Ran Sun Lyng

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PERSONAL

Citizenship: China; Permanent Resident of Denmark; Work Permit in Canada
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FIELDS OF INTEREST

- Matching (empirical application of matching theory in various markets):
  CEO labor market; Retail banking; Danish school principal and teacher labor market

- Applied Econometrics (Causal Inference; Household Finance):
  Portfolio Choice; Housing; Household Borrowing Decision

PROFESSIONAL APPOINTMENTS

- Danmarks Frie Forskningsfond Postdoctoral Fellow (03/2020 – 08/2022)
  University of Toronto, Department of Economics

- Postdoctoral Fellow in Economics and Finance (11/2018 – 02/2020)
  Aarhus BSS, Department of Economics and Business Economics

EDUCATION

09/2014 – 10/2018   Ph.D. (Diploma 23rd October 2018)
Aarhus BSS, Department of Economics and Business Economics

05/2016 – 09/2016   Visiting Graduate Student
Bank of Canada, Financial Stability Department

01/2016 – 04/2016   Visiting Graduate Student
University of Western Ontario, Department of Economics

REFERENCES

John Kennes
Associate Professor, Aarhus University, jkennes@econ.au.dk
Arnaud Dupuy
Professor, University of Luxembourg, arnauddupuy74@gmail.com
Ronald Wolthoff
Associate Professor, University of Toronto, ronald.wolthoff@utoronto.ca

WORKING PAPERS

1. Dupuy, A., Kennes, J., **Lyng, R. S.**, Job Amenities in the Market for CEOs, ***Job Market Paper***

2. Batsaikhan, M., Gørtz, M., Kennes, J., **Lyng, R. S.,** Monte D., Tumennasan N., Discrimination and Daycare Choice: Evidence from a Randomized Survey, ***Under Review at Journal of Human Resources, IZA Discussion Paper No. 14803***

3. **Lyng, R. S**., The Impact of the Financial Crisis on Homeowners' Portfolio Choice

4. Kennes, J., **Lyng, R. S.** & Zhou J., The Causal Effect of Household Risk-free Rates on Portfolio Choice

5. **Lyng, R. S**. & Zhou J., Household Portfolio Choice Before and After House Purchase, *nominated for the Best Paper Awards at the "2018 FMA Annual Meeting in San Diego"*

WORK IN PROGRESS

1. with Ronald Wolthoff and John Kennes, Matching and Welfare Analysis of the Danish Mortgage Market

Buying a home is the most important financial decision that most people will make in their life. The primary sources of finance for households when buying a home are banks and mortgage credit institutions (MCIs). The types of mortgage products offered by these institutions deeply affect individuals' lifetime well-being. This project investigates how the structure of, and changes in, the mortgage market affect both individual and overall social welfare.

While it is a matter of course that households ultimately choose their institutions and mortgage products, it is also important to recognize that the institutions themselves have incentives to choose customers with specific characteristics. These incentives are sometimes influenced by regulatory concerns. For example, the Danish FSA introduced in 2016 restrictions on the number of loans a bank can serve to customers for which the Loan to Income (LTI) ratio exceeds a factor of 4 in the Copenhagen metropolitan area and Aarhus. This is an example of a macroprudential policy which has become a focus point for policy makers since the financial crisis in 2007. To assess the welfare impact of new and potential developments in the mortgage market, it is important to consider both sides of the market and how they interact. In this project, we

1) determine what drives the terms of trade, i.e. pricing and other details of a mortgage contract, and the assignments between any particular individual and institution, and

2) determine how individuals and institutions will behave in response to structural and regulatory changes in the mortgage market.

2. with Arnaud Dupuy, John Kennes and Peter Rohde Skov, Teacher and Principal Labor Markets and School Performance

Measuring and improving the quality of school leadership and teaching is of fundamental importance in education. This project uses a two-sided multidimensional matching model to provide a full cost-benefit analysis of public policies that impact the assignments of principals/teachers to schools/classrooms. In particular, we will (1) estimate the potential amenities of teaching/managing "easy-to-serve classrooms/schools" for each type of teacher/principal in terms of their wages; (2) estimate how much inequality exists across schools with regard to the quality of teachers and principals; (3) evaluate the impact of counterfactual policy proposals, such as a change in the wage cap of teachers for one group of schools, on the assignments of more effective teachers to disadvantaged schools; (4) obtain new estimates on value-added measures for teachers and principals that take into account the selection of teachers and principals into schools, and (5) compare estimates on the selection and performance of teachers within schools with estimates from other studies. We extend state-of-the-art theoretical and empirical methodologies and apply it to the new and unique matched teacher-to-classroom and principal-to-school data from Denmark. A country that has decentralized school systems and school performance can be measured through national test scores. Our project will develop operational tools for the policymakers to improve the quality and governance of public schools. We aim to provide proof of practice for the general application of our methods to other education systems. Our project is multidisciplinary,

involving a combination of education, pedagogy, and developing of quantitative methods. It includes the transfer of knowledge to both academic and public sector, and the training of researcher in new advanced econometric methods. This study contributes to the EU strategy to develop school education systems and strengthen European identity through high-quality education.

AWARDS AND GRANTS	- Danmarks Frie Forskningsfond (Danish national grant) (DKK 1.45 million) - PhD student travel grant from Oticon Fonden (DKK 28,000) - Dale T. Mortensen Center seed grant 2018 (DKK 25,000) - Top Female Talent in Novo Nordisk - Degree with distinction, provincial honours in B.A. in Finance
CONFERENCE AND SEMINAR PRESENTATION	- Canadian Economic Association, May/June 2019 - FMA (Financial Management Association) Annual Meeting in San Diego, 2018 - SEHO Paris School of Economics 2018 - The Annual Nordic Data Meeting 2018 - Meetings of the Econometric Society, 2017 - Kellogg school of management: household financial choices 2017 - Bank of Canada, 2016 - Nordic Finance Network PhD Workshop 2016 (Norway)
TEACHING EXPERIENCE	- Lecturer in Corporate Finance (5ECTs), Bachelor's Degree in Business Administration, Fall 2019 & Fall 2020 (teaching evaluation available) - Lecturer in Corporate Finance (10ECTs), Bachelor's Degree in Economics, Fall 2017 - Co-lecturer in Corporate Finance (10ECTs), Master's Degree in Business Administration, Fall 2015 & Spring 2017 - Teaching Assistant in Microeconomics, Bachelor's Degree Programme, Spring 2015, Spring 2016 - Supervisor for "Seminar in Business Studies" (5ECTs), Spring 2015 - Supervisor for Bachelor and Master Thesis

I taught Corporate Finance for 5th semester Bachelor's Business Administration students in Fall 2019 and 2020. There were 200 students in my class each year. Over 70% students are Agree (35%) and Mostly Agree (35%) that I was good at communicating the subject matter. Over 75% of students got inspired to work with the subject during my course. As the overall outcome, over 90% of the students got some outcome from my class. Over 75% of students got Very significant or Significant outcome. In my teaching evaluations, students wrote that I was a "wonderful teacher", I "inspired them to study corporate finance more"; I was "good at explaining concepts and making them easier to grasp"; I had "explicitly stated knowledge and skills are expected from students. Topics and exercises were presented in clear way with detailed solutions. Whenever question has risen it was answered immediately plus questions from the break time. No questions left unanswered."

I was rated 5 out of 5 stars for supervising bachelor theses. My teaching evaluation reports are available upon request. During my PhD, I also worked as a teaching assistant in Microeconomics. I am also interested in teaching Econometrics courses.

WORKING PAPER ABSTRACTS

1. Dupuy, A., Kennes, J., **Lyng, R. S.**, Job Amenities in the Market for CEOs, *Submitted to Journal of Political Economy*

We derive structural estimates of important job amenities in the market for CEOs using a two-sided multidimensional matching model. The model is estimated by maximum likelihood using matched CEO-firm data from Denmark. Counterfactuals based on our estimates show amenities are important determinants of CEO assignment and compensations. We find that CEOs have preferences for two untaxed job amenities, which we call building legacy and gaining empowerment. The "legacy" amenity explains why there is low mobility in the CEO market, even though firms demand general CEO skills. The "empowerment" amenity explains why CEOs are willing to sacrifice significant pecuniary income to manage high equity firms.

2. Batsaikhan, M., Gørtz, M., Kennes, J., **Lyng, R. S.,** Monte D., Tumennasan N., Discrimination and Daycare Choice: Evidence from a Randomized Survey, *Under Review at Journal of Human Resources, IZA Discussion Paper No. 14803*

We use a randomized survey to study how discrimination affects parenting choices. In our survey, parents with young children choose between two public daycares, which are described by testimonials from other (fictitious) parents. The testifying parents in the first daycare describe a free play institution, which reflects a pro-typical Scandinavian 'permissive parenting' approach to childcare. The testifying parents in the second daycare describe a more structured daycare, which reflects an alternative approach to childcare that is broadly consistent with 'paternalistic parenting'. We randomize the fictitious names of the testifying parents across respondents. We find bias against ethnic minorities among parents who prefer a structured childcare institution but not among parents who prefer free play one. These biases are not reduced when we provide additional information on testifiers' professions. Our findings offer validation for a model of parenting where biases regarding discrimination are likely to come from parents preferring less permissive/more authoritarian methods of parenting.

3. **Lyng, R. S**. & Zhou J., Household Portfolio Choice Before and After House Purchase, *nominated for the Best Paper Awards at the "2018 FMA Annual Meeting in San Diego"*

Using unique administrative panel data from Denmark, this paper documents the development of households' liquid wealth, equity market participation (the extensive margin), and the conditional risky asset share of liquid wealth (the intensive margin) over a 7-year period around a house purchase. We find that households' equity market participation rate drops during the year of house purchase. Conditional on participation, the risky asset share of liquid wealth follows a V-shape around the house purchase. It decreases and reaches the lowest point 1 year before a house purchase but jumps up immediately after. This finding suggests that of the three channels identified in the literature that affect the risky asset demand after a house purchase, the debt retirement channel and the diversification effect dominate the liquidity concern.

4. **Lyng, R. S**., The Impact of the Financial Crisis on Homeowners' Portfolio Choice

This paper examines the mediating effect of the recent financial crisis on the relationship between house value fluctuation and households' liquid portfolio choice. To isolate exogenous variation in homeowners' home equity and mortgage debt before and after the crisis, I use a new regional level construction cost index along with other

commonly used house price determinants as instruments. Using an administrative register-based panel data for the entire Danish population in the period 2004 – 2012, I find that the effect of housing on households' risky asset holdings is asymmetric before and after the crisis. The elasticity of risky asset shares with respect to mortgage debt and home equity is -0.31 and 0.28 respectively in pre-crisis period. On the other hand, whereas for the post-crisis period, the elasticity of risky asset shares with respect to mortgage debt and home equity is -0.37 and 0.34 respectively. Suppose an average household had spent 10% more on housing, the estimates suggest that they would hold 6% less in risky shares pre-crisis and 7% less post-crisis. Homeowners rebalance their liquid portfolio to a larger extent in response to their housing value fluctuation after the financial crisis, adding an additional effect that is likely to exacerbate the instability of an already tumultuous financial system.

5. Kennes, J., **Lyng, R. S.** & Zhou J., Household Portfolio Choice at Mortgage Runoffs: A Regression Discontinuity in Time Analysis

Lack of participation in the stock market remains an ongoing discussion in finance. Brown, Veld & Veld-Merkoulova (2018) find that Perceived Equity Risk Premium (PERP), defined as the difference between the individual's expected stock market return and her personal opportunity cost of capital, can explain limited stock market participation, but were unable to provide causal evidence on that. We examine the causal impact of PERP on portfolio choice by estimating changes in portfolio choice at the time of mortgage runoffs. We merge administrative register-based panel data from Statistics Denmark with individual mortgage transaction data from the Association of Danish Mortgage Banks. Using a Regression Discontinuity in Time (RDiT) framework, we find the probability of equity market participation increases discontinuously at mortgage runoff, and conditional on equity market participation, the share of liquid wealth held in risky assets decreases discontinuously. Our result confirms Becker and Shabani (2010) theoretical prediction, and is consistent with Brown, Veld & Veld-Merkoulova (2018) and the life-cycle model prediction of Davis, Kubler and Willen (2006). PERP is an important determinant for portfolio choice.