

Indirect Interventions for Stabilizing Housing Markets*

Reproduction of Unemployment Insurance as a Housing Market Stabilizer (Hsu, Matsa, and Melzer 2018)

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Abstract

Preventing home foreclosures due to their associated costs is a key concern for policymakers during periods of economic instability. (Hsu, Matsa, and Melzer 2018) investigate the impact of unemployment insurance (UI) to stabilize the housing market, evaluating that UI expansions during the Great Recession aided in preventing foreclosures and stabilized home values. This paper replicates the analysis of their study and investigates alternative factors that impacted foreclosure rates and home valuation. **Keywords:** housing market stability, personal finance, great recession, unemployment insurance, foreclosures, economic policy, united states

1 Introduction

During periods of severe housing market instability such as the time of the Great Recession, policymakers are concerned with the potential of bearing the associated costs of defaulted mortgages and foreclosures. However, it is not always clear what type of intervention is most appropriate and/or feasible to relieve this issue provided the likelihood of high strain on the economy during such times. In the paper *Unemployment Insurance as a Housing Market Stabilizer* (Hsu, Matsa, and Melzer 2018), it is discussed that there exists a debate on the reasoning for mortgage defaults rendering it difficult to effectively design an intervening policy.

In this paper, we will be replicating the analysis originally presented by (Hsu, Matsa, and Melzer 2018) as well as expanding on additional indirect factors mentioned but not thoroughly explored in the original paper.

2 Data

We would like to investigate the relationship between changes in unemployment benefit generosity and the number of home foreclosures within the United States. The original analysis performed by (Hsu, Matsa, and Melzer 2018) is done in Stata. For the purposes of aiding reproducibility, we will be reproducing their scripts using R (R Core Team 2020), `dplyr` (Wickham et al. 2021) and converting data filetypes with `haven` (Wickham and Miller 2021). Tables are generated using `kableExtra` (Zhu 2021).

As a reproduction, we will be utilising the same data as the original paper, as made available and obtained from openICPSR (CITATION). There are five separate datasets used within the paper:

- Attributes relating to unemployment benefits for each state for the years of 1991-2010, obtained from the Bureau of Labor Statistics, Bureau of Economic Analysis, Department of Labor, and Hirsch and Macpherson (2003).

*Code and data are available at: <https://github.com/chan-roy/HousingMarkets>

- Factors of mortgage borrowers relating to potential of delinquency from the Survey of Income and Program Participation (SIPP) years 1991, 1992, 1993, 1996, 2000, 2004, 2008 and supplemented by the corresponding unemployment insurance program characteristics obtained from the Department of Labor.
- Household data of mortgage borrowers from the NLSY79 survey years 2010 and 2012 for foreclosure related variables.
- Characteristics of mortgages and housing relating to foreclosure risk by state from NLSY79 2010 and 2012.
- Home price growth, unemployment rates, and unemployment insurance data of each state from 2008 to 2013, obtained from Zillow, Bureau of Labor Statistics, and Department of Labor respectively.

3 Model

4 Results

5 Discussion

Variable	Mean	Median	SD
cov	14.13	13.55	5.85
duration_max	26.14	26.00	0.75
eb_euc_weeks	40.02	46.00	11.95
ln_max_ben	8.99	8.97	0.33
ln_realgdp_percap	10.46	10.47	0.31
max_ben	8.45	7.88	3.08
max_ben_eb_euc	17.72	17.39	8.37
max_ben_real	10.71	10.18	3.24
max_ben_wages	46.14	45.67	11.07
neg_ui_rr_pct	4.80	0.00	21.40
ui_rr	1.60	1.45	1.18
unemp_rate	5.47	5.20	1.82
wages_state	38.31	36.85	10.74
wba_max_thousands	0.32	0.30	0.11
assets_liquid	0.43	0.04	8.98
delinq_mort	5.40	0.00	22.61
earnings_total	52.66	42.25	55.39
educ_col	0.23	0.00	0.42
educ_grad	0.18	0.00	0.39
educ_hs	0.21	0.00	0.41
educ_less_hs	0.06	0.00	0.23
educ_somecol	0.33	0.00	0.47
evict	0.15	0.00	3.89
layoff	0.15	0.00	0.36
ltv_win	0.59	0.60	0.32
max_ben_indiv	6.50	6.70	4.02
mortgage_ui	0.61	0.51	0.39
neg_equity	0.05	0.00	0.23
thhtnw	0.19	0.09	0.95
earnings_lag	81512.43	66000.00	72523.39
foreclosure	4.08	0.00	19.79
layoff	0.11	0.00	0.31
lost_home	1.93	0.00	13.77
ltv_win_lag	0.44	0.44	0.37
ltv_win2nd_lag	0.04	0.00	0.16
neg_equity_lag	0.03	0.00	0.17
neg_equity2nd_lag	0.00	0.00	0.05
net_worth_lag	300998.91	141000.00	534014.04

Appendix

A Enhancement

A.1 Datasheet for Dataset

References

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