

Great expectations: The role of experiences in Irish house price expectations formation

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(1) Motivation

- Housing = largest asset of IE HHs
- HP growth:
 - > Confer wealth effects + loosen borrowing constraints
 - > Increase HH C and/or property I
 - > Impact property prices & construction
- HH beliefs (past perceptions and future expectations) are important macro-model inputs and may feed into consumer price expectations -> monetary policy implications

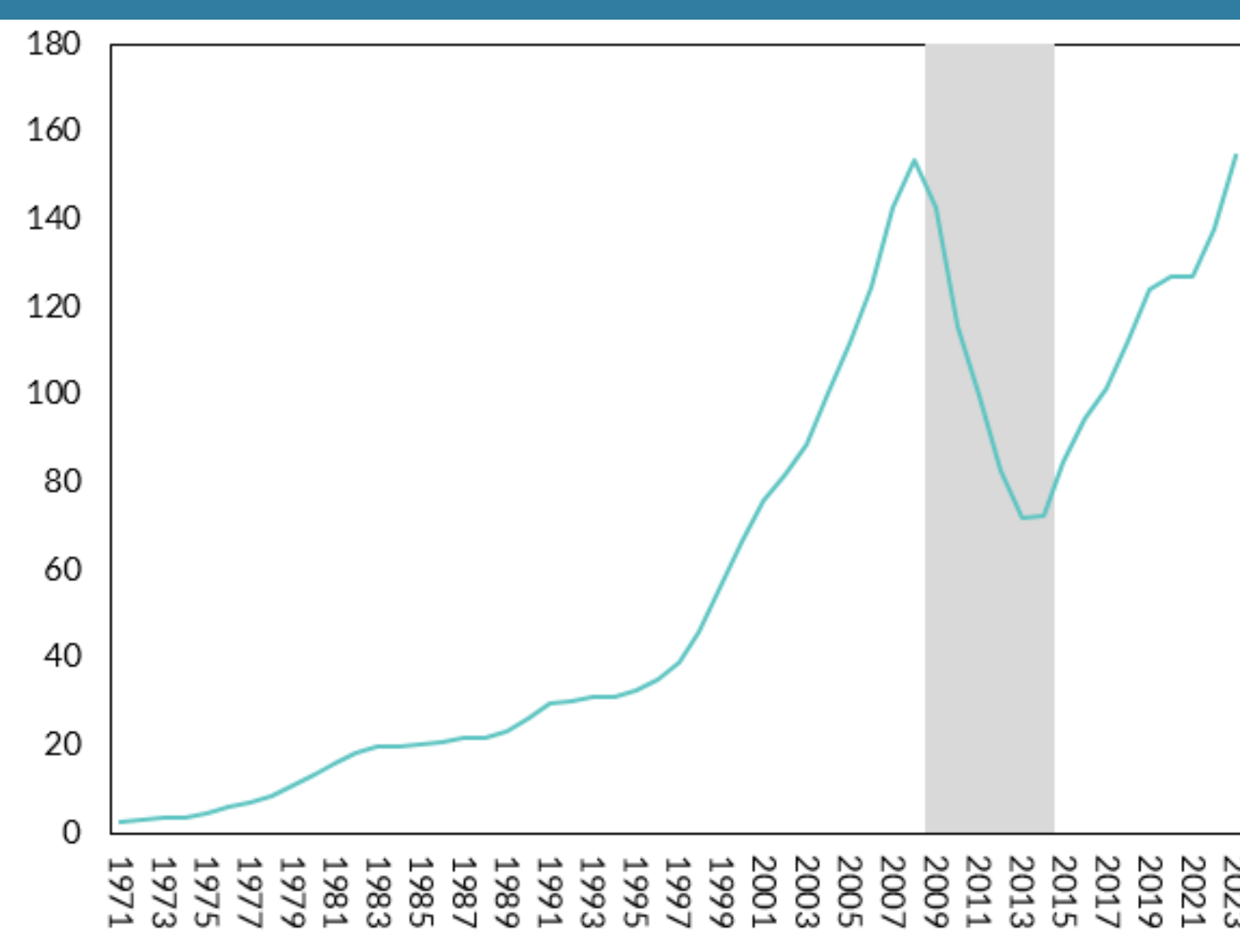
(2) Literature

- Inflation expectations literature more extensive than house prices (D'Acunto et al, 2024) but existing studies do find a strong link between HP expectations & actual past HP growth (e.g. Armona et al., 2019)
- Experiences play a role too:
 - Perceptions (i.e. "personal experience") of HP inflation (Gohl et al. 2022; Bielskis 2023)
 - Geographical location (Bover, 2015)
 - Housing market experiences of social network (Bailey, Cao, Kuchler & Stroebel, 2018)
 - Inflation literature also shows lifetime inflation experience matters (Malmendier & Nagel, 2016)
 - Evidence on the role of socio-demographics is somewhat mixed and inconclusive
- This paper: leverages unique high amplitude in IE housing market to explore the role of experiences in the HP expectation formation process (*study = association, not causal*)

(3) Research Questions

1. Do IE homeowners extrapolate from their perceived **personal experience** of own HP growth to date when forming their short-term (1yr ahead) HP expectations?
2. Is there a role for other experiences: (a) **local experience** of price developments near the home and/or (b) the **housing market conditions experience** of HHs at the time their home was acquired?
3. After controlling for experiences, to what extent do socio-demographics or other characteristics play a role?

IE offers interesting case study

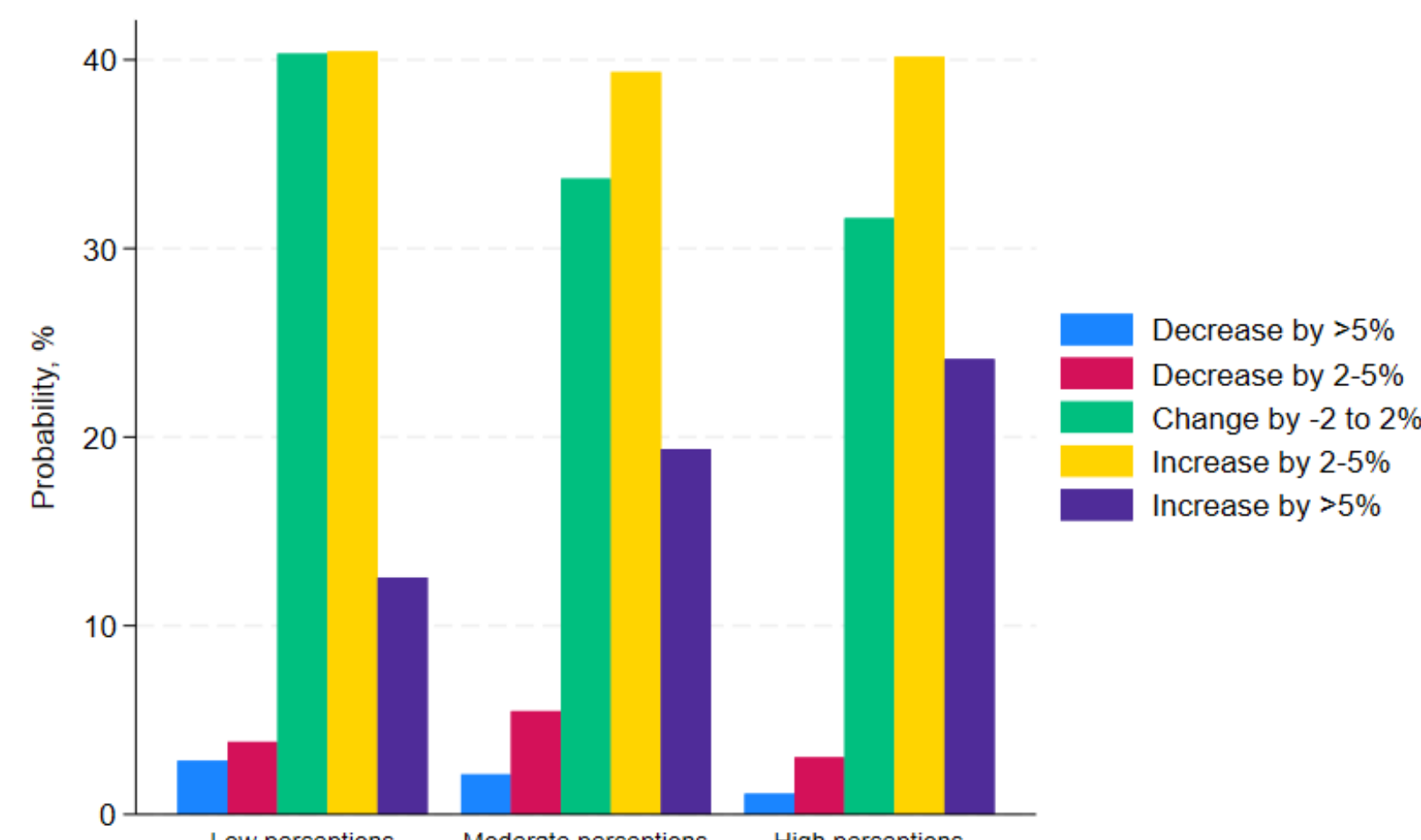


IE Residential property price index (1971-2023) (%)
Source: CSO and the Irish Department of Environment, Heritage & Local Government (accessed via the Federal Reserve Bank of St Louis)

(4) Data

- HFCS 2018 - IE (2,007 obs = 694,000 HHs)
- HP expectations: implied mean based on the probabilistic distribution of survey responses from homeowners only (renters not asked)
- Experience variables:
 1. Personal experience (captured as Perceived Average Yearly Return - PAYR - on home since its acquisition)
 2. Local experience (proxied by NUTS2 region)
 3. Housing conditions experience (by year of acquisition: pre-1996; Celtic tiger; GFC bust & post-GFC recovery)

Higher perceptions = Higher expectations



Share of IE HHs expecting different HP growth rates – across different perception groups (2018, %)
Source: HFCS and authors' calculations

(6) Findings

- Personal experiences matter (*Holding all else constant, a 1SD ↑ in PAYR is associated with ↑ mean E(HP) by c.0.23pp, equivalent to c.8.4 per cent of the mean expected annual HP growth in IE.*)
- Also find a role for local experience and housing market conditions experience (*More optimistic expectations if living near the capital or acquired HMR after 2008.*)
- Some tentative evidence (from regressions with interactions) that the effect of HP perceptions may be state-dependent and vary by time of acquisition -> *If homeowners perceive a negative personal experience of HP growth to date, then the effect of this experience on HP expectations may vary depending on whether they acquired their home during or after the GFC bust.*
- Controlling for our measures of experiences, we find little role for socio-demographics.
- Holding other property, being risk averse or perceiving the household income over the past 12 months to be lower than normal are all associated with more pessimistic expectations.
- Results hold across much of the distribution of expected house prices and are robust to different model specifications & definitions (e.g. alternative age & time of acquisition)

(5) Empirical Framework

- Stage 1: Reg PAYR measure on time of acquisition and region dummies (to purge personal experience of "sub-experiences" - helps limit collinearity & aid interpretation) then save the residuals

$$PAYR_i = \beta_{0i} + \beta_1 celtic_tiger_i + \beta_2 GFC_decline_i + \beta_3 GFC_recovery_i + \beta_4 southern_i + \beta_5 eastern_i + \varepsilon_i$$

- Stage 2: Reg mean 12-month ahead HP expectations on predicted errors from Eq 1 and other explanatory variables (use bootstrapped se's based on 2000 reps)

$$HPExp_i = \beta_{0i} + \beta_1 PAYR*_i + \beta_2 celtic_tiger_i + \beta_3 GFC_decline_i + \beta_4 GFC_recovery_i + \beta_5 southern_i + \beta_6 eastern_i + \beta_7 other_prop_i + \beta_8 mortgage_i + \beta_9 wealth_i + \beta_{10} risk_i + \beta_{11} income_norm_i + \beta_{12} female_i + \beta_{13} tertiary_i + \beta_{14} working_i + \beta_{15} age_60plus_i + \varepsilon_i$$

	Stage 1	Stage 2					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PAYR* (predicted errors)		0.0522** (0.021)	0.0493** (0.021)	0.0484** (0.021)	0.0422** (0.020)	0.0440** (0.020)	0.0422** (0.020)
Acquired in Celtic Tiger	-5.232*** (0.329)		0.3456 (0.289)	0.4354 (0.285)	0.4320 (0.299)	0.4164 (0.302)	0.432 (0.299)
Acquired in GFC Bust	-3.556*** (0.642)		0.7575* (0.405)	0.8326** (0.398)	0.8725** (0.401)	0.8344** (0.405)	0.8725** (0.401)
Acquired in GFC Recovery	1.906** (0.851)		0.9258** (0.388)	0.9051** (0.380)	0.8338** (0.387)	0.8222** (0.388)	0.8338** (0.387)
Live in Southern region	0.491 (0.418)			0.6845** (0.324)	0.6178* (0.323)	0.6257** (0.321)	0.6178* (0.323)
Live in Eastern & Midlands region	1.373*** (0.440)			1.5324*** (0.318)	1.3048*** (0.317)	1.2754*** (0.314)	1.3048*** (0.317)
Constant	5.977*** (0.403)	2.925*** (0.336)	2.527*** (0.437)	1.437*** (0.517)	1.152*** (0.572)	1.458*** (0.573)	1.521*** (0.572)
Observations	2,013	2,013	2,013	2,013	2,013	2,007	2,007
R-squared	0.237	0.0078	0.013	0.037	0.0546	0.0506	0.0545
Fstat p value	0.000						0.001
Additional controls included ^	N	Y	Y	Y	Y	Y	Y

Source: HFCS (weighted) and authors' own calculations.
Note: Robust standard errors in parentheses in Stage 1. Bootstrap standard errors (based on 2000 replications) in parentheses in Stage 2.
*** p<0.01, ** p<0.05, * p<0.1
Results based on a two stage process of first regressing PAYR on variables reflecting time of acquisition and location followed by using the residuals of this process in a standard OLS estimation of mean 12 month ahead house price expectations based on responses to the HFCS question in wave 3. The base time of acquisition is pre-Celtic Tiger (i.e. home acquired before 1996) while the base for location is living in the Northern or Western region.
^ Additional controls throughout the second stage include dummy variables for household respondent being female; being in work; being tertiary educated and being aged 60 years or over. From Column 5 onwards, a categorical variable for household gross wealth quintiles (with a base of quintile 1) is included as well as dummies for whether the household holds other property and has a mortgage. Column 6 adds a dummy for being risk averse, while Column 7 includes a dummy for whether the household self-reports their income over the past 12 months to be lower than normal.

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All comments welcome

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