Day 4 - Summary

[JULY 30, 2026]

[Saieh Hall, Room 146]
[5757 S. University Avenue, Chicago, IL 60637]

Lecture Summaries

Week 1, Day 4 Sessions

Session 1 | 9:00 AM – 10:30 AM

Lecture Summary – Artificial Intelligence and Economic Growth

In this lecture, Prof. Benjamin Jones examined what artificial intelligence is likely to do to economic growth and to inequality. He began by noting the range of possibilities, from AI merely sustaining the roughly two percent frontier growth rate of the past two centuries to a structural break at four or five percent or beyond, and a show of hands left the room roughly evenly divided. To discipline the question, he introduced the task-based models economists use to study automation, in which an outcome is a generalized mean over many tasks, each performed either by labor or by a machine. Any claim about what AI will do, he argued, is implicitly a claim about three parameters.

The first is the share of tasks machines take over. The second is how productive machines are at those tasks, a dimension he thought badly neglected in public discussion: computers do not beat people slightly but by orders of magnitude, since a phone can perform in a minute what would take a person a lifetime, whereas a self-driving car may only match a competent human. The third is how tasks aggregate, and in particular how strong bottlenecks are. Production often resembles the neck of a bottle: American farms produce corn cheaply, but it must still be trucked, processed, and shelved, so efficiency gains in one task are averaged down by the tasks that remain hard.

Applying this to ordinary production, automating tasks raises output per worker, since a given number of people is concentrated on a smaller set of activities. The distributional question is a battle between two dimensions of technological progress: automating more tasks shifts income toward

capital, but making machines better at those tasks pushes the other way, since flooding a market with cheap output lowers its price and its share of spending. This is Baumol's cost disease. As agriculture and then manufacturing became extraordinarily efficient, their shares of output fell while services rose, and a cellist today earns far more than one in eighteenth-century Vienna not by playing faster but because everything else has become cheap. Spending concentrates on what we remain bad at, which is why bottlenecks cut both ways, making growth harder while supporting a higher labor share.

That logic also shapes where innovation is directed, since the largest markets are precisely the bottlenecks, where output is expensive because people are slow. This is why automation has historically targeted routine physical work and has been skill-biased. Prof. Jones suggested AI may break the pattern, because it is a cognitive rather than a physical technology: self-driving cars have proved hard and a robotic plumber harder still, so workers doing physical tasks may be the least exposed this time. He also noted that adoption is itself a bottleneck, since these tools are only as good as the person directing them, and diffusion within organizations is slow.

The lecture closed with a brief treatment of AI in the production of ideas, where the same three questions apply and the aggregation again appears to be a harmonic average, leaving progress governed by the tasks we perform worst. Better telescopes did not resolve cosmologists' confusion about dark matter, and regression software made computation effortless without answering the conceptual and causal questions that actually constrain economics. A meaningful acceleration in discovery is plausible, and in health alone would be transformative, but singularity claims deserve skepticism. He also cautioned that AI's applications in security and political communication give far less ground for optimism than its economic uses.

Session 2 | 11:00 AM – 12:30 PM

Master Class on the Use of Data – From Micro Data to Better Policy

This session explored the research infrastructure behind the week's policy discussions, tracing the path from microdata to economic theory, structural estimation, and counterfactual policy analysis. Prof. Ufuk Akcigit began by arguing that aggregate statistics could hide the true sources of economic performance. Two economies may experience the similar aggregate slowdown in GDP growth while being driven by entirely different underlying forces. Just as similar symptoms can arise from different diseases, similar economic outcomes can reflect very different structural problems. Without an accurate diagnosis, policymakers risk prescribing solutions that are ineffective, or even counterproductive.

To illustrate this idea, he compared economic analysis to medical diagnosis. When two patients complain of headaches, a doctor does not automatically prescribe the same medication. Instead, the doctor considers each patient's full set of symptoms, vital signs, and medical history, orders additional tests if needed, and tailors the treatment to the underlying condition. Although the symptom is the same, the appropriate treatment may be completely different because the root causes differ. Economies, he argued, are similarly complex organisms. Effective policymaking requires the same disciplined approach: collecting high-quality microdata, constructing informative "economic vital signs," entertaining multiple hypotheses, and using the evidence to eliminate unlikely explanations before designing policy interventions.

He then presented ten stylized facts that characterize the evolution of the U.S. economy since 1980. These included rising industry concentration, increasing markups and profits, a declining labor share that is more pronounced in concentrated sectors, a widening productivity gap between frontier and lagging firms, declining business entry, a shrinking employment share of young firms, lower job reallocation, and a narrowing dispersion of firm growth rates. While each fact individually is consistent with several competing explanations—each implying different policy prescriptions—the key

message was that no single statistic is sufficient for diagnosis. A credible understanding of the economy requires explaining all of these facts simultaneously within a unified framework.

Dr. Marcio Cruz and Dr. Arti Grover presented examples of how micro-level databases have been constructed across a range of countries, illustrating the practical challenges and best practices involved in building research-ready administrative data infrastructure.

Dr. Furkan Kilic then explained why economic theory is indispensable to empirical work of this kind. A database of this size supports effectively unlimited regressions: with millions of firm-year observations and hundreds of variables, a researcher can always find statistically significant correlations, many of them spurious, contradictory, or artifacts of the sampling frame. Without discipline from theory, empirical work degenerates into data mining. Only a model indicates what to look for – which relationships are informative about the underlying economic mechanisms, which moments of the data identify which parameters, and which correlations are merely incidental.

The case for making such models quantitative, and for embedding them in general equilibrium, is equally practical. Qualitative theory can tell us that a policy (e.g., an R&D subsidy) pushes innovation in a certain direction, but it cannot tell us whether the effect is economically trivial or transformative, and most policy questions turn on magnitudes rather than signs. General equilibrium matters because firms do not innovate in isolation: when one firm expands its research effort, it bids up the price of scarce scientists, erodes competitors' market shares, and alters the incentives of every other firm in the economy. Partial equilibrium reasoning that ignores these feedbacks can get not only the size but even the sign of aggregate effects wrong. And because growth is inherently dynamic – today's research investment shapes tomorrow's productivity distribution – the model must trace out these interactions over time, not merely compare static snapshots.

He then walked through the anatomy of such a model and the quantitative workflow it demands. Because these problems admit no closed-form solution, the policy functions must be solved numerically. The model's parameters are chosen by the simulated method of moments: the

researcher simulates the model economy, computes the same statistics that can be measured in the microdata, and searches for the parameter values that bring the two into alignment. Crucially, the model is then validated against moments the estimation did not target; the quantitative analogue of an out-of-sample test. Only a model that survives this discipline can be trusted for its ultimate purpose: running counterfactual experiments, such as evaluating tax or subsidy reforms, that no regression on historical data could ever deliver, because the policy in question has never been observed.

Prof. Akcigit concluded by returning to the motivating puzzle introduced at the start of the lecture. When the competing hypotheses are evaluated within the estimated model, policies such as higher entry barriers, lower corporate taxes, research subsidies, and lower interest rates each explain only one or two of the ten stylized facts. By contrast, a decline in knowledge diffusion is the only mechanism that simultaneously accounts for the entire set of observed patterns.

Session 3 | 1:30 PM – 3:00 PM

Lecture Summary – Service-Led Growth and Structural Transformation

In this lecture, Prof. Fabrizio Zilibotti presented his work on service-led growth in the developing world. The canonical transformation is familiar: Italy employed half its labor force in agriculture in 1948 and four percent by 2019, with services reaching seventy percent, and the United States traced the same path over a longer horizon. Across countries, industrial employment follows an inverted U in income per capita. He was emphatic that the Italian decline is widely misattributed to Chinese competition: deindustrialization began well before the recent globalization wave and is a normal stage of transformation rather than a by-product of it.

Today's developing world, however, is taking a different route. Across countries poorer than China, every ten percentage point decline in the agricultural employment share is associated with a rise of 2.4 percentage points in manufacturing and 6.4 points in services, a relationship equally tight for

fast-growing and slow-growing economies. Ethiopia's agricultural share fell from seventy-six to sixty-two percent between 2000 and 2019 while industry stayed flat at seven percent, and Tanzania shows the same pattern. Prof. Zilibotti prefers to call this skipping the factory rather than premature deindustrialization, since what has changed is the destination, not the exit from agriculture. The expansion is dominated by local consumer services such as retail, hospitality, and health, with producer services like finance and information technology still limited, and it is concentrated in cities functioning as consumer hubs.

Whether this is success or stagnation cannot be settled by employment data, since the same rise in services is consistent with demand pull, in which productivity originates elsewhere and services act as a drag, or with services as a genuine engine of productivity growth. Prices cannot adjudicate either, since observed service prices confound quality improvements with efficiency. The paper's contribution is an identification strategy that avoids prices: because consumer services must be produced where they are consumed, the gap between the employment growth that income and demand alone would predict and the growth actually observed reveals productivity growth in the sector. The framework is applied to sub-Saharan African economies and to 380 Indian districts.

Estimated productivity growth in consumer services exceeds that in tradable goods, and consumer service jobs prove no worse than manufacturing jobs on measures of household living standards such as access to electricity and piped water, weighing against the view that they merely absorb workers who cannot find anything better. The welfare incidence, however, is sharply unequal: the three sectors generated similar average effects nationwide in India, but poor rural households benefited mainly from agriculture and rich urban households mainly from consumer services. Prof. Zilibotti proposed three mechanisms: agglomeration externalities, as growing consumer cities support more providers and the entry of supermarkets, clinics, and pharmacies; better allocation as informality and entry barriers decline; and technologies such as mobile phones, digital payments, and simple records that make small informal providers more efficient. His policy conclusion was that

this is not an argument against industrialization, but a case for treating services as productive assets, starting from revealed strengths rather than disconnected sectoral targets, and raising scale and efficiency through competition, formal entry, and urban infrastructure.

Session 4 | 3:30 PM – 4:30 PM

Session Summary – Participant Country Presentations

The final session opened with Takaaki Nomoto, Director for Multilateral Development Banks at Japan's Ministry of Finance, who explained how a new joint research initiative revisiting the East Asian Miracle came about. Asian policymakers are preoccupied with the middle-income trap while African leaders want to understand how Asian economies integrated into global value chains, and he noted that Japan and Korea accelerated rather than stagnated as they crossed from middle to high income. He raised open questions about domestic demand, about comparisons with Eastern Europe and Latin America, and about new contexts such as fragmentation and artificial intelligence, closing with a call for papers.

Hyeok Jeong of Seoul National University characterized Korean growth as six percent a year in income per capita sustained over six decades, remarkable for both speed and duration. He emphasized that Korean trade was not mercantilist, with imports serving as the channel for adopting advanced foreign technology.

Hemang Jani from India closed on state capacity, arguing that the binding constraint in middle-income countries is often not the design of policy but the capability of the officials who deliver it, and presenting India's Mission Karmayogi, a civil service capacity-building programme reaching some thirty million officials, as capacity building at the infusion stage of the World Development Report 2024 framework.