Curriculum Vitae
January 2025

YUKI YAO

Personal Data

Address
School of Economics, University of Kent
Sibson Building, Park Wood Road
Canterbury, Kent, CT2 7FS, UK

Contact Information
Office: +44 1227 823328
E-mail: y.yao@kent.ac.uk
URL: www.yaoyuki.com

Citizenship: Japan (Skilled Worker Visa for UK)

Major Fields of Concentration

Macroeconomics, Public Finance, Firm Dynamics

Academic Position

September 2021 – Present *Lecturer*, School of Economics, University of Kent, Canterbury, UK

Education

Degree	*Field*	*Institution*	*Year*
PhD	Economics	University of Minnesota	2022
Masters	Economics	University of Minnesota	2018
Masters	Economics	University of Tokyo	2014
Masters	Public Policy	University of Tokyo	2011
Bachelors	Engineering	University of Tokyo	2009

References

Professor Ellen McGrattan	(612) 625-6714 erm@umn.edu	Department of Economics University of Minnesota 4-101 Hanson Hall
Professor Anmol Bhandari	(612) 624-2816 bhandari@umn.edu	1925 Fourth Street South Minneapolis, MN 55454
Professor Erzo G.J. Luttmer	(612) 625-5054 luttmer@umn.edu	

Honors and Awards

2024 *Post-Graduate Certificate in Higher Education*, University of Kent
2020 - 2021 *Bruce and Mildred Mudgett Fellowship*, University of Minnesota, Minneapolis, Minnesota
Summer 2020 *Graduate Research Program Partnership Fellowship*, University of Minnesota, Minneapolis, Minnesota
2015 - 2017 *Japan-IMF Scholarship for Advanced Studies*, International Monetary Fund, Washington, D.C.

Teaching Experience

School of Economics, University of Kent

Autumn 2024	*Module Convenor*, ECON5620 Financial Economics: Financial Markets and Instruments (Undergraduate), ECON8220 Financial Economics (Msc)
Autumn 2023	*Module Convenor*, ECON5620 Financial Economics: Financial Markets and Instruments (Undergraduate), ECON8220 Financial Economics (Msc)
Autumn 2022	*Module Convenor*, ECON5620 Financial Economics: Financial Markets and Instruments (Undergraduate), ECON8220 Financial Economics (Msc)
Autumn 2021	*Module Convenor*, ECON5220 Monetary Economics (Undergraduate), ECON8220 Financial Economics (Msc)

Research Experience

June 2019 - August 2019	*Summer Intern*, Asia-Pacific Department, International Monetary Fund, Washington, D.C.
August 2018 - May 2019	*Research Analyst*, Research Department, Federal Reserve Bank of Minneapolis, Minneapolis, Minnesota.
June 2017 - July 2018	*Research Assistant*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Research assistant to Professor Anmol Bhandari.
March 2014 - March 2015	*Seasonal Analyst*, Global Macro Research, Goldman Sachs, Japan

Refereeing

Journal of Political Economy: Macroeconomics, Japanese Economic Review

Seminars and Conference Presentations

2024: T2M in Amsterdam, EEA-ESEM in Rotterdam, XAmsterdam Macro
2023: Universidad Alberto Hurtado (virtual)

Working Paper

"Robust Bounds on Optimal Tax Progressivity," with Anmol Bhandari and Jaroslav Borovička
Abstract:
We study the problem of a robust planner who designs an optimal taxation scheme for a heterogeneous population. Uncertainty about the type distribution distorts the distribution of underlying types. Low-income workers are well insured under the optimal scheme, and so concerns about the left tail of the type distribution are negligible. On the other hand, the planner fears misspecification of the right tail of the type distribution emerging from budgetary concerns. Even when the tail of the distribution is Pareto, arbitrarily small misspecification concerns lead to zero marginal taxes at the top. A quantitatively calibrated model shows that a plausible degree of uncertainty leads to an optimal tax scheme with substantially reduced marginal tax rates for high-income earners and a peak marginal tax rate much lower than in the model without uncertainty.

"Business Income Underreporting and Public Finance," with Anmol Bhandari, David Evans, and Ellen McGrattan
Abstract:
This paper proposes a new dynamic theory of business taxation that takes into account income underreporting by owners and potential reputational losses if tax evasion is discovered. Taxpayers are assumed to be of two types: those that are always compliant regardless of opportunity and those that cheat if it is economically beneficial to do so. Opportunities arise in self-employment but, in equilibrium, only for business owners that can weather the costs of an audit, which include fines for past taxes owed and losses in business brand. The theory is used to predict the aggregate and distributional impacts of increased enforcement efforts and then to run policy counterfactuals. In order to assess quantitative impacts, a baseline model is parameterized to be in line with data from the U.S. national accounts and National Research Program (NRP) random audits. The main policy experiments compare the impacts

of increased public spending financed either by increased taxation on business incomes or increased enforcement efforts aimed at their owners. Higher enforcement leads to a larger declines in entrepreneurship, less investment in business and financial assets, and lower average business ages. However, changes in business incomes are roughly equal in the two experiments because of selection: higher enforcement drives out owners that are unproductive.

Research Projects in Progress

"Taxation of Paid- and Self-Employment," with Anmol Bhandari, David Evans, and Ellen McGrattan
Abstract:
We compute optimal tax rates on income from paid- and self-employment and find estimates for both that are much lower than current estimates of marginal labor tax rates in the United States. This finding is based on a model of occupational choice with labor inputs allocated to production and to the building of business sweat capital—brands, customer bases, client lists and other intangible assets. With greater opportunities to substitute across sectors and activities, taxes become more distortionary and optimal tax rates will in general be lower. Our model incorporates an additional role for tax policy to induce a better allocation of hours, with more hours employed in the diversified C-corporate sector relative to the undiversified private business sector. Furthermore, at an optimum, those that choose self-employment are highly productive owners with significant sweat capital.

"Oligopoly and Efficiency," with Erzo G.J. Luttmer
Abstract:
We describe a model of long-run growth with a growing measure of industries, and discrete numbers of differentiated goods within each industry. A pioneer entrepreneur can start a new industry by creating an initial prototype blueprint and an industry-specific fixed asset. In every industry, this asset can be combined with labor to create blueprints for new differentiated goods in the same industry. In addition, blueprints in a particular industry can also be combined with labor to produce blue prints for new differentiated goods in the same industry. Given the right blueprint, the technology for producing a particular differentiated good is linear in labor only. A Roy model governs the supplies of entrepreneurial activity and labor. Household preferences imply a constant elasticity of substitution between differentiated goods within an industry that is strictly larger than the constant elasticity of substitution across the composite goods produced by the various industries. In the allocation chosen by a social planner, new industries grow towards stochastic steady states that have more variety when the gap between these two elasticities is small. Long-run growth is governed by population growth and the elasticity of substitution across industries only. Within-industry variety only affects the level of the balanced growth path. When households do not value leisure, the allocation chosen by the social planner can be implemented by assigning both the initial prototype blueprint and the industry-specific fixed asset to the pioneer entrepreneur, who then acts as a monopolistic competitor with producers in other industries. Alternative market arrangements produce the same long-run growth rate, but balanced growth paths may differ quite significantly in terms of levels. In particular, we consider a strong antitrust policy that enables entry into existing industries by assigning the industry-specific fixed asset to households and forcing incumbents to spin off any blueprints above a low threshold. This policy closely approximates the allocation chosen by the planner if the supply elasticity of entrepreneurial activity is zero. When this elasticity is positive, the antitrust regime produces too few industries and too many varieties within industries. The cost in terms of steady state consumption can be large when there is a substantial gap between the within- and across-industry elasticities of substitution.

"Aggregate Implications of Merger Policy"
Abstract:
To what degree should antitrust agencies allow firms to merge? While this question has been frequently investigated, the lifecycle of industries has often been neglected in the context. To take into account the importance of lifecycle consideration in merger analysis, we build a multi-industry macroeconomic model with oligopolistic competition. The model captures a typical lifecycle of industries: an industry starts with a few firms, then have many firms, and experiences a drop in the number of firms, and a smaller number of firms survive. When the industry is old, mergers are detrimental to consumers because they allow firms to obtain large market power and limit production. On the

other hand, merger opportunities induce entry at the early stage of an industry lifecycle. Death and birth of industries generate heterogeneity of industries in terms of age. Since households consume goods from industries, some of which are young and others of which are old, they care about outputs from both young and old industries. If merger analysis of industries is conducted at later periods of the lifecycle, when antitrust issues are typically recognized, the antitrust authority finds stricter regulation is more favorable than households do, leading to bias toward older industries.

Computer Skills

Python, Fortran, MPI, High Performance Computing

Languages

English (fluent), Japanese (native)