

Overview

Motivated by experience-based expectation formation literature, I show that experiencing higher local house price growth increases household consumption significantly:

- About a 2 to 6 percentage point increase in real household spending.
- Effects are similarly substantial for both homeowners and renters; the expectations channel is distinct from home equity channels.

This study contributes to our understanding of:

- The relationship between the housing market and household consumption:
 - ▶ Traditional channels: housing wealth and collateral channels
 - ▶ **This paper: expectations channel**
- Why household consumption remained low for years after the Great Recession:
 - ▶ House price experience effect

Hypothesis

Through expectations, experienced price growth ($EXPR$) influences household consumption.

Past local house price growth



Experienced price growth \longrightarrow House price expectations $\xrightarrow{?}$ Consumer spending

Measuring Expectations

$EXPR$ is calculated as the exponentially weighted average of the four prior years' house price growth realizations in household i 's county of residence:

$$EXPR_{i,t} = \omega \sum_{s=1}^4 (1-\omega)^s \Delta hp_{t-s,i} \quad (1)$$

- $\Delta hp_{t-s,i}$ = annual log real price growth in i 's county, $\omega = 0.07$

Baseline Specification

$$c_{i,t} = \alpha + \beta EXPR_{i,t} + \gamma X_{i,t} + \phi L_{g,t} + \tau_t + \eta_g + \delta_i + \epsilon_{i,t} \quad (2)$$

Where:

- $c_{i,t}$: Household i 's nondurables and services expenditure in year t from the PSID
- $X_{i,t}$: Household-level and head characteristics
- $L_{g,t}$: County-level controls
- τ_t : Year FE
- η_g : County FE
- δ_i : Household FE

Results: Higher EXPR \longrightarrow Higher Household Spending

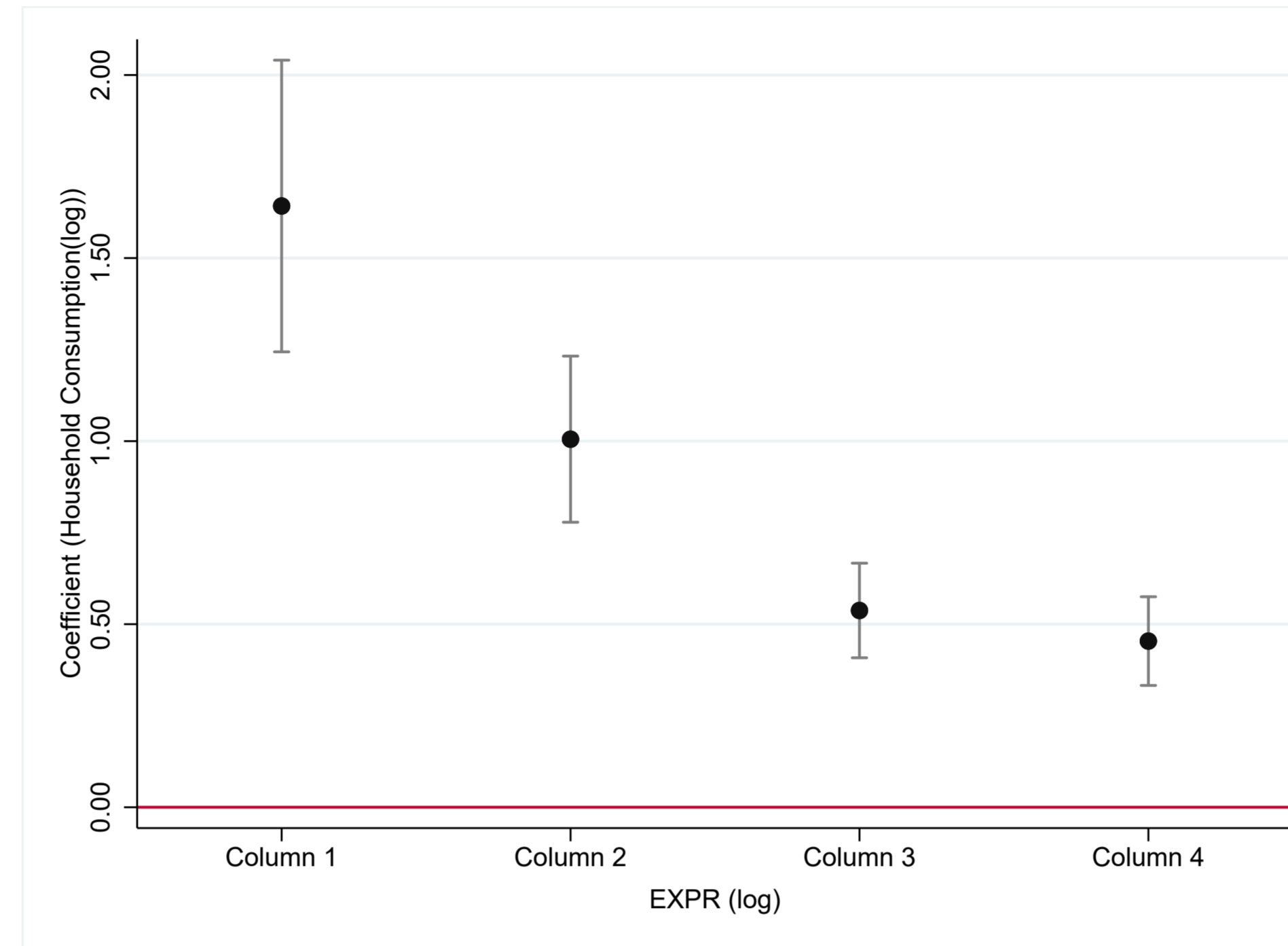


Figure 1. Effect of EXPR on household consumption.

- Controls: Column 1 = τ_t ; Column 2 = $X_{i,t}, L_{g,t}, \tau_t$
- Controls: Column 3 = τ_t, η_g, δ_i ; Column 4 = $X_{i,t}, L_{g,t}, \tau_t, \eta_g, \delta_i$

Instrumenting for EXPR

IV: EXPR of out-of-county (OOC) extended families ($EXPR^{OOC}$)

- **Relevance:** correlated with $EXPR$
- **Exclusion:** not correlated with past and future wealth (see the figure below) / borrowings and local confounds

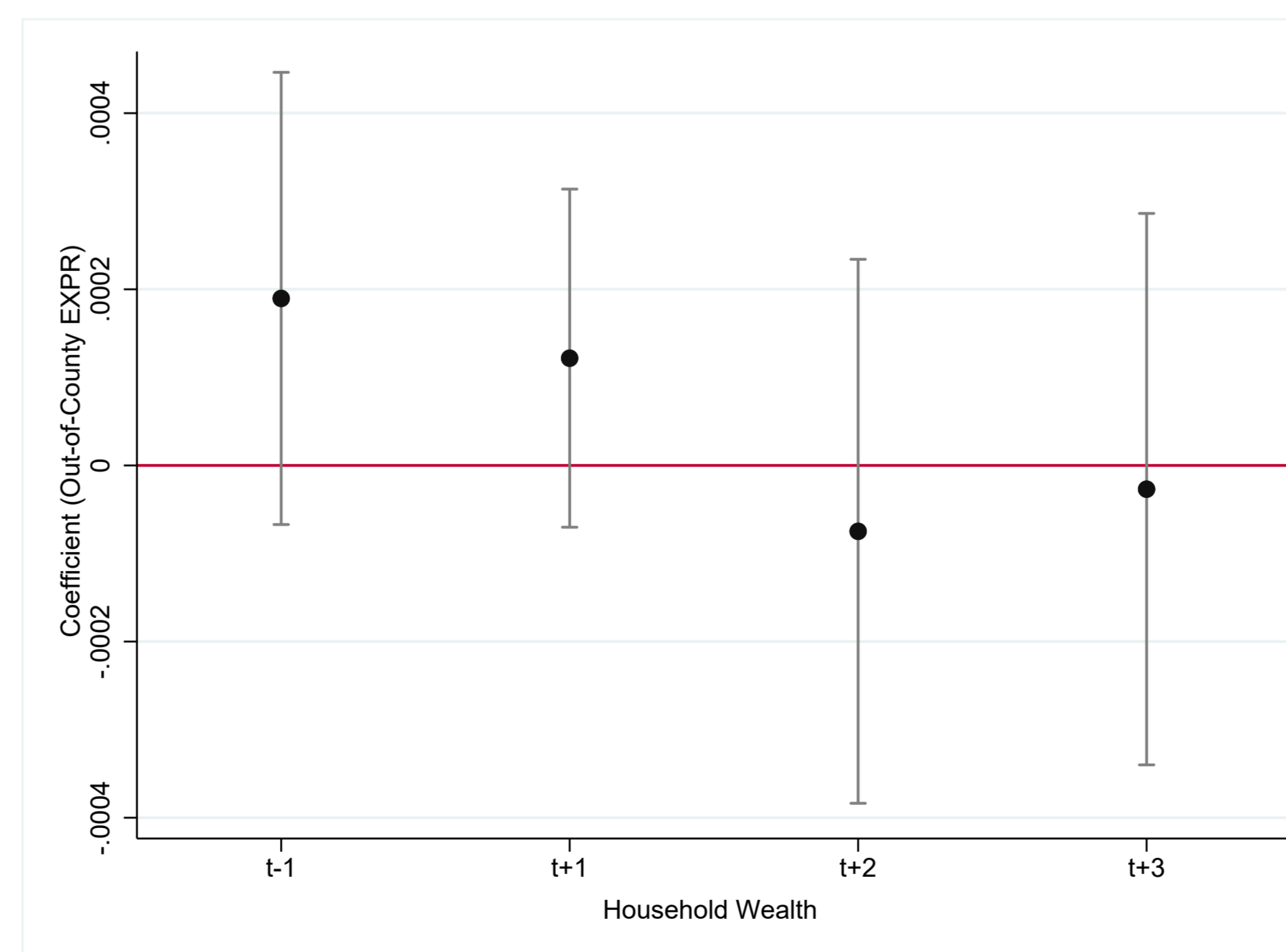


Figure 2. Effect of $EXPR^{OOC}$ on household wealth.

Higher Instrumented EXPR \longrightarrow Higher Household Spending

$$EXPR_{i,t} = \zeta EXPR_{i,t}^{OOC} + Controls + FEs + v_{i,t} \rightarrow 1st\ Stage \quad (3)$$

$$c_{i,t} = \beta EXPR_{i,t} + Controls + FEs + \epsilon_{i,t} \rightarrow 2nd\ Stage \quad (4)$$

	First Stage		Second Stage	
	EXPR		Consumption	
	(1)	(2)	(3)	(4)
IV: $EXPR^{OOC}$	0.450*** (0.034)	0.490*** (0.033)		
EXPR			1.214*** (0.260)	0.637*** (0.168)
Effect of 1 SD(pp)			7.3	2.0
Observations	20019	20019	20019	20019
Adjusted R^2	0.697	0.736		
K-P F-stat.			180.1	219.1
Controls				
Household & Head X'tics	x	x	x	x
County-Level	x	x	x	x
OOC-Level		x		x
Fixed Effects				
Year FE	x	x	x	x
County FE		x		x
Household FE		x		x

No difference in spending propensity between homeowners and renters

$$c_{i,t} = \alpha + \beta EXPR_{i,t} + \beta_{owner} (EXPR_{i,t} \times \mathbb{1}_{i,owner}) + \phi \mathbb{1}_{i,owner} + Controls + FEs + \epsilon_{i,t} \quad (5)$$

	OLS Fixed Effect	First Stage		Second Stage
	Consumption	EXPR	$EXPR \times \mathbb{1}_{i,owner}$	Consumption
	(1)	(2)	(3)	(4)
EXPR	0.412*** (0.105)			0.664*** (0.222)
$EXPR \times \mathbb{1}_{i,owner}$	0.054 (0.116)			-0.036 (0.138)
IV: $EXPR^{OOC}$		0.505*** (0.044)	-0.239*** (0.032)	
IV: $EXPR^{OOC} \times \mathbb{1}_{i,owner}$		-0.018 (0.022)	0.787*** (0.045)	
Observations	33995	20019	20019	20019
Adjusted R^2	0.786			
K-P F-stat.				113.0
Controls				
Fixed Effects	x	x	x	x

Why would house price expectations influence household consumption?

- **Homeowners:** optimism and pessimism about future price gains
- **Renters:** discouragement effect