# YANG PEI

**WORK ADDRESS**
University of Houston
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**D.O.B**
October 1993

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**CITIZENSHIP**
China, F1 Visa

## RESEARCH FIELDS

International economics, Economic growth, Macroeconomics

## EDUCATION

Ph.D. Candidate in Economics, **University of Houston** *Sep 2019 - Present*
M.A. in Economics, **University of Houston** *2019-2021*
M.A. in Economics, **Central University of Finance and Economics** *2016-2019*
Exchange Student in Applied Mathematics, **University of Science and Technology of China** *2012-2013*
B. S. in Statistics, **Anhui University** *2011-2015*

## RESEARCH

**Job Market Paper**

"**Demographics, Trade, and Growth**"

Motivated by China's recent economic slowdown, the relocation of labor-intensive industries, and an aging population, this paper examines how demographic forces shape China's economic growth and trade patterns. Country-level panel regressions and a VARX model indicate that countries with a larger working-age population share experience higher productivity growth and investment share of GDP. Building on these findings, I develop and calibrate an overlapping generations (OLG) trade model with three key features: age-varying abilities to generate ideas that drive knowledge accumulation, age-varying saving behaviors affecting capital accumulation, and a multi-sector structure that integrates both Heckscher-Ohlin and Ricardian comparative advantage forces. Through comparing the baseline case to a hypothetical case where China's fertility and/or survival rates align with those of the rest of the world, I find a trade-off in China's demographics: a savings-favorable age distribution in the short term leads to gains in capital and income per worker, along with a stronger comparative advantage in capital-intensive sectors. However, in the long term, it results in a lower growth path for productivity and income per worker, as a smaller working-age population generates fewer new ideas after 2060.

**Working Paper**

"**The Decline in China's Trade Share of GDP: A Structural Accounting**", under review
China's trade share of GDP has been declining since 2007. To understand this, I develop a multi-sector, multi-region Ricardian trade model to quantify the forces driving changes in China's trade share of GDP from 2002 to 2015. The model features three main types of time-varying shocks: productivity shocks, trade cost shocks, and labor mobility cost shocks. These shocks affect China's trade through comparative advantage and specialization. I calibrate the model and conduct structural accounting decompositions. The results indicate that changes in productivity and trade costs for both China and foreign regions together account for about 87% of the change in China's trade share of GDP. From 2002 to 2007, the decrease in China's international trade costs and the growth in foreign productivity were the main factors driving the increase in trade share. From 2007 to 2015, China's productivity growth became the primary factor reducing the trade share. Moreover, in contrast to the earlier period, China's international trade costs change also contributed to the decline in its trade share.

"**Expectation Sentiments and Consumption Fluctuations in the Time of COVID" (joint with Kunyao Xu)**
This paper estimates the impact of expectation sentiments on spending using daily data during the COVID-19 pandemic. We construct topic-specific sentiment indices (expectations regarding COVID, income, and unemployment) from 1.2 million U.S. news articles using a Large Language Model. Based on these sentiment indices, we assess the effects of consumer expectations on spending in two ways. First, we estimate the overall effect of sentiment shocks using regression discontinuity design. Second, we conduct a Vector Autoregressive (VAR) analysis to examine the dynamic effects of sentiment shocks. Our findings indicate that a 1-unit change in the COVID expectation sentiment index corresponds to a 3.2 percentage point increase in overall spending, primarily driven by the grocery and food delivery sectors. The VAR results show distinct responses between high- and low-income consumers: income expectations are more relevant for high-income consumers, while unemployment expectations are more influential for low-income consumers.

**Work-in-Progress**

"**Internal trade and optimal external tariff (joint with Kei-Mu Yi)**"
"**Accounting for China's Province-Level Border Effects (joint with Jun Nie)**"
"**China's VAT Reforms, Distortions, and Intranational Trade**"
"**The Effects of Macro-prudential Policies on Bank Efficiency and Profitability" (joint with Alice Ouyang)**

**Conference Presentations**

"Demographics, Trade, and Growth"
Federal Reserve Bank of Dallas, TX *2023*
"The Decline in China's Trade Share of GDP: A Structural Accounting"
Chinese Economic Association (CEA) Conference, Hangzhou, Zhejiang *2024*
Midwest International Trade Conference, Indianapolis, IN *2023*
Midwest Macroeconomics Conference, Lubbock, TX *2023*
"The Effects of Macro-prudential Policies on Bank Efficiency and Profitability"
Western Economic Association 15th International Conference, Tokyo *2019*

**Other research**

"Electricity analysis and targeted optimization of the rectangular micro-strip antenna", Project Leader, *National College Students' Innovation and Entrepreneurship Foundation of Ministry of Education of China* *2013-2014*

## WORKING EXPERIENCE

| | | |
|---|---|---|
| **Research Assistant** | University of Houston, Professor Kei-Mu Yi | *Summer 2024; 2023; 2022; 2021* |
| **Research Assistant** | University of Houston, Professor Steven G. Craig | *Fall 2022* |
| **Research Assistant** | National Taxation Bureau of China | *Fall 2019 - Spring 2020* |

## TEACHING EXPERIENCE

**Instructor**
Principle of Microeconomics (Undergrad), UH. *Fall 2022; Spring 2023*
Econometrics I (Ph.D.), Homework Instructor, Professor Nathan Canen, UH. *Spring 2021*
Quantitative Methods (Ph.D.), Homework Instructor, Professor Vikram Maheshri, UH. *Fall 2020*

**Teaching Assistant**
International Trade (Undergrad), Professor Kei-mu Yi, UH. *Summer 2024*
International Monetary Economics (Undergrad), Professor Ruxandra Prodan Boul, UH. *Fall 2021*

Money, Banking  Financial Markets (Undergrad), Professor Polly Hardee, UH. *spring 2020*
Macroeconomic Principles (Undergrad), Professor Polly Hardee, UH. *Fall 2019*

## HONORS AND GRANTS

**Honors**

National College Students Innovation and Entrepreneurship Competition, Third Prize, Beijing Municipal Education Commission *2017*
The Prize of School Outstanding Student Leader, Central University of Finance and Economics *2017*
National College Students Mathematics Competition, Third Prize, Chinese Mathematical Society *2013*

**Grants**

University of Houston Travel Fund, *2023*
University of Houston Graduate Student Fellowship, *2019 - 2024*
Academic Exchange Travel Fund, Central University of Finance and Economics (CUFE) *2019*
Postgraduate academic scholarship for excellent students, CUFE *2016-2018*
Wendian Scholarship, Anhui University *2012, 2013, 2014*

## COMPUTER SKILLS

Programming: C/C++, MATLAB, ArcGIS, Juila, Python
Statistical: Stata, R, Excel

## LANGUAGES

Chinese (Native), English (Fluent)

## REFERENCES

**Dr. Kei-Mu Yi** (Committee Chair)
*M.D. Anderson Professor of Economics,*
*Department of Economics*
University of Houston
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**Dr. Bent E. Sørensen**
*Lay Professor of Economics,*
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**Dr. German Cubas**
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*Department of Economics*
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