

# Siwon Lee

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I want to analyze monetary international economics and monetary policy. More specifically, I want to explain international trade based on the central bank's monetary policy. Also, I have an interest in Applied econometrics and matching theory.

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## EDUCATION

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### University of Washington in St.Louis

*Ph.D. in Economic*

MO, USA

*Aug 2024*

- Anticipated Graduation: Aug 2029

### Sungkyunkwan University

*B.A. in Global Economics, B.Math Mathematics*

Seoul, Korea

*Mar 2021-Aug 2024*

- Math: Analysis, Basic Mathematics for AI, Differential Geometry, Probability Theory, Computer Applied Mathematics
- Software: Operating System, Intro to DB, Data Structures, Intro to AI, System Programming, Algorithm
- Economics: Adv Macroeconomic Theory, Game Theory, Econometrics, Mathematical Economics, Intro Financial Accounting

### LUSEM & HANKEN University

*Joint Winter Exchange School*

Sweden and Finland

*Jan 2023-Jan 2023*

- Visited KPMG corporation in Helsinki and discussed sustainability.
- Discussed critical thinking and examples of sustainability in each country.

## WORK EXPERIENCE

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### TRC Research Assitant

*Research Assistant*

SKKU, Korea

*Nov 2023-Feb 2024*

- Organized from 111 pdf reports written in natural language to Excel.
- Fixed imperfect or mismatched data and recorded outlier cases.

## RESEARCH

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### Analyze Impact of Monetary Policy on Construction Investment and Facility Investment

*Coworker*

SKKU, Korea

*Mar 2024 Jul 2024*

- Analyze impact of monetary policy on investment using three paths as asset price, exchange rate, and interest rate.
- Analyzed South Korea case such as work-out of TaeYeong Company and LegoLand.
- Using Bayesian VAR and error correction model, statistical prove our statement.

### Analyze effect of Monetary Policy to Technological Progress: NACIS334(Korean)

*Team Leader*

DB, Korea

*Dec 2023 - Feb 2024*

- Specializing in analyzing monetary policy effects on industries, exemplified by NACIS334 sector research.
- Applying statistical methods such as constrained variable analysis, latent variable analysis, regression, and TVP-FAVAR.
- Formulated theoretical hypotheses mathematically and empirically validated them using data.

### Global Economic Individual Research 1(English)

*Team Member*

SKKU, Korea

*Jun 2022 - Jul 2022*

- Solving solow model problem using numerical method and python numpy library
- Researched solow model with changing several model's assumption such as s is constant
- Analyed United States economic data using FRED API and python

### Global Economic Individual Research 2(English)

*Team Member*

SKKU, Korea

*Feb 2023 - Jun 2023*

- Analyzed similarity between 2008 financial crisis and currently economic intension related to pandemic and war.
- Using TVP-FAVAR model, analyze FCI and macro economic index based on "The Term Structure of Growth-at-Risk"
- Analyzed using statistical model of TVP-FAVAR model changed variables using python.

### Effect of Internet Reviews on the Demand of Experience Goods: Korean Movie Industry(English)

*Team Member*

Korea

SKKU,

*Aug 2023 Ongoing*

- Crawling review data from the Daum site and standardizing natural language and scoring using Python
- Implementing basic demand function of movie, and determine to situation.

### **Forecasting Inflation and Economic Recession: Comparison of Econometrics and Machine Learning(English)**

Aug 2022

College of Economics

- Analyzed and forecasting inflation and GDP using ANN and classical econometrics method
- Reviewed progress and output of ANN model and econometrics model

### **Forecasting Changing Phase of Financial Market When Implementation CBDC**

Feb 2022(Korean)

DB financial investment

- Researched property of bonds, stocks, and currency swap future
- Calculated value and risk of financial products using value evaluation equation

### **Implementation of CBDC to Reduce Public Antipathy of Privacy Violations**

Aug 2021(Korean)

College of Economics

- Analyzed public's dislike about private invasion any CBDC type and monetary policy

## **TEACHING EXPERIENCE**

### **Department of College TA**

Teaching Assistant

SKKU, Korea

Feb 2023 - Jun 2023

- Graded students code and received questions related to the course.
- Feedback student's regular and extra studies, and suggest new ideas.
- Feedback student's team project related to their idea and implementation.

### **SKKU International Summer Semester TA**

Teaching Assistant

SKKU, Korea

Jun 2022 - Jul 2022

- Communicated between professor and director related to lecture course or attendance problem
- Supported culture event as orientation or graduation targeted to exchanged student

### **Young Economic Education Supporters**

Teacher

Bank of Korea, Korea

Apr 2023 - Dec 2023

- Lectured element school and middle student on role of BOK, currency and inflation, and history of currency.
- Lectured didactics and make material of lecture.

### **Sungkyun Tutoring**

Mentor

SKKU, Korea

Mar 2022 - Jun 2024

- Built note when used python language tutoring and designed programming problems
- Educated concept of list, loop, and function and thinking method of algorithm
- Coached student's programming code and revised or assisted their code

## **EXTRACURRICULAR ACTIVITIES**

### **Transdisciplinary Mentoring Community**

Member

WashU, USA

Aug 2024 - Jul 2024

- Pairing faculty mentors with small groups of graduate students to engage in conversations and accelerate connections beyond one's home department

### **Becoming Economist**

Vice President, Team Member

SKKU, Korea

Mar 2022 - Jun 2024

- Reviewed several economic articles related to estimated of schooling, Rouwenhorst Method, and hyperbolic discount function.
- Constructed English certification study as TOEFL and GRE.
- Prepared study abroad as doctor program with OB meeting.

### **Global Leasers in Finance(GLIF)**

Team Member

Seoul, Korea

Mar 2021 - Mar 2022

- Summarized important economic indicators such as S&P 500, KOSPI, and WTI rates to last market trends
- Abstract and translate daily articles from WSJ, FT, and BB in the field of macroeconomic news
- Structured fictional customer's portfolio and Analyzed Mezzanine and non-list company in an Academic-affiliated program

## MIMIC

Team Member

SKKU, Korea  
Sep 2022 - Jun 2024

- Communicated mathematic theorem such as four color theorem in regular seminar
- Studying regular lecture as binominal mathematic or linear algebra.
- Lectured Nash's existence theorem and minimax theorem of Von.

## Seekers

President

SKKU, Korea  
Mar 2022 - Jun 2024

- Debated economic and social issues as Middle Interest Rate, Global Supply Chain, and others.
- Participated mentoring with senior graduated of SKKU economic department.

## PROJECT

### Analzed relationship between COVID-19 and trade

Team Leader

SKKU, Korea  
Apr 2022 - Jun 2022

- Collected and analyzed COVID-19 data and international trade data using python
- Learning OLS regression with several different equation

### Learning-Fair

Colleague Depart. Dean's Awards

SKKU, Korea  
Sep 2021 - Nov 2021

- Assembles firm's financial statement, stock price, and trading volume data then standardized to excel data
- Implemented mock investment and classify investor tendency program using python library of pandas, mpl-finance

### Project of Convergence Basics

Team Member

SKKU, Korea  
Jun 2021 - Aug 2021

- Designed new items, using design thinking process as lottos-blossom & prototype test
- Collaborated with co-workers and delivered in front of professors and the CEO

### Calculated Production Possibility Function

Team Member

SKKU, Korea  
Apr 2021 - Jun 2021

- Calculated production possibility function on two different products and labor
- Solved feasible problem when gives each products price and budget line

## AWARDS

### 2022 SKKU Annual Conference on Economics

Top Prize

SKKU, Korea  
Jun 2022 - Aug 2022

- Analyzed neuron network method for economic research and comparison forecast efficiency to classical econometrics model.
- Tested several neuron network and econometrics model using past 50 years U.S. statistical data.

### 2022 Capston Design and AI Hackerton

Encouragement Prize

The Korean Association of Computer Education  
Oct.13.2022

- Structured business canvas about new business item based on financial market and AI.
- Implemented AI model and front web design using R, LSTM, and time-series data.

### Sungkyun tutoring

Excellence Prize

SKKU, Korea  
Aug 2022 - Dec 2022

### Facebook Hacker Cup 2021

Round 2

Facebook, Online  
Aug 2021 - Sep 2021

### Analyzing of Big Data contest by NH investment

Participation Prize

NH investment  
Nov 2022

### Dean's List

Aug 2022  
SKKU

## CONFERENCES ATTENDED

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<b>SKKU-KEIO Research Symposium</b>	SKKU and KEIO, Korea and Japan
<i>Speaker</i>	<i>Jan 2024</i>
<b>St. Louis Fed-WashU-LAEF Macro-Labor Conference</b>	St.Louis FED and WashU
<i>Participation</i>	<i>Mar 2025</i>
<b>REStud North America Tour 2024</b>	WashU, USA
<i>Participation</i>	<i>Nov 2024</i>
<b>NSF//NBER//CEME Mathematics Conference</b>	WashU, USA
<i>Participation</i>	<i>Sep 2024</i>
<b>2024 Colloquium: Recent Development in Derivative Pricing</b>	SKKU, Korea
<i>Participation</i>	<i>Jun 2024</i>
<b>2024 Colloquium: Positive Phenomena</b>	SKKU, Korea
<i>Participation</i>	<i>Jun 2024</i>
<b>2024 Colloquium: Decoupling and Application</b>	SKKU, Korea
<i>Participation</i>	<i>Apr 2024</i>
<b>2023 Colloquium: Introduction to the Navier-Stroke equations and Related Equations</b>	SKKU, Korea
<i>Participation</i>	<i>Nov 2023</i>
<b>International Conference on Einstein and Harmonic Manifolds</b>	SKKU and Samsung, Korea
<i>Participation</i>	<i>19-22 Jun 2023</i>
<b>MULTILINEAR OPERATORS IN HARMONIC ANALYSIS</b>	SKKU, Korea
<i>Participation</i>	<i>26 Oct 20223</i>
<b>MATLAB Expo Korea</b>	MATLAB, Korea
<i>Participation</i>	<i>Jun 2022</i>
<b>2022 SKKU International Conference: Trends in Digital Economy and Finance</b>	SKKU., Korea
<i>Participation</i>	<i>May 2022</i>

## SCHOLARSHIP

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<b>Fellowship &amp; Full scholarship</b>	Aug 2024	Aug 2029
		<i>WashU</i>
<b>Scholarship for Extracurricular Challenge</b>		Jan 2024
		<i>SKKU</i>
<b>Scholarship for Global Learning Leader</b>		Dec 2023
		<i>SKKU</i>
<b>Scholarship for Global Exchange Student</b>		Mar 2023
		<i>SKKU</i>
<b>Scholarship for Academic Excellence</b>		Aug 2022
		<i>SKKU</i>
<b>Scholarship for Academic Excellence</b>		Feb 2022
		<i>SKKU</i>
<b>State Scholarship</b>		Feb 2021
		<i>Government of South Korea</i>

## ADDITIONAL INFORMATION

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Achivements: ADsP, Certification of Cody Joint Event(MATLAB)

Skills: Programming(C, Python, R, HTML, MYSQL, Latex), MS Office(PowerPoint, Excel), Mathematica, Premiere Rush

Languages: Korean(Native), English(C1)

Interests: International economics, Finance, Monetary economy, Growth Theory

Hobby: Table Tennis, Tennis, Listening Music, Basketball

Strengths: Enthusiasm, Curiosity, Punctual, Trustworthiness, focused