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研究課題名(和文) The macroeconomic implications of a preference for wealth

研究課題名(英文) The macroeconomic implications of a preference for wealth

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研究成果の概要(和文)：本研究では、動的マクロ経済モデルにおける富の選好のマクロ経済的影響を分析した。この選好は、家計を救済するための強力なインセンティブを提供し、均衡金利を低下させる。低金利環境は資産価格バブルを生み出す可能性があり、政府が利用できる財政的余地を従来の分析で示唆されたレベルよりも拡大する可能性があることを示す。第二に、経済停滞中の労働市場は、低い失業率にもかかわらず、かなりの不完全雇用(すなわち、非正規雇用とパートタイム雇用)によって特徴付けられる可能性があることを示す。最後に、我々のモデルは、Piketty (2014)の実証分析を形式化および拡張し、不平等に関するミクロ的基礎理論を提供する。

研究成果の学術的意義や社会的意義

Our research establishes a foundation work for the theory of asset price bubbles, underemployment and wealth inequality. We provide insights into empirical puzzles, such as the rise of part-time employment in Japan, and policy recommendations for overcoming these challenges.

研究成果の概要(英文)：The purpose of this grant was to analyze the macroeconomic implications of a preference for wealth in dynamic macroeconomic models. Such a preference provides strong incentives to save for households, which lowers equilibrium interest rates. Our main findings are as follows. First, we show that such a low interest rate environment can give rise to asset price bubbles, i.e. asset values above those justified by economic fundamentals, and extends the fiscal space available to governments above the level suggested by the traditional analysis. Second, an economy can suffer from a persistent lack of aggregate demand (secular stagnation) in such an environment. We show that the labor market under stagnation can be characterized by substantial underemployment (i.e. non-regular and part-time employment) despite a low unemployment rate. Finally, our model provides a microfounded theory of inequality, formalizing and extending the empirical analysis of Piketty (2014).

研究分野：Economics

キーワード：Macroeconomics Secular stagnation Unemployment Asset price bubbles Wealth preference Inequality

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1. Background of the research project: The standard workhorse models of macroeconomics assume that households save for the purpose of optimally distributing consumption over time only. Ono (1994, Oxford University Press) was the first to study the implications for macroeconomic dynamics of incorporating behavioral features, specifically a preference for wealth, into an otherwise standard dynamic model. In a set-up with infinitely-lived households such a preference can represent bequest motives or status concerns, effectively providing additional incentives for households to save compared to standard models. In earlier research (Illing et al, 2018, EER), we have studied the implications of such a preference for credit growth and aggregate demand in a heterogeneous agent setup. The purpose of this grant was to extend this analysis in order to further our understanding of the macroeconomic implications of a preference for wealth.

2. Purpose of the research project: In a series of interrelated research projects, joint with Japanese and international researchers, we want to analyze the implications of a preference for wealth for macroeconomic dynamics. Specifically, we aim at studying the implications for the labor market of long-run economic stagnation, the implications for asset prices and the possibility of asset price bubbles as well as the implications for wealth inequality.

3. Methods of the research projects: Our method is two-folds. We study these questions analytically using modern continuous-time dynamic macroeconomic models, such as the neoclassical growth model or the Pissarides (2000) search-and-matching model of the labor market, that we have extended to include a preference for wealth. Based on these models, we derive propositions about the macroeconomic implications of the preference for wealth using stochastic optimization methods. In addition, we support the theoretical analysis by calibrating the model to match real-world data and numerically simulate the associated dynamics, partly using mean-field game methodology.

4. Research results: In three interrelated projects, we have analyzed the implications of the wealth preference for asset pricing, the labor market and inequality. Let me give a brief overview of the main results and the current state of each of these projects:

Asset pricing: We have established a foundation work generalizing the previous works of Tirole (1985) for the OLG model and Ono (1994) for the neoclassical growth model. We show that asset price bubbles, i.e. an asset valuation above its fundamental value, can emerge in the presence of a preference for wealth if the real rate of interest  $r$  in the absence of a bubble is below the real economic growth rate  $g$ . In that case, the model economy admits multiple equilibria depending on the initial size of the asset price bubble as illustrated in Figure 1.

Applying these insights to the case of sovereign debt, we show that the fiscal scope for governments is greater than usually suggested by the traditional analysis if the condition  $r < g$  holds. This finding complements the recent literature on fiscal scope in the presence of low interest rates (see Mian et al. 2021 or Reis, 2021).

Our paper is currently submitted to and under review at an international journal.

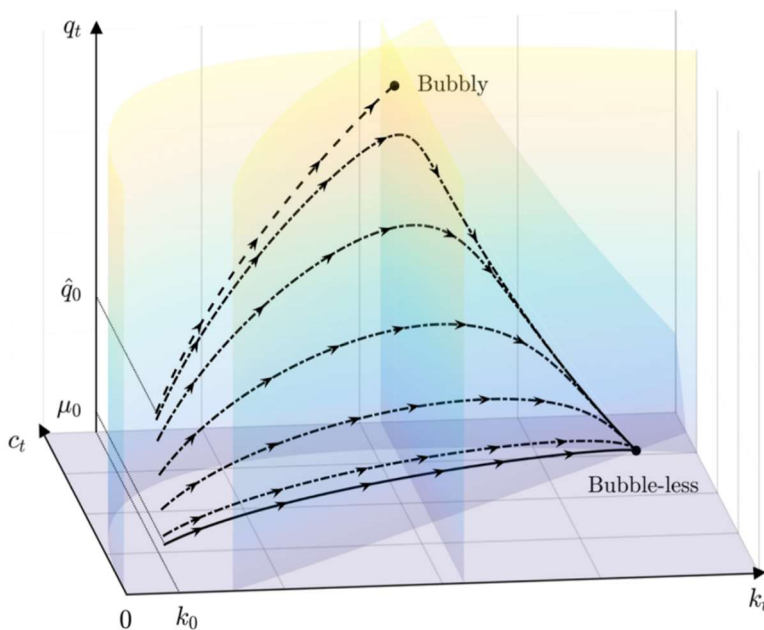
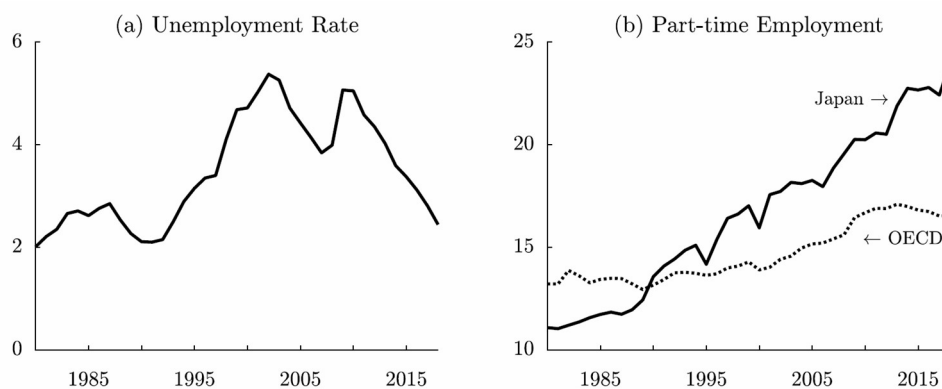


Figure 1: Equilibrium dynamics when  $\theta > 0$  and  $\bar{r} \in (n - \theta, n)$ .

Labor market: While our previous work (Illing et al, 2018) has analyzed credit growth under secular stagnation, this current project analyzes the consequences of a lack of aggregate demand for the labor market. We show that underemployment and not necessarily high unemployment becomes the main measure of economic slack in the labor market under secular stagnation. Specifically, involuntary underemployment in the form of a persistent shortfall of working hours occurs in the search and matching model, provided that households derive utility from holding wealth, and quickly dominates the total employment gap under stagnation. Our results provide new insights into empirical puzzles such as the substantial rise in part-time and irregular employment in Japan during its lost decade despite the seemingly decent employment record in terms of unemployment as illustrated in the figure below.



With respect to labor market policy, our analysis shows that conventional policy measures aimed at reducing unemployment may increase the labor market gap through their effects on underemployment and should be used with caution. In contrast, positive demand shocks improve unemployment and working hours, while increases in potential output worsen both. Our paper is currently submitted to and under review at an international journal.

Inequality: In this project, we provide a microfoundation of Piketty's (2014) approach to inequality, showing that widening or narrowing inequality dynamics depend on the real interest rate  $r$  relative to the growth rate of the real economy  $g$ . In addition, we analyze the role of wealth preference shocks, idiosyncratic income risk and illiquidity of assets for the dynamics of the wealth distribution. Our work so far has created the foundations for future work, establishing both the model framework and an extended code to conduct numerical simulations.

5. 主な発表論文等

〔雑誌論文〕 計0件

〔学会発表〕 計6件（うち招待講演 1件 / うち国際学会 1件）

1. 発表者名 Matthias Schlegl
2. 発表標題 Structural unemployment, underemployment, and secular stagnation
3. 学会等名 4th Sophia Research Workshop in Economics
4. 発表年 2021年

1. 発表者名 Matthias Schlegl
2. 発表標題 Structural unemployment, underemployment, and secular stagnation
3. 学会等名 Macro Research Seminar (University of Munich LMU)
4. 発表年 2021年

1. 発表者名 Matthias Schlegl
2. 発表標題 Structural unemployment, underemployment, and secular stagnation
3. 学会等名 WINPEC Macroeconomics Workshop (Waseda University)
4. 発表年 2021年

1. 発表者名 Matthias Schlegl, Christoph Trebesch, Mark Wright
2. 発表標題 The Seniority Structure of Sovereign Debt
3. 学会等名 Seminar at the World Bank (招待講演)
4. 発表年 2019年

1. 発表者名 Matthias Schlegl, Christoph Trebesch, Mark Wright
2. 発表標題 The Seniority Structure of Sovereign Debt
3. 学会等名 5th Sophia Research Workshop in Economics
4. 発表年 2022年

1. 発表者名 Matthias Schlegl, Christoph Trebesch, Mark Wright
2. 発表標題 The Seniority Structure of Sovereign Debt
3. 学会等名 ASSA 2022 Virtual Annual Meeting (国際学会)
4. 発表年 2022年

〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考

7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関