Labor 3: Human Capital and the Economics of Education-spring 2025

Syllabus for 2025. This course will cover three areas: (i) human capital investments and intergenerational mobility, (ii) educational production, and (iii) governance of and markets for education and schooling. In each of these segments, theoretical perspectives and empirical work will be presented.

Examination

This course will be graded as pass or fail. To obtain a passing grade in this course, students must:

1. Write three referee reports on an academic paper; one for each part of the course.

2. Present one academic paper during class.

3. Present a research proposal during a workshop at the end of the course.

4. Attend a minimum of 10 lectures (out of 13).

Instructors

Assistant Prof. Marie-Pascale Grimon, SOFI, SU (5 classes)

Assistant Prof. José Montalban Castilla, SOFI, SU (4 classes)

Prof. Jonas Vlachos, Department of Economics, SU (4 classes)

Readings

Readings will mostly be in the form of academic papers but students might want to order Derek Neal, *Information, incentives, and education policy*, Harvard University Press, 2018.

Lectures

Part 1: Marie-Pascale Grimon (5 classes)

Human capital

The first class simply entitled "Human Capital" starts by explaining what economists mean by this term, and covers briefly signaling theory (Spence, 1973) as part of this. Most of the lecture is then spent on an introduction to the Roy Model, as a fundamental model for how humans might differentially select to invest in skills, which leads us to discuss selection bias, Heckman selection and to go over econometric ways of estimating marginal treatment effects.

Non-cognitive skills and health

The second lecture covers then two margins of human capital that have received recent attention: non-cognitive skills and health. We review how non-cognitive skills have been measured, and their returns. We discuss Alan and Mumcu (2024) on measuring and enhancing child non-cognitive skills. Tying non-cognitive skills to health, we then go over the original Grossman (1972) model of health as human capital, review empirical evidence on whether health is human capital, touch upon nature vs nurture debates with a short discussion of epigenetics. Finally, we go over a simplified Heckman (2007) human capital production function and inter-temporal investments where health can be viewed as a prerequisite for human capital production.

The timing of investments

In the third class, we discuss the timing of investments: when should investments in human capital be made? We start by discussing the fetal origins hypothesis (Almond and Currie, 2011), the dynamic life cycle model, and the famous Heckman curve (2006). We then discuss empirical evidence on the Heckman curve and in so doing review ways of measuring the effectiveness of policies: cost-benefit, cost-effectiveness, surrogate indices, net social benefits and the marginal value of public funds or MVPFs which we review using Hendren and Sprung-Keyser (2020). Finally, we discuss how gaps between children early on in life, and are present already at the start of school, and some of the early childhood interventions that have been implemented to try to remediate this.

Parents and the family

This is a new class, and topics covered are susceptible to change. It will cover the role of parents for human capital investments, including discussing the role of parent beliefs, parenting styles and household shocks. We will also discuss negative human capital investments with child maltreatment. Time permitting, we may cover the influence of siblings and fertility.

Intergenerational mobility

The final lecture in the first part of the course will explain why economists' are interested in intergenerational mobility and cover a history of models on the topic. We will review the ways that economists have measured it with a discussion of classical measurement error for both attenuation bias and life-cycle bias, and latent variables. We will discuss the Great Gatsby curve (Corak 2013) and some of the recent directions of research in top journals on the topic with a long discussion of the Nybom and Stuhler (2024).

Part 2: José Montalbán Castilla (4 classes)

Returns to education and field of study

The lecture "Returns to Education and Field of Study" focuses on the economic evaluation of education's impact on earnings. It discusses theoretical models, like the Card model, to explain differences in educational attainment and returns. Methods to estimate returns, such as twin studies and instrumental variables, address biases in causality. The lecture also highlights how fields of study and educational quality influence earnings and explores future research on market failures, externalities, and non-monetary returns to education. The overarching goal is to link human capital theory with real-world policy implications.

Class size effects

The lecture "Class Size effects" explores the causal relationship between class size and student outcomes. It examines mechanisms through which class size affects learning and highlights empirical methods like randomized controlled trials (e.g., the STAR project), instrumental variables, and regression discontinuity design to address biases. Studies show mixed results on class size impacts, with some evidence of short-term academic gains and long-term economic benefits, though cost-effectiveness remains debated. The discussion extends to parental and teacher responses to class-size changes and future research directions in educational production functions and policy design.

Peer effects in education

The lecture "Peer Effects in education" examines how peers influence educational outcomes and identifies causal mechanisms through experimental and non-experimental designs. It discusses the challenges of endogeneity, self-selection, and reflection in peer group studies. Key topics include the effects of disruptive peers, gender composition, and rank on student outcomes. Empirical studies, such as randomized controlled trials and natural experiments, explore peer configurations' impacts. The lecture emphasizes heterogeneity and non-linearities in peer effects and suggests caution in applying findings for policy due to complex social dynamics.

Measuring teacher effectiveness

The lecture "Teacher Quality: Labor III – Human Capital and the Economics of Education" focuses on evaluating the impact of teacher effectiveness on student outcomes. It introduces methodologies like Value-Added Models (VAM) to quantify teacher contributions and discusses biases and precision challenges in such estimates. Evidence indicates that teacher quality significantly influences both short-term academic achievements and long-term outcomes such as college attendance and earnings. While traditional teacher characteristics are poor predictors of effectiveness, experience and contextual factors play a role. The lecture emphasizes the need for robust evaluation frameworks and research to refine teacher-effect measurement and its implications for educational policies.

Part 3: Jonas Vlachos (4 classes)

School finance and accountability

Resources are a critical input in the education production function but resources can be wasted. Various accountability schemes have been introduced to improve efficiency in education but the results from this are mixed. The lecture explores the intersection of school financing, accountability policies, and their effects on educational outcomes. The discussion is based on the multi-tasking framework that provides insights into the strengths and weaknesses of accountability systems.

The market for education

This lecture examines how competition and choice within educational markets impact student outcomes, equity, and school performance. The simplistic view is that school choice and private provision through voucher funding or charter schools enhances productivity through competitive pressures. A more realistic set of assumptions regarding the incentives, preferences and information available to the actors gives a more nuanced view of the problem. Ultimately, the lecture emphasizes the impacts of school choice and the importance of designing equitable and effective systems.

School choice mechanisms

School choice means that scarce resources (slots at popular schools) have to be provided without the use of the price mechanism. This lecture provides an introduction to the theory of school choice mechanisms and their implications for student assignment and for efficiency and equity. The properties of key assignment mechanisms like deferred acceptance and the Boston mechanism are discussed.

School management and school policies

This lecture focuses on how school management practices and interventions influence student outcomes. While all parts of the course are subject to constant revisions, this is particularly true for this section.