Session 1

Estate Taxation with Private Information on Income and Inter Vivos

Been-Lon Chen, Academia Sinica, and Fei-Chi Liang*, National Chengchi University

Abstract: We build an OLG model where agents work, educate children, and allocate income among consumption, inter vivos, and bequests, and idiosyncratic income shocks affect agents' and children's consumption and agents' consumption-labor margins. Applying Mirrlees's first-order approach to mechanism design, we derive three results for optimal taxes. First, the estate tax rate is positive and hump-shaped, being progressive in the lower but regressive in the upper tail of income distributions due to income shocks. Second, the labor income tax rate is generally positive; it is regressive in the lower and progressive in the upper tail of income distributions, driven by the U-shaped income-hiding effect. However, it is progressive in the lower and regressive in the upper tail of human capital distributions, due to the hump-shaped shirk-preventing effect. Third, the unobservability of inter vivos increases the labor income tax rate but reduces the estate tax rate in the middle while increasing it at both ends of income distributions. Accounting for positive externalities of bequests both tax rates reduces. With well-structured taxes and redistribution, our second-best economy's welfare gain is positive for individuals below the 99th percentile of income distributions and near zero for the top 1%, contrasting with large welfare losses for wealthier individuals above the 50th percentile in the first-best economy.

Wage Spillovers across Sectors: Evidence from a Localized Public-Sector Wage Cut.

Tsuyoshi Goto*, Chiba University

Abstract: We study how institutional wage reforms in one sector spill over to other sectors by analyzing the public sector. We leverage the Japanese policy reform that cut public-sector wages only in certain municipalities and the institutional setting in which only young workers are eligible for public-sector jobs. We find that a 1% public-sector wage cut reduces the private-sector wages of young workers by 0.3%, with larger spillovers in municipalities with a larger share of public workers. It also reduces the young population by 0.4%, suggesting a welfare decline based on spatial equilibrium and a decrease in private-sector labor demand.

Redistributive Taxation in the Roy Model: Robot Tax and Foreign Capital

Yunmin Chen*, National Central University, and C.C. Yang, Academia Sinica

Abstract: This paper revisits redistributive taxation in the Roy model as analyzed by Rothschild and Scheuer (2013). We extend the model to incorporate the Guerreiro et al. (2022) framework with inclusion of robots but allow for part of robots to be supplied by foreigners. We find: (1) without a robot tax, the optimal labor tax schedule aligns with the traditional Mirrleesian tax result; (2) a positive (negative) robot tax reduces (increases) labor tax progressivity; and (3) the top marginal labor tax rate is positive (negative) when the robot tax rate is negative (positive).

Session 2

Population Aging and Debt-Growth Nexus

Kazuo Mino*, Kyoto University,

Abstract: This study exposes the effect of population aging on the linkage between public debt and long-run economic growth. Using a semi-endogenous growth model with overlapping generations, We first examine how population aging alters profiles of the relationship between the public debt-to-GDP ratio and the steady-state growth rate of income. We then consider the impacts of policy change on public debt accumulation under different degrees of population aging. We numerically confirm that population aging may yield substantial impacts on debt-growth profiles and effectiveness fiscal policies. The paper has not been completed yet, but the theoretical part has been almost done.

Coauthor: Makoto Hirono (Tokushima University).

The Role of Costly Entry and Hiring Costs in the Search and Match Model

Jhih-Chian Wu*, National Chung Cheng University

Abstract: The standard Diamond-Mortensen-Pissarides (DMP) model predicts that labor market tightness is uncorrelated with unemployment, conditional on productivity shocks. Also, the DMP model must assume no job separation shocks to replicate the observed negative correlation between unemployment and job vacancies, as such shocks increase tightness in the model. This paper argues that introducing either vacancy creation costs or post-matching costs allows a matching model to replicate the negative correlation between tightness and unemployment, conditional on productivity shocks, by linking firms' recruiting costs to unemployment. Additionally, post-matching costs enable the model to explain the negative correlation between unemployment and job vacancies without excluding job separation shocks, as these costs allow job separation shocks to reduce tightness. However, the analysis finds that introducing vacancy creation costs can explain the negative correlation without excluding job separation shocks only when job separations do not prompt firms to repost vacancies. If separations lead firms to repost vacancies, vacancy creation costs still result in an increase in tightness following job separations.

Family structure, population change and long-run growth

Jun-ichi Itaya*, Hokusei Gakuen University, Kazuo Mino, Kyoto University, and Atsue Mizushima, Osaka University of Economics

Abstract: We consider three different types of family's models instead of a representative-agent setting in the semi-endogenous growth model of Jones (2022). The purpose of the paper is to provide an economic explanation for why birthrates are declining. We show that the varying structure of family such as cooperative, non-cooperative and collective decisions families critically affects the growth rate of population (i.e., the family size) and thus the growth rate of the economy. We suggest what public policies increase population and, moreover, realize a Pareto-efficient resource allocation, in the growth models which are driven by people discovering new ideas.

Session 3

Shifting Employment and Investment Structure Towards Environmental Sustainability

Meng-Ting Chen*, National Taiwan Normal University, Juin-Jen Chang, Academia Sinica, Jhy-Hwa Chen, Tamkang University, Jhy-Yuan Shieh, Soochow University, and Jiakai Zhang, New Mexico Tech

Abstract: This paper examines the labor market and investment effects of China's Environmental Protection Tax (EPT) reform, focusing on the reallocation of employment and market share between heavy-polluting and non-heavy-polluting industries. Empirical results show that the EPT reform significantly reduces employment in heavy polluting industries while moderately increasing aggregate employment. Moreover, the reform drives green investment primarily in non-heavy-polluting industries. To complement these findings, we develop a structural model that quantifies employment reallocation and green investment dynamics before and after the reform. The model reveals that higher labor substitutability and consumer responsiveness to environmental policies enhance the positive employment effects while moderating the decline in welfare. These results offer valuable policy insights for economies seeking to balance environmental governance with sustainable economic development.

Fiscal Reform, Government Debt and Female Labor Supply in Japan

Yunfang Hu*, Kobe University, Naiyue Cui, Kobe University, and Mingchun Hsu, GRIPS

Abstract: Fiscal sustainability has been a pressing concern in Japan, with its net debt-output ratio experiencing a significant surge from below 40% in 1995 to over 160% in 2020. Given the aging population and the disparity between male and female labor supply, promoting female workforce participation has become a crucial policy objective in enhancing the country's fiscal condition. This study extends the work of Hansen and Imrohoroglu (2016) by incorporating female labor and home production in the growth model to measure the size of Japan's fiscal burden and investigate the implications of female labor supply for stabilizing government debt. Our simulations suggest that without policy changes, the net debt-output ratio could surpass 250% by 2027, requiring a consumption tax hike to 61% for about 60 years to achieve fiscal stability (defined as a 60% net debt-output ratio in our model). However, our counterfactual experiments suggest that reducing female labor misallocation, thereby equalizing labor productivity between women and men could substantially boost female labor participation, allowing the consumption tax to be lowered to 44% (instead of 61%) during the transition and eventually reduced to 22% when the target debt level is achieved.

Development, Growth and Population Aging: A Political Economy Analysis

Been-Lon Chen, Academia Sinica, Minchung Hsu, GRIPS, and Samuel Leyton*, Academia Sinica

Abstract: Using a panel of 221 countries from 2019 to 2023, we show that economic development exhibits an inverse-U-shaped relationship with economic growth and a linear increasing relationship with the old-age dependency ratio. This paper explores the implications of these patterns for the evolution of redistribution across time and generations, as determined by elected politicians, compared to the choices of a social planner. We propose a two-period overlapping generations (OLG) model with exogenous productivity growth, featuring two types of agents: active workers and retirees. In the political equilibrium, two parties decide the transfer from active to retired workers through probabilistic voting ´a la Lindbeck and Weibull (1987). The evolution of redistribution under repeated voting diverges from the optimal path because politicians focus only on the welfare of the currently voting generations. This prevents them from internalizing the long-term relationship between development, growth, and population aging when determining redistribution policies. In contrast, a social planner considers all future generations, allowing them to account for these empirical dynamics.

Session 4

Claiming Tax Incentives: Heterogeneous Impacts on Investment and Productivity

Takafumi Suzuki*, Aichi Shukutoku University

Abstract: We investigate firms' decisions to claim investment tax incentives following the 2014 tax reform in Japan and their impacts on investment and productivity. Our industry-level instrumental variable, the ratio of tax-eligible capital input costs to their total costs, effectively explained firm-level variation in tax claims. We also report that firms facing financial constraints and those with tax loss carryforwards claimed the tax incentives less often than their counterparts. Tax claimants increased capital expenditures compared to pre-claim levels, with this effect being pronounced among financially constrained firms. Tax claiming did not improve total factor productivity. Our findings also suggest that when a relatively small proportion of firms—less than 20% in our data—claims tax incentives, examining actual claimants shows larger effects of tax incentives compared to the intent-to-treat approach, which is a standard method for evaluating investment tax incentives.

The Role of Marital Status for the Evaluation of Bankruptcy Regimes

Tsung-Hsien Li*, Academia Sinica, Jan Sun, Oxford Economics

Abstract: The consumer finance literature has emphasized the importance of income and expense risk for the evaluation of bankruptcy regimes. Single and married households differ in the risks they face. In this paper, we build the first quantitative consumer default model that explicitly models singles and couples. We calibrate our model to the United States in 2019 and estimate expense shocks separately for single and married individuals. Our calibrated model generates large differences in bankruptcy rates across marital status as in the data. We examine how the preferred degree of bankruptcy leniency differs between singles and couples. There are several channels at work: Differences on the income side between singles and couples cause couples to prefer a stricter bankruptcy regime due to the intra-household insurance channel. However, increased risk for couples due to divorce and on the expense side outweighs the first channel. The net effect is that couples prefer more lenient bankruptcy than singles. Our findings suggest that marital status is important to take into account for the evaluation of bankruptcy regimes.

Optimal Deficit Ceiling and International Externality of Crisis Risk

Toshihiro Ihori, GRIPS, and Shintaro Nakagawa*, Konan University

Abstract: In response to the global pandemic, governments in developed and emerging countries implemented significant public spending programs for households and businesses. This surge in government spending can be attributed to the political influence of interest groups competing for government resources. This, in turn, might have led to a rise in global inflation. This paper aims to conduct a theoretical analysis of these situations and elucidate the role of a deficit ceiling enforced by a supernational authority.

Krogstrup and Wyplosz (2010) introduced international externalities to the fiscal common pool problem. We extend their two-country model to incorporate economic crises caused by fiscal deficits explicitly. We assume that the nonproductive spending by governments in the first period raises the risk of crisis in the second period. In contrast, their productive spending raises the revenue in the second period with a decreasing returns technology. We also introduce an international externality of crisis risk in the form of the spill-in in crisis risk.

Theoretical analysis reveals the following. Without a deficit ceiling, an increase in the crisis damage rate reduces nonproductive spending and lowers the crisis probability. The impact of an international externality depends on the fiscal management in the initial equilibrium. If the comparative statics analysis starts from a case where countries restrain their unproductive spending, an increasing externality reduces their nonproductive spending and the crisis risk. If the unproductive spending is large in the initial equilibrium, an increasing externality raises the nonproductive spending further.

Furthermore, our numerical calculations yield the following result. In the scenario where national governments are subject to a deficit ceiling set by the supernational fiscal authority and cannot pre-commit to productive spending, the deficit ceiling may be higher and the expected welfare higher as the damage rate is higher. This is because interest groups in each country voluntarily restrain nonproductive spending, allowing the deficit ceiling to be raised and productive spending to increase.