Application for NBER Entrepreneurship Research Boot Camp 2025

Name: Sungil Kim

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Phone: 773-322-2327

Affiliation: Duke University, Fuqua School of Business (Finance)

Area of Interest: Entrepreneurial Finance, Private Equity, Venture Capital

Year of Entry: 2022

Expected Year of Completion: 2027

Letter Writer: Prof. John Graham

SUNGIL KIM

Duke University | Fuqua School of Business
(773) 322 – 2327 | sungil.kim@duke.edu

EDUCATION

Duke University — Durham, NC
PhD, Finance — 2022 –

University of Chicago — Chicago, IL
MS, Statistics — 2019 – 2020

Korea University — Seoul, Korea
BA, Economics — 2013 – 2019

RESEARCH EXPERIENCE

U.S. Census Bureau — Research Triangle, NC
Special Sworn Status Researcher — Mar. 2024 –

Entrepreneurs with Criminal Records

- Examined Census Bureau Longitudinal Employer-Household Dynamics (LEHD) Data

Duke University Fuqua School of Business — Durham, NC
PhD Student — Sep. 2022 –

Business Development Companies
RA for David Robinson and Melanie Wallskog

- Constructed and analyzed a BDC-Bank-PE panel dataset to examine the behaviors in the financing landscape
- Examined 10-K data with financial fundamentals and market sentiment using various techniques such as random forest

CFO Survey
RA for John Graham and Campbell Harvey

- Conducted a forensic analysis on the CFO survey data
- Extracted and compiled data pertaining to futures contracts and payout policy

Federal Reserve Bank of Kansas City — Kansas City, MO
Research Associate II — Jul. 2020 – Aug. 2022

Predicting the Oil Market
RA for Nida Çakır Melek, Charles Calomiris (Columbia Business School), and Harry Mamaysky (Columbia Business School)

- Adopted a forward selection model to determine parsimonious time series forecasting specifications from all potential measures including a set of novel natural language processing (NLP) measures
- Constructed bootstrapped distributions for t-statistics and R^2; implemented Monte Carlo simulations based on AR(8) process to eliminate serial correlation and finite sample biases in standard errors and R^2
- Built simulations to examine the persistence in what variables forecast across the different dependent variables in subperiod out-of-sample analysis; measured the frequency of variables present in the cross-subperiod reliable out-of-sample fixed models with two predicting variables

Text Analysis of FOMC Statements and Speeches Using Natural Language Processing
Coauthor with Taeyoung Doh and Shu-Kuei Yang

- Identified the tone of post-meeting FOMC statements (Mar. 2004 – Dec. 2014) using an NLP model called Universal Sentence Encoder (USE) which can detect the contextual meaning of words beyond simple frequency patterns
- Compared our text-based measure of the tone of FOMC statements with measures from previous research based on high-frequency asset price data only
- Applied the USE algorithm in a follow-up study analyzing the difference in the tone of speeches by FOMC participants from 2000-2020 describing economic outlook before and after the introduction of state-based forward guidance

Persistent Difference in Work from Home by Demographic Groups, and its Relationship with Consumer Spending
Coauthor with Nida Çakır Melek

- Constructed a high-frequency measure for work-from-home; used our measure to examine the differences in work-from-home behavior by income, race, and education during pandemic
- Utilized our work-from-home measure to investigate the link between consumer spending and work from home by demographic groups; co-authored an internal memo for the Bank President about the implications of work-from-home

Foreign Demand for U.S. Treasuries: Implications for Liquidity in Bond and Currency Markets
RA for Rajdeep Sengupta and Taeyoung Doh

- Implemented fixed effect regressions to examine the correlation between foreign demand for treasuries and bilateral / total trade balance
- Co-authored an internal memo to the Bank President which emphasizes the risk of declining foreign share of treasuries
- Estimated monthly regressions of foreign sector bond flows and excess returns on level and slope of short-term rates

Income Share of Energy and Substitution: A Macroeconomic Approach
RA for Nida Çakır Melek and Musa Orak (Federal Reserve Board)

- Constructed a variety of energy- and capital-related variables
- Estimated the elasticity of substitution between equipment capital and energy use with expanding-window regressions

University of Chicago Booth School of Business Chicago, IL
Research Assistant Feb. 2020 – Sep. 2021

Impact of Municipal Finances on the Economy
RA for Kilian Huber and Anselm Hager (Humboldt University)

- Carried out panel data regressions with fixed effects by municipality and by year to assess the impact of change in local population counts on municipal finances
- Analyzed meeting protocols of the municipal governments and recorded information pertaining to municipal finances for the period 2010-2019

Evolution of Investment Costs for Large Firms
RA for Niels Gormsen and Kilian Huber

- Extracted and compiled data pertaining to the management decisions of firms over the globe
- Analyzed running text in company reports and dug out information related to investment costs that appear in an unsystematic way in the reports

Korea University (Joint with Florida Gulf Coast University) Seoul, Korea
Research Assistant and Coauthor Sep. 2018 – present

Optimal Investment Strategy using Deep Learning
Coauthor with Prof. Anurag Agarwal (Florida Gulf Coast University)

- Drafted a review paper "Deep Learning – A Review of Applications in Multiple Disciplines" prior to the research working paper and submitted to Intelligent Systems in Accounting, Finance and Management
- Predicted future performance of about 4000 US stocks with our optimized deep learning model leveraging various financial indicators; compared the results with single-layer neural network and logistic regression

AI-based Business Decision-making Support System for Smart Factories and SME Enterprises
RA for Hongshik Lee

- Examined factors affecting prices of various indicators, e.g., Bloomberg Commodity Index, Chicago SRW Wheat Futures, and Bismut Ingot; implemented comparative analysis with the AI-based results

Korea Development Institute Sejong, Korea
Research Assistant Aug. 2018

Comprehensive Approach to Corporate Governance Issues: CEO Ownership and Expertise
RA for Hwa Ryung Lee

- Constructed a unique database on board activities of the outside directors contingent on social ties to the CEO.
- Analyzed the 2010-2017 business reports of large companies in Korea and examined the ratio of outside directors and the degree of ties between outside directors and the CEO as to measure the independence of the corporate board

PUBLICATIONS

Doh, T., **Kim, S.**, Kim, K., Lee, H., & Song, K. (2022). The Economic Effects of a Rapid Increase in the Minimum Wage: Evidence from South Korea Experiments. *Federal Reserve Bank of Kansas City Working Paper*, (22-13).

Doh, T., **Kim, S.**, & Yang, S. K. (2021). How You Say It Matters: Text Analysis of FOMC Statements Using Natural Language Processing. *Economic Review-Federal Reserve Bank of Kansas City*, 106(1), 25-40.

Çakır Melek, N., & **Kim, S.** (2021). Cell Phone Data Suggest Persistent Differences in Work from Home by Income, Race, and Education during the Pandemic. *Economic Bulletin-Federal Reserve Bank of Kansas City*, (March 31, 2021), 1-4.

Kahn, G. A., & **Kim, S.** (2020). Navigating the Decade Ahead: Implications for Monetary Policy: An Introduction to the Bank's 2020 Economic Symposium. *Proceedings-Economic Policy Symposium-Jackson Hole* (pp. xvii-xxix).

TEACHING EXPERIENCE

Duke University — Durham, NC
TA for Prof. John Graham| Corporate Finance (MBA) — 2023-2024
TA for Prof. Alon Brav| Financial Management (MBA) — 2024
TA for Prof. Gonzalo Maturana | Corporate Finance (MBA) | Foundations of Corporate Finance (MMS) — 2023

University of Chicago — Chicago, IL
TA for Prof. Yibi Huang | Linear Model and Experimental Design — 2020

Korea University — Seoul, Korea
TA for Prof. Seik Kim | Mathematics for Economists — 2018
TA for Prof. Seok il Kim | Microeconomics — 2017

PROFESSIONAL EXPERIENCE

U.S. Census Bureau — Research Triangle, NC
Special Sworn Status Researcher — Mar. 2024 –

United Nations — Geneva, Switzerland
Intern at United Nations Human Rights Council — Jul. 2019 – Aug. 2019

COMPUTER SKILLS/LANGUAGES

Programming: R, Python, Stata, MATLAB, SAS (SAS Base Certification), Shell Script, RapidMiner, LaTeX
Language: Korean (Native), English (Fluent, GRE V162 Q170), German (Fluent, ZD B2), Chinese (Intermediate, HSK Level 3)

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Fuqua School of Business
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January 10, 2025

Dear Selection Committee,

I am writing to apply for the 18th annual Entrepreneurship Research Boot Camp (ERBC) hosted by NBER. This program offers a unique opportunity to deepen my understanding of entrepreneurial finance and engage with leading scholars in the field. As a PhD candidate in Finance at Duke, I am particularly eager to share my research on private equity (PE) acquisitions in healthcare and gain new insights to enhance my academic contributions.

My current research investigates the operational impacts of PE buy-and-build strategies in the hospital industry. By distinguishing between initial platform acquisitions and subsequent add-on deals, I explore how PE firms manage hospital operations over time. Using a novel Hospital-PE-Year dataset, I have found that platform acquisitions yield significant improvements in operational efficiency and profitability, often at the expense of care quality, while add-on acquisitions fail to replicate these operational gains. This research highlights the trade-offs inherent in scaling healthcare investments and contributes to discussions about the role of private equity in entrepreneurial and institutional contexts.

Beyond this project, I have also worked with Professors David Robinson and Melanie Wallskog on a study of Business Development Companies (BDCs) as intermediaries in entrepreneurial finance. This work examines how BDCs operate between traditional banks and PE firms to address funding challenges, providing critical insights into an underexplored segment of entrepreneurial financing.

Looking ahead, I am also particularly intrigued by the prospect of exploring the impact of macroeconomic shocks on entrepreneurial financing and innovation. My envisioned future research will delve into the behavior of various forms of entrepreneurial financing — ranging from VC to SPACs — during periods of economic turbulence. By discerning patterns amidst macroeconomic uncertainties, I aspire to inform robust financial regulations and contracts that safeguard startups and foster innovation amidst challenging economic landscapes.

Attending ERBC 2025 aligns seamlessly with my aspirations to deepen my understanding of entrepreneurial finance and contribute insights to the academic community. The opportunity to engage with leading researchers, immerse myself in intensive workshops, and exchange ideas with fellow doctoral candidates excites me tremendously. Moreover, I am eager to leverage ERBC as a platform to cultivate future collaborations.

Thank you for considering my application. I am confident that my participation in ERBC would both enrich my research and contribute meaningfully to the program's vibrant intellectual community. Please feel free to contact me at sungil.kim@duke.edu or (773) 322-2327 with any questions.

Sincerely,

Sungil Kim
PhD Candidate, Finance
Fuqua School of Business, Duke University

Enclosure: CV

John R. Graham
D. Richard Mead Jr. Family
Professor of Finance
Director: www.cfosurvey.org
Director, Duke CFO Exec Ed

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Duke University
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January 12, 2025

Sungil Kim, Duke University, Fuqua School of Business Ph.D. student

Sungil Kim is a 3rd-year Ph.D. student at the Fuqua School of Business, Duke University. I am on Sungil's committee and have worked with him extensively as a TA and RA.

Sungil's RA duties relate to the Duke CFO survey and his role is important. Sungil also has functioned as Head TA for a massive MBA Corporate Finance class that I teach. In this role he manages a team of MBA TAs, enforces quality control, and handles some of the administrative work. Sungil works hard and is reliable. I recommend Sungil highly to the NBER Entrepreneurship camp.

The timing of this bootcamp is ideal for Sungil. He recently passed his preliminary exam and has some research ideas in the PE Health Care space. Sungil is good at implementing -- he would benefit greatly from being exposed broadly to research ideas and agendas in this space. He's got a good foundation on which the bootcamp can build and be very beneficial for him.

I'll keep this short because David R is Sungil's advisor and can fill you in on all the details.

Please let me know if I can provide more information.

Sincerely,

John R. Graham