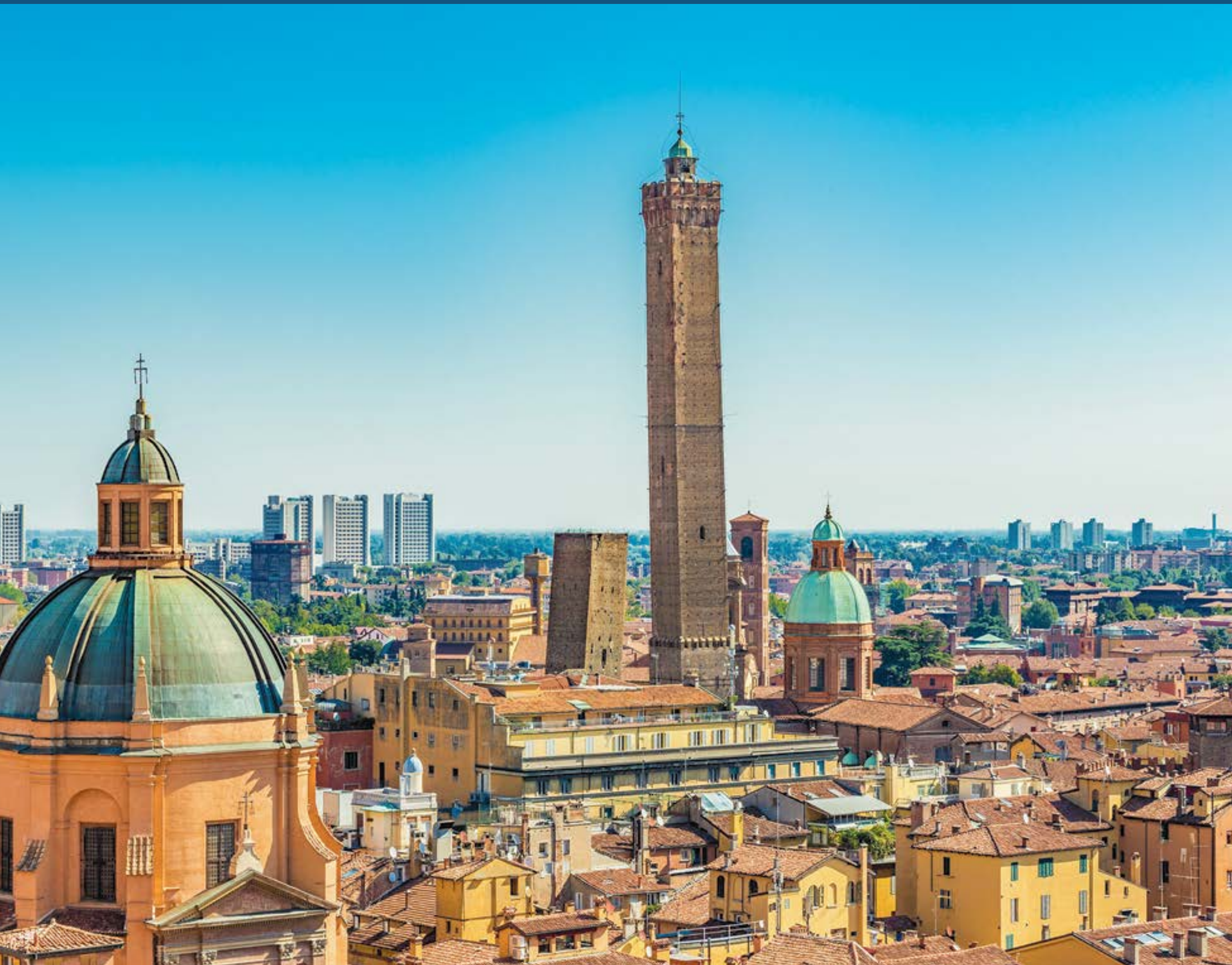
Essays on Labor Market Institutions, Housing and Demographics

Andrea Camilli



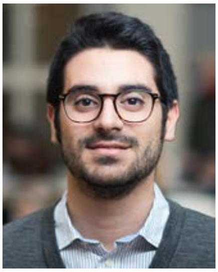
Essays on Labor Market Institutions, Housing and Demographics

This doctoral thesis in Economics consists of three chapters:

Labor market institutions and homeownership investigates the role of the legal framework of the labor market in explaining the heterogeneity we observe in homeownership rates across countries and over time.

Do labor market institutions matter for fertility? studies whether labor market institutions, not targeted towards maternity, impact the total fertility rate.

Investment choices and wealth inequality: evidence from Italy empirically examines the sources of wealth inequality dynamics in Italy during the Great Recession.



Andrea Camilli
holds a B.Sc. in Economics and Finance and a M.Sc. in Economics from University of Bologna. His main research fields are Macroeconomics and Labor Economics, with a focus on housing, demographics and inequality.

ISBN 978-91-7731-084-6

Doctoral Dissertation
in Economics
Stockholm School of Economics
Sweden, 2018

Essays on Labor Market Institutions, Housing and Demographics

Andrea Camilli

Akademisk avhandling

som för avläggande av ekonomie doktorsexamen
vid Handelshögskolan i Stockholm
framläggs för offentlig granskning
fredagen den 8 juni 2018, kl 13.15,
sal 120, Handelshögskolan,
Sveavägen 65, Stockholm

Essays on Labor Market Institutions, Housing and Demographics

Essays on Labor Market Institutions, Housing and Demographics

Andrea Camilli

Dissertation for the Degree of Doctor of Philosophy, Ph.D., in Economics
Stockholm School of Economics, 2018

Essays on Labor Market Institutions, Housing and Demographics

ISBN 978-91-7731-084-6 (printed)
ISBN 978-91-7731-085-3 (pdf)

This book was typeset by the author using LaTeX.

Printed by:
BrandFactory, Göteborg, 2018

Keywords:
Housing markets, Labor market institutions, DSGE, Labor reforms, income volatility, fertility, female labor force participation, wealth inequality, portfolio choices, inequality decomposition.

A Martina, per ieri, oggi e domani

Foreword

This volume is the result of a research project carried out at the Department of Economics at the Stockholm School of Economics (SSE).

This volume is submitted as a doctoral thesis at SSE. In keeping with the policies of SSE, the author has been entirely free to conduct and present his research in the manner of his choosing as an expression of his own ideas.

SSE is grateful for the financial support provided by the Jan Wallander and Tom Hedelius Foundation which has made it possible to carry out the project.

Göran Lindqvist
Director of Research
Stockholm School of Economics

Tore Ellingsen
Professor and Head of the
Department of Economics
Stockholm School of Economics

Acknowledgements

The PhD has been a long journey and a swing of emotions for me. Everything started when I decided to study economics ten years ago. I was coming from a background of Latin, ancient Greek and philosophy...so why did I make this choice? I remember that I thought: learn economics would be useful to better understand the world around me, and possibly try to give a small contribution to improve it. Soon I realized how my youth dream was way too simplistic, but in any case I became passionate about this broad, but narrow, mathematical, but philosophical, subject called Economics. Without much planning, I ended up in the situation of deciding what to do after the master and I remember I thought: I would like to do research in my life, it's going to be fun! Again an inaccurate -at least- thought...The five years of PhD gave me a lot of good, but also tough memories. There have been moments in which I wanted to give up and moments -fortunately the vast majority- in which I considered myself very lucky for being able to do research.

I am particularly indebted with my main supervisor David Domeij, for his guidance and encouragement. David is an enthusiastic person and he transmitted me his passion and rigor in research. David was an example and his invaluable and constant feedbacks were fundamental, not only for me completing the PhD, but also for me becoming a young economist. David gave me the final and decisive push for going on the academic job market and he was always available for suggestions or meetings, often during holidays or via precarious Skype connections. Thank you David for all you support, I know that this is not a goodbye, but only an arrivederci!

I also thank a lot my second supervisor, Tore Ellingsen. Tore was my temporary supervisor during the second year, when I was still trying to understand which topics were closer to my real interests and capabilities. He always supported me and had an open door for suggestions and conversations. He also helped me to organize my year of visiting at the European University Institute.

The Florentine period has been particularly productive for me, mainly thanks to my host supervisor, Evi Pappa. Evi is a fantastic researcher and she was always able to understand the important point from my mumbling of early stage research ideas. She guided me through the difficult process of taking an idea and transform it into a scientific paper. Evi is also an incredibly nice person, with whom is really enjoyable to take an espresso. Thank you Evi, I hope I learned at least half of what you tried to teach me!

I am also very indebted with my co-author Andresa Lagerborg, who is not only a great colleague, but also a friend. I will always remember the long days spent on impervious algebraic solutions and calibrations! Thanks, grazie, obrigado, tack!

In Stockholm my mind was open by the courses of Jörgen Weibull, Lars Ljungqvist and Per Krusell. I am also extremely grateful for the interesting and useful conversations across Stockholm and Florence with Tobias Broer, Juan Dolado, Erik Lindqvist, Federica Romei, Paolo Sodini and Anna Grodecka. With Anna I had really enjoyable brainstorms on research ideas. I also thank Martina Björkman Nyqvist and Johanna Wallenius for their valuable advises on the job market. For my PhD I had to move to a foreign country, which welcomed me very warmly. I thank all the administrative staff of Stockholm School of Economics, and in particular Ritva Kiviharju, Pia Ylinen, Idha Hobro and Camilla Elwing-Johansson, for the help and support.

But a PhD is not only research, it is a human experience, which affects many aspects of life. During these five years I met many beautiful people and I learned a lot about friendship. I thank my first and inimitable house mate Markus, who I am sure will do great things in the future. I thank my second house mate, officemate, T.A. mate and name mate Andrea Papetti. A huge grazie mille goes to Marta, who was my first buddy in Stockholm and my constant source of support, smart feedbacks and laughs during these years. I will never thank enough my family in Stockholm: Domenico and Serena. You have been my happy Sundays, great chats and delicious meals during these five years...thanks! I would like to thank my office mates Thomas and Sreyashi. Thomas saved my 'academic' life in more than one occasion and Sreyashi with her joy saved my spirit, basically every day. I thank the Italian community, Eleonora, Alberto, Selene and Benedetta and the international community, Elle, Roman, Nadiia, Chris and Mathias for all the nice moments together. A separate mention goes to Evelina and Mark who shared with me long weeks of preparation and presentations during the job market. I am indebted with my teammates, in a very successful (only in terms of fun...) football team: Jóse, Julian, Niklas, Max and Francesco. I thank a lot the big group of people that I met in Stockholm: Adam, Siri, Elin, Emma, Andreas, Aljoscha, Benni, Clara, Matilda, Jaakko, Matti, Paul, Lera, Richard, Jonna, Atahan, Binnur, Alla, Elisabet, Saman, John, Arieda, Xueping, Jósef, Albin and Magnus. You made my Swedish experience memorable. I want to thank some of the people who contributed to make my year in Florence very happy. My great officemates Andreas, Gabo, Brais and Riccardo. Riccardo is the most volcanic person I ever met and his contagious optimism changed my attitude towards my job. Thanks to the many people I met at the EUI: Francesca, Anna, Andrea G., Gabriela, Julie, Gozde, Matteo, Oliko, Viktor, Lorenzo, Johannes, Andrea C., Carmen, Ana and Chiara. Finally, I thank a lot Luis, Rita and Carlo. Carlo became immediately a good friend and a great person to talk about research ideas. With Luis and Rita I prepared a lot of pizza and enjoyed many notti fiorentine and trips...thanks for your friendship!

At this point I change language to make this thanks open to even more people. Un grazie enorme va a tutti i miei amici Minghettiani e non: Lottie, Marci, Manu, Frenz, Nico, Tallons e Simo. Grazie a voi Bologna sarà sempre la mia casa. Grazie a Giulio e Ilaria, per esserci sempre stati quando avevo bisogno di amici veri. Voglio ringraziare tutti i miei amici "della montagna", siete tanti e non voglio dimenticare nessuno. Ogni volta che torno, riprendiamo da dove avevamo lasciato. Grazie anche tutti i nuovi amici che sono arrivati dalle tante avventure degli ultimi anni. Un grazie speciale va a tutti i miei amici dell'Università. Giulia, che ha condiviso con me gioie e dolori di Clef e Lmec e poi Edo, Fabri, Leti, Enri, Marta, Giorgia, Maddy, Paolo, Andy, Paul e Aysil, con cui ho condiviso tantissimi momenti fantastici.

Voglio dedicare uno spazio speciale alla mia famiglia, che mi ha sempre sostenuto ed incoraggiato. La mia è, per fortuna, una famiglia numerosa e quindi sono tante le persone che meritano una ringraziamento particolare. Le mie nonne fantastiche, Olga e Santina, che mi hanno fatto sempre sentire amato e coccolato...grazie! Le mie zie ed i miei zii: Patty, Nadia, Flavia, Manuela, Stefano, Patrizio, Patrizia, Marco ed Ettore. Grazie di avermi sempre accolto come se fossi appena partito e di avermi sempre sostenuto. Un grazie grandissimo lo devo ai miei cugini Elisa, Giacomo, Gianmarco, Jacopo e Sara. Siete semplicemente fantastici! Grazie a Pigi, per essere cresciuti insieme e per essere per me come un fratello.

Tutto quello che ho ottenuto nella vita è stato grazie a mia madre e mio padre...a loro devo tutto. Mamma, babbo, il vostro amore incodizionato e il vostro esempio mi hanno reso la persona che sono oggi, grazie. Voi siete la mia casa, *vi voglio bene*!

Infine, voglio ringraziare te, che mi hai supportato e sopportato in ogni situazione e che ora alla fine di questo lungo percorso sei ancora con me. La distanza non ci ha sconfitti. *Grazie*!

Stockholm, April 23, 2018

Andrea Camilli

Contents

Introduction

This Doctoral thesis is composed by three self-contained chapters. The first two focus on the effects of labor market institutions on the housing market and the demographics of an economy. Housing is one of the most important components of households' wealth and its dynamics affect many aspects of the economy. Demographics and fertility choices have relevant policy implications, such as the sustainability of the pension system. Housing tenure decisions and evolution of demographics are strictly linked, and in the first two chapters of this PhD thesis, I show that they both interact with labor market institutions. In these papers I use a combination of empirical as well theoretical approaches, working with aggregate panel data and Dynamic Stochastic General Equilibrium models. The third chapter instead, uses Italian micro-data to develop an empirical analysis of the drivers for wealth inequality dynamics in Italy, during the Great recession. Abstracts of each chapter follow.

Labor market institutions and homeownership Studies to what extent *labor market institutions* can explain homeownership rate differences over time and across countries. Using panel data from 19 OECD countries over the period 1965-2014, I find empirical evidence that employment rigidities are positively correlated with homeownership, and real wage rigidities are negatively correlated with homeownership. The empirical findings are rationalized using a DSGE model with labor rigidities, and search and matching frictions, where heterogeneous households face a housing tenure decision. Labor market frictions affect housing tenure choice through their impact on employment and wage volatility. The housing market is directly linked to labor rigidities via an endogenous credit constraint. Performing counter-factual analyses, I find that labor market institutions account for a relevant share of the difference in homeownership between countries and over time. I also show that labor reforms which reduce unemployment benefits can dampen the effect of policies targeted to increase homeownership.

Do Labor Market Institutions Matter for Fertility? Using annual data for 20 OECD countries over the period 1961-2014, we study whether *labor market institutions* (LMIs) not targeted to maternity impact the *total fertility rate* (TFR). We distinguish between *employment rigidities* (ER) and *real wage rigidities* (RWR), since the former reduces and the latter amplifies the response of the business cycle to shocks. Panel regressions and principal component analysis reveal that ER, such as employment protection and union strength, increase TFR. On the other hand, RWR, proxied by the centralization of wage bargaining and unemployment benefits, reduce TFR. We also find evidence that unemployment volatility reduces fertility whereas wage volatility raises fertility. Thus, to the extent that labor market institutions affect unemployment and wage volatility, they may also affect fertility. We complement our analysis with a DSGE model that incorporates households' fertility decision as well as unemployment and wage rigidities. We find that downward wage rigidities amplify real contractions in response to negative demand shocks and lead to large drops in employment and fertility.

Investment choices and wealth inequality: evidence from Italy This paper uses micro-data from the Bank of Italy Survey of Household Income and Wealth to investigate the drivers of net wealth inequality dynamics in Italy during the Great Recession. Understanding the sources of wealth inequality is important from a welfare perspective, since different causes may have different implications and may call for different policy interventions. I analyze the evolution of wealth components across the wealth distribution and I use Gini index decomposition to assess the relevance of each wealth component for total inequality. I show that a large part of wealth dynamics in Italy during the Great Recession was driven by the evolution of real estate. I document that the Gini index for net wealth increased significantly between 2008 and 2012 and decreased between 2012 and 2014. The evolution is very similar for the Gini index for real estate. I find that the increase in inequality observed in Italy between 2008 and 2012 cannot be attributed to changes in the relative contribution of each wealth component, but more likely to the rise of real estate shares hold by households in the top of the wealth distribution. The reduction in inequality observed after 2012 instead, can be related to changes in the share of real estate, but also to a shift between the relative importance of other real assets and financial assets.