL playoffs will both be going on during the draft, the NFL will pull the highest viewership numbers.

THE COACHING CAP

BY CATHERINE DONOHUE, APRIL 2025

SPORTS COMMITTEE



Is the money worth leaving your cozy coordinator position for a tenuous shot as an NFL head coach?

When it comes to blockbuster contracts for head coaches and players, the billion-dollar NFL enterprise expertly asks the question: How much money can you pay? Year after year, a new “highest-paid player in history” is crowned, and multi-year contracts guarantee millions. Coaches – even head coaches – sign contracts for millions of dollars but rarely extend longer than two or three years with guaranteed press conferences and criticism. Without salary caps on any coaching or coordinator position, is it that much bigger of a check to write from coordinator to head coaching salary to keep the team together?

Every season, hot coordinator candidates flock to interviews to try their hands at an open head coach position instead of continuing their success with their organization. In a big (but highly anticipated) move this year, the Detroit Lions lost both their coordinators shortly after the 2024 NFL season. Brought in and up through the organization by remaining head coach Dan Campbell, both offensive coordinator Ben Johnson and defensive coordinator Aaron Glenn have announced their departure from Detroit to head coaching jobs at the Chicago Bears and the New York Jets, respectively. Despite a rough start under Campbell, both coordinators achieved massive success and popularity in Detroit, however, this didn’t keep the coaches in Detroit shortly after the end of the Lions’ playoff run this past season.

Though coordinator salaries number in the millions – the highest-paid coordinator clocked in at \$6 million in 2024 – head coaches have been outearning their counterparts for years. The highest-paid NFL head coach, Andy Reid of the Kansas City Chiefs, signed his most recent contract for \$20 million a year. Sean Payton, the second-highest-paid HC, makes about \$18 million a year, with the rest of the 2024 season’s coaches following Sean McVay and Mike Tomlin’s \$16 million/year.

In interviews, Johnson discussed his desire to lead a team to compete, explaining his draw to Bears quarterback Caleb Williams and staying in the NFC North division. Something he didn’t mention in his press conferences: the Bears signed Johnson’s contract to the tune of \$13 million

a year. For comparison: In 2021, his former HC Campbell signed a 6-year extension for \$4 million a year. With Johnson’s new \$13 million/year, he suddenly became the seventh-highest-paid NFL coach in the league, ahead of his first head coaching year. For Johnson, the paycheck might’ve made the gig. But if that’s the case, what’s to stop teams like the Lions from shelling out to keep a successful coaching staff together?

As it turns out, aside from the big publicized contracts announced every season, NFL teams, owners, and coaches aren’t required to report coaching or coordinator salaries. For coordinators and position coaches without the big checks trying to negotiate contracts with teams and owners, this lack of transparency becomes a power disadvantage – it’s hard to negotiate a contract for what your skill set deserves when there’s no pay transparency for any comparative positions. Many of these position coaches don’t have agents – they’re negotiating their own contracts. For these “middle management” NFL team positions, secretive conferences are coordinated amongst themselves to each write down their yearly salaries. Here, out of the public eye, the data is compiled and shared anonymously – with two pieces of paper from each coach turned in by hand – for the less famous coordinators and position coaches to know how much money the others are making to better negotiate their contracts.

For most of these coordinators, the average salary hovers around \$1 million, depending on the team’s market and a variety of other factors like coaching tree, years of experience, and more. These private numbers are hard to find, even as coordinators or position coaches, given the secrecy on behalf of both teams and the league. If you’re not signing a blockbuster contract, the odds are that you’re negotiating on your own with little to no insight on market prices.

So, when it comes to getting contracts signed, head coaching positions might just be the move. But when it comes to getting paid, for a majority of the league, the pay grade of a couple million isn’t worth the tenuous move and added scrutiny and stress. Instead, coordinators becoming head coaches reveals something rare about the billion-dollar NFL business – the paycheck isn’t everything, but it makes a world of difference.

LIFESTYLE & SUSTAINABILITY

*Contributed by Malin Phelan, Kadie Juliian, Frannie Petersen,
Chaired by Malin Phelan and Frannie Petersen*



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A PROFIT-BOOSTING PARTNERSHIP: THE BENEFITS OF CONNECTING AI & MARKETING

BY MALIN PHELAN, APRIL 2025
LIFESTYLE & SUSTAINABILITY COMMITTEE CHAIR

The rise of artificial intelligence (AI) has fundamentally changed how people interact with technology on a daily basis. It has enabled a vast number of new processes for day-to-day use, including simplifying tasks, analyzing data, and generating content in seconds. The field of marketing, in particular, has the potential to be completely transformed due to the advent of AI.

AI has the capability to disrupt the field of marketing in numerous ways. It can analyze data in the market research area, expediting the process and reducing tedious work for humans. Additionally, it can generate graphics, images, and text for ad campaigns. Though it will be important to exercise caution and check that content made by generative AI is accurate and amenable to audiences, the introduction of AI into the field of marketing has the capability to allow for exponential growth and earning potential.

Taking a deeper dive into AI and marketing is critical for understanding how it will reshape the field. For example, AI can take in a spreadsheet of data on the reach of a social media ad campaign, then analyze viewership demographics, appearance rate, and audience follow-up. From that, it provides insights into the success of the campaign and potential areas for improvement. Another major area of marketing is assessing website performance and where it can be improved. Search engine optimization (SEO) is one critical aspect of this. Platforms like Google Analytics gather vast amounts of data based on user search engine history. AI can take this data in, and in turn, provide insights, such as which words draw users in, how long they remain on a website before clicking away, and where they see the most engagement. This is one example of how AI can benefit marketing strategies.

Furthermore, AI capabilities go far beyond analysis. Generative AI can create entire marketing campaigns from the ground up. It can take in a prompt –such as, “Create an ad campaign strategy for a new energy drink containing all natural ingredients.” It can then create a comprehensive plan for bringing the drink to new audiences, including plans for online ads, influencer collaborations, and tangible billboard imagery.

Evidently, AI has the potential to completely reshape



the field of marketing. It will expedite processes, provide new insights, and allow for the expansion of campaigns to an extraordinary degree. When marketing strategies work in tandem with generative AI, the potential to expand reach and earning power will accelerate like never before. However, this is not to say that there are no risks when implementing AI into marketing strategies. One major concern raised is that by using generative AI, artists and creatives may be put out of work. If it becomes commonplace to generate ad artwork using AI, human jobs could certainly fall out of favor. Additionally, the issue has been raised that marketing campaigns may lack humanity, thereby actually decreasing viewer engagement. However, it is important to remember that this does not have to be the case. Rather, if firms learn to temper AI use with human involvement, they can retain human artistry and authenticity.

The possibilities for AI in the field of marketing are endless. It has the capability to increase viewer engagement, and thus increase brand profitability. Though there are risks in implementing it, the benefits have the potential to vastly outweigh any drawbacks. As long as firms are diligent and implement well-thought-out policies, AI will be highly beneficial. Using AI as a tool to enhance marketing campaigns, rather than becoming entirely reliant on it, will enhance campaigns and open the door to engaging audiences at unprecedented rates.

LIBERATION DAY BLUES LOOM OVER THE RUNWAY

BY FRANNIE PETERSEN, APRIL 2025
LIFESTYLE & SUSTAINABILITY COMMITTEE CHAIR

On April 2, 2025, President Donald Trump's declared "Liberation Day" unveiled a sweeping number of baseline tariffs on imported goods in more than 180 countries, including a 10% duty on all imports to the U.S. These measures immediately provoked panic across global markets and fear of an American recession set in, with implications that will directly affect the fashion industry. These tariffs aren't only hitting large fashion retailers, but small businesses in the retail space, and somewhere much closer to home: your wallet.

How This Impacts the Fashion Industry

The fashion industry is one of the hardest hit industries by Trump's imposed tariffs. Stock shares in major fashion retailers plummeted—some by as much as 30%. The U.S. also faces additional challenges, being the world largest consumer of clothing, and more than 98% of the U.S. 's apparel imported. These tariffs are expected to disrupt the fashion supply chain from farmers to in-house seamstresses. Down to the sourcing of raw materials like cotton and silk, which are typically sourced from major supply countries like Pakistan and Bangladesh. With 29% and 37% tariffs, respectively, slapped onto prices without materials even making it to manufacturing.

These tariffs are even eating into luxury fashion and affecting long-standing designers. Many major luxury labels—like Gucci, Dior and Burberry—are facing tariffs up to 20% as their detailed craftsmanship lies in skilled workers in both France and Italy. With shoppers already planning to be frugal with their money in these uncertain financial times, top designers are forced to hike up prices to pay for the costly tariffs, and analysts predict a steep decline in American consumers' purchasing power for luxury brands.

While many luxury giants will be able to survive these vast shifts in the retail space, smaller businesses and independent retailers may not. Companies like Shein and Temu, known for their extremely low costs, have previously been able to thrive due to exemption from import taxes as packages under \$800 in value were able to ship from factories in China duty free. This model allowed for a loophole of selling directly to consumers for fast fashion companies operating overseas. Trump's new protocols on imported goods have eliminated the \$800 'de minimis' exemption in many nations, including China. Now, every order placed on these fast-fashion websites will be charged import taxes, meaning that a \$15 dollar T-shirt could cost over \$23 without additional fees. Fast fashion e-commerce platforms that took advantage of low prices and high volume will lose their previous competitive advantage and reduce reliance on affordable foreign sellers. This also directly affects consumers taking



advantage of cheap e-commerce—as for the future, the low-cost high-volume model is not what it used to be.

What now?

With Trump's reelection and return to the center of the political stage, the future of global economies remains uncertain. Fashion industry experts fear that this disruption in the economy could set the global fashion industry back 50 years, with worries of a fractured market where European designers resort to selling mainly to the European market, and American brands retreat inward.

U.S. in-house manufacturers will rely on American consumers to survive. Though, brands themselves are not powerless. They can lobby and speak out to government officials. Similarly, consumers can resume their old shopping habits and avoid higher prices by shopping secondhand and buying locally or from U.S.-based brands. Luckily, tariffs do not apply to used goods—this includes secondhand and consignment stores, and platforms like Ebay and Facebook Marketplace are great places to find well-priced used goods.

While some price increase may be unavoidable, there are ways to reduce the impact:

Shop Secondhand: Tariffs don't apply to used goods. Thrift stores, Facebook Marketplace, eBay, and consignment shops can help you score deals while keeping items out of landfills.

Buy Local or U.S.-Made: Domestic products aren't subject to these import tariffs. Look for "Made in USA" tags when shopping for clothes, tools, or home goods.

Wait It Out (If You Can): Some experts believe this could be a short-term policy shift. If you don't need to make an urgent purchase—especially big-ticket fashion or electronics—it might be wise to wait.

INVESTING IN SUSTAINABILITY WITH LEED

BY KADIE JULIAN, APRIL 2025
LIFESTYLE & SUSTAINABILITY COMMITTEE

In today's world, every business has to make a decision on their commitment to sustainability. These commitments often require significant financial investment through various programs, many of which allow businesses to earn a sustainability certification. The most widely used system of certifying buildings with green ratings is LEED, or Leadership in Energy and Environmental Design.

LEED follows a four level rating system based on points earned. Its goals include enhancing human health, minimizing contributions to climate change, and enhancing community quality of life. Many businesses value these goals. The real question is how many are willing to change their processes and make significant financial investments towards sustainability.

LEED's first edition, known as 1.0, was created in 1998. In September 2023, LEED released the fifth iteration of its rating system. With new editions, businesses that have already been LEED certified must reassess and possibly adhere to new requirements. [According to a study](#) by Nish Armanath, the fifth edition highlights buildings working towards ultra-low carbon and zero-emission plans. LEED provides step-by-step plans to help businesses obtain exceptionally low greenhouse gas emissions.

In order to gain LEED points, businesses must follow different protocols. The amount of points a company has determines their LEED certification. For example, the fifth edition offers four points to any building with EV charging equipment in at least twenty percent of its total parking spaces. With 40 to 49 points, a building can be certified. As buildings gain more and more points, they can work up to silver, gold, and platinum certification.

Sustainability is often not the most profitable business practice. Every business must find a balance between sustainability and affordability. [A study by Derrick Teal](#) investigates this balance. The two primary incentives for companies to implement sustainable policies are to satisfy customers and lower overall production costs. In today's world, many consumers search for sustainable businesses and products. According to Teal's study, "Gen Z is willing to pay 50% more for an item that is sustainable and Millennials up to 33% more."

Many businesses do not seek LEED certification because implementing sustainable practices can be costly and complex. For example, if a business wanted to utilize



green shipping practices, the limited supply and accessibility of electric trucks would pose a significant challenge. This results in high costs that are unrealistic for many businesses. This is where LEED comes in, helping companies start their sustainability journey and continue forward into the future. In his article, Derrick Teal argues that investing in sustainability offers a great return on investment. His study suggests that the costs of certification are insignificant when compared to the total ROI potential of a certified facility.

This higher return is driven by two key factors: increased customer loyalty, particularly from younger generations who are willing to spend more on sustainable brands, and long-term operational savings from implementing energy efficient systems. Many LEED strategies cut down on water and energy usage, which ends up reducing monthly utility costs. Making these sustainable investments allows businesses to offset their upfront costs over time while simultaneously strengthening their brand image.

Overall, LEED provides helpful resources and instructions for businesses to grow their sustainability efforts. The formality of a LEED certification helps businesses show their employees and customers proof of their efforts. In the end, every business wants proud employees and proud customers.

WHEN INFLUENCER MARKETING TURNS SOUR: THE BENEFITS AND DRAWBACKS OF NEW BRAND STRATEGIES

BY MALIN PHELAN, APRIL 2025
LIFESTYLE & SUSTAINABILITY COMMITTEE

Vending machines have rarely been a cause for controversy—they're a given in public places, merely an object that takes a dollar and returns a sweet or salty snack or beverage in exchange. However, one recent ad campaign generated an unforeseen controversy around vending machines for the first time.

Poppi was founded in 2018, and is one of several new brands (others include Olipop and Culture Pop) that have reinvented soda to include pre- and probiotics. Their marketing strategy focuses on repositioning soda as a healthy option. During the 2025 Super Bowl, Poppi ran an ad with Alix Earle and Jake Shane, among other popular influencers within Gen-Z. This ad is merely one example of influencer reach, but the controversy came during the lead-up to the event. Poppi provided influencers—including Shane again, as well as lifestyle creators Avery Wood and Rachel Sullivan—with vending machines stocked full of their product. The backlash from consumers was swift, calling these influencers and the brand “out-of-touch” and that it was unfair to send free, extravagant products to already “rich people” (Marketing Brew). The swift backlash to this campaign is just one example of how influencer marketing can quickly leave a sour taste in consumers' mouths.

Influencer marketing has become one of the primary ways for brands to reach new audiences and connect with their existing ones. The rise of “influencers”—that is, individuals who curate a specific brand around themselves, typically via social media apps—has fundamentally changed how brands conduct advertising campaigns. In general, this marketing style is a way to reach entire demographics with the medium of the influencer serving as a way to get there. In many cases, influencers generate positive buzz around a brand. Audiences tend to appreciate the endorsement of their favorite influencers, thus reflecting positively on the brand.

However, in the age of rapid information exchange, brands can also become susceptible to the downsides of influencer marketing. There are just as many potential negatives as there are positives. Poppi's ad campaign was just one example of this—others include the infamous Kendall Jenner Pepsi ad, the rapid drop of Bud Light sales after sending influencer Dylan Mulvaney a personalized can, and Kim Kardashian's failure to disclose the side effects of a prescription medication she endorsed.

Furthermore, these brand deals with influencers can feel inauthentic: “It is challenging to maintain influencers' credibility while promoting products because followers increasingly perceive influencers' recommendations as mere marketing tactics, known as persuasion knowledge (Friestad & Wright, 1994)” (Pan et al.). Over time, consumers have become highly aware of inauthenticity perpetuated by influencers, including promotions of products that those influencers don't truly use. When consumers exercise more caution and avoid taking influencer words at face value, influencer marketing tactics begin to suffer.

One final, epic failure of an influencer marketing campaign in the past year was Tarte Cosmetics' sponsored trip to Turks and Caicos. Tarte paid for influencers, including Alix Earle, to take a trip to a luxury resort, with the only requirement that they post about the brand and use their makeup while there. However, Tarte quickly faced backlash when some influencers stepped forward and shared that they experienced discrimination as women of color. These women disclosed that they did not receive equal treatment, including having smaller hotel rooms and overall receiving less support from the brand. Cynthia Victor, a beauty and makeup influencer, described her experience receiving a smaller hotel room than other creators, as well as receiving an invitation for only one week compared to others who were invited for two. Tarte quickly came under fire for giving preferential treatment, once again resulting in audiences calling the brand out-of-touch and discriminatory. Furthermore, the overall trip was seen as unnecessarily extravagant by audiences, who felt it unfair that influencers already making vast amounts of money were receiving a fully paid vacation. This is just one poignant example of a negatively received influencer marketing attempt.

Influencer marketing campaigns succeed when they continue to allow the consumer to identify with the brand. When they feel unobtainable and tone-deaf, consumers start to lose interest. In a world of seemingly constantly rising costs, influencers with access to free PR packages and extravagant vacations can make their audiences feel left out. Thus, while influencers can serve as a meaningful way to reach new audiences, brands must exercise caution to ensure that they don't fall into the trap of becoming unobtainable and out-of-touch.

HEALTHCARE

*Contributed by Kiley von Bernthal, Parker Griffith, Halle Rezin,
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ARTIFICIAL INTELLIGENCE IN DENTISTRY: TECHNOLOGY MEETS TEETH

BY KILEY VON BERNTHAL, APRIL 2025
HEALTHCARE COMMITTEE CHAIR

Would you let a robot clean your teeth?

Like professionals in many other fields, dentists and their teams are facing a range of challenges and controversies surrounding artificial intelligence. Given the rapid expansion of this innovative technology, it is not surprising that dentists are questioning the fate of their roles and the well-being of their patients moving forward. In terms of patient concerns, going to the dentist is already frightening enough, so replacing that friendly neighborhood face with an automated machine isn't favorable to most. Fortunately, AI holds promising potential in enhancing dentistry without compromising the careers of dental professionals or the clinical outcomes of patients.

Company Breakthroughs

Several leading dental AI platforms have already received FDA clearance for their proposed technologies, which will soon become commonplace in all successful clinics. In May 2021, Overjet became the first dental machine learning company to receive FDA approval for its bone-level and disease detection software. The pioneer's vast capabilities include insurance processing, generative imaging, and automated education; such features have already drastically improved efficiency, allowing for dentists, insurers, and educators alike to shift their focus towards the patient. CEO Wardah Inam emphasizes that Overjet's Clinical Intelligence Platform and Insurance Intelligence Platform can serve as the "first objective standard for dentistry...making it a more accessible and equitable medical field" (Pulse 2.0).

Another leader in AI solutions, Pearl, announced its first FDA approval in May 2022 for its "real-time pathology detection solution" titled *Second Opinion*®. Since then, the company has added other tools such as *Practice Intelligence*® for practices, *Precheck*® for insurance verification, and *Calibrate*® for clinical assessment.

DentalMonitoring, a remote orthodontics monitoring tool, was approved within the last year for use in clinical care. Its software employs image processing intelligence to examine permanent teeth within the oral cavity, and is designed to provide insight into diagnosis and treatment plans for orthodontists. The DentalMonitoring

team prides itself as one of the four recipients of De Novo grants from the FDA since 2012, and CEO Philippe Salah anticipates more to come following their software's approval.

Other leading companies in dental AI, such as VideHealth, boast exponential increases in partnerships, along with updated clearance for expanded disease detection. With such sophisticated advancements being pushed out at this stage, there is no doubt that routine appointment tasks will be delegated to AI systems for the long term.

Hope for Humans

Despite the promising progress demonstrated by these companies, dentistry is still considered one of the more "protected" careers from AI due to its unique blend of small-scale artistry with medicine. Trained professionals will continue to have a place in the dental realm due to their conscious expertise and, most importantly, ethical judgement. Like other areas of healthcare, dentistry requires a mix of extensive medical knowledge, critical thinking, and genuine sympathy.

Procedures, no matter how repetitive they may seem, will always vary between patients due to a number of factors, including case complexity, medical history, and even the patient's financial status. The process by which a patient receives care is just as important as the outcome itself, and the ability to consider real-time changes along with a patient's comprehensive circumstances requires raw human input. After all, the trust that defines dentist-patient relations cannot be mimicked by any machine or system.

Conclusions: Collaboration as a Compromise

Instead of devising ways to slow AI's inevitable rise, dentists and other healthcare providers may encounter more success by integrating these novel technologies in a way that will enhance patient outcomes. Moving forward, providers will bear a larger responsibility for understanding the implementation of AI-based approaches and figuring out how they can be used most effectively in their typical care setting. Nevertheless, patient skepticism over AI's ability to replace trained, conscious providers sustains the demand for human dentists as of now.

HUMAN REGENERATION THEORY

BY PARKER GRIFFITH, APRIL 2025
HEALTHCARE COMMITTEE

Human Regeneration: A Hypothetical Approach to Human Limb Regeneration combining plant and animal mechanisms with AI-Assisted Scaffolding

Limb regeneration in humans is a dream that has posed a tremendous feat for medical science. Over 2 million Americans live with limb loss today, yet no biological method for regrowth is currently available. While humans have limited regenerative capabilities, organisms like salamanders and plants demonstrate remarkable tissue repair and regrowth. The potential to use AI-assisted biodegradable scaffolding to apply these regenerative principles presents a prospect that excites tissue regeneration researchers and their teams. Could this revolutionary blend of biology and technology lead to the successful regeneration of human limbs, or will we remain trapped by our biology?

What is Human Limb Regeneration?

Human limb regeneration refers to the ability to regrow lost or damaged body parts. While mammals - including humans - have very limited regenerative capabilities, other species such as salamanders and plants can reform complex organs and tissues.

The key to successful limb regeneration in these organisms lies in cellular dedifferentiation, controlled growth pathways, and precise molecular signaling, some of which have been observed in plant regeneration and salamander limb regrowth.

The theory of human regeneration centers around the activation of dormant regenerative pathways that are present during early human development and that some species retain throughout their lifetime. For instance, during early embryonic development, humans exhibit similar regenerative abilities that we see in salamanders, but these genetic programs are turned off after birth. Understanding how salmonid regeneration works and how plant regeneration principles like totipotency and hormonal signaling operate could potentially unlock this capacity in humans.

How Can Plant Regenerative Mechanisms Be Applied to Humans?

In plants, the ability to regenerate tissue is largely driven

by totipotency, a property that allows cells to de-differentiate and become any type of cell needed to regenerate the damaged tissue. Totipotency can be adapted for human limb regeneration with the help of stem cells, particularly induced pluripotent stem cells (iPSCs), which have the potential to reprogram differentiated cells back to the embryonic state that allows them to regain their regenerative capacity. By harnessing these stem cells, it may be possible to direct the formation of selected cell types needed to replace lost tissue, similar to how plants regenerate entire organs from a single cell.

Additionally, plants regulate their regeneration of damaged tissue through a very efficient process utilizing hormones like auxins and cytokinins, which control the balance of cell growth and differentiation to avoid cancerous overgrowth. A similar approach could be taken in humans by manipulating specific growth factors and cytokines. Growth factors such as Fibroblast Growth Factors (FGF) could stimulate cell proliferation and differentiation, while cytokines could help guide tissue regeneration, ensuring the correct tissue types form at the appropriate locations. By controlling these molecular signals, it may be possible to guide human cells to regenerate complex tissues, such as limbs, with the same efficiency that we see in plants.

The Salamander's Role in Limb Regeneration: Insights for Human Application

Salamanders, a genetically similar species to humans, possess the remarkable ability to regenerate entire limbs through the formation of a blastema, a group of undifferentiated cells that proliferate and then differentiate into the various tissues needed to rebuild the limb.

These blastema cells have extraordinary regenerative properties and are driven by molecular signals such as the ZF143 gene, which plays a crucial role in regulating these regenerative processes.

While humans lack the ability to form blastemas, recent research suggests that genes like ZF143 could potentially be reactivated from our human DNA, giving us back the power of extraordinary regeneration once held during our embryonic state. Combining this with

stem cell therapy (iPSCs) could allow for better targeting of specific regenerative tissues, mimicking the way plants regenerate organs from a single cell and providing a path toward human limb regeneration.

AI-Assisted Biodegradable Scaffolding: Guiding Cellular Growth and Regeneration

Even if we were able to tap into the regenerative power of stem cells to regrow limbs, how can we be sure that the new tissue forms correctly and doesn't grow out of control, leading to complications like cancer or incorrect formations? One promising solution to this challenge is the use of AI-assisted biodegradable scaffolding, which can guide the growth and organization of cells during regeneration.

Biodegradable scaffolds, made from materials such as collagen or silk fibroin, serve as a temporary framework that supports cellular growth. These scaffolds degrade over time, leaving behind fully regenerated tissue. Crucially, they can be designed to encourage the development of specific tissue types—such as bone, muscle, or skin—at the right locations. By mimicking the natural extracellular matrix, the scaffold can help stem cells better differentiate into the required cell tissues, ensuring that regeneration happens at the right time and in the correct structural position.

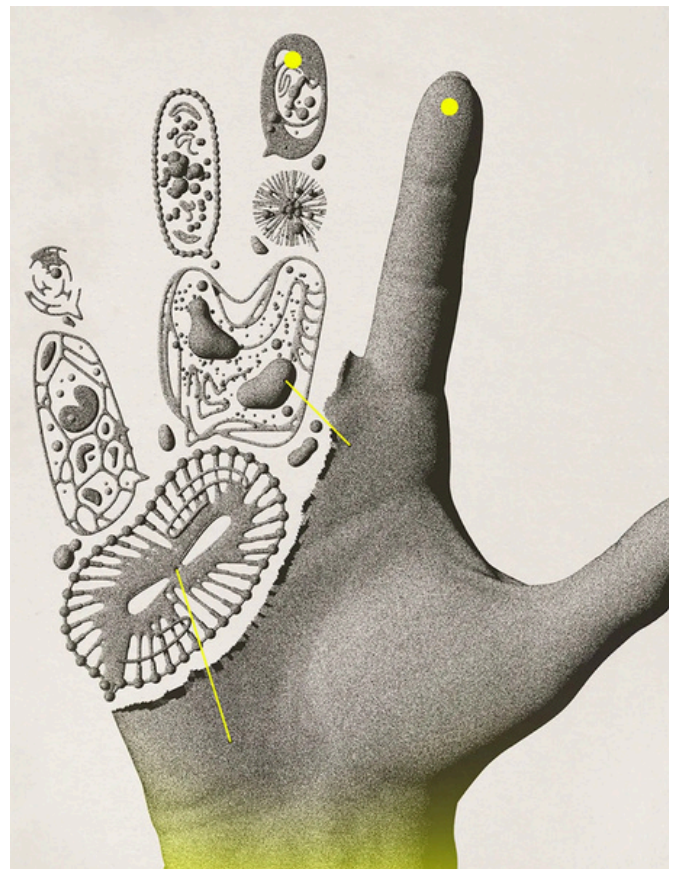
To ensure proper growth and prevent uncontrolled cell division, AI-assisted imaging can create detailed 3D models of the damaged limb. These models can then be used to design customized scaffolds tailored to the patient's anatomy, and a computer system can then continuously monitor the regeneration process, adjusting the scaffold placement and directing the release of growth factors when needed. This dynamic monitoring ensures that cells develop properly and that the tissue remains balanced and regulated.

Additionally, 3D printing technology can allow for the precise placement of scaffolds with the right level of detail, replicating the exact structure of the missing limbs based on the other limb's mirror image if the limb is present. By combining these advanced technologies, we can ensure that the regeneration process occurs in a controlled, organized manner, reducing the risk of abnormal growth and improving the chances of successful limb regrowth.

Conclusion: A New Era of Limb Regeneration

The combination of plant regenerative principles, salamander regeneration mechanisms, and AI-assisted biodegradable scaffolding offers a promising new pathway for human limb regeneration. By harnessing the power of stem cells, gene editing, and advanced scaffold design, we have the potential to regenerate lost limbs or damaged organs with a level of precision never before seen in medicine. While significant challenges remain—such as refining gene regulation and ensuring safe, controlled growth—this theoretical approach could represent the future of regenerative medicine.

If successful, it could transform the lives of millions, offering hope to those who have lost limbs or suffered organ damage from injury or disease. With continued innovation and research, the integration of AI imaging, biodegradable scaffolds, and hormonal regulation may one day revolutionize not just the treatment of limb loss, but the very future of healing and human restoration.



DEFEATING THE SUPERBUGS: GROUNDBREAKING APPROACHES TO OVERCOMING ANTIBIOTIC RESISTANCE

BY HALLE REZIN, APRIL 2025
HEALTHCARE COMMITTEE

Antibiotic resistance persists as a global health threat that severely undermines the effectiveness of medications used to treat infections. As bacteria evolve resistance to common antibiotics, the world faces the risk of returning to an era where modest infections could be fatal. Recent scientific advancements, however, may present a solution that combats this pressing issue. This challenge is a race against the clock and raises unease about what lies ahead: will superbugs take over, or could researchers conquer this urgent healthcare crisis?

What is Antibiotic Resistance?

Antibiotic resistance refers to bacteria's ability to withstand antibiotics that were once effective at killing the organism. Two of the key factors leading to this urgent crisis include the *overuse* and *misuse* of antibiotics in treating infections. What this means for healthcare is that infections, specifically those that were once cleared through the administration of simple antibiotics, are becoming increasingly difficult to treat and more harmful to patients.

The issue of resistance emerged just years after the widespread introduction of early antibiotics, such as penicillin. As more antibiotics were released into the market, the issue only worsened, with resistance rates rising at an alarming rate. Health agencies such as the World Health Organization (WHO) called for increased efforts to combat antibiotic resistance in the early 2000s. Despite the recent progress in our understanding of bacterial mechanisms, the threat of an antibiotic resistant future remains a cause for concern, especially with the delayed development of new antibiotics.

How is Antibiotic Resistance Being Combated?

Antibiotics function by damaging bacterial DNA to trigger expression of the "SOS" response, which involves rapid mutagenesis (the general process of DNA alteration that leads to mutations), resulting in resistance against the drug at hand.



In May 2024, Oxford researchers announced the development of a molecule that hinders the bacteria's ability to resist antibiotics. This chemical works by targeting the mechanisms through which the bacteria develop opposition in the first place, leading to decreased incidence of antibiotic resistance. When combined with an antibiotic, the anti-resistance molecule significantly decreased the bacterial resistance to the drug compared to the antibiotic used alone. This development offers revolutionary hope to researchers and healthcare professionals, as this molecule can increase the effectiveness of current antibiotics and extend their capabilities.

In another study, Imperial College London revealed another clever strategy to fight antibiotic resistance. Inhibitors can be used to target the process of bacterial communication, also known as quorum sensing, and prevent the synchronization of their behavior during antibiotic exposure. This prevents the bacteria from coordinating a shared defense, and ultimately weakens their retaliation against the therapy. While not entirely combative, this crucial discovery can prolong the lifetime of antibiotics, giving researchers more time to develop improved interventions.

While antibiotic resistance remains a daunting global challenge, recent efforts offer promising routes for overcoming the crisis. From Oxford's inhibitory molecule that prevents the evolution of resistance in bacteria to Imperial College's novel approach of disrupting bacterial communication, these innovative strategies have the potential to significantly enhance antibiotic efficiency and provide gateways into solving this global crisis. The fight against bacterial superbugs is far from over, but with continued research and better stewardship of existing antibiotics, we can stay ahead of the fight against antibiotic resistant microbes.

MEDTRONIC PERCEPT DBS SYSTEM: ADVANCING THE FIGHT AGAINST PARKINSON'S DISEASE

BY HAYAT BRAHMER, APRIL 2025
HEALTHCARE COMMITTEE

In the ongoing battle against Parkinson's disease (PD), a progressive neurological disorder that compromises movement and quality of life, technology continues to play a transformative role. One of the most groundbreaking developments in recent years is Medtronic's Percept Deep Brain Stimulation (DBS) system, which includes the newly FDA-approved Percept RC neurostimulator. This innovative device not only delivers therapeutic stimulation but also captures real-time brain signals—offering hope for a more personalized and effective treatment.

The system involves implanting a small, pacemaker-like device under the skin of the chest. This neurostimulator connects via electrodes to regions in the brain responsible for regulating movement. The device sends mild electrical pulses to these areas, helping regulate abnormal brain activity associated with PD. What sets Percept apart is its integration of BrainSense technology, which records and monitors the brain's electrical activity (local field potentials or LFPs), even while delivering therapy. This dual functionality represents a significant advancement over traditional DBS systems, which induce stimulation without providing key feedback on brain response. With BrainSense, clinicians can better understand the relationship between a patient's brain signals and symptoms, fine-tuning stimulation settings based on neural data as needed.

For individuals living with Parkinson's, symptom fluctuations can make disease management a daily challenge. As the disease progresses, medications may become less effective or even introduce complications. Percept offers a new avenue by enabling clinicians to map brain activity linked to symptoms such as tremor, stiffness, and slowness of movement. By analyzing this data, clinicians can adapt DBS therapy over time, potentially leading to more stable symptom control. For researchers, BrainSense opens the door to a better understanding of Parkinson's pathology by enabling the study of neural patterns over prolonged periods outside clinical settings.

Medtronic's latest Percept RC neurostimulator is also notable for its size and longevity. It is the smallest and thinnest dual-channel neurostimulator on the market and offers a rechargeable battery that lasts at least 15 years. The device recharges rapidly—charging from 10% to 90% in under an hour—reducing the burden on patients. Another key feature is MRI compatibility; with many PD patients requiring regular imaging, the Percept system is cleared for use in 1.5T and 3T MRI scans under specific conditions, giving patients access to essential diagnostics without disruption to their current therapies.

With over 25 years of innovation in DBS and more than 175,000 devices implanted globally, Medtronic continues to lead in neuromodulation technologies. The Percept DBS system marks a major step forward in treating Parkinson's disease—not just by delivering therapy but by empowering physicians with authentic data for personalized care. As research concerning brain sensing evolves, this technology could pave the way toward a more adaptive, responsive future in neurological treatment.



REVOLUTIONIZING EARLY DETECTION AND TARGETED TREATMENT IN HEALTHCARE WITH RADIOPHARMACEUTICALS

BY JONAH NICK, APRIL 2025
HEALTHCARE COMMITTEE

Introduction

Two key developments in the search for an umbrella cancer treatment are prognosis and targeted therapy. Radiopharmaceuticals have the potential to make comprehensive treatment a reality due to the unique characteristics of radioactive compounds known as radionuclides. Radionuclides have both diagnostic and therapeutic (theranostic) applications, allowing tandem use for imaging and radiation therapy. Through radioactive decay, these nuclides can inflict irreparable damage to targeted cells, making them less invasive and more precise than current alternatives. Additionally, they can attack many diseases that have not demonstrated a sufficient response to current therapies.

What are theranostics?

A theranostic is a drug in which two chemically similar or identical molecules are paired to provide imaging diagnostics and irradiation therapeutic effects. Since it was coined by John Funkhouser, the term has been used to describe an emerging field that integrates diagnosis and targeted therapy as a means of personalizing disease treatment. Over the past few decades, radiopharmaceuticals have been widely used as diagnostic tools through imaging techniques including PET and SPECT scans. These scans use radioactive tracers to construct three-dimensional organ models that can represent complex physiological functions. On the other hand, while still acting as radiotracers, various radionuclides can be employed with more precision to provide a therapeutic effect that minimizes damage to healthy tissue. The theranostic capabilities of radionuclides continue to grow as researchers continue to explore sources of new radioisotopes.

What is targeted therapy?

Targeted therapy is a process by which a tissue that obstructs normal function, such as a tumor, can be attacked without sacrificing nearby healthy tissue. This process occurs when a radionuclide gets attached to a

targeting molecule, which can then attach to a protein unique to the tumor tissue. Once anchored, the radionuclide can directly degrade the cancerous region without damaging adjacent tissues. Research in this field remains active, aiming to broaden both the range of effective radionuclides and the variety of diseases they can treat.

What diseases has this been effective for?

Several conditions have been effectively diagnosed and even alleviated by radiopharmaceuticals, including thyroid cancer, prostate cancer, neuroendocrine tumor, pheochromocytoma, lung cancer, and malignant bone metastases. One promising example involves prostate-specific membrane antigen (PSMA)-targeted radiopharmaceuticals. These have demonstrated immense potential in serving as theranostics in metastatic prostate cancer management, with radioisotope probes ^{68}Ga and ^{177}Lu being noteworthy in terms of their efficacy.

What is the future outlook?

Nuclear medicine in the form of radiopharmaceuticals is still considered a relatively new frontier, though like nuclear energy, it holds immense potential. Nevertheless, expanding upon current theranostics and treatable diseases will take time. This is partly due to the requirement of additional stages that go beyond those typical of traditional drug development. The inherent design and synthesis of radionuclides are also challenging due to experimental complexities and rigid safety protocols; these contribute to the preclinical trial backend that is unique to radionuclides. Still, the outlook remains optimistic as momentum continues to shift favorably toward a nuclear medicine revolution that could transform clinical practice in the context of disease.

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LOOKING FORWARD

Contributed by Jason Li, Andrew VanDerKolk



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WBR-HARVARD TECH CONFERENCE 2025

BY **ANDREW VANDERKOLK**, MARCH 2025
GOVERNMENT & LAW COMMITTEE CHAIR



At the intersection of intellect, innovation, and impact, the Harvard Tech Conference 2025 was more than a gathering of great minds—it was a blueprint for how we, as members of the Wisconsin Business Review, can chart the future.

Across panels spanning EdTech, Climate Tech, AI for Social Good, and the evolving nature of business roles, a common thread emerged: technology is no longer a sector—it is the substrate of everything. OpenAI’s vision for personalized learning tools, AWS’s emphasis on accessible infrastructure, and Google’s mission to reimagine the classroom speak directly to our work as writers and editors: we are educators in our own right. If learning is becoming more conversational, iterative, and personalized, then so should our storytelling.

From Zendesk’s insight that personalization will define competitive edges to Lightmatter’s radical vision of photonic computing replacing traditional chips, we were reminded that while the medium

may change, our charge does not. We are here to explain the world—and to prepare readers for what’s next.

WBR doesn’t merely comment on trends; we embody them. The future-forward conversations we heard on managing innovation within large organizations, responsibly scaling AI across communities, and thinking boldly (think Mars-as-a-data-center bold) sharpened our understanding of what it means to operate with both vision and values.

We return not only with fresh perspectives and questions worth exploring, but also with a reaffirmed belief: thoughtful discourse is a force multiplier. The next edition starts now—with more curiosity, more conviction, and more clarity than ever before.

Andrew VanDerKolk
VP of Administration
Director of Publication



THE PAST, PRESENT, AND FUTURE

The Wisconsin Business Review was established on Tuesday, March 14th, 2023. To this day, across the span of two years, the Review continues to serve as the first and only student publication and research medium in the Wisconsin School of Business, dedicated to presenting original and insightful perspectives on business-orientated issues. We hope, from the effort and work we accomplish, to cement Grainger and the broader university as a focal point of insight and journalism.

The Review started from the mind of one student, but was made possible by the efforts of many. In fact, the idea became a reality after a career trek to Chicago, where the founding team first met. The Review then began the bureaucratic process of club recognition and affiliation with the Wisconsin School of Business. We are happy to share the club has growth exponentially, to over 65 active members and a board of over 10 executives.

As many of the senior members of the organization is set to graduate, we have made the appropriate moves to transition our next wave of leadership, and establish the foundation and traditions that have given us so much success previously.

We are trailblazers in our approach, creating our own formulas from our own experiences, allowing

mistakes, failures, and successes to allow for genuine growth and progress.

We have written over 50 articles, worked with many distinguished faculty and administrators, and attended many valuable conferences, from the Harvard Technology Conference and the Yale Impact Investing Conference in following years.

In all honestly, we don't know the future of this organization, nor the world in mass. Even still, we are extremely confident on the capabilities and potential of our future generations, and genuinely believe the best years of this organization is still ahead.

We want to thank all of the contributors for making this magazine happen, our club advisors for providing us invaluable guidance, and the school administration and other student organizations for believing in our mission and product. I want to especially shout-out Andrew VanDerKolk for his dedication and effort, and Ily Grinberg, Abhinav Kumar, Aadit Bhavsar, and Iris Sklavounou in their leadership in the past, present, and the foreseeable future.

Jason Li
Founder, President

