Tsolmon Otgon
Economics Ph.D. Student
Department of Economics
Georgetown University
Email: to292@georgetown.edu
Phone: (202) 412-9129

February 5, 2025

To Whom It May Concern,

I am writing to apply for the NBER Innovation Research Boot Camp 2025. As a fifth-year Ph.D. student in Economics at Georgetown University, I am interested in understanding the dynamics of advanced digital technology adoption from the contracting perspective. Systematically learning the economics of innovation will be essential for my current work and future research projects.

Thank you for your time and consideration. Please find my application materials attached for your review.

Sincerely,
Tsolmon Otgon

Recommendation Letter Writer:
Timothy DeStefano
Associate Professor, McDonough School of Business
Georgetown University
Email: timothy.destefano@georgetown.edu

Tsolmon Otgon

Economics Ph.D. Candidate
Department of Economics
Georgetown University

Mobile: 202-412-9129
Email: to292@georgetown.edu

Education

Georgetown University 2020 – Present
Ph.D. Economics *Washington, DC, USA*

Waseda University 2018 – 2020
M.A. Economics *Tokyo, Japan*

Waseda University 2017 – 2018
Research student *Tokyo, Japan*

National University of Mongolia 2009 – 2013
B.A International Economics *Ulaanbaatar, Mongolia*

Professional Experience

Short Term Consultant Oct 2024 - Present
The World Bank *Washington, DC*
- Conducting interviews with businesses regarding their experience in adopting advanced technologies.

Research Assistant Aug 2023 - Present
Center for Business and Public Policy *Georgetown University*
- Conducting economic research in Industrial Organization
- Analysis and visualization of data in energy and freight sectors as well as several government means-tested programs

Senior Associate Intern June 2023 - Aug 2023
Charles River Associates *Washington, DC*
- Econometric analysis of business data, market share, and market definition
- Simulation of a structural model of second-score auction

Economist January 2014 - March 2017
Bank of Mongolia *Ulaanbaatar, Mongolia*
- Compilation of monetary and financial statistics
- Analyzing and reporting statistical and survey data
- Conducting research and surveys

Assistant Economist June 2013- January 2014
Bank of Mongolia *Ulaanbaatar, Mongolia*
- Compilation of monetary and financial statistics
- Research a new method of calculating core inflation

Teaching Experience

Graduate Teaching Assistant 2021 - 2023
Georgetown University *Washington, DC*
- ECON 605 Ph.D. Macroeconomics I
- ECON 122 Introduction to Econometrics
- ECON 102 Intermediate Macroeconomics

Publications

" 'The Report of My Death was an Exaggeration': Business Dynamism in the United States" with John Mayo and Robert Press. The Economist's Voice. Forthcoming.

"Rising Markups, Rising Prices?" with Christopher Conlon, Nathan Miller, and Yi Yao. AEA: Papers and Proceedings (May 2023)

"The Forecast of the Housing Mortgage Market" with Enkhzaya Demid. Research Yearbook, Bank of Mongolia (2015)

Research Presentations

"Rising Markups, Rising Prices?", 2023 Eastern Economics Association Annual Meetings

Awards & Honors

Best Graduate Teaching Assistant in Social Sciences
Georgetown University *2023*

M.A. Economics Salutatorian
Waseda University, Japan *2020*

MEXT scholarship (M.A. Economics)
Government of Japan *2018-2020*

MEXT scholarship (Research student)
Government of Japan *2018-2020*

B.A. International Economics Valedictorian
National University of Mongolia *2013*

Skills Summary

Statistical Software: Python (PyData Stack), Deep Learning (TensorFlow, PyTorch), Databricks, R, MATLAB, Stata
Other Software: LaTeX, Microsoft Office Suite
Languages: English (fluent), Mongolian (native), Russian (fluent), Japanese (JLPT N2 level), Spanish (A2)

Georgetown University

Unofficial Academic Transcript

This is not an official transcript. Courses which are in progress may also be included on this transcript.

Transcript Data

STUDENT INFORMATION

Name
Tsolmon Otgon

Birth Date
09-JUN

Current Program

Doctor of Philosophy

College
Graduate School

Major and Department
Economics, Economics

Secondary

Master of Arts

College
Graduate School

Major and Department
Economics, Economics

DEGREE AWARDED

Awarded
Master of Arts

Degree Date
05/17/2024

Primary Degree

College
Graduate School

Major
Economics

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Institution	52.000	52.000	52.000	48.000	179.72	3.744

INSTITUTION CREDIT

Term: Fall 2020

Major
Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	601	G	Microeconomics I	A-	4.000	14.68	
ECON	605	G	Macroeconomics I	B+	4.000	13.32	
ECON	611	G	Math for Economics	B	3.000	9.00	
ECON	612	G	Econometrics I	A-	4.000	14.68	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	15.000	15.000	15.000	15.000	51.68	3.445
Cumulative	15.000	15.000	15.000	15.000	51.68	3.445

Term: Spring 2021

Major
Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	602	G	Microeconomics II	A	4.000	16.00	
ECON	606	G	Macroeconomics II	A	4.000	16.00	
ECON	613	G	Econometrics II	A	4.000	16.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	12.000	12.000	12.000	12.000	48.00	4.000
Cumulative	27.000	27.000	27.000	27.000	99.68	3.691

Term: Fall 2021

Major

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Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	607	G	Macroeconomics III	A-	3.000	11.01	
ECON	609	G	Comp of Dynamic Models w/ Apps	A-	3.000	11.01	
ECON	615	G	Micro Econometrics	A-	3.000	11.01	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	33.03	3.670
Cumulative	36.000	36.000	36.000	36.000	132.71	3.686

Term: Spring 2022

Major

Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	608	G	Macroeconomics IV	A	3.000	12.00	
ECON	622	G	Development Economics	A-	3.000	11.01	
ECON	631	G	Industrial Organization	A	3.000	12.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	35.01	3.890
Cumulative	45.000	45.000	45.000	45.000	167.72	3.727

Term: Fall 2022

Major

Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	661	G	Labor Economics I	A	3.000	12.00	
ECON	723	G	Wkshp: Applied Micro I	S	1.000	0.00	
ECON	999	G	Thesis Research	.	0.000	0.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	4.000	4.000	4.000	3.000	12.00	4.000
Cumulative	49.000	49.000	49.000	48.000	179.72	3.744

Term: Spring 2023

Major

Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	724	G	Wkshp: Applied Micro II	S	1.000	0.00	
ECON	999	G	Thesis Research	.	0.000	0.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	1.000	1.000	1.000	0.000	0.00	0.000
Cumulative	50.000	50.000	50.000	48.000	179.72	3.744

Term: Summer 2023

Major

Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	999	G	Thesis Research	.	0.000	0.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	0.000	0.000	0.000	0.000	0.00	0.000
Cumulative	50.000	50.000	50.000	48.000	179.72	3.744

Term: Fall 2023

Major

Economics

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Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	7023	G	Wkshp: Applied Micro I	S	1.000	0.00	
ECON	9999	G	Thesis Research	.	0.000	0.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	1.000	1.000	1.000	0.000	0.00	0.000
Cumulative	51.000	51.000	51.000	48.000	179.72	3.744

Term: Spring 2024

Major

Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	7024	G	Wkshp: Applied Micro II	S	1.000	0.00	
ECON	9999	G	Thesis Research	.	0.000	0.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	1.000	1.000	1.000	0.000	0.00	0.000
Cumulative	52.000	52.000	52.000	48.000	179.72	3.744

Term: Fall 2024

Major

Economics

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	7023	G	Wkshp: Applied Micro I	S	1.000	0.00	
ECON	9999	G	Thesis Research	.	0.000	0.00	

Term Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	1.000	1.000	1.000	0.000	0.00	0.000
Cumulative	53.000	53.000	53.000	48.000	179.72	3.744

TRANSCRIPT TOTALS

Level Comments

Doctoral Comprehensive Examination 06-22-2021, Result: Pass

Transcript Totals (MN or MC Graduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution	53.000	53.000	53.000	48.000	179.72	3.744
Total Transfer	0.000	0.000	0.000	0.000	0.00	
Overall	53.000	53.000	53.000	48.00	179.72	3.744

COURSE(S) IN PROGRESS

Term: Summer 2024

Major

Economics

Subject	Course	Level	Title	Credit Hours
ECON	9999	G	Thesis Research	0.000

Term: Spring 2025

Major

Economics

Subject	Course	Level	Title	Credit Hours
ECON	7032	G	International Wrkshp	1.000
ECON	9999	G	Thesis Research	0.000

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About My Research

My research interests lie at the intersection of industrial organization, market power, and the economics of innovation. I have been particularly drawn to understanding how firms compete, negotiate contracts, and adopt new technologies. My work thus far has explored price markups, inflation dynamics, and contractual frictions, and I am now focusing on how businesses adopt and churn through digital technologies. By participating in the NBER Innovation Research Boot Camp, I aim to deepen my understanding of innovation economics and improve my research in this field.

My research journey began with an interest in imperfect competition and market power, which led me to study industrial organization. My early research examined the relationship between price markups and inflation (Conlon et al. 2023). Building on this, I explored the role of contracting between manufacturers and retailers in generating price stickiness from the microeconomics perspective. In this project, I developed a dynamic structural model to estimate the fixed cost of contract renegotiation. Using data from the consumer packaged goods retail sector, I applied the Maximum Likelihood approach to estimate contracting costs, shedding light on how contracting frictions can contribute to price rigidities. Since late 2023, my research interests have expanded to understanding the recent shifts in business dynamism, particularly the surge in new firm entry and record-high business applications (Mayo, Otgon, and Press 2024). These trends might signal a broader transition toward the digital sector. My growing focus on technology adoption and diffusion led me to work together with a World Bank research team to study how novel technologies spread across firms, particularly within multinational enterprises.

Currently, using a detailed proprietary dataset, I am investigating the churn of digital technology vendors—such as cloud computing and machine learning providers—by businesses across the world. I am particularly interested in how the introduction of new digital products influences firms' decisions to switch service providers. This has created a competitive environment where major digital technology vendors such as Amazon and Microsoft rapidly develop new technologies to attract and retain customers. My research aims to analyze this competition from a contracting perspective. I hypothesize that there are considerable costs in switching the digital service providers causing a higher burden on smaller businesses. I strongly believe that understanding these dynamics is crucial for the regulatory policies that need to keep pace with technological advancements.

As I continue to explore the diffusion of digital technologies, I recognize the importance of systematically studying the economics of innovation. The frameworks and methodologies developed in this field will be essential for my current work and future research projects. The NBER Innovation Research Boot Camp offers an invaluable opportunity to deepen my theoretical and empirical understanding of innovation economics, interact with leading scholars, and refine my research agenda.

I sincerely appreciate the effort put into organizing this boot camp to support young researchers in a field that is not always covered in traditional university curricula. I would be immensely grateful for the opportunity to participate and learn from this experience.

References

Conlon, Christopher, Nathan H Miller, Tsolmon Otgon, and Yi Yao. 2023. "Rising markups, rising prices?" In *AEA Papers and Proceedings,* 113:279–283. American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203.

Mayo, John W, Tsolmon Otgon, and Robert Press. 2024. ""The Report of My Death was an Exaggeration": Business Dynamism in the United States." *The Economists' Voice,* no. 0.

Admissions Committee
NBER Innovation Research Boot Camp 2025

Dear Members of the Admissions Committee,

I am delighted to write this letter of recommendation for Tsolmon Otgon, an exceptional Economics Ph.D. candidate at Georgetown University, who is applying for the NBER Innovation Research Boot Camp 2025. I have had the pleasure of working Tsolmon on various projects and have been consistently impressed by her intellectual rigor, technical expertise, and passion for firms, digital technology and innovation.

Tsolmon's research is grounded in industrial organization, with a particular focus on market power and the dynamics of firm behavior. Her job market paper analyses how vertical contracting between firms can slow pass-through rates by exploiting consumer packaged goods retail data with a structural dynamic model that incorporates contract renegotiation costs. Beyond this, Tsolmon's research explores the synergies between digital platforms, such as TikTok's role in driving music discovery on Spotify, as well as the impact of cloud computing subscription churn on firm performance and innovation. Together, her work contributes valuable insights into the economics of innovation, shedding light on how technological and contractual dynamics shape firm behavior and market outcomes.

Tsolmon also brings a wealth of professional experience that complements her academic achievements, showcasing her ability to apply advanced economic analysis to real-world challenges. As a consultant at the World Bank, she explored how firms measure efficiency through technology adoption and management practices by combining observational data with company interviews. At the Georgetown Center for Business and Public Policy, she took the lead to conduct research on business dynamism in the US, pre- and post-COVID, analyzing business entry trends across regions and firm types. Her time at Charles River Associates involved simulating structural models and running regressions to understand market participant behavior within the retail sector. Earlier in her career, at the Bank of Magnolia, she compiled extensive datasets on the private economy and conducted surveys on SMEs to study their innovative objectives, R&D activities, and financial constraints. This diverse range of experiences underscores her ability to blend rigorous economic research with practical applications.

What distinguishes Tsolmon is her ability to tackle complex research questions with analytical precision, a collaborative spirit, and an unwavering commitment to integrity and honesty. Her unique combination of academic excellence, technical proficiency, and professional experience, grounded in strong ethical principles, makes her an ideal candidate for the NBER Innovation Research Boot Camp. I am confident that this opportunity will equip her with the knowledge, network, and ethical foundation to drive impactful research on the economics of innovation.

I wholeheartedly recommend Tsolmon Otgon for your program and am confident that she will contribute significantly to the Boot Camp's objectives. Please do not hesitate to contact me at timothy.destefano@georgetown.edu or 202-687-1273 should you require further information or insights into her qualifications.

Sincerely,



Timothy DeStefano
Georgetown University
McDonough School of Business