Yunan Ji

CONTACT INFORMATION

National Bureau of Economics Research
1050 Massachusetts Avenue
Cambridge, MA 02138

(401)573-9637
ji@g.harvard.edu

EDUCATION

Harvard University, Cambridge, MA — 2016 -

Ph.D., Health Policy (Economics Track)

Brown University, Providence, RI — 2010 - 2014

B.A., Mathematics-Economics, *Magna Cum Laude* and with Honors

EMPLOYMENT

National Bureau of Economic Research

Graduate Research Assistant — 2017 -

Full-Time Research Assistant to Amy Finkelstein — 2014 - 2016

Brown University Department of Economics

Research Assistant (Aizer, Dal Bo, Putterman, Weil) — 2011 - 2014

Teaching Assistant (Melly) — 2013

PUBLICATIONS

Finkelstein A, **Ji Y**, Mahoney N, Skinner J. "Mandatory Medicare Bundled Payment Program for Lower Extremity Joint Replacement and Discharge to Institutional Postacute CareInterim Analysis of the First Year of a 5-Year Randomized Trial." *JAMA*, 2018; 320(9): 892900.
Media coverage: Bloomberg, The New York Times

"Punishment can support cooperation even when punishable." *Economics Letters*, 154 (2017): 84-87. (with Tingting Fu, Kenju Kamei, and Louis Putterman)

HONORS AND GRANTS

Co-Investigator, J-PAL North America Grant, "The Impact of Medicare Bundled Payments: Evidence from a Nationwide Randomized Evaluation for Lower Extremity Joint Replacement", with Amy Finkelstein, Neale Mahoney, and Jonathan Skinner. $206,036.28 — 2017-2019

Harvard Graduate School of Arts and Sciences Graduate Fellowship 2016 - 2018

Omicron Delta Epsilon — 2014

Samuel Lamport Prize for Outstanding Thesis in Economics — 2014

Solsbery Fellowship — 2014

PH.D LEVEL COURSEWORK

Harvard University

Econ 2020A: Microeconomic Theory I
Econ 2020B: Microeconomic Theory II
Econ 2010: Econometrics I
Econ 2020: Econometrics II
Econ 2450A: Public Economics I
Econ 2610: Industrial Organization I
Econ 3460: Research in Health Economics
Health Policy 2000A: Core Course in Health Policy I
Health Policy 2000B: Core Course in Health Policy II
SUP 785M: US Healthcare Industry and Regulatory Policy

Massachusetts Institute of Technology

14.273: Industrial Organization III
14.387: Applied Econometrics
14.472: Public Economics II

Brown University (taken during undergraduate studies)

Econ 2040: Econometrics
Econ 2050: Microeconomics I
Econ 2070: Macroeconomics I
Econ 2080: Macroeconomics II
Econ 2360: Health Economics

Massachusetts Institute of Technology

Amy Finkelstein
John & Jennie S. MacDonald Professor of Economics

MIT Department of Economics
Building E52-442

77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Phone (617) 253 4149
Fax (617) 253 1330
Email afink@mit.edu
http://econ-www.mit.edu/faculty/afink/

September 15, 2018

To Whom It May Concern

I am writing with the greatest enthusiasm to recommend **Yunan Ji** to the NBER's "Health Economics Research Boot Camp". Yunan is a 3rd year PhD student in Harvard's health policy PhD program. She worked for me as a full time RA for two years prior to starting graduate school, took (and did very well in) my graduate public finance class at MIT, and is now collaborating with me (and Neale Mahoney and Jon Skinner) on a multi-pronged project studying the impact of bundled payments in Medicare. I am also advising her dissertation. So in short, I know Yunan very well, and think very highly of her.

Yunan has been collaborating with us for the last year and a half on a project studying the impact of Medicare bundled payment for hip and knee replacement on healthcare costs and health outcomes. To do so, we are taking advantage of a nationwide, mandatory participation, five-year randomized evaluation, designed and implemented by CMS, in which 75 MSAs were assigned to bundled payment and 121 to the status quo Medicare reimbursement system. We published a paper this month in *JAMA* (on which she is a co-author) looking at the impacts of the bundled payment in its first year (2016). We are now working on extending the analysis to include later year(s) and to writing a more nuanced economics paper about what we can learn from this reform about the impacts of provider incentives and alternative payment designs. Yunan's co-authorship on this project reflects her active intellectual leadership in shaping the questions and the approach we are taking from the very beginning. She has been instrumental in pushing our thinking (not to mention our production) forward, and is an extremely valued member of our team. I am thrilled to be continuing to work with her on this over the coming year(s).

Yunan also has a promising idea for an independent research project, which she began working on this summer. She has discovered an interesting change in Medicare's procurement auction design for medical devices (introduced in staggered fashion across MSAs and across categories of devices!). She will be trying to use this variation for two purposes. First, she wants to use the reform as an instrument for changes in the prices of medical device prices to study how medical device use responds, and whether other care (drugs, nursing home etc) are complements or substitutes. This strikes me as a promising and interesting exploration of what is to my knowledge a little studied topic (Medicare expenditures on medical devices). From the work she has done thus far it seems eminently doable. Second, she is also exploring a more ambitious project to understand

Massachusetts Institute of Technology

Amy Finkelstein
John & Jennie S. MacDonald Professor of Economics

MIT Department of Economics
Building E52-442

77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Phone (617) 253 4149
Fax (617) 253 1330
Email afink@mit.edu
http://econ-www.mit.edu/faculty/afink/

the provider behavioral response to the auction design; this will require her to observe the provider's bids and how they changed in response to the reform (so that she can model how their bids might respond to other, counterfactual, auction designs). It is unclear yet whether she can obtain these bid data but she is doggedly pursuing them! While it is of course too early to know exactly how this project will turn out, I think it is very promising and – even more – very impressive at how fleshed out and far along she is on this project in September of her 3rd year!

In sum, I give her my strongest recommendation.

Sincerely,



Amy Finkelstein

Yunan Ji
1050 Massachusetts Avenue 3F
Cambridge, MA 02138
ji@g.harvard.edu
(401) 573-9637

Friday, September 21, 2018

Professors Ben Handel, Katherine Ho, and Jonathan Kolstad
National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA 02138

Dear Professors Handel, Ho, and Kolstad:

I am writing to apply for the Health Economics Research Boot Camp for Graduate Students at the National Bureau of Economic Research, which I learned about through my program administrator.

Currently a third year PhD student in Health Policy and Economics at Harvard, I have worked on various health economic research projects focusing on health care payment and delivery. My co-authored paper on Medicare bundled payments was recently published in the Journal of American Medical Association. In other works in progress, I have been studying how other payment models, such as accountable care organizations, alter provider incentives and care delivery, as well as estimating the impact of alternative payment models on health care use and patient outcomes through structural modeling.

I am hoping to participate in this boot camp as it provides an excellent opportunity to learn from top health economists from other schools, and to connect with peers who are also interested in conducting research in health economics. My training in health policy will also enable me to contribute to the discussions with unique insights.

Please find attached to this cover letter my curriculum vita (including a list of Ph.D. level courses that I have taken), and my application essay. A letter of recommendation written by MIT Professor Amy Finkelstein has been sent separately to Ms. Elisa Pepe.

Please feel free to contact me at ji@g.harvard.edu or (401) 573-9637 should you have any questions about my application. Thank you for your consideration. I look forward to hearing from you.

Sincerely,

Yunan Ji
PhD Student in Health Policy (Economics Track)
Harvard University

My interest in health economics began long before I enrolled in graduate school. My undergraduate thesis, advised by Professor Anna Aizer, explores the relationship between alcohol consumption and crime, using a natural experiment of the staggered introduction of a single-container alcohol ban in the District of Columbia.

Following graduation, I spent two years as a full-time research assistant at the National Bureau of Economic Research, working under the supervision of MIT Professor Amy Finkelstein. During my time as a full-time research assistant, I was involved in research projects exploring the sources of geographic variation in health care spending and the impact of payment structure on provider behavior. It was during this time that I developed a deep interest in health care economics and became determined to pursue a PhD in health economic research.

In my first two years at Harvard, I completed field courses in public economics and industrial organization, and passed my general exam in health economics. Beyond coursework, I have been conducting independent and co-authored research in health care economics.

Much of current my research interest is on ways to improve efficiency in health care delivery.

My current research projects study different health care payment systems and the (perverse or efficiency-inducing) incentives that they create. Specifically, I have been working on projects exploring the impact of different payment models, such as Accountable Care Organizations and Bundled Payments, on spending, care delivery, and patient outcomes. In a recent paper published in the Journal of American Medical Association, my co-authors and I study the impact of bundled payment, which pays a single payment for the initial hospitalization and any subsequent care within a given time frame.[1] As economic theory would predict, when paid separately for each service, providers are not incentivized to consider the externalities that their service may impose on care delivered elsewhere in the system. Therefore, there is potential for efficiency gains from bundled payment by holding hospitals

[1]Finkelstein A, Ji Y, Mahoney N, Skinner J. Mandatory Medicare Bundled Payment Program for Lower Extremity Joint Replacement and Discharge to Institutional Postacute Care: Interim Analysis of the First Year of a 5-Year Randomized Trial. JAMA. 2018;320(9):892900. doi:10.1001/jama.2018.12346

accountable for downstream expenditures and forcing them to internalize these externalities. Nonetheless, the incentives created by bundled payment may also encourage gaming behavior such as selecting healthier, less costly patients to treat, or attempting to cut spending in ways that eventually harm patient outcomes. To answer these questions, we evaluate the first year of a five-year bundled payment RCT for lower extremity joint replacement. In this CMS-designed RCT, 75 of 196 eligible metropolitan statistical areas (MSA) were randomly assigned to be paid under bundled payment while the remaining 121 MSAs continued to be paid under the existing fee-for-service system. Consistent with what economic theory would predict, in the first year of the program, bundled payment reduced discharges to institutional post-acute care, the more expensive discharge destination relative to home and home health, by 9 percent. Despite reduced health care utilization, we find no evidence of reduced quality or selection of patients, although further analysis will be necessary as the magnitude of incentives ramp up in the later years of the experiment. In addition to quantifying the reduced-form effect of different models that we observe, we have also been working on modeling the impact of alternative payment systems, which will allow us to understand the effects of payment designs that we do not directly observe.

A related set of questions that I have been working on concerns the impact of quality improvement initiatives, such as pay-for-performance programs. Specifically, whether pegging payments to certain quality measures would in fact lead to better patient outcomes, and what are the welfare implications of such interventions.

I believe that I will benefit greatly from this boot camp as it provides an excellent opportunity to learn from top health economists and to connect with other PhD students interested in pursuing health economic research. While I have been able to interact with many economists at Harvard, it is a rare opportunity for health economists from different schools to come together and lead an intensive workshop for graduate students. The workshop will both demystify the areas of health economics which I have not yet explored, as well as inspire fresh ideas in areas that I have been actively working on. I look forward to actively contributing to the workshop discussions and to helping make the boot camp an engaging and rewarding experience for all participants.