

Dreaming of a home: Equity as an obstacle to home ownership

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Overview

- Housing affordability in German cities has declined markedly since 1980, with significant implications for wealth accumulation, social mobility, and intergenerational inequality. Young households in particular face increasing difficulties in entering the housing market.
- Housing affordability consists of two components: (i) the share of disposable household income required to service mortgage interest and principal payments, and (ii) the upfront cash requirement including the non-mortgaged share of the purchase price, taxes, and transaction fees, relative to annual disposable income.
- Despite rising house prices, mortgage payments relative to disposable income have remained broadly stable since the 1980s due to declining interest rates. In contrast, upfront costs have increased substantially over the same period.
- Upfront costs have become the primary barrier to homeownership. Whereas households purchasing an apartment in 1980–1990 needed savings of less than two years of disposable income to cover the equity requirement, households in 2015–2024 require more than three years.
- At today's savings rate of 20%, households must save roughly 14 years to accumulate the required equity, twice as long as households needed in the 1980s.
- As a result, access to homeownership increasingly depends on existing wealth. Households with sufficient savings or family support can more easily meet rising equity requirements, whereas households with limited wealth or without familial assistance are often excluded from homeownership despite being able to afford monthly mortgage payments.
- It is therefore crucial from a policy perspective to reduce the entry barriers to homeownership. A targeted reduction in the real estate transfer tax, combined with an increase in the annual property tax, could substantially lower these barriers while keeping overall government revenue unchanged.

Keywords Housing affordability, Homeownership, Wealth inequality

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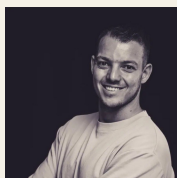
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1 Introduction

The declining affordability of homeownership in German cities has become a central social and economic concern with direct implications for wealth accumulation and intergenerational equality. Homeownership is not only an important determinant of individual life satisfaction but also a key vehicle for long-term wealth accumulation (Bach et al., 2021; Zumbro, 2014). Germany's homeownership rate, at around 44 percent, is far below the European average of roughly 70 percent and has been decreasing over time.¹ In this study, we examine the long-term evolution of housing affordability. We ask: How much of their income must households devote to monthly mortgage payments? How much equity must they provide upfront? And how have these burdens changed over time?²

Housing affordability depends on two key components. First, buyers must provide sufficient equity to cover the portion of the purchase price not financed by a mortgage, as well as taxes and other transaction-related fees. Second, they must be able to service the ongoing interest and principal payments of the mortgage. To capture both dimensions, we analyze data on mortgage financing conditions, disposable household income, and house prices in German cities from 1980 to 2024. From these data, we construct two measures: (i) the *mortgage cost ratio* (MCR), which denotes the share of annual disposable income spent on interest and principal payments, and (ii) the *upfront cost ratio* (UCR), which measures the upfront cash requirement including the portion of the purchase price not financed through a mortgage, as well as real estate transfer taxes and legal fees.

Our analysis reveals significant differences in how the two measures developed over time. Households of the Baby Boomer generation, purchasing between 1980 and 1990, devoted around 20% of their income to mortgage payments for apartments and roughly 46% for single-family houses. Millennials entering the market between 2015 and 2024 face similar burdens of around 25% and 42%, respectively. Despite sharply rising house prices since 2010, declining interest rates have offset much of the increase in mortgage costs.

The pattern is different for equity requirements. Baby Boomers in the 1980s typically had to provide equity amounting to roughly 1.7 times their annual income for an apartment and 3.6 times for a single-family house, whereas Millennials today must provide more than three and five years of income, respectively. At today's savings rate of 20%, Millennials must save about 14 years to accumulate the required equity—twice as long as households

¹See https://ec.europa.eu/eurostat/databrowser/view/ILC_LVH002/default/table.

²A complementary working paper by the authors provides a detailed analysis, robustness checks, and city-level results (Amaral et al., 2025).

needed in the 1980s. Thus, it is not mortgage servicing costs but the high upfront costs that constitute the primary barrier to homeownership, particularly for households with limited savings or without family support.

Therefore, focusing the political debate solely on monthly mortgage burdens overlooks a crucial dimension. Rising upfront costs, driven by rapidly increasing house prices and associated transaction fees, have become the primary determinant of housing affordability. To enable broader access to homeownership, policy should primarily target reducing these entry barriers. One promising lever is the real estate transfer tax, which amounts to an average of 5–6 percent of the purchase price. A substantial reduction of this tax, combined with a moderate increase in the annual property tax to offset revenue losses,³ could significantly ease market entry, particularly for young and low-wealth households, and foster broader wealth accumulation in the long run.

2 Development of housing affordability

To analyse the long-term development of housing affordability in Germany, we rely on two key indicators. The *mortgage cost ratio* (MCR) measures the share of disposable household income spent annually on interest and principal payments, capturing the ongoing financial burden faced by an average household. The *upfront cost ratio* (UCR) captures the share of annual disposable income that must be provided at the time of purchase consisting of the portion of the purchase price not financed through a mortgage, the real estate transfer tax, and notary and registry fees.

Both indicators are based on data for house prices, mortgage interest rates, loan-to-value (LTV) ratios, repayment rates, and household income for the period 1980–2024. For the calculations, we use regional price data from the *German Real Estate Index (GREIX)* as well as regional mortgage financing information provided by the Interhyp Gruppe and the Association of German Pfandbrief Banks (vdp).⁴

As Panel (a) in Figure 1 shows, the mortgage cost ratio for apartments declined from around 22% in 1980 to 18% in 2005. Beginning in 2006, it increased steadily, reaching a peak of 28% in 2022 before easing to 25% in 2024. The pronounced fluctuations during the 1980s largely reflect sharp movements in mortgage interest rates.

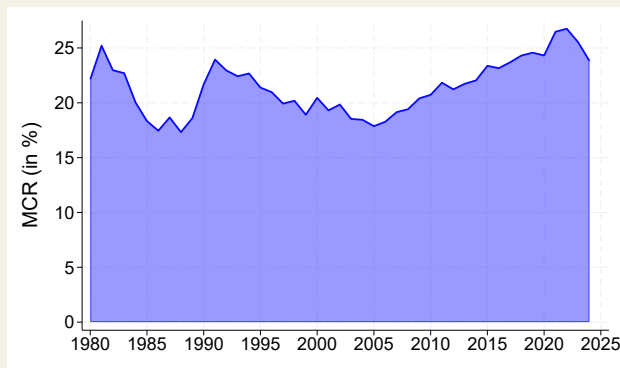
³Because the transfer tax is levied at the state level and the property tax at the municipal level, a revenue-neutral reform requires coordination between states and municipalities.

⁴We thank Dr. Georg Weigert from the Interhyp Gruppe and Thomas Hofer from vdp for kindly providing access to the data.

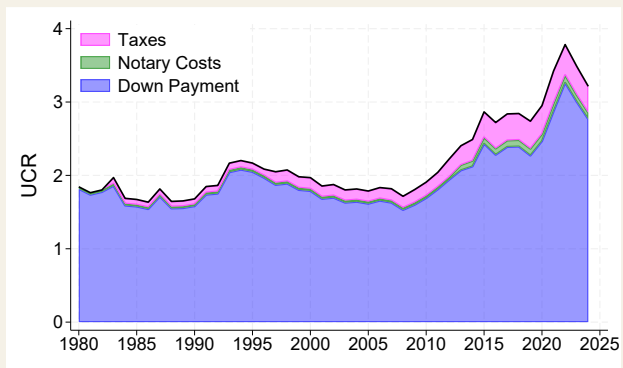
Panel (b) of Figure 1 illustrates the evolution of the upfront cost ratio. It remained broadly stable at around 1.7–1.8 times annual disposable income until 2008, before rising sharply with rapidly increasing house prices to 3.8 in 2022 and then declining to 3.2 in 2024. Entry costs have therefore nearly doubled since the 1980s, making upfront equity requirements the central barrier to homeownership.

Figure 1: Apartments

(a) Mortgage Cost Ratio



(b) Upfront Cost Ratio

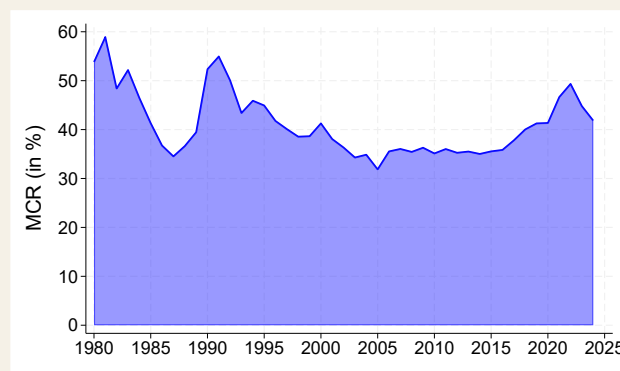


Notes: The mortgage cost ratio measures the share of annual disposable household income spent on interest and principal payments. The upfront cost ratio measures the equity required (non-mortgaged portion of the purchase price, taxes, transaction fees) relative to annual disposable income. A mortgage cost ratio of 30 means that 30% of disposable household income is spent on mortgage payments; an upfront cost ratio of 3.0 means that upfront costs correspond to three times the annual disposable household income.

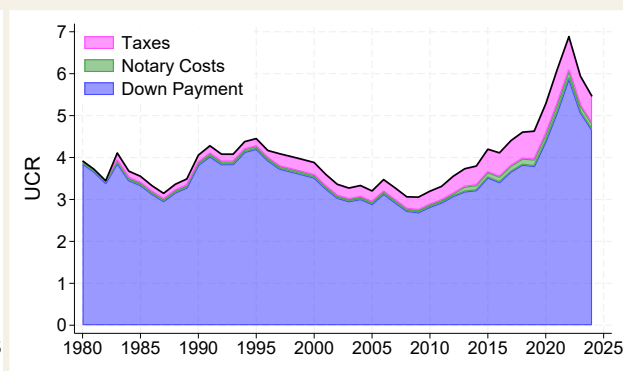
Source: Bundesbank, DESTATIS, EUROPACE, GREIX, Interhyp Group, National Accounts of the German States, vdp. Own calculations.

Figure 2: Single-Family Houses

(a) Mortgage Cost Ratio



(b) Upfront Cost Ratio



Notes and source: See Figure 1.

For single-family houses (Figure 2), the mortgage cost ratio has historically been higher

than for apartments: it declined from around 60% in 1981 to 34% in 2005, stabilised at roughly 37%, and then increased again from 2016, reaching 50% in 2022 before falling to 43% in 2024. The highest mortgage cost ratios are concentrated in the period 1980–1995.

As with apartments, the upfront cost ratio for single-family houses rose substantially: from around 3.9 in 1980 to 6.9 in 2022, before declining to 5.5 in 2024. For both housing types, rising prices as well as repeated increases in the real estate transfer tax, set by federal states since 2006, contributed significantly to the increase in entry costs.

While the mortgage cost ratio has remained relatively stable over time due to declining interest rates, and increased only modestly for apartments, the upfront cost ratio has risen markedly and now constitutes the primary barrier for households seeking to purchase a home. This trend reinforces concerns about wealth distribution and intergenerational equity, as access to homeownership increasingly depends on existing wealth.

A generational comparison further illustrates this development. Households purchasing an apartment between 1980 and 1990 (Baby Boomers) needed to save for around 6.8 years at a gross savings rate of 20% in order to accumulate 1.7 times their disposable income to cover upfront costs. Buyers in the years 2015–2024 (Millennials), by contrast, must save for approximately 13.9 years to accumulate the upfront requirement of 3.1 times their disposable income.⁵ In addition, rising rents prior to moving into an owned home make it even more difficult for young households to save the required equity (Kholodilin and Baake, 2024).

Consequently, family wealth transfers are becoming increasingly important. The share of equity financed through households' own savings declined from around 50% in 2012–2017 to 38% in 2018–2021, while gifts and inheritances increased from 21% to 31% (BBSR, 2019; LBS, 2024). At the same time, the share of inherited properties in the housing market rose from about 15% to roughly 25% (BBSR, 2019, 2023). The share of buyers whose parents were renters also declined substantially (Lersch et al., 2025). As a result, access to homeownership is shifting increasingly from an income-based to a wealth-based threshold, with growing implications for distributional and intergenerational equity.

This development underscores that policies aimed at improving housing affordability should not focus solely on monthly mortgage costs but, above all, on reducing the high entry barriers to homeownership, e.g. through a reform of the real estate transfer tax.

⁵The calculations assume a savings rate of 20% of disposable income. Compound interest with annual contributions is accounted for using the average risk-free interest rate on ten-year German government bonds: 7.9% (1970–1990) for Baby Boomers and 1.7% (2005–2024) for Millennials.

3 Political implications

With rising house prices, entry costs have increased substantially, primarily due to the higher upfront costs required at the time of purchase. Policy measures aimed at improving housing affordability should therefore focus on reducing these entry costs. Measures that solely lower monthly mortgage payments mainly benefit households with sufficient savings or financial support from their families, while low-income and low-wealth households remain excluded from homeownership. By contrast, reducing upfront costs would also enable households without family support to access the housing market, thereby fostering more equitable opportunities for wealth accumulation.

Since taxes constitute a significant share of upfront costs, a reduction in the real estate transfer tax (Grunderwerbsteuer) is a promising policy option to lower the entry barrier to homeownership. The resulting loss in government revenue could be offset by a moderate increase in the annual property tax (Grundsteuer). This would shift part of the tax burden from the initial entry costs to ongoing housing costs, thereby facilitating access to homeownership.⁶

⁶Importantly, the actual relief for homebuyers depends on the price response. Dolls et al. (2025) show that in a tight housing market, sellers may increase prices following a reduction in the transfer tax, thereby limiting the relief. However, Besley et al. (2014) find that around 60% of the benefits from a temporary tax cut accrued to buyers, suggesting that a reduction in the transfer tax can indeed provide meaningful relief. Even if prices rose one-to-one with the tax reduction, a substantial part of the upfront costs would still be shifted toward higher monthly mortgage payments, thereby lowering the entry barrier to purchasing a home.

References

- Amaral, Francisco, Gereon Staratschek, Jonas Zdrzalek, and Steffen Zetzmann (2025). *Mehr als nur Zinsen: Eigenkapitalanforderungen und Erschwinglichkeit von Wohneigentum in Deutschland*. Kiel Working Papers 2307. Kiel Institute for the World Economy.
- Bach, Stefan, Reiner Braun, Sebastian Eichfelder, Markus M. Grabka, Konstantin A. Kholodilin, and Claus Michelsen (2021). “Vermögensbildung in Deutschland: Immobilien – Schwelle und Schlüssel zugleich”. *DIW Wochenbericht* 27, pp. 459–461.
- BBSR (2019). *Wohneigentumsbildung – Faktencheck. BBSR Analysen KOMPAKT 09/2019*. Tech. rep. Bundesinstitut für Bau-, Stadt- und Raumforschung.
- (2023). *Wohneigentumsbildung – Faktencheck 2.0. BBSR Analysen KOMPAKT 08/2023*. Tech. rep. Bundesinstitut für Bau-, Stadt- und Raumforschung.
- Besley, Timothy, Neil Meads, and Paolo Surico (2014). “The Incidence of Transaction Taxes: Evidence from a Stamp Duty Holiday”. *Journal of Public Economics* 119, pp. 61–70.
- Dolls, Mathias, Clemens Fuest, Carla Krolage, and Florian Neumeier (2025). “Who Bears the Burden of Real Estate Transfer Taxes? Evidence from the German Housing Market”. *Journal of Urban Economics* 145, p. 103717.
- Kholodilin, Konstantin A. and Pio Baake (2024). “Mietbelastung in Deutschland: In den letzten Jahren nicht gestiegen, aber ungleich verteilt”. *DIW Wochenbericht* 41, pp. 628–633.
- LBS (2024). *Markt für Wohnimmobilien – Daten. Fakten. Trends*. Tech. rep. Berlin: LBS – Bausparkasse der Sparkassen.
- Lersch, Philipp M., Selçuk Bedük, and Enrico Benassi (2025). “Einfluss der Eltern auf das Wohneigentum der Kinder ist immer noch hoch, geht aber zurück”. *DIW Wochenbericht* 44.
- Zumbro, Timo (2014). “The Relationship Between Homeownership and Life Satisfaction in Germany”. *Housing Studies* 29.3, pp. 319–338.

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