Economics Ph.D Candidate **January 2020**

Dong Woo Hahm

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EDUCATION

Columbia University in the City of New York, New York, New York

Ph.D. Candidate, Economics 2016 – 2022 (expected)
M.Phil., Economics 2019
M.A., Economics 2018
Fields: Economics of Education, Market Design, Industrial Organization

Seoul National University, Seoul, Republic of Korea

B.A., Economics 2009 – 2015

WORKING PAPERS

"What Makes NYC Specialized High Schools So Special?: Relating School Effectiveness and Student Preferences"

Abstract: New York City (NYC) specialized high schools are highly selective and popular among students and parents. Nevertheless, the reason why those schools are so popular compared to non-specialized high schools has not been studied yet. This paper aims to answer the question in the context of academic performance, by studying the relationship among three factors: preference of specialized high schools applicants, peer qualities and causal effectiveness of those schools. First, a unique feature of NYC public high school admission system enables me to link preferences on specialized high schools and non-specialized high schools and hence to jointly estimate those using students' rank-ordered lists. Next, I estimate the value-added of schools that corrects endogenous selection following Abdulkadiroglu et al. (2017), and finally link them to the estimated preference in the first step. I preliminarily find the additional valuation that students and parents put on specialized high schools relative to non-specialized high schools is mostly related with higher peer quality at specialized high schools.

"Leveraging Uncertainties to Infer Preferences: Robust Analysis of School Choice" (with Yeon-Koo Che and Yinghua He)

Abstract: Recent evidence suggests that market participants make mistakes (even) in a strategically straightforward environment but seldom with significant payoff consequences. Uncertainties arising from the use of lotteries or other sources increase payoff consequences of certain mistakes, and force participants to take care to avoid them. Consequently, uncertainties limit the extent to which certain mistakes are made, thus making it possible for one to infer some preference relations reliably. We propose a novel method of exploiting the uncertainties present in a matching environment to systematically and robustly infer student preferences over schools based on their rank-order lists data. Our method consists of three steps: (i) simulating the underlying structure of uncertainties present in the environment, (ii) extracting preference relations

revealed under the simulated uncertainties, and then (iii) extending the revealed preference relations via the axiom of transitivity. Depending on the type of uncertainties present, the method rationalizes a variety of procedures, ranging from truthful-reporting assumption at one extreme (full-support uncertainty) to the stability assumption at the other extreme (when there is little uncertainty). Further, we refine our method to strengthen the robustness of the revealed preferences in the presence of participants making even some payoff-relevant mistakes, and explore ways to optimally balance the tradeoff between robustness and efficiency in preference estimation. We apply our methods to estimate student preferences through a Monte Carlo analysis capturing canonical school choice environment with single tie-breaking lotteries. Finally, we apply our methods as well as other existing methods to New York City high school assignment data to explore their implications for preference estimation and counterfactual analysis under a possible policy intervention.

WORK IN PROGRESS

"NYC Public High School Admissions: Empirical Research and Policy Implications" (with Yeon-Koo Che and Yinghua He)
"Elite Aspiration: The Value of Attending NYC Elite Exam Schools to Underrepresented Students" (with Yeon-Koo Che and Yinghua He)
"An Empirical Framework of School Choice and Location Choice" (with Minseon Park)

GRANTS AND AWARDS

Runner-up, Wueller Pre-Dissertation Award, Columbia University	2020
Winner and Runner-up, Wueller Teaching Awards: Best TA, Columbia University	2019
Runner-up, Vickrey Prize: Best 3rd year Paper in Economics, Columbia University	2019
PER Summer Research Fellow, Columbia University	2018 Summer, 2019 Summer
Young-Iob Chung Fellowship, Columbia University	2018 – 2019
Dean's Fellow, Columbia University	2016 – 2021

TEACHING AND WORK EXPERIENCE

Teaching Assistant:

Introduction to Econometrics (Seyhan Erden, Simon Lee)	2017 Fall, 2018 Spring
Intermediate Microeconomics (Susan Elmes)	2018 Fall, 2019 Fall
— Runner-up of Wueller Teaching Awards (2019)	
Introduction to Econometrics II (Ph.D. level, Jushan Bai and Simon Lee)	2019 Spring
— Winner of Wueller Teaching Awards (2019)	

Research Assistant:

Research Assistant for Yeon-Koo Che, Columbia University, 2018 Spring - present

LANGUAGES

English (fluent), Korean (native).
Proficient in STATA, MATLAB, R, Excel and LaTeX

MILITARY SERVICE (MANDATORY)

Sergeant, Republic of Korea Army. Nov. 2010 - Aug. 2012