THE UNIVERSITY OF CHICAGO
HARRIS SCHOOL
OF PUBLIC POLICY
Social Impact, Down to a Science

PP45210: Tech-Based Economic Development

Fall Quarter, 2026
Thomas Day
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M-W, 9:00 a.m.

Background and Goals

Why do some cities and regions thrive while others struggle? How can regional policymakers support sustainable, equitable economic growth, enabled by local private enterprise, technology development, and industry? How can regions best respond to changes in national industrial policies? And what does a productive relationship between government and the private sector look like? This applied course will focus on place-based economics and the roles of research and innovation in driving regional economic growth. Learning from the successes of tech-driven "superstar" cities and the challenges of Chicago and other cities left behind, this course will prepare students to develop realistic, region-specific development goals and strategies, whether coming from the private, public, or nonprofit sector perspective. Our discussions will also familiarize students with the critical and rapidly evolving technology market, and the proper role of government in managing that market and protecting citizens.

Course objectives include:

1. Gaining familiarity with industrial policy, entrepreneurship, venture capital, technology, and applied research, and understanding how entrepreneurship and technology development support local growth and economic vitality.
2. Understanding regional production through a function of talent, capital, and technology.
3. Exploring the intersection of national security strategy and regional growth.
4. Understanding how public policy has acted to support the growth of regional technology economies and design a strategy for supporting regional economic growth.
5. Understanding the critical issues that technology presents policy makers from a perspective of economic fairness, privacy, and respect for humanity.

Instructor

Tom is the executive director and co-founder of the Frontier Mission Network, a business consortium serving the new defense industrial base and national security community of Chicago. He holds degrees from Penn State University, the Medill School of Journalism at Northwestern University, and the University of Chicago's Harris School of Public Policy. He has authored opinions for the Morning Breakfast (Palantir's substack), Washington Post, Deadspin, ESPN the Magazine, Philadelphia Magazine, Inside Higher Ed, and Crain's Chicago Business, and has been a regular contributor to Governing. He was a McClatchy Newspapers bureau correspondent in Afghanistan in 2009 and 2010.

Course Logistics

- Our class will meet twice a week, including the first week of the quarter.
- Course materials, assignments, and announcements will be posted on Canvas.
- Your learning experience will be guided and enhanced by course discussions, and your attendance and participation in course discussions will be factored into your grade.

Student assignments

You will be graded on three problem sets and your final project, as well as course participation. The breakdown is as follows:

- 30% problem sets
- 60% final project
- 10% participation in course discussions

Grading policies and procedures

All assignments are expected to be submitted through Canvas by 9:00 a.m. the Monday they are due. If you would like an extension, please email me with an explanation and expect that the maximum additional time I can provide will be an additional week. Students who wish to take the course pass/fail rather than for a letter grade must use the Harris Pass/Fail request form and must meet the Harris deadline, which is generally 9:00 a.m. on the Monday of the fifth week of courses. Students who take the course pass/fail must attend class meetings and turn in all assignments, achieving marks on assignments that are overall commensurate with at least a C- letter grade.

Final project

Your final project will be a white paper exploring a market you select at the beginning of the course and will provide a detailed growth strategy rooted in the region's economic assets. I will provide detailed expectations concerning the final project during the initial weeks of the course.

Class policy on AI

Using a large language model (LLM) virtual assistant to better communicate thoughts and concepts, and to check punctuation, is permitted, though I ask you to identify work that has been produced with the assistance of AI, in accordance with university policy.

Instructor Office Hours

I will host office hours after our Wednesday lectures.

Academic integrity

Collaborating with your colleagues is encouraged. Drawing upon the insight of others is required. Copying the work of your classmates and plagiarism will earn you swift referral to Harris School dean of students. All written work must include proper citations.

Week-by-week schedule

Week 1: Why do economies grow? Why do some regions grow faster than others? And what is the ultimate goal of economic growth?

Lecture 1.1: We will begin by understanding course expectations. We will also set context for the course and define place-based economics. We will define success for regional economies, a seemingly simple concept that is often lost in regional economic development. We will discuss why we are so focused on cities as a platform for technology development and economic growth. We will define an understanding of the role of government and its relationship with the private sector – not simply one as market manager, but as an actor in the market itself, serving to shape markets rather than simply correct market failures. Then we will discuss how the conversation surrounding technology-driven place-based industrial policies has changed in recent years.

Lecture 1.2: In our second lecture, we will outline the economic variables that support regional growth that we will explore in this course. We will examine Robert Solow's exogenous growth model that predominated after the Industrial Revolution, the updated version of the model authored by Paul Romer, and examine relevant data to understand why growth across regional economies has diverged. The Solow and Romer models define technology as a critical variable in regional growth, and we will define exactly what technology is, moving beyond using "tech" as a symbol.

Concepts: Solow and Romer's growth models, the post-WWII convergence and post-Great Recession divergence of regional economies, economic development organizations, place-based policies, deindustrialization, reindustrialization.

Reading: "A Contribution to the Theory of Economic Growth" by Robert Solow; "Endogenous Technical Change" by Paul Romer.

Data: GDP per Capita data.

For next week: Select a city within the top 40 largest municipal statistical areas to evaluate for this course.

Week 2: Where does technology come from? How do federal-university partnerships drive innovation? And how did a Northern California orchard become "Silicon Valley"?

Lecture 2.1: Our second week will be focused on the intersection between government and technology. We will draw a map of U.S. research community and understand how research has often been funded by the U.S. military since before World War II. This relationship continues to this day, and we will explore the evolving relationship between the U.S. government, the Pentagon, and the technology industry. As we will discover, the novel technologies of today trace their roots back to fundamental discoveries enabled by public support of basic research – and we will appreciate the importance of basic science in enabling future technological progress.

Lecture 2.2: We will explore the process for bringing technologies from the laboratory into the commercial market and explore the role of public funding in research commercialization. We will discuss how stakeholders at the early stages of technology development can define the products that R&D later enables. And we will discuss the concepts of technology push and market pull, and ask ourselves, does government create value? (Answer: yes!).

Concepts: Basic and applied research, general purpose technologies, technology readiness levels, national laboratory system, technology push and market pull, the "ARPA" model, testbeds, technology implementation.

Reading/Viewing: "The Secret History of Silicon Valley" by Steve Blank (YouTube recording); "America's Defense Dollars Are Up for Grabs. Is Your City Ready?" by Thomas Day (First Breakfast). *Optional*: "Reindustrialize" by Austin Grey and Blake Seitz; Thomas Day interview with Steve Blank; Thomas Day interview with Peter Newell.

Problem Set 1 assigned: First problem set will ask you to show that you understand the fundamentals of the Solow and Romer models and will ask you to explore the research assets of your market.

Week 3: How are cities designed to maximize the impact of technology on their local economies? How can regions attract the private capital needed to support R&D?

Lecture 3.1: We put our urban planning hats on and discuss how cities are designed to best support technology-enabled growth. We will explore placemaking strategies and efforts to increase urban density and reign in suburban sprawl. We will explore the role of local real estate and innovation districts like Cambridge's Kendall Square. And we will explore how cities are designed to support match technology push (generated at universities and local R&D facilities) with market pull, engineering collaborations with local firms and capital managers with research laboratories within market verticals.

Lecture 3.2: The second lecture of week 3 is all about venture capital. We will look at the functions of venture capital and understand how deal structure can influence downstream consequences. We will also discuss the venture capital market and understand VC as a driver of regional growth, and why some state and local policymakers in regions without much local VC have stepped into the funding void. Finally, we will explore the limits of the venture capital model and think about other funding models to grow new ventures.

Concepts: Innovation districts, urban density, sequence of venture capital funding and structure of venture capital funds, public early-stage funding sources, private capital.

Reading/Viewing: "Geography, Venture Capital, and Public Policy" by Josh Lerner; "Neighborhoods Are Not Local Labor Markets" by Tim Bartik (Liberal Patriot); "The American suburbs are better than you think" by Noah Smith (Noahpinion).

Data: Pitchbook data on venture capital investment, Bureau of Labor Statistics data on occupation by MSA

Problem Set 1 due

Week 4: How should cities and regions build on their unique assets and advantages? Is it wise to build a regional economy around one core industry or even one company? Or should policymakers look to diversify regional economies?

Lecture 4.1: Harvard Business School's Michael Porter has popularized the "clusters" concept, or the idea that regional economies grow around industries unique to a region's assets. Porter also explores four failed strategies that have undermined previous efforts regional growth: Repealing regulations and lowering taxes to attract industry, building aesthetically pleasing downtowns, going to extreme lengths to attract a headquarters or plant (Amazon HQ2), and following "the next big thing" in technology. We will look at Porter's work and programs guided by cluster-focused economic development. We will also explore growth strategies that drive technology push – R&D tax credits, for example – and strategies drive market pull, such as tax credits for private actors to purchase new technologies.

Lecture 4.2: The theme of the second lecture of week 4 is the relationship between a city and a large employer, sometimes mutually beneficial and sometimes not. We will also take a more critical look at publicly subsidized job training programs, research and development tax credits, and the tens of billions of dollars that American cities and states have provided in relocation incentives. And we will begin to understand how national industrial policies are crafted and connected with regional economic growth.

Concepts: Clusters, relationship between universities and regional economies, corporate incentives, R&D tax credits, labor force incentives, industrial policy.

Reading/Viewing: "Reshaping Regional Economic Development: Clusters and Regional Strategy" by Michael Porter (video recording); "Using Place-Based Jobs Policies to Help Distressed Communities" by Timothy Bartik (Upjohn Institute); "Tulsa Remote's Benefits for Other Tulsa Residents: Results and Implications for Local Economic Development Policies" by Timothy Bartik (Upjohn Institute); "The Last Mile of Reindustrialization Is Real Estate" by Ken Biberaj (First Breakfast).

Data: Harvard Growth Lab's Metroverse, Inc. 5000 Fastest-Growing Private Companies in America.

Problem Set 2 assigned: Second problem set will examine the economic assets of each city, and where they align with industry.

Week 5: How can cities and regions keep and attract educated and skilled workers? Just how far should policymakers go to attract these works? What is the role of culture in supporting regional growth?

Lecture 5.1: In Week 1 we defined a production function that includes technology. This week we will define the relationship between talent and production. Has the relationship between talent (skills) and regional growth increased in recent years? How about wages net of housing and regional growth? We will explore the vital role of housing supply in supporting labor productivity growth. We will seek to understand the lifestyle demands of most high-skill workers. This week will be critical in understanding how agglomerating talent into cities drives growth.

Lecture 5.2: Our second lecture of week 5 will briefly cover the role of culture in growing regional economies, then pivot to a discussion of technology infrastructure. We will also explore technology infrastructure – including broadband access and data centers – and the challenges facing rural communities.

Concepts: Regional culture, the movement of people into cities, housing supply, skill-biased technological change, immigration and regional growth, net neutrality, data centers, broadband policy.

Reading: Chapters from "Regional Advantage" by Annalee Saxenian; "An immigration slowdown led to widespread declines in population growth in America's major metro areas" by William Frey (Brookings); "America Needs to Build More Housing" (NYTimes); Generative AI Is an Engineering Disaster" by Alex Reisner (The Atlantic). *Optional*: "Techno-Optimist Manifesto" by Marc Andreesen (Andreesen-Horowitz).

Data: Pew Center data on under-30 population by city; MigrationPatterns.org and OpportunityAtlas.org data; Community Network Map; Moody's Housing Supply Map.

Week 6: How do R&D, innovation, and the patent process affect regional growth? What policies can increase these markers of technological change and increase productivity? Is it time to fundamentally reform the American innovation engine?

Lecture 6.1: We will explore the patenting process, patent law, and the correlation between patenting and regional growth. We will also untangle who is funding R&D at what stage and understand why it is so critical that government supports high-risk, high-reward research projects. And we will discuss the critical role of technology transfer in advancing technologies and growing regional economies.

Lecture 6.2: Our second lecture of Week 6 will focus on startup culture, its good and self-destructive elements. We will discuss the sweeping changes in R&D in the United States during the 1970s, and how new models for technology commercialization emerged that put special emphasis on startups. Startups commercializing technologies in the high sciences require much more early-stage capital than startups building mobile applications. To help solve this challenge

the U.S. federal government has created the Small Business Innovation Research (SBIR) program, which we will explore.

Concepts: Patent law, standards, technology transfer, public grant programs, citation incentives, focused-research organizations.

Reading: "Science, A New Golden Age" by Michael Kratsios (White House Office of Science and Technology Policy); "Stagnation and Scientific Incentives" by Jay Bhattacharya and Mikko Packalen.

Data: U.S. Patent and Trademark data on patenting activity by MSA; Stats America.

Problem Set 2 due

Problem Set 3 assigned: Third problem set will require students take the provided data set and begin not only understanding correlations between explanatory variables – including patents, venture financing, and workforce education – and growth, but begin understanding how to increase regional growth.

Week 7: Who is driving R&D and innovation in the private sector? How does the growth in open-source innovation affect different regions? What policies can best facilitate technology transfers that raise productivity?

Lecture 7.1: Gone are the days when General Electric would take on the risk attendant to building out an invention under their own R&D budget. What happened? What is the new model for supporting corporate innovation and privately funded R&D? We will use our first lecture of week 7 to understand how corporate innovation has changed and allowed for a market where small- and medium-sized businesses struggle to challenge "big tech."

Lecture 7.2: We will begin by discussing the growth of open-source innovation. We will then examine the current state of manufacturing supply chains and understand how the national and international conversation has changed since COVID-19. Finally, we will explore deindustrialization and *re*industrialization of advanced economies.

Concepts: Stock buybacks, financialization, corporate innovation, the "innovator's dilemma," M&A, open-source innovation, offshoring and reshoring of manufacturing.

Reading: Chapter from "Innovator's Dilemma" by Clayton Christensen. "The Techno-Industrialist Manifesto" by Aaron Sladov (Pirate Wires); "The Finance Industry Is a Grift. Let's Start Treating It That Way." By Oren Cass (NY Times); "What the Government's Fight With Anthropic Reveals About Free Speech in America" by Paul Ford (NYTimes).

Week 8: How has R&D and technology policy moved to the center of global power competition? Instead of simply competing with China, have we seen U.S. in fact replicating its industrial policies? How will increasing antitrust scrutiny of big tech firms affect future innovation and productivity growth?

Lecture 8.1: We will explore how the regional export markets have changed since China entered the World Trade Organization. We will also discuss the Chinese and American innovation models, and how the American industrial policies have sharply changed in recent years. This lecture will explore at a fundamental level what model is best for advancing innovation (not that advancing innovation should be the sole focus of public policy makers).

Lecture 8.2: This is our "big tech" lecture. We will discuss the growth of the big tech firms and the role of antitrust enforcement in regulating these firms. We will explore the concerns at the center of antitrust litigation and legislation to regulate Big Tech being debated in Washington and legislatures across the globe.

Concepts: Tech Cold War, supply chains, the big five technology companies, antitrust policy, American and global regulation of technology corporations.

Reading: "Globalization did not hollow out the American middle class" by Noah Smith (Noahpinion). "How Companies Got So Good at M&A" by David Harding, Dale Stafford, and Suzanne Kumar (Bain & Company); "China's Technology Transfer Strategy" by Mike Brown and Panveet Singh (DIU); "China's industrial policy has an unprofitability problem" by Noah Smith (Noahpinion); "Every President Tries It. It Never Works." by Jason Furman (NY Times). "I'm kinda over the whole 'Anti-Monopoly' movement" by Noah Smith (Noahpinion); "China's Next Generation Industrial Policy" (Rhodium Group); "Rebalancing AI" by Simon Johnson and Daron Acemoglu (IMF).

Data: U.S. Department of Commerce data on exports from municipal areas; U.S. Department of Commerce's Export Analysis Tool.

Problem Set 3 due

Week 9: What's next? How are new sectors driving value in the 2020s? And are we at the beginning of several new technology frontiers that could fundamentally change humanity?

Lecture 9.1: We will discuss current trends that define technology markets. Our conversation will explore how policymakers can anticipate the dramatic economic changes these new technology fields will catalyze in the near future, and how to make technology work for, not against, communities.

Lecture 9.2: Our course will end with a look toward the future and discuss what I believe to be the most promising drivers of future value.

Concepts: U.S. military's critical technology areas, unmanned aerial vehicles, quantum, biotech, Recursive Self-Improvement (RSI).

Reading/Viewing: *Optional*: Amy Webb 2026 Emerging Tech Trend Report (SXSW).

Final Project due