Housing Market and Labor Market

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Abstract

No abstract.

1 Motivation

In many countries, including South Korea and the U.S., housing is the single most important asset for households. As such, it is a primary interest for economists to exploring links between housing market and labor market. Previous literature proposes several mechanisms through which house prices can affect labor market outcomes; for example, wealth effect, credit constraint, and moving constraint. Most of these proposed channels work for home-owners, and previous papers confirms that house prices affect labor market choices of home-owners in various dimensions: entrepreneurship, wage, labor hours, and unemployment. (previous literature!) On the other hand, relatively little is known about how housing market condition affects non-home-owners' labor market behaviors. Indeed, many papers implicitly assume that non-home-owners' labor market choices are not responsive to house price fluctuation, and use non-home-owners as a comparison group to identify the effects for home-owners. (again, literature!) However, it can mislead the aggregate labor market implications of housing market dynamics, if non-home-owners also respond to housing market shocks. This paper examines how housing market shocks affect the labor market behaviors of both home-owners and non-home-owners.

One key channel through which house prices can affect non-home-owners' labor market choices is the expected housing cost channel. While housing wealth does not appear in non-home-owners' current balance sheet, it does not mean housing wealth never appear in their life-time. As many of them become home-owners in the future, and likely to plan the

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home purchase in advance, persistent housing market shock would affect the non-home-owners present value balance sheet through the expected cost of future housing services. It means that the house prices would affect the labor market choices of non-home-owners as well.

Regression results may not support or contradict to the introduction.

2 Regression

$$y_{it} = \alpha_i + \gamma_t + x'_{it}\beta + \eta_{j(i,t)} + \beta_0 I(H_{it} = r) + \sum_{h=o,r} P_{j(i,t)} \cdot I(H_{it} = h) \cdot \beta_h + \epsilon_{it} \tag{1}$$

- y_{it}: dependent variable. labor hours, unemployment dummy and real wages.
- α_i, γ_t: individual and time fixed effects
- x_{it}: age, age-squared, total wealth (financial + housing), financial debt, monthly income (from all sources. labor, financial, etc.)
- $j(i,t)$: a region where i lives at time t
- $\eta_{j(i,t)}$: region fixed effect
- $P_{j(i,t)}$: regional (real) house price excluding own house price
- H_{it} : house ownership status. $H_{it} = o(wner)$ or $H_{it} = r(enter)$.
- β_0: coefficient for renter dummy
- β_o, β_r: effect of regional house prices on y, depending on house ownership status.

I use the KLIPS 04 - 22, since 04 is the first survey that monthly income is available. I consider the household head whose age is between 18 - 40. When calculating total wealth, I added housing deposits to financial wealth. It is a bit ambiguous that whether renters would report housing deposits as their wealth or not, because there is no housing deposit category (but, there exists personally rented money category) for wealth reporting. For house owners, if they rented a house, they should have reported the housing deposit as financial debts.

2.1 Results

2.1.1 Labor Hours

Table 1: Labor Hours

	(1) lab_hour	(2) lab_hour	(3) lab_hour	(4) lab_hour
Age	-0.783**	-0.791**	-0.812**	0.546
	(0.341)	(0.341)	(0.341)	(0.663)
Age**2	0.00631	0.00612	0.00633	-0.0162
	(0.00516)	(0.00518)	(0.00517)	(0.0101)
tot_wealth	-0.0000355***	-0.0000387***		0.0000217
	(0.0000134)	(0.0000133)		(0.0000231)
fin_debt	0.0000857***	0.0000908***		0.0000116
	(0.0000242)	(0.0000244)		(0.0000554)
Income	0.0466	0.0428	0.0413	-0.177
	(0.0757)	(0.0751)	(0.0737)	(0.141)
Renter	-0.0739	-0.846	-1.098	1.124
	(0.669)	(1.143)	(1.141)	(3.306)
Renter*Reg.HP		0.00301**	0.00283**	0.00570***
		(0.00134)	(0.00134)	(0.00202)
Owner*Reg.HP		-0.000682	0.00149	0.00838
		(0.00442)	(0.00435)	(0.00788)
net_wealth			-0.0000370***	
			(0.0000141)	
Constant	61.53	60.92	61.49	34.28***
	(466517.2)	(161726.2)	(161787.9)	(11.69)
Observations	9966	9811	9815	2626
Adjusted R^2	-0.250	-0.247	-0.249	-0.318

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Model (1) is without interaction between regional house price and house ownership. The effect of home-ownership itself does not have a significant effect for labor hours.

Model (2) is baseline. The interaction term between renter and regional house price is positive and significant, while that of owners is negative and insignificant. The overall insignificant effect of model (1) comes from the higher labor hours of renters when regional house price is higher and lower labor hours of renters when regional house price is lower.

Model (3) includes net wealth, rather than wealth and debt separate. Model (4) is only for people living in Seoul. The patterns are similar. The signs of wealth and debt effects are expected.

2.1.2 Unemployment

Table 2: Unemployment

	(1) unemp	(2) unemp	(3) unemp	(4) unemp
Age	0.00580	0.00460	0.00440	0.0345**
	(0.00603)	(0.00611)	(0.00611)	(0.0136)
Age**2	-0.0000745	-0.0000403	-0.0000314	-0.000465**
	(0.0000907)	(0.0000921)	(0.0000919)	(0.000205)
tot_wealth	0.000000517**	0.000000579***		0.000000809*
	(0.000000216)	(0.000000218)		(0.000000463)
fin_debt	-0.000000122	-0.000000183		-0.000000331
	(0.000000401)	(0.000000410)		(0.00000111)
Income	-0.0176***	-0.0174***	-0.0170***	-0.0212***
	(0.00107)	(0.00107)	(0.00106)	(0.00220)
Renter	-0.0132	-0.00375	-0.000777	-0.0296
	(0.0110)	(0.0188)	(0.0188)	(0.0681)
Renter*Reg.HP		-0.000102***	-0.0000974***	-0.000182***
		(0.0000240)	(0.0000239)	(0.0000406)
Owner*Reg.HP		-0.0000554	-0.0000440	-0.000154
		(0.0000738)	(0.0000725)	(0.000163)
net_wealth			0.000000385*	
			(0.000000228)	
Constant	-0.0531	-0.00225	-0.00913	-0.417*
	(2552.1)	(0.107)	(0.107)	(0.240)
Observations	12255	12060	12067	3136
Adjusted R^2	-0.207	-0.208	-0.209	-0.226

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

2.1.3 Wage

Table 3: Wages

	(1) lnw	(2) lnw	(3) lnw	(4) lnw
Age	0.117***	0.118***	0.119***	0.219***
	(0.00884)	(0.00897)	(0.00896)	(0.0189)
Age**2	-0.00122***	-0.00125***	-0.00127***	-0.00281***
	(0.000134)	(0.000136)	(0.000136)	(0.000287)
tot_wealth	0.00000108***	0.00000100***		-0.000000723
	(0.000000350)	(0.000000354)		(0.000000660)
fin_debt	-0.00000179***	-0.00000156**		-0.00000255
	(0.000000628)	(0.000000644)		(0.00000158)
Income	0.0563***	0.0558***	0.0559***	0.0722***
	(0.00197)	(0.00198)	(0.00194)	(0.00402)
Renter	0.0113	-0.0415	-0.0334	-0.187**
	(0.0174)	(0.0303)	(0.0302)	(0.0943)
Renter*Reg.HP		0.0000555	0.0000614*	0.000274***
		(0.0000353)	(0.0000352)	(0.0000577)
Owner*Reg.HP		-0.000188	-0.000202*	-0.000182
		(0.000118)	(0.000116)	(0.000225)
net_wealth			0.00000147***	
			(0.000000376)	
Constant	-1.764	-1.763	-1.784***	-3.374***
	(3366.0)	(16172.5)	(0.157)	(0.334)
Observations	9931	9776	9780	2615
Adjusted R^2	0.161	0.154	0.155	0.203

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$