Housing Markets and the Belief in Opportunity*

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August 27, 2026

Abstract

We study how housing-market signals shape beliefs about economic opportunity. Using a randomized information experiment in Singapore, we vary exposure to information about housing price dynamics and housing-related policy signals, then elicit expected social mobility for children from low- and high-social-position families. We find asymmetric belief updating. Rising house prices and higher property taxes lower perceived upward mobility for children from low-social-position families, while leaving beliefs about children from high-social-position families largely unchanged. By contrast, information about slower price growth or expanded subsidies does not increase perceived mobility. Our results are consistent with an attainability-based interpretation: housing-market signals shape opportunity beliefs by changing whether advancement appears within reach.

JEL Classification: D84, D63, R21, H31

Keywords: Social mobility expectations; housing markets; belief formation; policy signals

*This project was reviewed and approved in advance by the Institutional Review Board at Nanyang Technological University (IRB No.IRB-2025-548). The randomized controlled trial was registered with the AEA RCT Registry under ID AEARCTR-0016640. We gratefully acknowledge funding support from the Social Mobility Foundation Grant at the Lee Kuan Yew School of Public Policy, National University of Singapore. We thank participants at the 2026 ABFER Annual Conference, Applied Economics Workshop, 13th Conference on Asia and Pacific Economies, 2026 Asia-Pacific ESA Meeting, NTU Brownbag Seminar, SWUFE Seminar, and AMES 2026 for helpful comments and discussions. We are especially grateful to Devin Pope, Kaiji Chen, Joseph Vecci, Marco Grotteria, Tien Foo Sing, and Shihan Xie for valuable feedback and suggestions. All remaining errors are our own.

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1 Introduction

Housing is one of the main assets linking family resources to economic opportunity across generations. It determines where families live, affects children's access to schools and local labor markets, and facilitates the accumulation and transfer of wealth across generations (Chetty et al. 2016; Chetty and Hendren 2018; Chen et al. 2024). Through these channels, housing shapes both realized opportunity and beliefs about mobility. When housing costs rise relative to income, homeownership, access to desirable neighborhoods, and asset accumulation become less attainable for families with limited financial resources. Rising prices also increase wealth for existing owners while raising the financial threshold faced by prospective owners. Housing-market conditions may therefore signal whether the asset ladder remains accessible and economic progress remains within reach. Although a growing literature shows that housing-market changes shape expectations about future prices and wealth accumulation (Kuchler et al. 2023; Armona et al. 2019), we know much less about whether these signals shape beliefs about intergenerational mobility itself.

Housing is useful for studying this belief channel because it converts the abstract question of how attainable advancement is into a comparison between visible financial thresholds and available resources. Prices reveal the cost of purchasing a home, taxes and subsidies alter its effective cost, and eligibility and financing rules shape access. Respondents can compare the resources associated with a child's starting position with those required to obtain housing, enter desirable neighborhoods, and accumulate housing wealth. The same market or policy signal can therefore imply different opportunity assessments across children from different social positions. A higher price may leave housing within reach for a family with substantial resources while placing it further beyond the reach of a family with limited resources. Because new information can immediately alter this comparison, mobility beliefs may respond well before any change in realized mobility becomes observable. Housing-market information thus allows us to isolate a belief response from the slower-moving effects of housing conditions on realized outcomes.

To study this belief channel, we conduct a randomized information experiment in Singapore. Respondents receive information about public housing price dynamics or housing-related policies, allowing us to estimate how these signals affect perceived mobility for children from different social positions. Signals emphasizing rising housing costs reduce perceived upward mobility for children from low-social-position families. Signals pointing to more moderate cost conditions produce no comparable increase, while beliefs about children from high-social-position families remain largely unchanged. This pattern is consistent with an attainability-based interpretation: adverse housing signals make advancement appear less within reach, whereas partial relief does little to restore perceived opportunity.

Singapore provides a useful setting because its housing system closely links homeownership, asset accumulation, and public policy within a highly developed public housing framework. More than 80 percent of residents live in Housing & Development Board (HDB) flats, and homeownership is widespread among these households.[1] For many citizens, public housing serves as both a place to live and an important component of household wealth. Recent increases in resale prices have also made housing affordability a prominent public concern. Singapore's housing system combines subsidies, access schemes, housing-related taxes, and purchase restrictions, allowing us to study market and policy information within the same institutional environment. We discuss in Section 5 how the attainability mechanism documented here extends beyond Singapore's specific institutional structure.

We implement the test through a randomized information experiment that organizes housing-related information along two dimensions: signal domain and signal direction. Respondents are randomly assigned to one of five groups. The first two treatments provide information about HDB resale price dynamics: rising HDB resale prices (T1) and slowing resale price growth (T2). The next two treatments provide information about housing-related policies: expanded housing subsidies for first-time buyers (T3) and higher property taxes for owner-occupied residential properties (T4). The control group receives no housing-related information. Within each domain, one treatment raises concerns about housing attainability and the other suggests some relief. This four-treatment design provides a structured comparison of how respondents update when market or policy information makes housing appear less attainable and when it points to more moderate cost conditions. It also allows us to examine whether these responses vary across children from different social positions.

Our main result is that housing-related information shifts beliefs about social mobility itself, and does so asymmetrically. Information about rising house prices and higher property taxes lowers perceived upward mobility for children from low-social-position families by about 0.10 rungs on a five-rung mobility ladder. This effect is equivalent to roughly 12 percent of the baseline gap in perceived mobility between children from low- and high-social-position families and 14 percent of the standard deviation of post-treatment beliefs for the low-position group. Neither slower house-price growth nor expanded housing subsidies produces a corresponding increase in perceived mobility for this group. None of the treatments significantly affects beliefs about children born at the top of the social distribution. Post-treatment beliefs also move measurably closer to administrative benchmarks

[1]HDB flats are public housing units developed by Singapore's Housing & Development Board and sold on long leases to eligible households. Access to HDB housing is shaped by eligibility rules, purchase restrictions, housing grants, financing conditions, minimum occupancy requirements, and resale regulations. After satisfying the minimum occupancy period, owners may sell their flats in a regulated resale market. Resale prices are market-determined transaction prices for existing HDB units and are distinct from the subsidized prices of newly built flats sold directly by the government.

of realized intergenerational mobility, providing additional evidence that respondents relate the information treatments to economically meaningful mobility assessments. These results reveal an asymmetric and distribution-specific response: heightened housing-cost signals lower perceived upward mobility from the bottom, partial-relief signals generate little offsetting optimism, and beliefs about persistence at the top remain largely unchanged.

A broader set of revisions in housing-market and macroeconomic expectations helps assess whether the mobility effects reflect a generalized change in economic sentiment. The experiment provides suggestive evidence on this alternative, although it does not fully separate the two accounts. Information about rising HDB resale prices (T1) raises expected future house-price growth and expected inflation while reducing trust in the government's ability to increase social mobility. Information about higher property taxes (T4) also lowers trust in the government to increase social mobility, although it produces a different pattern of macroeconomic updating. Despite these differences, T1 and T4 generate similar declines in perceived mobility from the bottom. Their common effect is therefore more consistent with a shared inference about housing attainability or the institutional support for opportunity than with a single shift in macroeconomic pessimism.

Signals pointing to more moderate housing-cost conditions generate weaker and more outcome-specific responses. T2 lowers expected future house-price growth, while its effects on inflation, aggregate growth, and government trust are limited or statistically indistinguishable from zero. T3 likewise produces no broad-based revision across the macroeconomic and institutional measures. Despite these more contained macroeconomic footprints, neither T2 nor T3 raises perceived upward mobility from the bottom. Together, these results indicate that partial-relief signals do not translate mechanically into generalized optimism or more favorable mobility beliefs.

We interpret this pattern using a reference-dependent model in the spirit of Kőszegi and Rabin (2006). Respondents evaluate perceived housing access relative to an attainability benchmark. This benchmark captures the resources and institutional conditions, including confidence that policy will preserve access to opportunity, that respondents associate with upward mobility. Housing-related information changes the perceived distance between a child's starting resources and this benchmark. A negative signal lowers perceived mobility when it increases the shortfall in access, while a positive signal has a limited effect when it eases conditions without making advancement appear attainable. The model's first prediction is that belief revisions are larger for adverse signals that worsen perceived access than for signals that provide partial relief. A second comparative static predicts greater sensitivity when information places perceived access near the boundary between attainable and unattainable advancement. The treatment contrasts test the first prediction directly. Rising house prices and higher property taxes make

housing-based advancement appear less attainable and lower perceived mobility from the bottom, while the corresponding relief signals produce no comparable increase. The absence of similar updating for children from high-social-position families further suggests that housing attainability is most consequential when respondents evaluate upward mobility from the bottom.

We provide additional evidence for this interpretation through heterogeneity in belief updating. Respondents who believe that family wealth or social connections matter for mobility become more pessimistic about upward mobility from the bottom and more likely to expect persistence at the top. Low-income and illiquid respondents also react more negatively to adverse housing signals. These groups are more likely to view housing access as a consequential constraint on advancement and to attach greater weight to changes in its effective cost. Respondents who place themselves near the bottom of the social distribution show the largest revisions, consistent with stronger responses when the social position being evaluated resembles their own economic circumstances. These patterns do not directly measure each respondent's distance from the latent attainability benchmark. They instead provide complementary evidence that the strength of belief updating depends on how strongly respondents associate housing access with the feasibility of advancement.

Our findings identify a belief-based dimension of housing markets that extends the analysis beyond realized outcomes. A large literature documents how housing prices and housing policies shape wealth accumulation, consumption, credit access, and residential sorting through housing wealth effects, collateral constraints, and location choice (Sodini et al. 2023). A separate literature studies beliefs about social mobility, inequality, and fairness and shows that these beliefs affect how individuals evaluate inequality, public policy, and redistribution (Benabou and Ok 2001; Cruces et al. 2013). Our results link these perspectives by showing that housing-market conditions and housing policies also shape beliefs about social mobility itself.

Conceptually, this belief channel complements the realized-outcome channels emphasized in standard models. Canonical frameworks of housing markets and social mobility focus on affordability constraints, borrowing limits, residential choice, and human capital accumulation (Becker and Tomes 1979; Benabou 1996). In these frameworks, housing prices and policy incentives affect opportunity mainly by changing the constraints households face. Our results identify an additional channel in which housing-related information changes how households perceive the opportunity structure. Higher housing costs lower perceived upward mobility from the bottom, while information pointing to more moderate cost conditions generates little corresponding increase. This asymmetry suggests that housing markets shape opportunity through both material constraints and perceived attainability.

Related Literature. This paper contributes to several strands of literature. First, we relate to research on house-price expectations and their economic effects. A large body of work shows that beliefs about future house prices shape individual behavior, including homeownership decisions (Bailey et al. 2018; Ben-David et al. 2019; Bottan and Perez-Truglia 2025), mortgage choice (Bailey et al. 2019; De Stefani 2021), housing investment (Armona et al. 2019), and consumption (Lambertini et al. 2013; Qian 2023; Chopra et al. 2025). Using a randomized information experiment, Chopra et al. (2025) show that higher expected long-run house-price growth has sharply asymmetric effects across tenure status, with renters reducing consumption substantially while homeowners' spending is largely inelastic. We extend this literature to beliefs about long-run economic opportunity. Our contribution is to show that housing-market and policy signals shape beliefs about the attainability of upward mobility. Housing-related information therefore conveys information beyond future asset returns by affecting whether advancement appears within reach for those starting from the bottom of the social distribution.

Second, this paper relates to a growing literature on how economic information shapes household beliefs. A key insight from this work is that belief formation responds to the way economic signals are framed, presented, and attended to, even when realized economic conditions are held fixed (Coibion et al. 2022; D'Acunto et al. 2021). Agarwal et al. (2022) show that providing Singaporean households with price information about higher-quality goods raises inflation expectations, illustrating how informational content can shift beliefs while underlying fundamentals remain unchanged. Recent work applies these insights to housing and policy environments. Kuang et al. (2026) show that information about borrower-based macroprudential policies causally shifts housing-market expectations and affordability perceptions, while Ahn et al. (2024) document that housing exposure shapes how households process monetary policy information. We build on this literature by showing that housing prices and policies also function as signals about long-horizon opportunity, extending the existing focus on near-term prices and policy conditions.

Third, we contribute to the literature on beliefs about social mobility and fairness. A large body of work uses surveys and experimental methods to study perceptions of inequality, mobility, and support for redistribution (Cruces et al. 2013; Karadja et al. 2017; Alesina et al. 2018; Hvidberg et al. 2023; Fisman et al. 2022; Moore et al. 2025; Chinoy et al. 2026). Karadja et al. (2017) find that relative income positions shape redistributive preferences, while Alesina et al. (2018) document systematic biases in beliefs about intergenerational mobility and show that more pessimistic mobility perceptions increase support for redistribution. Chinoy et al. (2026) show that people who experience greater upward intergenerational mobility tend to hold less zero-sum worldviews. A related strand emphasizes perceived benchmarks in the formation of fairness and re-

distribution beliefs. Fisman et al. (2022) demonstrate that perceived benchmarks shape redistributive behavior in controlled experiments, and Alesina et al. (2023) show that perceived relative income positions within relevant reference groups influence fairness views and policy attitudes. We add to this literature by showing that housing-market and policy information shifts beliefs about social mobility in a manner consistent with reference-dependent assessments of whether advancement remains attainable.

The remainder of the paper proceeds as follows. Section 2 develops the motivation, institutional setting, experimental design, and data. Section 3 presents the main results on how housing-market signals shape expectations of social mobility and related beliefs. Section 4 examines the underlying mechanism through an attainability-benchmark framework. Section 5 evaluates alternative explanations and discusses policy implications. Section 6 concludes.

2 Research Design and Data

This section develops the motivation, institutional context, experimental design, and data. We begin by explaining why housing affordability is relevant for beliefs about economic opportunity, then describe Singapore's housing institutions, the survey experiment, and the empirical measures used in the analysis.

2.1 Housing Affordability and Economic Opportunity

Housing has become an increasingly visible source of concern about economic opportunity around the world. Its importance extends well beyond the consumption value of shelter. For many households, housing provides stability, access to neighborhoods and local opportunities, and a principal means of accumulating and transferring wealth across generations (Sodini et al. 2023; Becker and Tomes 1979; Chetty et al. 2016; Chetty and Hendren 2018). Homeownership can therefore represent not only the acquisition of an asset, but also the attainment of a widely recognized milestone of economic security and progress.

Yet this milestone has become increasingly difficult to reach. UN-Habitat describes housing affordability as a global crisis and reports that housing is less affordable today than two decades ago, with house prices rising faster than incomes in many parts of the world. Online Appendix Figure A.1 reports house-price-to-income ratios from the *World Cities Report 2026*. The ratio measures the price of a median home as a multiple of median annual household income, providing a direct measure of the income threshold associated with homeownership. Globally, the ratio increased from 9.3 in 2010 to 11.2 in 2023, an

increase of 20.4 percent. These pressures fall disproportionately on households with fewer resources and on younger generations attempting to enter the housing market (United Nations Human Settlements Programme (UN-Habitat) 2026). The United States provides a particularly familiar illustration of this tension. Homeownership remains closely associated with the American Dream and continues to be strongly desired, yet perceptions of whether it is attainable have deteriorated sharply (Goodman and Mayer 2018) Fannie Mae (2024) documents that 95 percent of respondents said they would prefer to own rather than rent if they could afford either option, underscoring the enduring appeal of homeownership. Yet only 19 percent considered it a good time to buy a home, down sharply from 62 percent in 2018, revealing a growing disconnect between the aspiration to own and the perceived feasibility of achieving it.

This growing gap between aspiration and attainability motivates our analysis. When a widely valued marker of economic progress becomes increasingly difficult to reach, particularly for households starting with fewer resources, housing conditions may convey information about more than the cost of shelter. They may also signal how open the broader opportunity structure is. Rising prices, higher ownership costs, or changes in housing policy can alter the perceived resources required to achieve economic security, accumulate assets, and access opportunity. Individuals may therefore interpret housing-market conditions as signals about whether advancement remains realistically within reach.

2.2 Institutional Background: Housing Markets in Singapore

We begin with a brief overview of Singapore's housing system. The institutional structure is important because Singapore's public housing market combines broad household participation with highly visible prices, eligibility rules, and policy interventions. While Singapore has both public and private housing markets, public housing dominates the homeownership landscape and provides the main institutional context for our study. Administered by the Housing & Development Board (HDB), public flats house roughly 80 percent of Singapore's resident population, and the vast majority of HDB households own their flats. Public housing is therefore the primary housing asset for most Singaporean households. As a result, changes in HDB prices and housing policy are highly visible and are often interpreted as signals about access to economic opportunity.

Within this framework, access to newly built public housing (primary market) is tightly regulated. Eligibility depends on citizenship, family structure, income, and prior property ownership. Applicants also typically face waiting times before newly built units become available. Households above specified income ceilings are ineligible to purchase new public housing, while new units are sold at government-determined subsidized prices

and subject to resale restrictions during a minimum occupation period. These features channel many households toward the secondary market, namely the HDB resale market.

The HDB resale market differs from the new-flat market in two important ways. First, resale prices are negotiated between buyers and sellers rather than set directly by the government. Second, eligibility conditions are broader than in the new-flat market, and resale purchases are generally not subject to the same income ceilings that apply to new public housing. Resale prices therefore provide a visible market signal of housing demand, credit conditions, and policy expectations. They are also a key price measure households observe when assessing wealth accumulation, access, and economic opportunity. For this reason, our experimental treatments focus on HDB resale prices and resale-related housing policies.

Government policy also shapes housing access in the resale market through subsidies that lower the effective purchase price for eligible buyers. Particularly, first-time buyers may qualify for substantial, means-tested housing grants administered through the Central Provident Fund (CPF), Singapore's mandatory individual savings system. In the housing context, CPF serves as the administrative channel through which these grants are credited to eligible buyers and used to offset the purchase price. For example, the Enhanced CPF Housing Grant provides income-linked subsidies that vary discretely with household earnings and can represent a large share of annual income. Because these subsidies directly reduce the upfront resources needed to purchase a flat, changes in grant policy provide a clear and highly visible signal about housing affordability and access.

Housing policy further affects housing costs through property taxation. Owner-occupied residential properties are subject to progressive property taxes based on Annual Value, which is assessed using estimated market rentals. Recent reforms have raised marginal tax rates, especially for higher-value properties. By increasing the recurring cost of homeownership for affected households, these taxes may shape how households perceive the cost of housing and the resources required to sustain homeownership.

Singapore is particularly well suited because housing access is governed by an active policy environment that generates salient variation in the resources required to obtain and retain a home. Households observe changes in HDB resale prices alongside changes in housing grants, eligibility rules, and property taxes; these policies directly alter effective purchase costs, access, and ownership costs. The experiment therefore varies information about policy-relevant housing conditions that respondents already encounter in everyday economic decisions. Because the signals are observed within a common institutional framework, the design can test whether information about changing housing constraints shifts beliefs about economic opportunity, rather than merely capturing differences in national institutions or general attitudes toward inequality.

Public housing is central to homeownership, while resale prices, eligibility thresholds, subsidies, and property taxes provide visible signals about access and costs. This institutional setting allows us to examine how information about housing price movements and housing-related policies affects beliefs about economic opportunity.

2.3 Experiment Set-Up

Building on recent work using survey-based information experiments (Haaland et al. 2023), we field a single-wave online survey experiment to study how housing-market information and policy framing shape beliefs about social mobility and related expectations in Singapore. The target population consists of adult Singapore residents, restricted to Singapore Citizens and Permanent Residents aged 21 and above. Respondents are recruited through Rakuten Insight, a large commercial survey platform widely used for academic and market research in Asia.

Rakuten Insight is a commercial survey platform that maintains a large online panel of Singapore residents and supports quota-based sampling along key demographic dimensions. Respondents who opt into the study complete eligibility screens, and sampling quotas are imposed so that the recruited sample closely matches national population distributions by gender, age, income, marital status, race, and homeownership status. Respondents receive compensation only upon completing the full questionnaire, in the form of Rakuten reward points that can be redeemed for gifts or vouchers through the platform. The survey was conducted over a two-month window from October to November 2025 and recruited a total of 3,160 participants.

To ensure data quality and internal consistency, we apply a set of standard data-cleaning procedures following previous literature (Chopra et al. 2025; Coibion et al. 2022). First, we exclude respondents with total interview times below 280 seconds, corresponding to the bottom 1 percent of the completion-time distribution, as these responses likely reflect insufficient attention to survey instructions and information screens. Second, we drop observations with internally inconsistent housing reports, specifically cases in which respondents indicate living in owner-occupied housing while reporting ownership of no properties. Third, we trim extreme outliers in reported past housing price beliefs by excluding respondents who report annual price changes of 60 percent or more. Finally, for the policy-treatment arms, where respondents answer comprehension checks about the policy information, we exclude those who did not pass these checks. Together, these restrictions help improve data quality and reduce the influence of inattentive, inconsistent, or implausible responses. After applying these restrictions, the final analysis sample consists of 2,299 respondents, corresponding to 73 percent of the recruited sample.[2]

[2]We conduct a robustness check using an alternative, less restrictive sample construction to verify that

The survey follows a three-stage structure. Respondents first report baseline beliefs prior to any information exposure. They are then randomly assigned either to one of the information treatments, which provide housing price or housing policy signals, or to a pure control group that receives no information. Finally, respondents report post-treatment beliefs, which constitute the main outcomes of interest.

2.3.1 Elicitation of Prior Beliefs

Before any information is shown, we elicit a comprehensive set of baseline expectations. These priors capture beliefs about social mobility at both the individual and societal levels, as well as the broader macroeconomic and housing context in which mobility assessments are formed. Specifically, we measure (i) perceived mobility prospects for one's own household, (ii) perceived mobility for children from low and high social-position families, and (iii) expectations about housing prices, macroeconomic conditions, and government performance that may co-move with mobility beliefs.

Social mobility beliefs are elicited using a set of social position ladder tasks following Alesina et al. (2018). Figure A.2 in the Online Appendix provides an illustration of these tasks. For perceived individual upward mobility, the ladder consists of ten rungs, where rung 1 represents households that are worst off in Singapore and rung 10 represents those that are best off. Respondents first place their own household on the ladder based on its current position and then indicate where they expect their household to be ten years in the future. This task provides a simple and intuitive measure of perceived individual upward mobility over time.

Intergenerational mobility is captured through a related allocation task. Respondents are shown a five-rung social ladder and asked to consider 100 children born today to families in the bottom twenty percent of the current social distribution. They allocate these children across the five rungs according to where they expect them to be as adults, with allocations required to sum to 100. The same exercise is then repeated for 100 children born to families in the top twenty percent of the social distribution. The resulting allocations generate full destination distributions that summarize expected upward mobility from the bottom of the social distribution and persistence or downward mobility from the top. These measures constitute the primary outcomes in our analysis.

Beyond mobility beliefs, we collect baseline expectations that characterize the broader economic and housing environment. Respondents report perceived changes in HDB resale prices in recent years and state expectations for house price changes over the next twelve months using a probability-bin elicitation that sums to 100. We additionally collect

our main results are not driven by sample restrictions. Specifically, we apply only two restrictions. First, we drop respondents who provide internally inconsistent housing tenure/ownership reports. Second, we exclude interviews with very short completion times.

one-year-ahead expectations for aggregate economic growth and inflation, and measure baseline trust in the Singapore government to do what is right to enhance social mobility on a 1-5 scale.

2.3.2 Treatment

Following the elicitation of baseline beliefs, respondents are randomly assigned either to one of the information treatments or to a pure control group that receives no housing-related information. Random assignment generates exogenous variation in exposure to housing-related signals, allowing us to estimate their effects on post-treatment beliefs. The intervention varies information along two dimensions central to housing costs in Singapore: market conditions and government policy.

The four treatments map these two dimensions into specific housing-related signals. The first pair provides information about HDB resale price dynamics, while the second pair provides information about housing-related government policies. As discussed earlier, the resale market is central to Singapore's housing system and provides highly visible information about housing costs, access, and asset accumulation. Across all treatments, the information is drawn from official sources and presented using factual descriptions and statistics.

Housing Price Treatments. We begin with two treatments that provide information about recent housing price developments. Treatment 1 (T1) highlights a sustained increase in housing prices in recent years, while Treatment 2 (T2) emphasizes a deceleration in housing price growth. Figure 1 displays the housing price information shown to respondents in each treatment.

<Insert Figure 1 Here>

In T1, respondents see Panel (a) of Figure 1, which shows that the HDB Resale Price Index has increased markedly over time. Rising housing prices provide a market signal of heightened housing costs and tighter access to a key asset associated with economic advancement. In the context of social mobility, such price increases may be interpreted as raising barriers to entry and weakening pathways to asset accumulation. This treatment allows us to examine how housing-market signals associated with rising housing costs affect beliefs about upward social mobility, especially for children from low social-position families, and whether beliefs about children from high social-position families respond in a similar way.

T2 presents the corresponding moderation signal. Respondents see Panel (b) of Figure 1, which emphasizes that housing price growth has slowed. A deceleration in price

growth may signal some moderation in housing-market pressures. At the same time, when price levels remain elevated, slower growth need not imply a meaningful expansion of access to housing. This treatment allows us to examine whether signals pointing to more moderate housing cost conditions raise perceived upward mobility, or whether belief updating remains asymmetric across housing-market developments.

Housing Policy Treatments. The remaining two treatments shift attention from market outcomes to government interventions in the housing market. Treatment 3 (T3) highlights an expansion of government support for first-time homebuyers, while Treatment 4 (T4) presents an increase in housing-related taxes. Figure 2 displays the information shown to respondents in these treatments.

<Insert Figure 2 Here>

In T3, respondents see Panel (a) of Figure 2, which provides information about an expansion of housing subsidies for first-time buyers. Specifically, respondents are informed that the maximum Enhanced CPF Housing Grant has increased from S$80,000 to S$120,000, and that total grants available to eligible first-time buyers can now reach up to S$230,000. Expanded housing subsidies represent a policy signal intended to ease access to homeownership and reduce housing costs for eligible households. This treatment allows us to assess whether information about policy support is interpreted as expanding economic opportunity and improving prospects for upward mobility, or whether such support is perceived as insufficient to alter underlying mobility beliefs.

T4 presents a housing-cost policy signal. Respondents see Panel (b) of Figure 2, which provides information about increases in owner-occupied property taxes from 2024 onward, with larger increases applying to higher-value residential properties. The information includes an example of a home with an annual value of S$100,000, for which annual property tax payable increased from S$8,730 to S$11,980. It also reports that the highest marginal tax rate on owner-occupied residential properties increased from 23 percent to 32 percent. Although Singapore's owner-occupied property tax is progressive, the information shown to respondents emphasizes the upward revision in tax rates and the higher recurring fiscal cost associated with homeownership, especially for higher-value homes. The treatment therefore captures a policy-induced housing-cost signal, distinct from the market-based price signal in T1, and tests whether respondents interpret higher recurring ownership costs as informative about the attainability of social mobility.

2.3.3 Post-Treatment Beliefs

After the information is shown, we elicit respondents' post-treatment expectations using a format that closely parallels the baseline. To reduce consistency pressures and

direct anchoring to baseline responses, we vary the phrasing and response scale of several questions while keeping the underlying constructs comparable. Expectations about housing prices, inflation, and macroeconomic conditions are collected as point forecasts rather than probability distributions. Social mobility beliefs are measured using the same ladder framework as in the baseline, but respondents allocate outcomes for 300 children rather than 100. Because expected-rung measures are constructed from allocation shares, post-treatment responses remain directly comparable to baseline measures. This design captures belief updating rather than repetition of previously stated values.

2.4 Data

We now turn to our data. Table 1 reports summary statistics for the final analysis sample of 2,299 respondents. The table summarizes demographic characteristics, socioeconomic status, and subjective expectations elicited before and after information exposure.

<Insert Table 1 Here>

The sample is broadly distributed across age, household structure, income, and education. Table 1 reports the main demographic and socioeconomic variables used in the analysis, including age, household size, gender, marital status, household income, education, parental education, employment status, housing type, and birthplace. Household size is measured as the number of other household members living with the respondent, excluding the respondent. Income is elicited in categories and recoded using category midpoints. Education, parental education, employment, private housing, and Singapore-born status are coded as indicator variables. The sample contains substantial variation in economic resources and family background, both of which are central to beliefs about mobility. Consistent with Singapore's housing structure, most respondents live in public housing, while a smaller share reside in private housing.

Table 1 further documents respondents' baseline expectations prior to receiving any information. Expectation variables include prior beliefs about housing prices, economic growth, inflation, government trust, perceived individual upward mobility, and intergenerational mobility. Housing price, economic growth, and inflation expectations are constructed as weighted averages from probability-bin responses. Government trust is measured on a 1-5 scale and has a mean of 3.44. On average, respondents expect housing prices to increase by about 4.4 percent over the next year. Baseline expectations for aggregate economic growth average around 2.0 percent, while expected inflation averages 3.9 percent. Mobility beliefs are summarized as expected-rung measures from ladder allocations. Individual mobility refers to respondents' expected own social position ten years in the future. Low social-position mobility and high social-position persistence refer to

expected-rung measures for children born to families in the bottom and top 20 percent of the social-position distribution, respectively.

Social Mobility Data. We first summarize respondents' intergenerational mobility beliefs using an expected-rung measure. For each respondent (i), we compute

$$ER_i = \sum_{r=1}^{5} r \cdot P_{ir}, \tag{1}$$

where P_{ir} is the share of children assigned by respondent (i) to rung (r), with shares summing to one. Higher values of ER_i indicate a higher expected social position.

We construct this measure separately for children born to families in the bottom 20 percent and top 20 percent of the social distribution. For children from low social-position families, a higher expected rung reflects greater perceived upward mobility. For children from high social-position families, it reflects stronger expected persistence at the top. Before information exposure, respondents place their own household at an average of 6.13 on the ten-rung social ladder. They expect children from bottom-20-percent families to reach an average rung of 2.86 on the five-rung ladder, compared with 3.71 for children from top-20-percent families.

Balance Test. We assess randomization balance by comparing observable characteristics across treatment and control groups. Appendix Table A.1 reports differences in means between each treatment arm and the control group for demographics, socioeconomic characteristics, and pre-treatment beliefs. The treatment groups are balanced on baseline social mobility beliefs. Prior expected rungs for children from low social-position families do not differ significantly across groups, with p-values ranging from 0.105 to 0.908. Expected rungs for children from high social-position families are similarly balanced, with p-values ranging from 0.173 to 0.720. Respondents' expectations about their own future social position are also balanced, with p-values ranging from 0.288 to 0.900.[3]

As descriptive motivation for the experimental analysis, Appendix Table A.2 reports pairwise correlations between mobility beliefs, housing expectations, macroeconomic expectations, and demographic characteristics. Expected house-price growth is negatively correlated with perceived individual mobility and perceived upward mobility from the bottom, but positively correlated with expected persistence at the top. Mobility-related trust in government displays the opposite pattern: it is positively correlated with perceived mobility from the bottom and negatively correlated with expected persistence at the top. These baseline relationships suggest that housing and institutional beliefs are closely linked to how respondents perceive opportunity across the social distribution. The

[3]Figures A.3 and A.4 provide additional balance checks using cumulative distribution functions (CDFs).

survey experiment turns this descriptive pattern into a causal test by randomly varying the housing-market and policy signals respondents observe.

3 Main Results

This section presents the main empirical results. We first estimate treatment effects on housing and macroeconomic expectations. We then turn to mobility beliefs, examining effects on perceived intergenerational mobility and, finally, respondents' beliefs about their own future social position.

3.1 Effects on Housing and Macroeconomic Expectations

We begin by analyzing treatment effects on respondents' expectations about the housing market and the macroeconomic environment. The outcomes are post-treatment expectations of housing price growth over the next 12 months, aggregate economic growth, inflation, and trust in government to promote social mobility. We estimate separate OLS regressions for each outcome, comparing each treatment group to the control group while controlling for demographic characteristics and baseline expectations. Specifically, we estimate:

$$Y_i^{\text{post}} = \alpha + \beta \, \text{Treat}_i + \gamma' X_i + \varepsilon_i, \tag{2}$$

where Y_i^{post} denotes respondent i's post-treatment expectation. Depending on the specification, Y_i^{post} corresponds to expected housing price growth over the next 12 months, expected aggregate economic growth, expected inflation, or trust in government. For each treatment arm, we restrict the sample to respondents assigned either to that treatment or to the control group. Treat_i is equal to one for respondents assigned to the treatment arm and zero for respondents assigned to the control group. X_i is a vector of control variables including demographic characteristics. The coefficient β captures the causal effect of the information treatment on post-treatment expectations.

<Insert Table 2 Here>

Table 2 reports the estimated treatment effects on post-information expectations. We begin by examining responses in expected housing price growth, reported in Columns (1)–(4). Exposure to information emphasizing rising housing prices (T1) increases expected price growth by 0.943 percentage points, statistically significant at the 1% level. Conversely, information highlighting slower housing price growth (T2) leads to a reduction in expected price growth of 1.420 percentage points, also statistically significant at

the 1% level. By contrast, information about housing subsidies (T3) and property taxes (T4) does not generate statistically significant changes in housing price expectations.

We next turn to expectations about broader macroeconomic growth, reported in Columns (5)–(8). Respondents exposed to rising housing price information (T1) revise expected economic growth upward by 0.462 percentage points, while those exposed to higher property tax information (T4) revise downward by 0.447 percentage points. Cooling housing price growth (T2) and subsidies (T3) do not lead to statistically significant changes in expected growth. This pattern suggests that heightened housing costs are the main signal that shifts perceived aggregate economic performance.

We then examine inflation expectations in Columns (9)–(12). Information about rising housing prices (T1) increases expected inflation by 0.411 percentage points, consistent with respondents interpreting price increases as reflecting broader inflationary pressures. In contrast, information about higher property taxes (T4) leads to a decline in expected inflation of 0.358 percentage points, statistically significant at the 10% level. Information about slower price growth and housing subsidies does not significantly affect inflation expectations.

Finally, we assess whether the treatments also affect institutional confidence. Columns (13)-(16) report treatment effects on trust in government. Exposure to rising housing price information reduces trust in government by 0.105 on a scale of 1 to 5. Information about higher property taxes reduces trust by 0.148 points, statistically significant at the 5% level. T2 and T3 show smaller and statistically insignificant effects. Notably, both the rising-price and property-tax treatments reduce trust, despite implying different revisions in macroeconomic expectations.

Overall, the treatments produce an asymmetric pattern of belief updating. Information associated with rising housing costs leads to broader revisions across several belief dimensions, whereas information pointing to more moderate housing cost conditions generates little adjustment beyond the targeted price belief. Rising-price information shifts expectations about future prices, inflation, and trust in government. Higher property taxes also reduce trust, despite producing different revisions in macroeconomic expectations. Thus, reductions in trust arise under both market-based and policy-based increases in housing costs, suggesting that respondents interpret both signals as informative about the institutional support for social mobility.

These cross-outcome results also help assess whether the mobility effects are simply a manifestation of generalized economic optimism or inflation expectations. The two treatments that reduce perceived upward mobility from the bottom, T1 and T4, do not generate the same macroeconomic revision: the rising-price treatment raises expected growth and inflation, whereas the property-tax treatment produces a different—and in

some dimensions opposite—pattern. A common optimism or inflation channel would therefore have difficulty explaining why these distinct macro responses yield the same mobility revision. Conversely, the treatments that provide more moderate housing-cost signals do not produce a corresponding increase in bottom mobility, even where they affect selected macro expectations. The treatment effects are thus not a mechanical spillover from a single macro outlook. We cannot exclude that macro beliefs or institutional confidence contribute at the margin, but the joint pattern is more consistent with respondents interpreting housing information in relation to the attainability of upward mobility than with a broad shift in economic sentiment.

3.2 Effects on Intergenerational Mobility Beliefs

Next, we estimate treatment effects on our main outcome of interest: beliefs about intergenerational mobility for children born into different positions in the social distribution. As described above, we summarize respondents' mobility beliefs using the expected-rung measure constructed from the five-rung social mobility ladder. We compute expected rungs separately for children born to families in the lowest 20 percent and in the highest 20 percent of the social distribution. The outcome is the post-treatment expected rung. We estimate treatment effects using the following specification:

$$ER_{ig}^{\text{post}} = \alpha + \beta \, \text{Treat}_i + \gamma' X_i + \varepsilon_{ig}, \tag{3}$$

where ER_{ig}^{post} denotes respondent i's post-treatment expected rung for children from origin group $g \in \{\text{low}, \text{high}\}$. For each treatment arm, we restrict the sample to respondents assigned either to that treatment or to the control group. Treat_i is equal to one for respondents assigned to the treatment arm and zero for respondents assigned to the control group. X_i is the same vector of covariates as before. The coefficient β thus captures the causal effect of the information treatment on intergenerational mobility beliefs.

Table 3 reports treatment effects on post-treatment beliefs about intergenerational mobility. We first focus on mobility beliefs for children born to low social-position families, reported in Columns (1)-(4). Exposure to information about rising housing prices (T1) lowers the expected rung by 0.101 relative to the control group, statistically significant at the 5% level. Exposure to information about higher property taxes (T4) produces a similar decline of 0.104 rungs, also statistically significant at the 5% level. These effects are economically meaningful: the T1 and T4 estimates amount to about 12 percent of the baseline perceived bottom-top gap and about 14 percent of the standard deviation of post-treatment perceived upward mobility for children from low social-position families. By contrast, information about slower housing price growth (T2) and housing subsidies (T3) does not produce statistically significant changes in perceived upward mobility for

this group, with point estimates close to zero.

<Insert Table 3 Here>

We then turn to mobility beliefs for children born to families at the top of the social distribution. Columns (5)–(8) report results for children from high social-position families. Across all four treatments, the estimated effects on expected persistence at the top are small in magnitude and statistically insignificant. Information about housing prices, housing subsidies, or property taxes therefore does not lead respondents to revise beliefs about mobility persistence at the top of the distribution.

To assess whether this asymmetry reflects broad shifts in beliefs rather than changes in mean outcomes alone, we next examine the full distribution of mobility beliefs. Figure 3 plots the pre- and post-treatment distributions of expected rungs for children from low social-position families, separately for each treatment arm. Figure 4 presents the corresponding distributions for children from high social-position families. In each panel, the pre-treatment distribution is overlaid with the post-treatment distribution for the same treatment arm.

The distributional patterns mirror the regression results. For children from low social-position families, belief updating is concentrated in the rising-price and property-tax treatments. Panels A and D of Figure 3 show that post-treatment beliefs shift left relative to pre-treatment beliefs, indicating lower perceived upward mobility after respondents receive information about rising HDB resale prices or higher property taxes. By contrast, the distributions for the slower-price-growth and expanded-subsidy treatments show little movement. These patterns suggest that adverse housing signals lower perceived upward mobility from the bottom, while signals pointing to more moderate housing costs generate limited offsetting optimism.

<Insert Figure 3 Here>

Figure 4 shows a different pattern for children from high social-position families. Across all treatment arms, the pre- and post-treatment distributions remain largely stable. This is consistent with the small and statistically insignificant treatment effects reported above, and suggests that housing-related information primarily changes beliefs about upward mobility from the bottom rather than beliefs about persistence at the top.

<Insert Figure 4 Here>

Across all treatment arms, expected rungs for children from low social-position families are lower than expected rungs for children from high social-position families. This

ordering is consistent with respondents' baseline views of intergenerational inequality and suggests that the elicited mobility beliefs capture a coherent underlying belief structure. Taken together, these descriptive distributional patterns mirror the regression results. Housing-related information shifts perceived mobility for children from the bottom of the social distribution, but leaves beliefs about children from the top largely unchanged. For low social-position families, pessimistic revisions are concentrated in the two treatments that emphasize higher housing costs: rising prices and higher recurring ownership costs.

Robustness. We further assess the robustness of our results in two ways. First, we verify that the findings are not driven by sample selection. We construct an alternative, less restrictive analysis sample that excludes only respondents with internally inconsistent housing reports and respondents with very short completion times, following standard approaches to screening inattentive responses (Alesina et al. 2023; Chopra et al. 2025). We then replicate the main analysis using this alternative sample. The results, reported in Online Appendix Table A.3, are similar to the baseline estimates, suggesting that our findings are not driven by the main sample restrictions. Second, we account for time-varying factors and events that may have occurred during the survey period. Following Alesina et al. (2023), we re-estimate the main specifications with week fixed effects. The results remain stable, as shown in Online Appendix Table A.4.

3.3 Effects on Respondents' Own Future Mobility

We also examine whether the information treatments affect respondents' perceptions of their own future social mobility. The outcome is respondents' post-treatment assessment of their own future social position, measured on the ten-rung social ladder.

Figure A.5 in the Online Appendix reports the corresponding distributions, and Table A.5 reports the regression estimates. Across all four treatments, the estimated effects are small in magnitude and statistically insignificant. Information about rising housing prices (T1), slower price growth (T2), housing subsidies (T3), and property taxes (T4) does not lead respondents to revise their self-assessed future social position.

This null effect helps clarify the scope of the main findings. Housing-related information shifts beliefs about intergenerational opportunity, especially perceived mobility from the bottom, but does not produce comparable revisions in respondents' average beliefs about their own future position. The treatment effects therefore appear to operate primarily through beliefs about the opportunity structure faced by children from different social origins, rather than through broad revisions in respondents' own expected mobility.

In sum, the results establish four empirical facts. First, respondents distinguish between market and policy signals: price information moves house-price expectations, while

policy information has weaker effects on price beliefs. Second, adverse housing-related signals, namely rising resale prices and higher property taxes, reduce trust in the government's ability to promote social mobility. Third, these same signals lower perceived upward mobility for children from low social-position families. Fourth, beliefs about children from high social-position families and respondents' own future social position remain largely unchanged.

4 Housing Access and Attainability Benchmarks

The results in Section 3 show that housing information affects mobility beliefs in an asymmetric and distribution-specific way. Signals that make housing access appear more difficult, namely rising resale prices and higher property taxes, reduce perceived upward mobility for children from low social-position families. By contrast, signals that point to partial relief, such as slower price growth or expanded subsidies, do not generate corresponding optimism. Beliefs about children from high social-position families remain largely unchanged.

Using a benchmark-based model of belief formation (Kőszegi and Rabin 2006), we interpret the results through an attainability-benchmark framework. The framework rests on the idea that respondents evaluate housing-related information relative to a perceived benchmark for feasible advancement. This benchmark reflects the resources and institutional conditions needed for housing to support upward mobility, including housing costs, living expenses, family resources, social connections, and confidence in policy support. Singapore's high rate of public-housing ownership strengthens this interpretation. Because more than 90 percent of HDB households own their flats, respondents may view access to homeownership as part of the benchmark for economic security and asset accumulation. Children from low social-position families are more likely to be perceived as facing uncertainty about whether they can reach this threshold, whereas children from high social-position families are more likely to be viewed as already above it. In settings with lower ownership rates, non-homeownership may reflect a wider range of factors, including tenure preferences, local housing-market structure, or weaker links between ownership and advancement. In Singapore, by contrast, housing signals are likely to shape mobility beliefs because they affect whether access to a key asset appears realistically within reach.

4.1 Perceived Channels Linking Housing and Social Mobility

Before laying out the mechanism, we first examine how respondents understand the relationship between housing and social mobility. Figure 5 summarizes the factors re-

spondents considered when forming views about social standing and upward mobility. Respondents evaluated five channels: home values, living costs, borrowing costs, government action, and overall economic conditions.

<Insert Figure 5 Here>

The figure shows that respondents place the greatest weight on living costs, borrowing costs, and overall economic conditions. These channels are closely related to the financial constraints that shape whether advancement is feasible. Home values and government action receive fewer top-end responses, suggesting that respondents do not view housing mainly as a direct source of upward mobility through capital gains or policy intervention alone. Instead, they interpret housing conditions as part of a broader resource environment that affects whether advancement is attainable.

This interpretation helps explain the asymmetric treatment effects. Adverse housing signals can reduce perceived mobility because they make the constraints surrounding advancement more prominent. Slower price growth or expanded subsidies may generate limited optimism if respondents view them as partial improvements that do not fundamentally relax the constraints facing lower-status families. The evidence therefore points to a benchmark-based interpretation: housing information matters for mobility beliefs because it changes whether housing access appears sufficient to support upward advancement.

4.2 An Attainability-Benchmark Framework

We formalize this intuition with a simple attainability-benchmark framework. The main idea is that respondents do not interpret housing information in isolation. Instead, they evaluate it relative to the level of housing-related access they believe is necessary for economic advancement to be feasible.[4] This benchmark is broader than the price of a flat. It captures the resources and conditions through which housing can support advancement, including access to homeownership, living costs, family resources, policy support, and support for children's development (Heckman and Mosso 2014). In this framework, housing signals reduce perceived mobility when they make access appear further below this benchmark. Signals that provide only partial relief may have limited effects if they do not make advancement appear realistically attainable.

Formally, let x_{ig0} denote respondent i's baseline perception of housing-related access to advancement for children from origin group $g \in \{\text{low}, \text{high}\}$. This term allows perceived

[4] Hvidberg et al. (2023) show that people evaluate economic outcomes relative to different reference groups. In our setting, housing information may similarly be evaluated against mobility-relevant benchmarks rather than only as aggregate market information.

access to differ by social origin. Children from high social-position families may be viewed as having greater baseline access because of family resources and housing wealth, while children from low social-position families may be viewed as starting with weaker access to these resources. After receiving housing signal s, the respondent updates perceived access by $\delta_{ig}(s)$, so posterior perceived access is

$$x_{igs} = x_{ig0} + \delta_{ig}(s). \tag{4}$$

Let r_i denote respondent i's attainability benchmark, defined as the level of access the respondent believes is required for advancement to be feasible. The respondent's posterior belief about social mobility for origin group g is then

$$y_{igs} = f(x_{igs} - r_i) = f(x_{ig0} + \delta_{ig}(s) - r_i), \tag{5}$$

where y_{igs} denotes the posterior social mobility expectation for children from origin group g. The key object is the gap $x_{igs} - r_i$. This gap captures whether perceived access for children from origin group g is sufficient relative to the benchmark required for advancement. When the gap is larger, advancement appears more attainable. When the gap is smaller or negative, respondents are more likely to view housing access as insufficient for advancement. Children from low social-position families are likely to be perceived as having lower baseline access, x_{ig0}, while children from high social-position families are likely to be perceived as starting closer to, or above, the benchmark. Respondents who believe that family wealth or social connections are important for social mobility are likely to have a higher benchmark, r_i.

Housing signals affect mobility beliefs by shifting perceived access. Rising resale prices and higher property taxes are likely to worsen perceived access, so $\delta_{ig}(T1) < 0$ and $\delta_{ig}(T4) < 0$. By contrast, slower price growth and expanded subsidies may be interpreted as limited improvements. These signals may ease pressure at the margin without changing the broader perception that housing remains difficult to access. Hence, $\delta_{ig}(T2)$ and $\delta_{ig}(T3)$ may be small or close to zero.

The model delivers three empirical predictions. First, signals that worsen perceived access should reduce perceived upward mobility, especially for children from low social-position families. These children are more likely to be viewed as starting below the resources needed for advancement. Second, signals that provide partial relief need not generate symmetric increases in mobility beliefs. Slower price growth or expanded subsidies may not raise perceived mobility if respondents believe that housing access remains below the level required for advancement. Third, treatment effects should be stronger among respondents who are closer to the attainability constraint. This can occur because they have lower baseline access x_{ig0}, a higher benchmark r_i, or a more negative

interpretation of the signal $\delta_{ig}(s)$.

The first two predictions correspond to the main treatment effects in Section 3. The third prediction motivates the heterogeneity analysis below.

4.3 Evidence from Heterogeneity

The framework implies that belief updating should be stronger among respondents for whom housing access is more likely to feel binding. We examine three sources of heterogeneity that map to the objects in the framework. First, beliefs that family wealth or social connections matter for mobility proxy for a more demanding benchmark, r_i. Second, income and liquidity proxy for baseline access, x_{ig0}. Third, perceived bottom status captures subjective proximity to the attainability constraint. These tests do not directly identify the latent benchmark, but they examine whether housing-related information generates stronger revisions among respondents who are more likely to view advancement as difficult to attain.

4.3.1 Heterogeneity by Mobility Benchmarks

We first examine heterogeneity in the benchmark r_i. In the framework above, r_i captures the level of resources respondents believe is required for upward mobility to be attainable. Respondents who believe that family wealth or social connections are important for mobility are likely to hold a more demanding benchmark, because they view advancement as requiring inherited resources and networks in addition to housing access. We therefore use these beliefs as proxies for variation in r_i. Both variables are measured on a five-point scale and converted into dummy indicators equal to one if the respondent rates the factor as 4 or 5.

<Insert Table 4 Here>

Building on the baseline specification in equation 3, we interact each treatment indicator with these benchmark proxies. Table 4 presents the results using beliefs about the importance of family wealth. The estimates show that respondents who view family wealth as important respond more negatively to housing-related information when assessing mobility from the bottom. For children from low social-position families, the interaction estimates are -0.185 rungs under rising housing prices (column 1, $p < 0.05$), -0.176 rungs under slower housing price growth (column 2, $p < 0.01$), and -0.145 rungs under subsidies (column 3, $p < 0.05$). The estimate under property taxes is also negative, though not statistically significant. These results suggest that respondents with a more

demanding mobility benchmark interpret housing-related information as weakening the prospects for advancement from the bottom.

The pattern reverses for children from high social-position families. Respondents who view family wealth as important revise expected persistence at the top upward more than other respondents by 0.184 rungs under T1 (column 5, $p < 0.05$), 0.178 rungs under T2 (column 6, $p < 0.05$), 0.253 rungs under T3 (column 7, $p < 0.01$), and 0.239 rungs under T4 (column 8, $p < 0.01$). Thus, the same benchmark belief predicts pessimism about advancement from the bottom and stronger perceived persistence at the top. This is consistent with the framework: when family wealth is viewed as central to mobility, housing-related information is interpreted through a more demanding standard of what is needed to move up.

We next use beliefs about social connections as a second proxy for a more demanding social mobility benchmark. Table 5 presents the results. The pattern is strongest for the policy-related signals. For children from low social-position families, respondents who view social connections as important revise expected mobility downward more than other respondents under subsidies and property taxes. The interaction estimates are -0.172 rungs under subsidies (column 3, $p < 0.05$) and -0.164 rungs under property taxes (column 4, $p < 0.05$). The estimates under the two housing-price signals are small and statistically insignificant.

<Insert Table 5 Here>

For children from high social-position families, the pattern runs in the opposite direction. Respondents who view social connections as important revise expected persistence at the top upward under the same policy-related signals. The interaction estimates are 0.197 rungs under subsidies (column 7, $p < 0.01$) and 0.204 rungs under property taxes (column 8, $p < 0.01$). Thus, respondents who view networks as central to mobility interpret policy information as lowering perceived advancement from the bottom while reinforcing perceived persistence at the top.

These results thus show that mobility beliefs depend on the standard respondents use to judge whether advancement is feasible. Respondents who view family background and networks as important appear to hold a more demanding view of what upward mobility requires. For these respondents, housing-related information is more likely to signal that children from low social-position families remain short of the resources needed to move up, while children from high social-position families remain protected by inherited resources, networks, and related advantages.

4.3.2 Heterogeneity by Housing Access

We next examine heterogeneity in baseline access. In the framework, respondents with greater financial resources are more likely to view housing access as attainable, while financially constrained respondents are more likely to view housing costs, living expenses, and borrowing constraints as barriers to advancement. We proxy for this component of access using income and liquidity. Higher-income and more liquid respondents are likely to perceive housing access as less binding. Lower-income and less liquid respondents are more likely to perceive housing-related constraints as limiting future advancement. The framework therefore predicts more negative belief updating among respondents with lower baseline access, and weaker or more positive responses among respondents with greater financial capacity.

This analysis uses respondents' own expected mobility rather than beliefs about children from low- or high-social-position families because income and liquidity are measured at the respondent level. This outcome is useful for testing the access channel because income and liquidity directly measure the respondent's own financial capacity, and therefore map naturally into the respondent-level analogue of baseline access.

To test this prediction, we augment the baseline regression with interactions between the treatment indicators and measures of financial capacity. Table A.6 presents heterogeneity by income. *High Income* is an indicator equal to one if the respondent's monthly household income is at least SGD 9,000. Low-income respondents revise their expected individual upward mobility downward under all four housing-related signals. The estimates are negative under rising housing prices, at -0.111 rungs (column 1), slower housing price growth, at -0.221 rungs (column 2, $p < 0.10$), subsidies, at -0.349 rungs (column 3, $p < 0.01$), and property taxes, at -0.316 rungs (column 4, $p < 0.05$). By contrast, high-income respondents revise their mobility expectations upward relative to low-income respondents. The interaction estimates are positive across all four treatments: 0.176 rungs under T1 (column 1), 0.430 rungs under T2 (column 2, $p < 0.01$), 0.585 rungs under T3 (column 3, $p < 0.01$), and 0.413 rungs under T4 (column 4, $p < 0.01$). These results suggest that income shapes whether housing-related information is interpreted as a constraint on one's own future advancement.[5]

Similarly, we test whether responses differ by liquidity. Table A.7 presents the liquidity heterogeneity results. *High Liquidity* is an indicator equal to one if the respondent reports being able to cover three months of expenses. Respondents with lower liquidity revise their expected individual upward mobility downward under all four treatments. Respondents with higher liquidity revise their mobility expectations upward relative to

[5]These heterogeneous results also help reconcile the average null effects on respondents' own future mobility in Section 3.3: the average effect may be masked by offsetting responses across respondents with different levels of baseline access.

low-liquidity respondents. The interaction estimates are positive and statistically significant under T1, at 0.665 rungs (column 1, $p < 0.01$), T2, at 0.477 rungs (column 2, $p < 0.05$), and T3, at 0.949 rungs (column 3, $p < 0.01$). The estimate under T4 is also positive, at 0.342 rungs, though not statistically significant.

The income and liquidity results support the access component of the framework. Respondents with lower income or weaker liquidity are more likely to view housing access as a binding constraint on future advancement, and therefore revise mobility beliefs more negatively after receiving housing-related information. Respondents with higher income or greater liquidity appear less exposed to this constraint and revise less negatively.

4.3.3 Heterogeneity by Attainability

The same housing signal may be interpreted differently depending on whether upward mobility already feels within reach. Respondents who perceive themselves as near the bottom are likely to evaluate housing information from a position where housing access already feels difficult to attain. In the model, this corresponds to a lower baseline perceived access x_{i0}, a higher perceived benchmark r_i, or both. For a given signal $\delta_i(s)$, either factor reduces the comparison term $x_{i0} + \delta_i(s) - r_i$, making the same information more likely to lower perceived mobility. The framework therefore predicts more negative treatment effects among respondents who perceive themselves as near the bottom, and weaker or more positive responses among respondents who do not.

<Insert Table 6 Here>

We next test this prediction by examining heterogeneity in respondents' perceived position in the social distribution. Table 6 shows that respondents who do not perceive themselves as near the bottom revise perceived individual mobility upward in response to all four treatments, with effects ranging from 0.488 to 0.738 rungs, statistically significant at the 1% level. In contrast, the interaction terms between bottom-status perception and each treatment are uniformly negative, ranging from -1.438 to -1.876 rungs ($p < 0.01$). The implied net effects for bottom-status respondents are negative across all treatments.

These results are consistent with the attainability-benchmark interpretation of opportunity. Respondents who perceive themselves as near the bottom are close to or below the benchmark at which housing access makes upward mobility feel attainable. For this group, housing information makes the constraint evident. Rising prices and higher property taxes reduce perceived access. Slower price growth and subsidies may not be perceived as improvements; instead, they may highlight that housing remains expensive or requires government intervention. By contrast, respondents who do not

perceive themselves as near the bottom evaluate the same information from a position of greater security. As a result, the same information can generate positive revisions among non-bottom respondents while generating negative revisions among those who perceive themselves near the bottom.

Overall, the heterogeneity results are consistent with the attainability-benchmark interpretation. Housing signals affect mobility beliefs through how respondents evaluate perceived housing access relative to the benchmark required for upward mobility to feel attainable. Respondents with more demanding structural benchmarks, lower material access, or greater subjective vulnerability are more likely to interpret housing information as evidence that the conditions required for housing access are harder to meet.

5 Discussion

This section further examines the mechanisms underlying the observed belief responses. We first show that several alternative explanations are difficult to reconcile with the empirical patterns we document. We then benchmark the elicited mobility beliefs against realized intergenerational mobility to assess whether they fall within an economically meaningful range. Thereafter, we discuss what these responses imply for how housing policies are designed, evaluated, and communicated.

5.1 Alternative Explanations

We consider three alternative channels that could, in principle, explain why housing-related information affects beliefs about opportunity: wealth effects, financial literacy, and general economic sentiment. These channels imply different mappings from housing-market information to mobility beliefs, and therefore generate distinct empirical predictions. Although each channel can explain some aspects of the data, none accounts for the full pattern of results, especially the asymmetric response to adverse versus favorable signals and the concentration of effects on perceived upward mobility from the bottom.

Wealth Effects. Housing-related information may affect mobility beliefs by changing how respondents perceive household wealth. Under this channel, rising house prices and expanded subsidies should increase perceived mobility by raising expected asset values or easing access to ownership. Conversely, slower price growth and higher property taxes should reduce perceived mobility by lowering expected housing wealth or increasing ownership costs. The response should also be strongest among households with greater housing exposure.

However, the evidence is difficult to reconcile with a pure wealth-effect interpretation.

First, belief updating is concentrated in perceived upward mobility for children from low social-position families, rather than in beliefs about persistence at the top, where housing-wealth effects should be more pronounced. Second, respondents with lower income or weaker liquidity revise mobility beliefs downward even when the information points to moderate housing costs, such as slower price growth or expanded subsidies. These patterns suggest that respondents are not simply translating housing information into changes in perceived household wealth. Instead, they appear to interpret housing signals through their implications for access, constraints, and the attainability of advancement from the bottom.

Financial Literacy and Information Processing. Another possibility is that the results reflect differences in financial literacy or information processing. To assess this channel, we examine whether treatment effects vary by respondents' education. More educated respondents may better understand the housing-market and policy information and therefore update differently. Table A.8 in the Online Appendix presents the corresponding education heterogeneity results. If education primarily captured stronger comprehension of the information, treatment effects among more educated respondents should move in the direction implied by the signal: lower perceived mobility after heightened housing cost signals and higher perceived mobility after moderate housing cost signals. The estimates instead point to a different pattern. More educated respondents revise perceived mobility from the bottom downward and expected persistence at the top upward. Hence, this pattern is more consistent with education capturing a more structural view of mobility barriers than with education capturing better comprehension of the treatment information alone.

General Economic Sentiment. A third possibility is that housing-related information changes general economic sentiment, which then spills over into social-mobility expectations. This mechanism would predict coordinated movement in expected growth, inflation, and related macro beliefs, followed by a broad shift in mobility expectations. The results do not show this pattern: the estimated effects on expected growth and inflation are statistically indistinguishable from zero, while the remaining macro estimates are neither uniform in sign nor common across treatment arms.

The macro outcomes provide a direct check on this alternative. The treatments do not produce a uniform shift in expected growth, inflation, or trust: some estimates are statistically indistinguishable from zero, while others move in different directions across treatment arms. This heterogeneity is difficult to reconcile with a single latent change in economic expectation. In particular, T1 and T4 both reduce perceived upward mobility from the bottom even though their effects on macroeconomic expectations differ, and the more moderate housing-cost signals do not generate offsetting mobility gains. The

absence of a common macro signature, together with the concentration of effects on bottom mobility rather than on all mobility outcomes, makes broad economic sentiment an incomplete account of the results. These patterns do not imply that macro beliefs are irrelevant; rather, they indicate that macro updating alone is insufficient to explain the mobility responses. The evidence is more consistent with respondents using housing information to assess whether advancement remains attainable relative to a perceived benchmark.

Taken together, these findings suggest that the treatment effects are unlikely to be driven primarily by perceived household wealth, differences in financial literacy, or broad shifts in economic sentiment. Instead, the evidence points to belief formation that depends on how housing market signals are interpreted relative to respondents' perceived attainability benchmarks.

5.2 Expected and Realized Social Mobility

The alternative-explanations tests above speak to why beliefs move, not to whether the resulting beliefs are themselves economically plausible. We turn to that question next, using an external calibration exercise that compares the elicited mobility distribution with realized intergenerational mobility. The exercise asks whether respondents' expectations resemble an economically meaningful administrative benchmark and whether this alignment changes between the first and second elicitation.

Our benchmark comes from Singapore's Ministry of Finance, which reports the adult-income-quintile distribution of children born between 1985 and 1989 whose fathers were in the bottom 20 percent of the earnings distribution (Ministry of Finance, Singapore 2026, Chart 17). The MOF data follow a low-origin cohort across the same five destination categories used in our survey. This correspondence makes the administrative distribution the closest available benchmark for respondents' expected allocation of children from low-social-position families.[6]

Let $\bar{p}_{tq}$ denote the pooled mean survey share assigned to destination rung q at elicitation $t \in \{1, 2\}$, and let m_q denote the corresponding share in the MOF distribution. We measure calibration using total-variation distance:

$$D_t^{\mathrm{TV}} = \frac{1}{2} \sum_{q=1}^{5} |\bar{p}_{tq} - m_q| \,.$$

A smaller value indicates that the expected mobility distribution is closer to the adminis-

[6]Realized adult outcomes are necessarily unavailable for the children described in the survey. The 1985–1989 cohort is the most recent cohort for which adult outcomes are observable and matches both the low-income origin group and the five destination categories used in the survey.

trative benchmark. Total-variation distance can also be interpreted as the minimum share that would need to be reallocated across destination rungs for the two distributions to coincide. We test the difference between elicitation rounds using a respondent-level paired bootstrap with 2,000 resamples. Each resample keeps a respondent's two allocations together and recomputes both pooled distributions, preserving the within-respondent structure of the data.

Figure A.7 reports the results. The pooled mean distribution at the second elicitation is closer to the MOF benchmark than the distribution at the first elicitation. Total-variation distance declines from 8.83 to 7.14 percentage points, a reduction of 1.69 points. The paired bootstrap yields a 95 percent confidence interval from -2.50 to -0.88, with $p < 0.001$. Aggregate beliefs at the second elicitation sit closer to the administrative distribution than beliefs at the first.

This exercise provides external calibration of the elicited beliefs. The comparison pools all experimental arms, the two allocation tasks use different denominators, and the distance is calculated from pooled distributions. The observed change may consequently reflect a combination of information effects, repeated elicitation, differences in response-grid granularity, and offsetting changes across respondents. We use Figure A.7 to establish that the aggregate beliefs lie near an observed mobility distribution. Causal claims about particular housing signals continue to rely on the randomized treatment-control comparisons in Section 3.

5.3 Policy Implications and External Validity

The asymmetric belief responses documented above have implications for how housing markets, housing cost pressures, and policy interventions are evaluated and communicated. Our results suggest that housing market conditions and housing-related policies shape beliefs about social mobility through how households interpret signals about economic opportunity. Housing-market and policy signals associated with rising housing cost pressures disproportionately depress perceived upward mobility at the bottom of the social distribution, while signals pointing to moderate housing costs generate little offsetting optimism. Consequently, policies intended to expand access or reduce housing costs may not translate into commensurate improvements in perceived opportunity, particularly among groups that view advancement as structurally constrained.

This asymmetry has important implications for the design and evaluation of housing policies. Governments often justify housing interventions, such as affordability measures, subsidies, or property taxation, in part by their expected effects on economic opportunity and fairness. The evidence here suggests that policy communication and framing may play an important role alongside policy content itself. When housing policies are expe-

rienced as losses or as signals of tighter constraints, they may undermine perceptions of opportunity even when they are intended to improve affordability. Conversely, policies that generate gradual or less visible gains may fail to shift beliefs if they do not reset perceived benchmarks or alter how households perceive access to homeownership.

Importantly, these belief responses are conceptually distinct from the real effects of housing policies on prices, quantities, or household balance sheets. Even when policies succeed in easing housing cost concerns or expanding access in equilibrium, households may continue to perceive opportunity as limited if policy interventions are interpreted as evidence of persistent structural barriers. Because perceived upward mobility is closely related to views about fairness (Alesina et al. 2023) and whether economic advancement is zero-sum (Chinoy et al. 2026), housing signals that make advancement appear less attainable may also weaken beliefs in fair opportunity. In this sense, belief responses matter independently of realized outcomes. Perceptions of mobility shape political attitudes, trust in institutions, and support for redistribution, and may influence long-run behavior through channels such as human capital investment, savings decisions, and residential choice. Evaluations that focus exclusively on realized affordability or ownership outcomes may therefore understate the broader social consequences of housing market developments and policy interventions.

These findings align with models of belief formation that emphasize benchmark salience. In such frameworks, negative deviations from salient benchmarks receive disproportionate weight, while comparable gains are discounted. Rising housing prices and housing-related taxes thus function as salient losses relative to perceived benchmarks anchored in attainability of opportunity and expected access to homeownership, particularly for households at the bottom of the social distribution. By contrast, improvements in housing conditions may be less salient or insufficient to reset these perceived benchmarks, yielding little upward revision in perceived mobility. From this perspective, housing markets influence beliefs about economic opportunity not through symmetric updating about fundamentals, but through asymmetric responses to perceived losses versus gains.

Finally, we clarify how the Singapore setting informs the scope and external validity of the findings. We acknowledge that Singapore is not intended to be representative of housing markets in general. Its centralized housing system, high homeownership rate, and strong government presence make housing prices and housing policies especially visible and closely tied to perceptions of economic opportunity. These institutional features allow us to study belief formation in a setting where housing-related information is widely observed and policy-relevant. At the same time, the mechanisms highlighted in this paper are not specific to Singapore. Benchmark-based asymmetries may arise more generally when individuals evaluate economic information relative to perceived thresholds of opportunity. In many advanced economies, housing prices, property taxes, and affordability

policies are widely discussed economic signals, even when housing systems are more decentralized.

To the extent that households interpret housing-market developments and policy interventions as signals about opportunity and constraint, similar asymmetric belief responses may arise elsewhere. What is likely to vary across contexts is not the mechanism itself, but the strength and clarity of the signal. Institutional features such as policy credibility, market transparency, homeownership prevalence, and the importance of housing in household balance sheets will shape how strongly housing information maps into beliefs about opportunity. Singapore therefore provides a useful setting for studying these mechanisms. Its institutional structure makes the housing-opportunity link especially clear, but the underlying belief channel is not confined to this context.

6 Conclusion

In sum, this paper provides direct evidence on how housing market signals and housing-related policies shape beliefs about social mobility. Using a survey experiment that exogenously varies information about house price changes, housing taxes, and housing subsidies, we elicit expectations about future mobility for individuals at the bottom and at the top of the social distribution. Three findings emerge. First, increases in house prices and housing-related taxes significantly reduce perceived upward mobility at the bottom of the social distribution, while leaving beliefs about mobility at the top largely unchanged. Second, signals pointing to moderate housing costs, such as slower house price growth and housing subsidies, do not raise perceived mobility at the bottom. Third, beliefs about mobility at the top appear largely insulated from both housing market developments and housing policy interventions. Together, these results show that housing cost pressures shape perceptions of economic opportunity in an asymmetric and distribution-specific manner, operating primarily through beliefs about constraints at the bottom rather than perceived advantages at the top.

More broadly, the findings highlight a belief-based channel through which housing markets influence perceptions of opportunity and fairness, beyond their direct effects on realized outcomes such as wealth accumulation or access to homeownership. Standard economic frameworks typically evaluate housing policies through their impacts on constraints, incentives, and distributional outcomes. The evidence here suggests that housing prices and housing-related policies also shape how households interpret the scope for advancement across the social distribution. When housing signals associated with rising housing cost pressures are salient and widely observed, they disproportionately depress optimism about upward mobility, while signals pointing to moderate housing costs fail

to restore confidence. Accounting for this belief-based channel may therefore be important for understanding the full societal consequences of housing market developments and housing policy interventions.

References

Agarwal, S., Chua, Y. H., and Song, C. (2022). Inflation expectations of households and the upgrading channel. *Journal of Monetary Economics*, 128:124–138.

Ahn, H. J., Xie, S., and Yang, C. (2024). Effects of monetary policy on household expectations: The role of homeownership. *Journal of Monetary Economics*, 147:103599.

Alesina, A., Miano, A., and Stantcheva, S. (2023). Immigration and redistribution. *The Review of Economic Studies*, 90(1):1–39.

Alesina, A., Stantcheva, S., and Teso, E. (2018). Intergenerational mobility and preferences for redistribution. *American Economic Review*, 108(2):521–554.

Armona, L., Fuster, A., and Zafar, B. (2019). Home price expectations and behaviour: Evidence from a randomized information experiment. *The Review of Economic Studies*, 86(4):1371–1410.

Bailey, M., Cao, R., Kuchler, T., and Stroebel, J. (2018). The economic effects of social networks: Evidence from the housing market. *Journal of Political Economy*, 126(6):2224–2276.

Bailey, M., Dávila, E., Kuchler, T., and Stroebel, J. (2019). House price beliefs and mortgage leverage choice. *The Review of Economic Studies*, 86(6):2403–2452.

Becker, G. S. and Tomes, N. (1979). An equilibrium theory of the distribution of income and intergenerational mobility. *Journal of Political Economy*, 87(6):1153–1189.

Ben-David, I., Towbin, P., and Weber, S. (2019). Inferring expectations from observables: Evidence from the housing market. Technical report, National Bureau of Economic Research.

Benabou, R. (1996). Inequality and growth. *NBER Macroeconomics Annual*, 11:11–74.

Benabou, R. and Ok, E. A. (2001). Social mobility and the demand for redistribution: the poum hypothesis. *The Quarterly Journal of Economics*, 116(2):447–487.

Bottan, N. and Perez-Truglia, R. (2025). Betting on the house: Subjective expectations and market choices. *American Economic Journal: Applied Economics*, 17(1):459–500.

Chen, K., Fang, H., and Tang, Y. (2024). Housing privatization as intergenerational redistribution. *Working Paper*.

Chetty, R. and Hendren, N. (2018). The impacts of neighborhoods on intergenerational mobility i: Childhood exposure effects. *The Quarterly Journal of Economics*, 133(3):1107–1162.

Chetty, R., Hendren, N., and Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the moving to opportunity experiment. *American Economic Review*, 106(4):855–902.

Chinoy, S., Nunn, N., Sequeira, S., and Stantcheva, S. (2026). Zero-sum thinking and the roots of us political differences. *American Economic Review*, 116(3):1052–1096.

Chopra, F., Roth, C., and Wohlfart, J. (2025). Home price expectations and spending: Evidence from a field experiment. *American Economic Review*, 115(7):2267–2305.

Coibion, O., Gorodnichenko, Y., and Weber, M. (2022). Monetary policy communications and their effects on household inflation expectations. *Journal of Political Economy*, 130(6):1537–1584.

Cruces, G., Perez-Truglia, R., and Tetaz, M. (2013). Biased perceptions of income distribution and preferences for redistribution: Evidence from a survey experiment. *Journal of Public Economics*, 98:100–112.

De Stefani, A. (2021). House price history, biased expectations, and credit cycles: The role of housing investors. *Real Estate Economics*, 49(4):1238–1266.

D'Acunto, F., Malmendier, U., Ospina, J., and Weber, M. (2021). Exposure to grocery prices and inflation expectations. *Journal of Political Economy*, 129(5):1615–1639.

Fannie Mae (2024). Mortgage understanding study: 2023 refresh. Today's Consumer and the Mortgage Process.

Fisman, R., Kuziemko, I., Charite, J., and Zhang, K. (2022). Reference points and redistributive preferences: experimental evidence. *Journal of Public Economics*.

Goodman, L. S. and Mayer, C. (2018). Homeownership and the american dream. *Journal of Economic Perspectives*, 32(1):31–58.

Haaland, I., Roth, C., and Wohlfart, J. (2023). Designing information provision experiments. *Journal of Economic Literature*, 61(1):3–40.

Heckman, J. J. and Mosso, S. (2014). The economics of human development and social mobility. *Annu. Rev. Econ.*, 6(1):689–733.

Hvidberg, K. B., Kreiner, C. T., and Stantcheva, S. (2023). Social positions and fairness views on inequality. *Review of Economic Studies*, 90(6):3083–3118.

Karadja, M., Mollerstrom, J., and Seim, D. (2017). Richer (and holier) than thou? the effect of relative income improvements on demand for redistribution. *Review of Economics and Statistics*, 99(2):201–212.

Kőszegi, B. and Rabin, M. (2006). A model of reference-dependent preferences. *The Quarterly Journal of Economics*, 121(4):1133–1165.

Kuang, P., Mitra, K., Tang, L., and Xie, S. (2026). Macroprudential policy and housing market expectations. *European Economic Review*, 181:105191.

Kuchler, T., Piazzesi, M., and Stroebel, J. (2023). Housing market expectations. In *Handbook of Economic Expectations*, pages 163–191. Elsevier.

Lambertini, L., Mendicino, C., and Punzi, M. T. (2013). Expectation-driven cycles in the housing market: Evidence from survey data. *Journal of Financial Stability*, 9(4):518–529.

Ministry of Finance, Singapore (2026). Income growth, inequality, and social mobility trends in singapore. Occasional paper, Ministry of Finance, Singapore.

Moore, D. A., Choudhari, R., and Wu, A. (2025). Does the prospect of upward mobility undermine support for redistribution? *Journal of Public Economics*, 248:105418.

Qian, W. (2023). House price expectations and household consumption. *Journal of Economic Dynamics and Control*, 151:104652.

Sodini, P., Van Nieuwerburgh, S., Vestman, R., and von Lilienfeld-Toal, U. (2023). Identifying the benefits from homeownership: A swedish experiment. *American Economic Review*, 113(12):3173–3212.

United Nations Human Settlements Programme (UN-Habitat) (2026). World cities report 2026: The global housing crisis: Pathways to action.

Tables and Figures

Table 1: Summary Statistics

Variable	N	Mean	SD	Min	Max
Panel (a): Demographics					
Age	2299	45.403	12.648	21	81
Household Size	2299	2.415	1.424	0	16
Female	2299	0.496	0.500	0	1
Marital Status	2299	0.679	0.467	0	1
Income	2299	8937.582	6138.055	0	22000
Education	2299	0.829	0.377	0	1
Father Education	2299	0.419	0.493	0	1
Mother Education	2299	0.294	0.456	0	1
Employed	2299	0.873	0.333	0	1
Private Housing	2299	0.216	0.412	0	1
Singapore Born	2299	0.828	0.377	0	1
Panel (b): Prior Expectations					
Housing Price	2299	4.354	3.666	-10	10
Economic Growth	2299	2.018	3.195	-10	10
Inflation	2299	3.873	3.305	-10	10
Trust	2299	3.440	0.896	1	5
Bottom Mobility	2299	2.858	0.726	1	5
Top Persistence	2299	3.713	0.781	1	5
Individual Mobility	2299	6.130	1.853	1	10

Notes: This table reports summary statistics for demographics and prior expectations. The sample includes 2,299 respondents. Demographic variables include age, household size, gender, marital status, household income, education, parental education, employment status, housing type, and birthplace. Expectation variables include prior expectations about housing prices, economic growth, inflation, trust in government, social mobility for top and bottom 20% children, and participants' perceived individual upward mobility. Household size is measured as the number of other household members living with the respondent, excluding the respondent. We recode survey responses into a set of indicator and continuous variables used as controls. Female is an indicator equal to 1 if the respondent reports being female and 0 if male. Marital Status equals 1 if the respondent reports being married and 0 otherwise. Income is elicited in categories and recoded as a continuous midpoint measure. Specifically, unemployed/no income is coded as 0; "Below 2,000" as 1,000; 2,000-3,999 as 3,000; 4,000-4,999 as 4,500; 5,000-6,999 as 6,000; 7,000-8,999 as 8,000; 9,000-10,999 as 10,000; 11,000-12,999 as 12,000; 13,000-14,999 as 14,000; 15,000-19,999 as 17,500; and 20,000 and above as 22,000. Education is coded into an indicator equal to 1 for respondents who report higher educational attainment (Polytechnic diploma or above) and 0 otherwise (primary, secondary, or junior college). Parental education is constructed analogously using father's and mother's highest education. Employed is an indicator equal to 1 for respondents who are employed (full-time, part-time, or self-employed) and 0 otherwise (unemployed, student, or not in the labor force). Private Housing equals 1 if the respondent lives in private housing and 0 otherwise. Finally, Singapore Born is an indicator equal to 1 if the respondent reports being born in Singapore and 0 otherwise. Prior expectations are constructed from baseline belief measures. Housing price, economic growth, and inflation expectations are constructed as weighted averages from probability-bin responses. Government trust is measured on a 1–5 scale and used as reported. Mobility beliefs are summarized as expected-rung measures from ladder allocations. Individual mobility refers to respondents' expected own social position ten years in the future. Top Persistence and Bottom Mobility refer to expected-rung measures for children born to families in the top and bottom 20% of the social position distribution, respectively.

Table 2: Treatment Effects on Macro Expectations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Housing Price Expectation				Economic Growth Expectation				Inflation Expectation				Trust Expectation			
T1	0.943***				0.462**				0.411**				-0.105*			
	(0.210)				(0.226)				(0.205)				(0.059)			
T2		-1.420***				-0.313				-0.299				0.069		
		(0.232)				(0.217)				(0.201)				(0.057)		
T3			0.327				0.081				0.239				0.036	
			(0.213)				(0.226)				(0.204)				(0.056)	
T4				-0.079				-0.447*				-0.358*				-0.148**
				(0.218)				(0.231)				(0.208)				(0.061)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	917	935	939	891	917	935	939	891	917	935	939	891	917	935	939	891
R^2	0.076	0.077	0.058	0.067	0.171	0.148	0.150	0.155	0.130	0.129	0.118	0.102	0.081	0.060	0.062	0.048

Notes: This table reports OLS estimates of the effects of housing-related information treatments on post-information macroeconomic expectations, including housing price growth, economic growth, inflation, and government trust. Columns (1)-(4) examine expectations about housing price growth, columns (5)-(8) examine expectations about economic growth, columns (9)-(12) examine expectations about inflation, and columns (13)-(16) examine expectations about government trust. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. All specifications include the same set of controls including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table 3: Treatment Effects on Intergenerational Social Mobility Expectations

	Low Social-Position				**High Social-Position**			
Dependent Variable:	Posterior Intergenerational Social Mobility Expectation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	-0.101**				0.007			
	(0.049)				(0.051)			
T2		-0.015				-0.009		
		(0.048)				(0.050)		
T3			-0.032				-0.027	
			(0.047)				(0.049)	
T4				-0.104**				-0.002
				(0.049)				(0.051)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	917	935	939	891	917	935	939	891
R^2	0.091	0.103	0.105	0.106	0.041	0.055	0.041	0.039

Notes: This table reports OLS estimates of the effects of housing-related information treatments on intergenerational mobility expectation for children born to families at the bottom and top 20% of the distribution. Columns (1)–(4) use mobility expectations for children from low social-position families as the dependent variable, while columns (5)–(8) use beliefs about persistence for children from high social-position families. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. All specifications include the same set of controls including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth conditions and trust. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table 4: Heterogeneous Effects on Intergenerational Social Mobility Expectations by Perceived Importance of Family Wealth

	Low Social-Position				**High Social-Position**			
Dependent Variable:	Posterior Intergenerational Social Mobility Expectation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	0.025				-0.119			
	(0.070)				(0.073)			
Family Wealth × T1	-0.185**				0.184**			
	(0.075)				(0.079)			
T2		0.097				-0.123*		
		(0.062)				(0.068)		
Family Wealth × T2		-0.176***				0.178**		
		(0.067)				(0.072)		
T3			0.064				-0.195***	
			(0.064)				(0.067)	
Family Wealth × T3			-0.145**				0.253***	
			(0.067)				(0.072)	
T4				-0.044				-0.162**
				(0.067)				(0.070)
Family Wealth × T4				-0.090				0.239***
				(0.072)				(0.075)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	917	935	939	891	917	935	939	891
R^2	0.097	0.109	0.109	0.107	0.046	0.061	0.053	0.049

Notes: This table reports OLS estimates of the heterogeneous effects of housing-related information treatments on intergenerational mobility expectations by beliefs about family wealth advantage. Columns (1)–(4) use mobility expectations for children from low social-position families as the dependent variable, while columns (5)–(8) use beliefs about persistence for children from high social-position families. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. Family Wealth is an indicator equal to one if the respondent rates family wealth & background as 4 or 5 on a five-point importance scale. All specifications include the same set of controls, including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth and government trust. Robust standard errors are reported in parentheses. *, **, *** denote significance at the 10%, 5%, and 1% levels.

Table 5: Heterogeneous Effects on Intergenerational Social Mobility Expectations by Perceived Importance of Social Connections

	Low Social-Position				**High Social-Position**			
Dependent Variable:	Posterior Intergenerational Social Mobility Expectation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	-0.062				-0.005			
	(0.071)				(0.073)			
Connection × T1	-0.055				0.016			
	(0.075)				(0.079)			
T2		0.067				-0.031		
		(0.068)				(0.072)		
Connection × T2		-0.117				0.031		
		(0.072)				(0.076)		
T3			0.090				-0.167**	
			(0.067)				(0.070)	
Connection × T3			-0.172**				0.197***	
			(0.070)				(0.074)	
T4				0.008				-0.140*
				(0.067)				(0.072)
Connection × T4				-0.164**				0.204***
				(0.073)				(0.077)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	917	935	939	891	917	935	939	891
R^2	0.091	0.105	0.110	0.110	0.041	0.055	0.048	0.046

Notes: This table reports OLS estimates of the heterogeneous effects of housing-related information treatments on intergenerational mobility expectations by beliefs about social connections. Columns (1)–(4) use mobility expectations for children from low social-position families as the dependent variable, while columns (5)–(8) use beliefs about persistence for children from high social-position families. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. Social connections are indicators equal to one if the respondent rates connections & networks as 4 or 5 on a five-point importance scale. All specifications include the same set of controls, including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth and government trust. Robust standard errors are reported in parentheses. *, **, *** denote significance at the 10%, 5%, and 1% levels.

Table 6: Treatment Effects on Perceived Individual Upward Mobility Expectations: Heterogeneity by Perceived Bottom Status

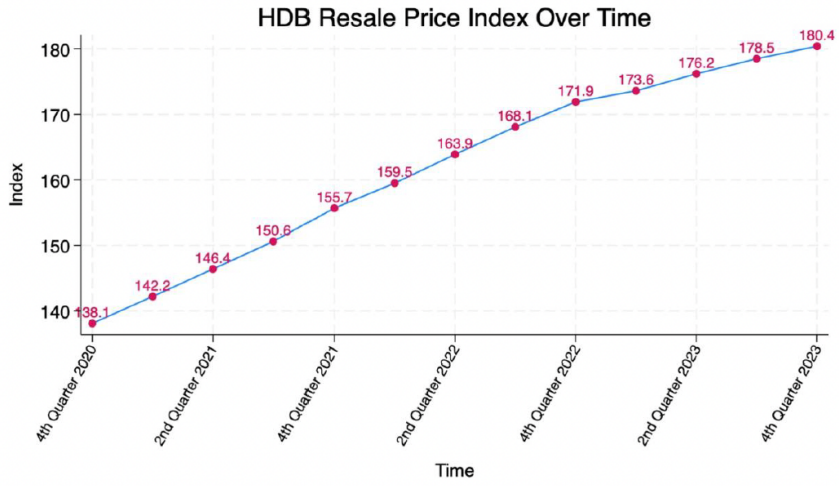
Dependent Variable:	**Posterior Individual Mobility Expectation**			
	(1)	(2)	(3)	(4)
T1	0.578***			
	(0.105)			
Bottom Status × T1	-1.451***			
	(0.138)			
T2		0.592***		
		(0.100)		
Bottom Status × T2		-1.480***		
		(0.137)		
T3			0.738***	
			(0.100)	
Bottom Status × T3			-1.876***	
			(0.145)	
T4				0.488***
				(0.103)
Bottom Status × T4				-1.438***
				(0.143)
Controls	Yes	Yes	Yes	Yes
N	917	935	939	891
R^2	0.331	0.327	0.358	0.372

Notes: This table reports OLS estimates of heterogeneous treatment effects on perceived individual upward mobility by self-perceived bottom status. The dependent variable is respondents' expected own social position ten years in the future. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. Self-perceived bottom status is an indicator equal to one if the respondent places their current position in the bottom 2 rungs of the social ladder. All specifications include the same set of controls, including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth and government trust. Robust standard errors are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Figure 1: Housing Price Information Treatments

(a) T1: Rising Housing Price

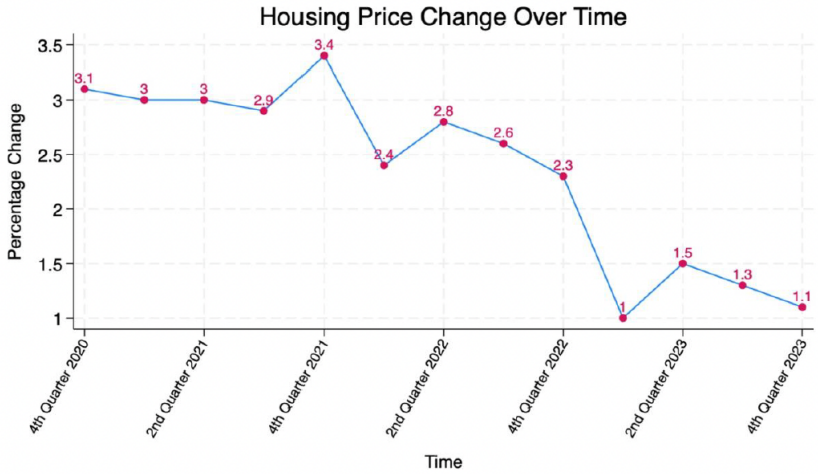
Over the past few years, HDB resale flat prices have risen steadily. The Resale Price Index (RPI), which tracks overall price movements in Singapore's public housing resale market, increased from **138.1** in the fourth quarter of 2020 to **180.4** in the fourth quarter of 2023, an overall rise of about **30%**.



Source: hdb.gov.sg; The RPI can be used to compare the overall price movements of HDB resale flats. It is calculated using resale transactions registered across towns, flat types, and models. The base period is the 1st quarter of 2009, i.e. RPI has a value of 100 in 1st Quarter 2009. For example, if the index increases from 100 to 110 in 1 year, that means that overall, HDB resale flat prices increased by about 10% over that year.

(b) T2: Cooling Housing Price Growth

Since 2020, the pace of resale flat price growth has slowed markedly. After peaking at **3.4%** in the fourth quarter of 2021, the growth rate fell to just **1.1%** by the fourth quarter of 2023, indicating a clear cooling of the market.



Source: hdb.gov.sg

Notes: This figure presents the information provided to respondents in the housing price treatments. Panel (a) displays the level of the HDB Resale Price Index, highlighting the cumulative increase in public housing resale prices since 2020. Panel (b) displays the quarterly growth rate of the same index, emphasizing the deceleration in price growth in recent years. All figures are based on official statistics from the Housing & Development Board in Singapore.

Figure 2: Housing Policy Information Treatments

(a) T3: Subsidy Treatment

The Enhanced CPF Housing Grant (EHG) is a government subsidy in Singapore that helps first-time home buyers afford an HDB flat. During the 2024 National Day Rally, it was announced that the Enhanced CPF Housing Grant (EHG) will be increased for eligible families purchasing HDB flats.

	Current	**Revised**
Enhanced CPF Housing Grant	Up to $80,000	Up to $120,000

With this change, the maximum total grant available to first-time families buying resale flats will rise to **$230,000**, comprising the EHG of up to $120,000, the CPF Housing Grant of up to $80,000, and the Proximity Housing Grant of up to $30,000.

Source: hdb.gov.sg

(b) T4: Tax Treatment

Property tax for owner-occupied residential properties applies to condominiums, HDB flats, and other homes where the owner lives in ("occupies") the property. From January 2024, property tax rates have been revised upwards for most residential properties.

	Current	**Revised**
Property Tax Rates	Up to 23%	Up to 32%

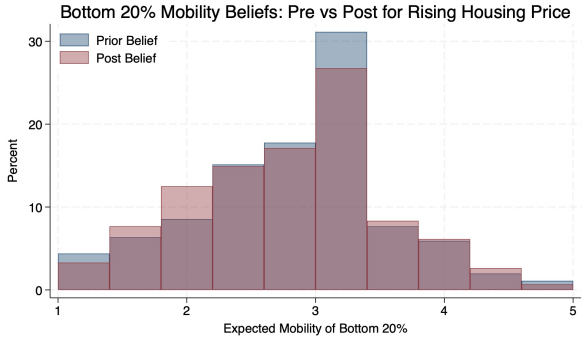
For example, for an owner-occupied property with an annual value (AV) of $100,000, the **property tax payable will increase from $8,730 to $11,980.**

*The AV of buildings is the estimated gross annual rent of the property if it were to be rented out, excluding furniture, furnishings and maintenance fees.

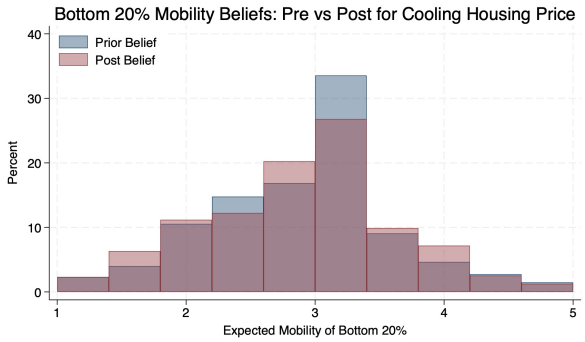
Source: iras.gov.sg

Notes: This figure presents the information shown to respondents in the housing policy treatments. Panel (a) displays information on the Enhanced CPF Housing Grant (EHG), highlighting the announced increase in the maximum grant amount for eligible first-time HDB resale flat buyers. The table reports the current and revised grant ceilings, and the accompanying text describes the resulting increase in total housing grants available to eligible households. Panel (b) presents information on property tax changes for owner-occupied residential properties, including the revision of marginal tax rates and an illustrative example of the increase in tax payable for a property with an annual value of S$100,000.

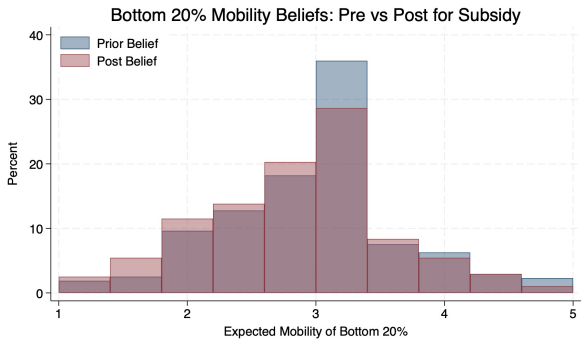
Figure 3: Prior and Posterior Beliefs about Social Mobility of Children from Low Social-Position Families



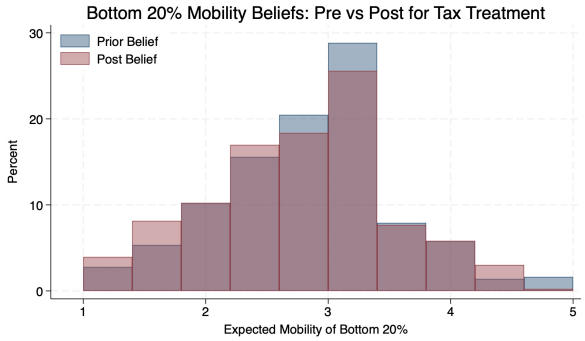
Panel (a): Treatment 1



Panel (b): Treatment 2



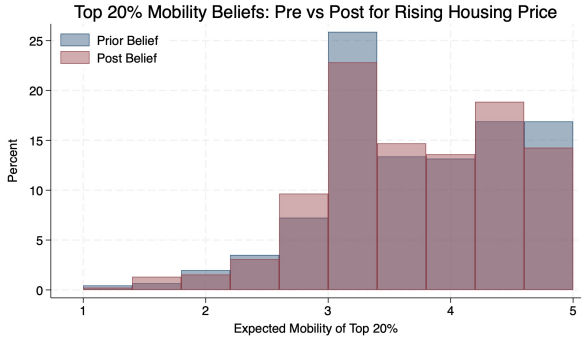
Panel (c): Treatment 3



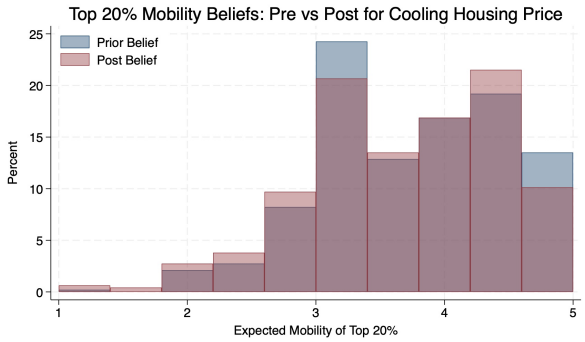
Panel (d): Treatment 4

Notes: This figure presents the distribution of respondents' beliefs about intergenerational upward mobility for children born to families in the bottom 20 percent of the social distribution, measured before and after information exposure. Each panel corresponds to one treatment arm, as in the previous figure. Beliefs are elicited using a five-rung social mobility ladder and summarized using an expected-rung measure, which is treated as a continuous variable and grouped into ten equal-width bins for visualization. Higher values indicate greater expected social position.

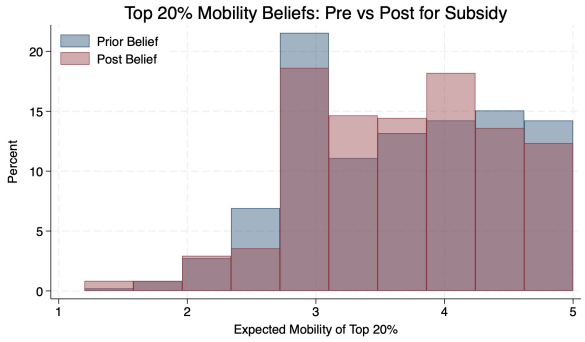
Figure 4: Prior and Posterior Beliefs about Social Mobility for Children from High Social-Position Families



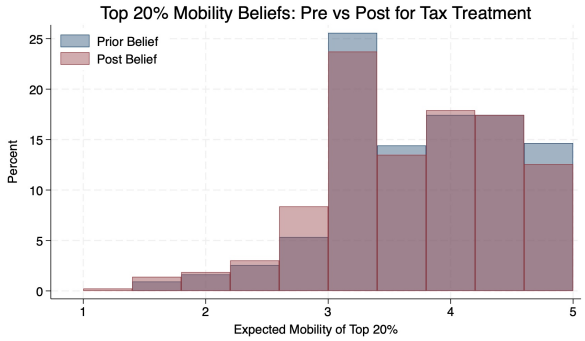
Panel (a): Treatment 1



Panel (b): Treatment 2



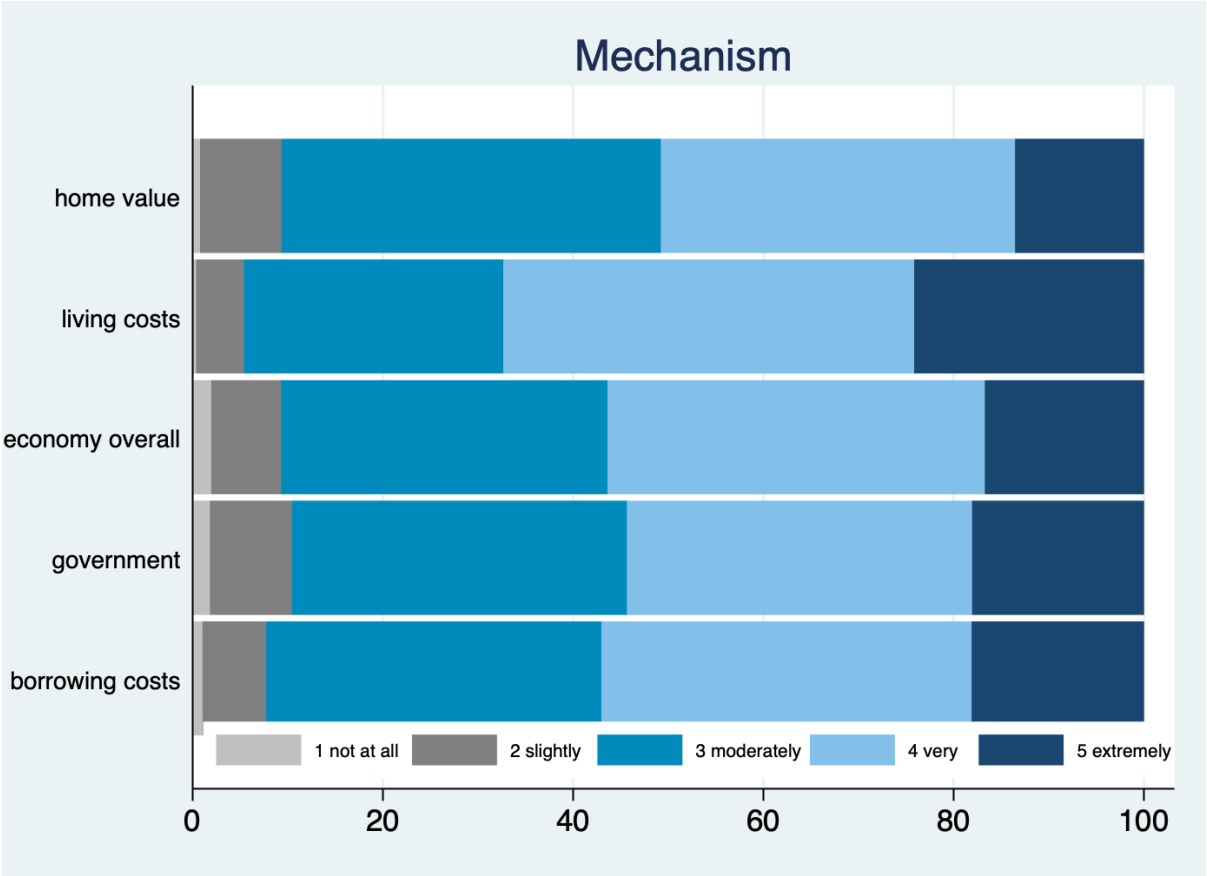
Panel (c): Treatment 3



Panel (d): Treatment 4

Notes: This figure presents the distribution of respondents' beliefs about intergenerational mobility persistence for children born to families in the top 20 percent of the social distribution, measured before and after information exposure. Each panel corresponds to one treatment arm, as in the previous figure. Beliefs are elicited using a five-rung social mobility ladder and summarized using an expected-rung measure, which is treated as a continuous variable and grouped into ten equal-width bins for visualization. Higher values indicate greater expected social position.

Figure 5: Perceived Channels Linking Housing to Social Mobility



Notes: This figure summarizes respondents' views on how housing conditions affect social mobility through several potential channels, including home values, living costs, borrowing costs, government action, and overall economic conditions. Respondents were asked to assess the extent to which each channel influences social mobility on a five-point scale ranging from 'not at all' to 'extremely.' The bars report the distribution of responses for each channel.

Online Appendix

Housing Markets and the Belief in Opportunity

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B Attainability Benchmark Model **64**

B.1 Setup 64

B.2 Proposition 1. 65

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A Additional Tables and Figures

Table A.1: Test of Balance

	T1		T2		T3		T4	
	Diff	p	Diff	p	Diff	p	Diff	p
Panel (a): Demographics								
Age	0.434	(0.601)	1.446*	(0.075)	0.715	(0.392)	0.528	(0.537)
Female	0.027	(0.406)	-0.027	(0.418)	-0.010	(0.769)	0.004	(0.908)
Income	-127.752	(0.754)	554.141	(0.164)	-137.308	(0.738)	283.534	(0.497)
Education	-0.014	(0.577)	0.002	(0.943)	0.011	(0.662)	0.021	(0.405)
Father Education	-0.048	(0.140)	-0.027	(0.400)	-0.021	(0.504)	-0.012	(0.708)
Employed	-0.018	(0.412)	-0.002	(0.940)	-0.041*	(0.055)	0.001	(0.976)
Liquidity	0.026	(0.305)	0.004	(0.873)	0.011	(0.658)	0.010	(0.704)
Panel (b): Prior Expectations								
Bottom Mobility	0.080	(0.105)	0.005	(0.908)	-0.067	(0.157)	0.061	(0.216)
Top Persistence	-0.032	(0.551)	-0.048	(0.345)	0.018	(0.720)	-0.070	(0.173)
Individual Mobility	-0.076	(0.526)	-0.015	(0.900)	0.043	(0.724)	0.134	(0.288)
Housing Price	-0.275	(0.274)	-0.255	(0.311)	-0.369	(0.131)	-0.289	(0.244)
Economic Growth	0.026	(0.903)	-0.091	(0.668)	-0.197	(0.361)	0.037	(0.865)
Inflation	-0.206	(0.338)	-0.085	(0.699)	-0.394*	(0.069)	-0.080	(0.711)
Trust	-0.024	(0.688)	-0.037	(0.524)	-0.014	(0.809)	0.016	(0.795)
N	917		935		939		891	

Notes: This table reports balance tests for baseline covariates across treatment and control groups. Panel (a) reports demographic characteristics, while Panel (b) reports pre-treatment expectations. T1-T4 denote the four information treatments. Female is an indicator equal to one if the respondent is female and zero if male. Income is elicited in categories and recoded as a continuous midpoint measure, with no income coded as 0 and the top-coded category assigned SGD 22,000 as in Table 1. High education equals one if the respondent has at least post-secondary education and zero otherwise. Father education indicators equal one if the respondent's father has at least a post-secondary education and zero otherwise. Employed equals one if the respondent is currently employed and zero otherwise. Liquidity is an indicator equal to one if the respondent reports being able to cover three months of expenses. Prior expectations are constructed from baseline belief measures. Housing price, economic growth, and inflation expectations are constructed as weighted averages from probability-bin responses. Government trust is measured on a 1–5 scale and used as reported. Mobility beliefs are summarized as expected-rung measures from ladder allocations. Statistical significance is based on two-sided t-tests of equality in means between each treatment group and the control group. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table A.2: Pairwise Correlations

	Individual Mobility	Top Persistence	Bottom Mobility	Housing Price	Economic Growth	Inflation	Trust	Age	Income	Education
Individual Mobility	1.000									
Top Persistence	-0.080***	1.000								
Bottom Mobility	0.168***	-0.100***	1.000							
Housing Price	-0.175***	0.235***	-0.053**	1.000						
Economic Growth	0.174***	0.077***	0.138***	0.268***	1.000					
Inflation	-0.176***	0.234***	-0.064***	0.599***	0.336***	1.000				
Trust	0.297***	-0.088***	0.179***	-0.171***	0.164***	-0.177***	1.000			
Age	-0.210***	0.040*	0.065***	0.045**	-0.010	0.087***	0.007	1.000		
Income	0.251***	0.091***	-0.053**	0.068***	0.055***	0.033	0.014	-0.053**	1.000	
Education	0.143***	0.119***	-0.106***	0.050**	-0.018	-0.007	-0.004	-0.242***	0.290***	1.000

Notes: This table reports pairwise Pearson correlation coefficients among baseline mobility beliefs, macroeconomic expectations, and selected respondent characteristics. Individual mobility refers to respondents' expected own social position ten years in the future. Top Persistence and Bottom Mobility refer to expected-rung measures for children born to families in the top and bottom 20% of the social position distribution, respectively. Housing Price, Economic Growth, and Inflation refer to baseline expectations constructed from probability-bin responses. Trust is measured on a 1-5 scale. Income is the midpoint-coded measure of monthly household income, and Education is an indicator for having at least a polytechnic diploma or above. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table A.3: Robustness: Treatment Effects on Intergenerational Social Mobility Expectations Using an Alternative Sample

	Low Social-Position				**High Social-Position**			
Dependent Variable:	Posterior Intergenerational Social Mobility Expectation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	-0.105**				0.060			
	(0.048)				(0.050)			
T2		-0.019				0.020		
		(0.046)				(0.049)		
T3			-0.029				0.000	
			(0.046)				(0.049)	
T4				-0.095**				0.013
				(0.047)				(0.049)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	946	962	964	952	946	962	964	952
R^2	0.081	0.095	0.101	0.101	0.046	0.059	0.044	0.044

Notes: This table reports OLS estimates of treatment effects on intergenerational mobility expectations under an alternative sample construction. This sample applies only two restrictions: excluding respondents with inconsistent housing tenure or ownership reports and interviews with very short completion times. Columns (1)–(4) use mobility expectations for children from low social-position families as the dependent variable, while columns (5)–(8) use beliefs about persistence for children from high social-position families. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. All specifications include the same set of controls: age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth conditions and trust. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table A.4: Robustness: Treatment Effects on Intergenerational Social Mobility Expectations with Week Fixed Effects

	Low Social-Position				**High Social-Position**			
Dependent Variable:	Posterior Intergenerational Social Mobility Expectation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	-0.101**				0.010			
	(0.048)				(0.051)			
T2		-0.016				0.010		
		(0.048)				(0.050)		
T3			-0.029				-0.025	
			(0.047)				(0.049)	
T4				-0.107**				0.002
				(0.049)				(0.051)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	917	934	939	890	917	934	964	952
R^2	0.100	0.110	0.115	0.116	0.061	0.064	0.046	0.052

Notes: This table reports OLS estimates of treatment effects on intergenerational mobility expectations with week fixed effect. Columns (1)–(4) use mobility expectations for children from low social-position families as the dependent variable, while columns (5)–(8) use beliefs about persistence for children from high social-position families. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. All specifications include the same set of controls: age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth conditions and trust. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table A.5: Treatment Effects on Perceived Individual Upward Mobility

Dependent Variable:	**Posterior Individual Mobility Expectation**			
	(1)	(2)	(3)	(4)
T1	-0.027			
	(0.099)			
T2		-0.017		
		(0.099)		
T3			-0.064	
			(0.104)	
T4				-0.125
				(0.102)
Controls	Yes	Yes	Yes	Yes
N	917	935	939	891
R^2	0.251	0.240	0.232	0.303

Notes: This table reports OLS estimates of the effects of housing-related information treatments on post-treatment beliefs about participants' individual upward mobility. The dependent variable is respondents' expected own social position ten years in the future. Each column reports results from a separate regression corresponding to a different treatment. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; T4 provides information about property taxes. All specifications include the same set of controls including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, and pre-treatment expectations about economic growth conditions and trust. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table A.6: Treatment Effects on Perceived Individual Upward Mobility: Heterogeneity by Income

Dependent Variable:	**Posterior Individual Mobility Expectation**			
	(1)	(2)	(3)	(4)
T1	-0.111			
	(0.125)			
High Income × T1	0.176			
	(0.152)			
T2		-0.221*		
		(0.126)		
High Income × T2		0.430***		
		(0.146)		
T3			-0.349***	
			(0.135)	
High Income × T3			0.585***	
			(0.163)	
T4				-0.316**
				(0.127)
High Income × T4				0.413***
				(0.155)
Controls	Yes	Yes	Yes	Yes
N	917	935	939	891
R^2	0.229	0.217	0.212	0.286

Notes: This table reports OLS estimates of heterogeneous treatment effects on perceived individual upward mobility by income. The dependent variable is respondents' expected own social position ten years in the future. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. High income is an indicator equal to one for respondents with monthly household income of SGD 9,000 or above. All specifications include the same set of controls, including age, gender, marital status, household size, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth and government trust. Robust standard errors are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table A.7: Treatment Effects on Perceived Individual Upward Mobility: Heterogeneity by Liquidity

Dependent Variable:	**Posterior Individual Mobility Expectation**			
	(1)	(2)	(3)	(4)
T1	-0.566***			
	(0.196)			
Liquidity × T1	0.665***			
	(0.199)			
T2		-0.419*		
		(0.224)		
Liquidity × T2		0.477**		
		(0.226)		
T3			-0.847***	
			(0.209)	
Liquidity × T3			0.949***	
			(0.215)	
T4				-0.408*
				(0.228)
Liquidity × T4				0.342
				(0.230)
Controls	Yes	Yes	Yes	Yes
R^2	0.262	0.246	0.252	0.305
N	917	935	939	891

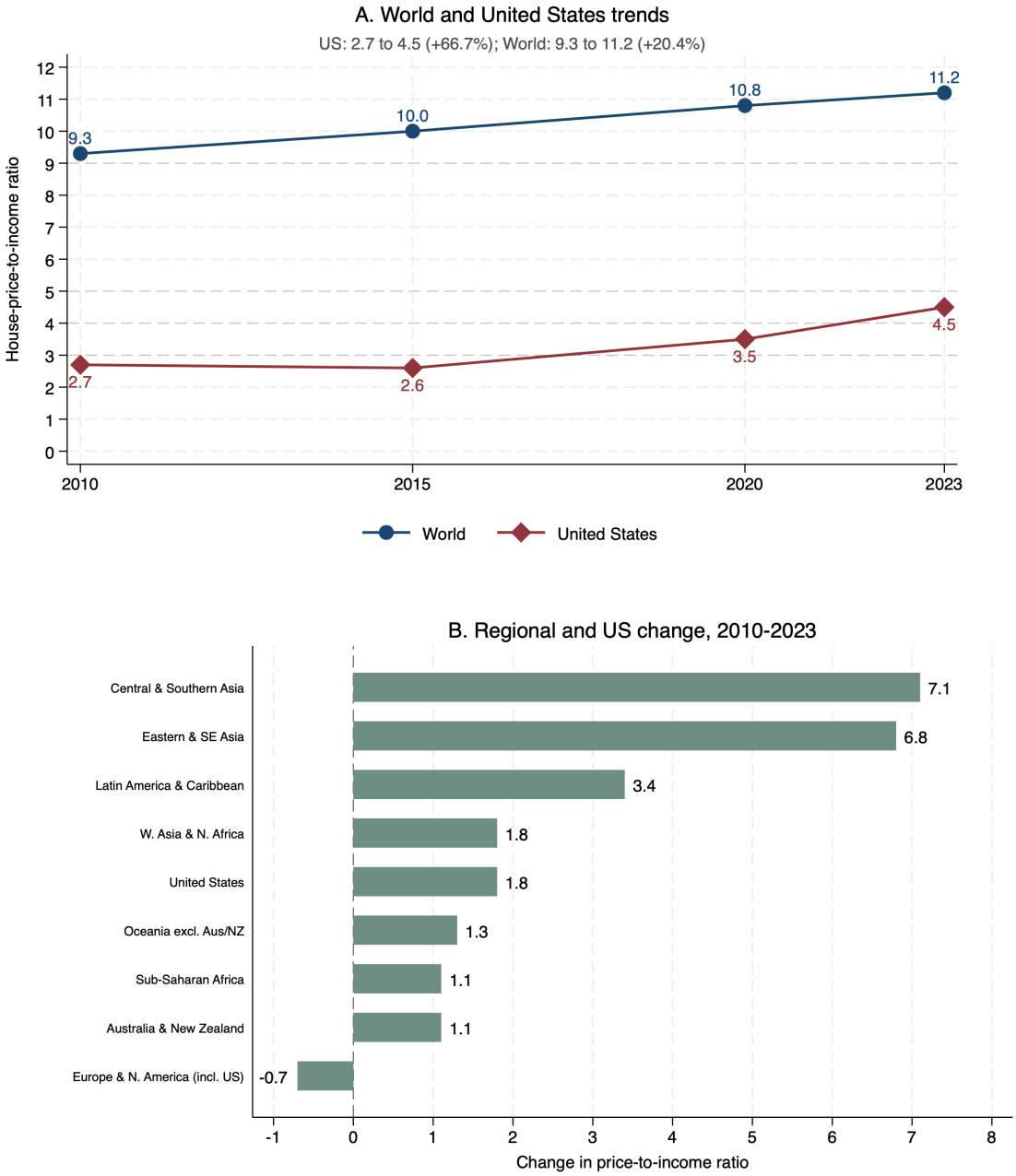
Notes: This table reports OLS estimates of heterogeneous treatment effects on perceived individual upward mobility by liquidity. The dependent variable is respondents' expected own social position ten years in the future. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. Liquidity is an indicator equal to one if the respondent reports being able to cover three months of expenses. All specifications include the same set of controls, including age, gender, marital status, household size, household income, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth and government trust. Robust standard errors are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table A.8: Treatment Effects on Intergenerational Social Mobility Expectations: Heterogeneity by Education Level

	Low Social-Position				**High Social-Position**			
Dependent Variable:	Posterior Intergenerational Social Mobility Expectation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	0.080				-0.182*			
	(0.083)				(0.103)			
High Education × T1	-0.216**				0.226**			
	(0.088)				(0.107)			
T2		0.099				-0.193**		
		(0.085)				(0.090)		
High Education × T2		-0.137				0.221**		
		(0.088)				(0.093)		
T3			0.052				-0.301***	
			(0.088)				(0.104)	
High Education × T3			-0.099				0.326***	
			(0.091)				(0.107)	
T4				0.034				-0.056
				(0.095)				(0.100)
High Education × T4				-0.167*				0.061
				(0.098)				(0.104)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	917	935	939	891	917	935	939	891
R^2	0.093	0.102	0.104	0.107	0.033	0.047	0.031	0.033

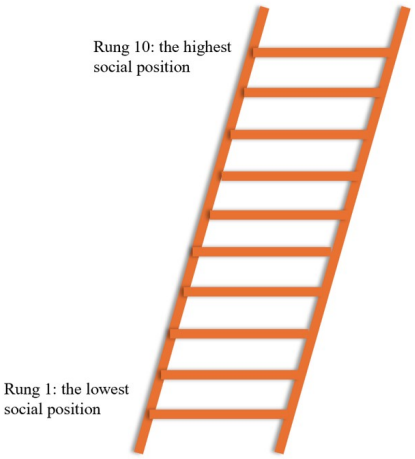
Notes: This table reports OLS estimates of the heterogeneous effects of housing-related information treatments on intergenerational social mobility expectations by education. Columns (1)–(4) use mobility expectations for children from low social-position families as the dependent variable, while columns (5)–(8) use beliefs about persistence for children from high social-position families. Each column corresponds to a separate regression comparing one treatment group to the control group. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; and T4 provides information about property taxes. High education is defined as completing at least post-secondary education (Polytechnic diploma or above). All specifications include the same set of controls, including age, gender, marital status, household size, household income, education, parental education, employment status, housing type, birthplace, race, and pre-treatment expectations about economic growth and government trust. Robust standard errors are reported in parentheses. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

Figure A.1: Homeownership Affordability

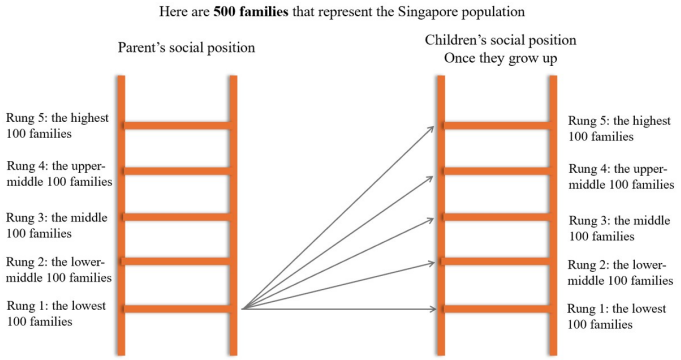


Notes: Panel A reports the world and United States median house-price-to-income ratios in 2010, 2015, 2020, and 2023. Panel B reports the 2010–2023 change for the United States and eight UN-Habitat regions; the Europe and Northern America aggregate includes the United States, which is also shown separately for transparency. Higher values indicate lower homeownership affordability. Source: UN-Habitat, *World Cities Report 2026*, Statistical Annex.

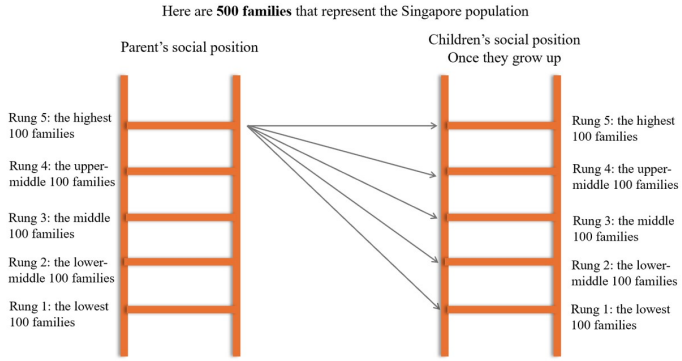
Figure A.2: Social Mobility Ladders



(a) Perceived Individual Upward Mobility Ladder



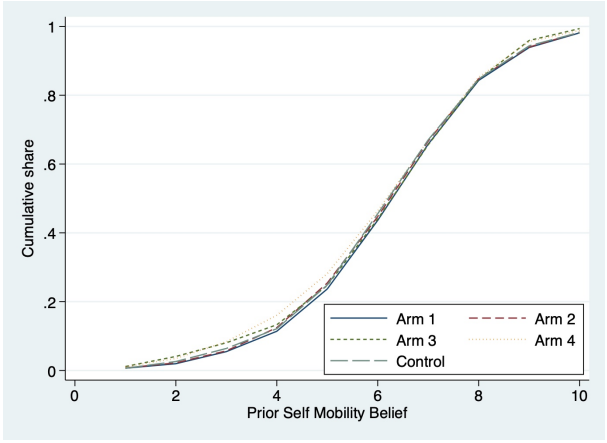
(b) Low Social-Position Mobility Ladder



(c) High Social-Position Persistence Ladder

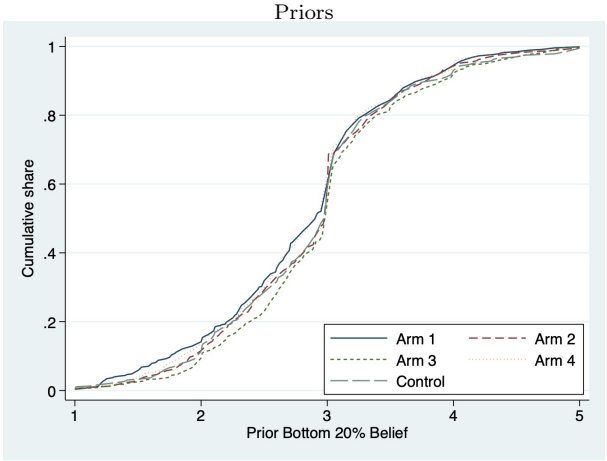
Notes: This figure illustrates the social mobility ladder framework used in the survey. Panel (a) presents the perceived individual upward mobility ladder, where respondents locate their own expected social position on a 10-rung scale. Panels (b) and (c) depict intergenerational mobility ladders for children from low and high social-position families, respectively. In these panels, 500 families representing the Singapore population are evenly divided across five rungs (100 families per rung) based on parents' social position, and arrows indicate potential mobility outcomes for children once they grow up.

Figure A.3: Test of balance for baseline mobility beliefs

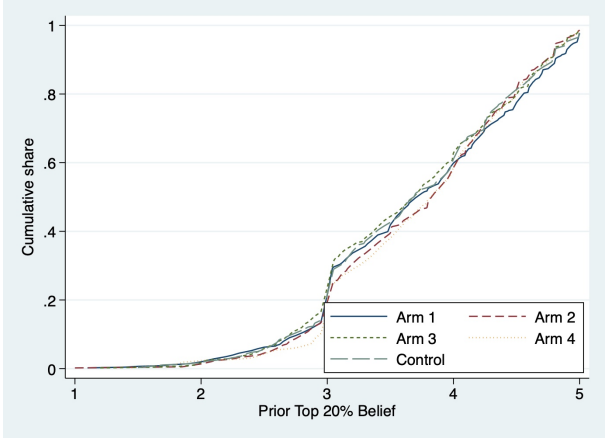


Panel (a)(1): CDF - Perceived Individual Upward Mobility

Priors



Panel (a)(2): CDF - Low Social-Position Mobility Priors



Panel (a)(3): CDF- High Social-Position Persistence Priors

Notes: This figure reports empirical cumulative distribution functions of baseline social mobility beliefs across treatment arms and the control group. Panel (a)(1) plots the distribution of prior individual upward mobility beliefs, Panel (a)(2) plots the distribution of prior beliefs about upward mobility for children from low social-position families, and Panel (a)(3) plots the distribution of prior beliefs about persistence for children from high social-position families. Each panel compares distributions across all treatment arms and the control group.

Figure A.4: Test of Balance - Baseline Housing & Macro Expectations

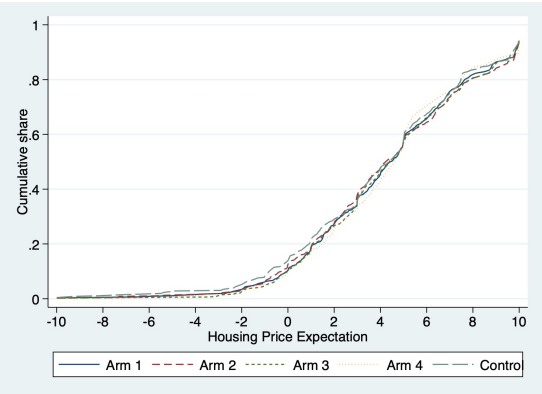


Figure A3(1): CDF — Housing Price Expectations

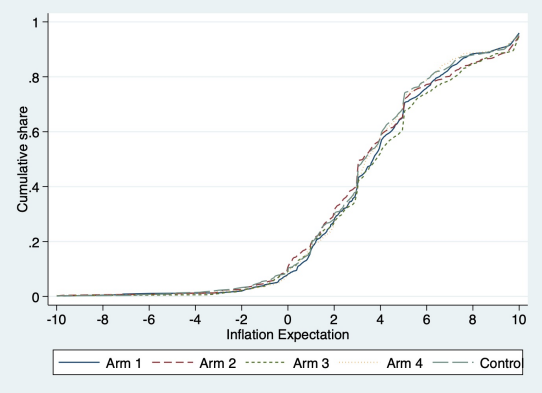


Figure A3(2): CDF — Inflation Expectations

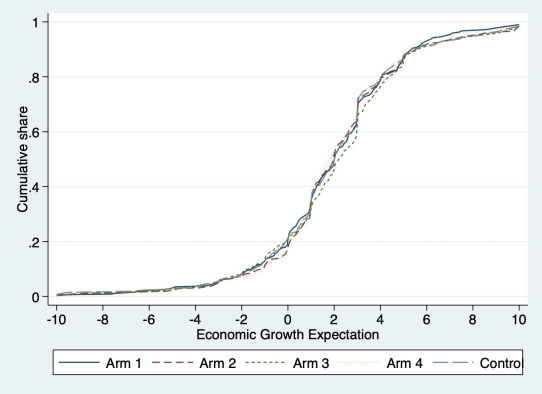


Figure A3(3): CDF — GDP Growth Expectations

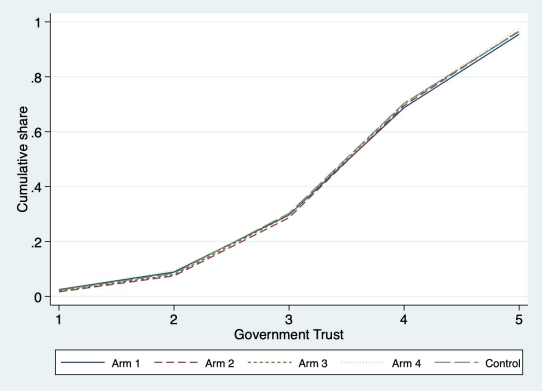
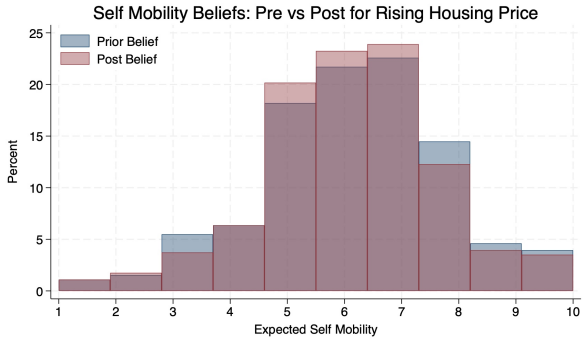


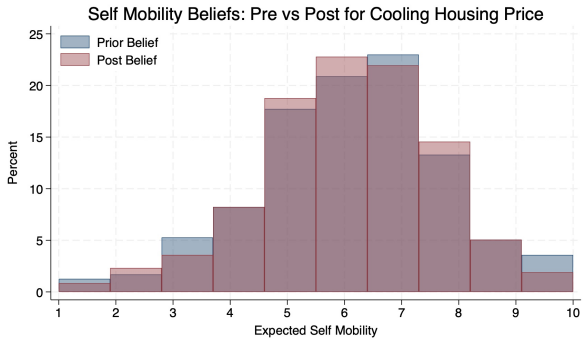
Figure A3(4): CDF — Trust Expectations

Notes: This figure reports empirical cumulative distribution functions of baseline macroeconomic expectations across treatment arms and the control group. Panel (a)(1) plots prior housing price expectations, Panel (a)(2) plots prior inflation expectations, Panel (a)(3) plots prior expectations of economic growth, and Panel (a)(4) plots baseline government trust expectations. Each panel compares distributions across all treatment arms and the control group.

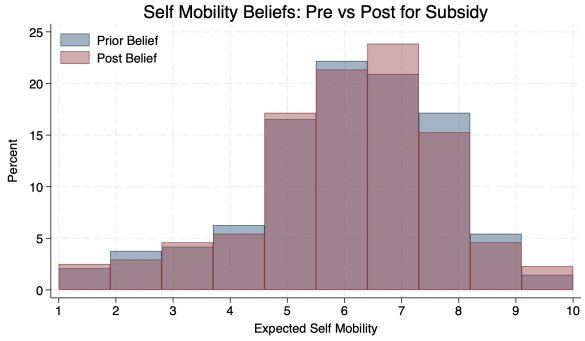
Figure A.5: Prior and Posterior Beliefs about Perceived Individual Upward Mobility.



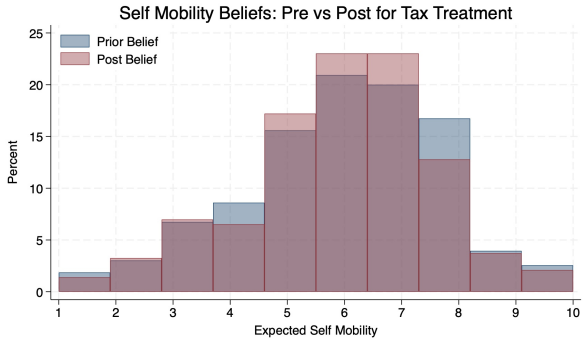
Panel (a): Treatment 1



Panel (b): Treatment 2



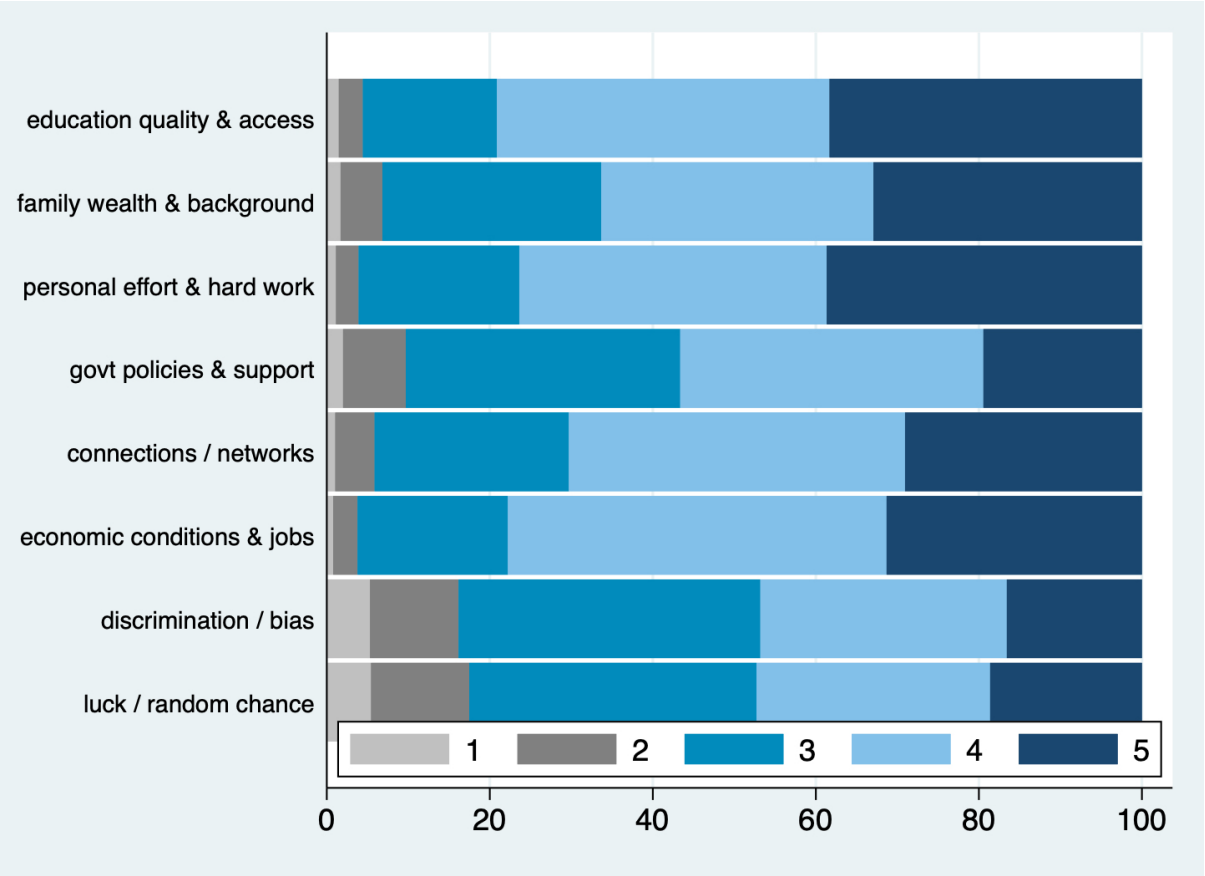
Panel (c): Treatment 3



Panel (d): Treatment 4

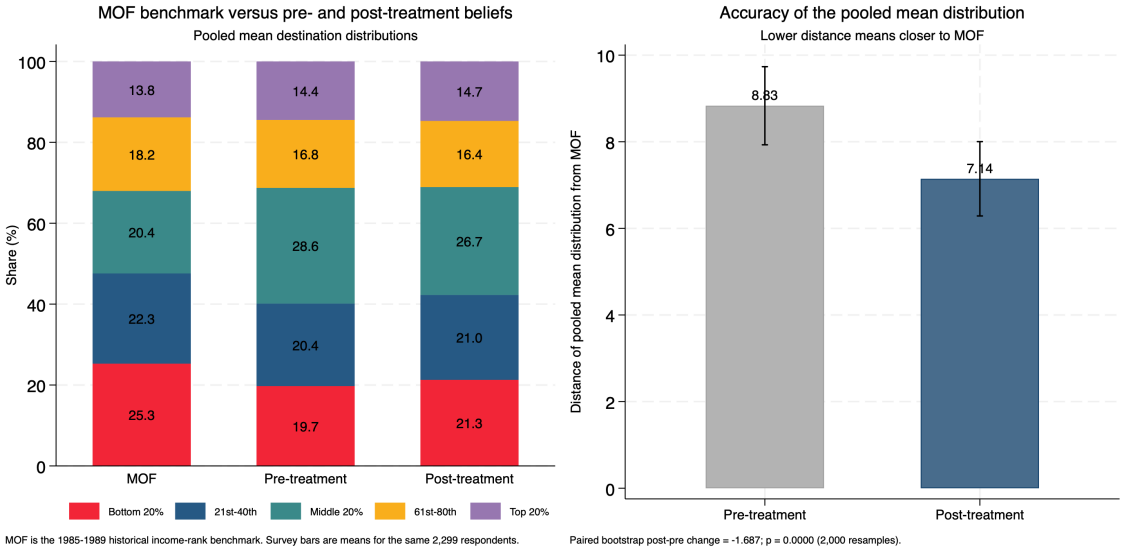
Notes: This figure presents the distribution of respondents' beliefs about their perceived individual upward mobility, measured before and after information exposure. Each panel corresponds to one treatment arm: Panel (a) Rising Housing Price (T1), Panel (b) Cooling Housing Price Growth (T2), Panel (c) Subsidy Treatment (T3), and Panel (d) Tax Treatment (T4). Individual mobility is measured using a ten-rung social ladder, where higher values indicate higher expected future social position. The figure illustrates how different housing market and policy information affects beliefs about respondents' own upward mobility relative to baseline expectations.

Figure A.6: Factors Influencing Social Mobility



Notes: This figure reports respondents' baseline perceptions of factors influencing social mobility prior to treatment exposure. Respondents rated the importance of each factor on a five-point scale ranging from 1 (not at all important) to 5 (extremely important). Bars show the distribution of responses for each factor.

Figure A.7: Mobility Beliefs Before and After Information: Calibration to the MOF Benchmark



Notes: The left panel compares the MOF benchmark with the pooled mean pre- and post-treatment distributions for the same 2,299 respondents. The right panel reports total-variation distance between each pooled survey distribution and the MOF benchmark; lower values indicate closer calibration. The MOF shares are 25.3, 22.3, 20.4, 18.2, and 13.8 percent across the five destination quintiles for the 1985-1989 birth cohort. Error bars are 95% confidence intervals. The post-pre change is tested using a paired respondent bootstrap with 2,000 resamples. MOF Chart 17 is a historical income-rank benchmark and is not treated as the literal truth for the survey question.

B Attainability Benchmark Model

B.1 Setup

Let $x \in \mathbb{R}$ denote perceived housing attainability or access, and let $r \in \mathbb{R}$ denote the benchmark level of housing access required for upward mobility to feel attainable. Reported mobility beliefs are determined by an attainability-based evaluation of x relative to r:

$$y(x \mid r) = m(x) + \mu\big(m(x) - m(r)\big), \tag{B1}$$

where $m(\cdot)$ is increasing and differentiable. The gain-loss component is

$$\mu(w) = \begin{cases} \eta w, & w \geq 0, \\ \eta\lambda w, & w < 0, \end{cases} \qquad \eta > 0,\ \lambda > 1. \tag{B2}$$

Thus, movements below the attainability benchmark receive greater marginal weight than movements above the benchmark following the loss aversion property of the benchmark-based model (Kőszegi and Rabin 2006). Let F denote the respondent's perceived distribution of housing access and let G denote the distribution of reference benchmarks. The posterior belief is then represented by

$$Y(F \mid G) = \iint y(x \mid r)\, dG(r)\, dF(x). \tag{B3}$$

A housing treatment delivers signal s. The signal changes perceived housing access from F_{i0} to F_{is}. Let G_{i0} denote respondent i's pre-signal benchmark distribution. Over the short experimental horizon, we treat this benchmark as locally fixed, so the relevant object is

$$Y_i(F_{is} \mid G_{i0}). \tag{B4}$$

To obtain transparent comparative statics, assume a location-shift structure. Let $X_{i0} \sim F_{i0}$ and suppose

$$X_{is} = X_{i0} + \delta_i(s), \qquad X_{is} \sim F_{is}, \qquad \delta_i(0) = 0, \tag{B5}$$

where $\delta_i(s)$ captures respondent i's interpretation of the signal. Heightened housing cost signals imply $\delta_i(s) < 0$. Hence, we define

$$Y_i(\delta) \equiv Y_i(F_{i\delta} \mid G_{i0}). \tag{B6}$$

We then define boundary sensitivity. Let $R_{i0} \sim G_{i0}$ denote a draw from respondent

i's benchmark distribution and define the comparison gap

$$Z_i \equiv m(X_{i0}) - m(R_{i0}). \tag{B7}$$

This gap measures perceived housing access relative to the attainability benchmark. Under a signal-induced shift,

$$Z_{i,\delta} \equiv m(X_{i0} + \delta) - m(R_{i0}). \tag{B8}$$

Specializing to the linear case $m(x) = x$, we have

$$Z_i = X_{i0} - R_{i0}, \qquad Z_{i,\delta} = Z_i + \delta. \tag{B9}$$

Let $H_i(\cdot)$ and $h_i(\cdot)$ denote the CDF and density of Z_i. Define respondent i's boundary sensitivity as

$$\varphi_i \equiv h_i(0), \tag{B10}$$

the density of comparison gaps near the attainability benchmark. A higher φ_i means that perceived housing access is concentrated near the benchmark required for mobility to feel attainable. For such respondents, small negative signals can move substantial probability mass below the benchmark, producing large downward revisions in reported mobility beliefs.

The attainability-based belief function can be written as

$$Y_i(\delta) = \mathbb{E}[X_{i0}] + \delta + \mathbb{E}\big[\mu(Z_i + \delta)\big]. \tag{B11}$$

B.2 Proposition 1.

Proposition 1 (Asymmetric Response to Housing Signals)**.** *Suppose the comparison gap Z_i has continuous CDF $H_i(\cdot)$. Then the marginal effect of a signal-induced shift δ on respondent i's reported mobility belief is*

$$\frac{dY_i(\delta)}{d\delta} = 1 + \eta + \eta(\lambda - 1)H_i(-\delta). \tag{B12}$$

For negative deviations from the benchmark, $H_i(-\delta)$ increases, so the amplification term $\eta(\lambda - 1)H_i(-\delta)$ becomes larger. Reported mobility beliefs therefore respond more strongly when housing signals reduce perceived access below the attainability benchmark.

Proof: With the linear specification $m(x) = x$ and the location-shift structure $X_{i\delta} =$

$X_{i0} + \delta$, respondent i's attainability-based utility can be written as

$$Y_i(\delta) = \mathbb{E}\big[X_{i0} + \delta + \mu(X_{i0} + \delta - R_{i0})\big] = \mathbb{E}[X_{i0}] + \delta + \mathbb{E}\big[\mu(Z_i + \delta)\big], \tag{B13}$$

where $R_{i0} \sim G_{i0}$ and $Z_i \equiv X_{i0} - R_{i0}$ denotes respondent i's baseline comparison gap.

Differentiating with respect to δ yields

$$\frac{dY_i(\delta)}{d\delta} = 1 + \frac{d}{d\delta}\,\mathbb{E}\big[\mu(Z_i + \delta)\big]. \tag{B14}$$

Writing the expectation as an integral with respect to the density $h_i(\cdot)$ of Z_i,

$$\mathbb{E}\big[\mu(Z_i + \delta)\big] = \int_{-\infty}^{\infty} \mu(z + \delta)\, h_i(z)\, dz, \tag{B15}$$

and using dominated convergence (recall that $\mu(\cdot)$ is piecewise linear and h_i is integrable), we may interchange differentiation and integration to obtain

$$\frac{d}{d\delta}\mathbb{E}\big[\mu(Z_i + \delta)\big] = \int_{-\infty}^{\infty} \mu'(z + \delta)\, h_i(z)\, dz = \mathbb{E}\big[\mu'(Z_i + \delta)\big]. \tag{B16}$$

From the gain–loss function

$$\mu(w) = \begin{cases} \eta w, & w \geq 0, \\ \eta\lambda w, & w < 0, \end{cases} \qquad \eta > 0,\ \lambda > 1,$$

the derivative satisfies

$$\mu'(w) = \begin{cases} \eta, & w > 0, \\ \eta\lambda, & w < 0. \end{cases}$$

Since the distribution of Z_i is continuous, $\Pr(Z_i + \delta = 0) = 0$, and the nondifferentiability at zero does not affect the expectation.

Therefore,

$$\begin{aligned} \mathbb{E}\big[\mu'(Z_i + \delta)\big] &= \eta\, \Pr(Z_i + \delta \geq 0) + \eta\lambda\, \Pr(Z_i + \delta < 0) \\ &= \eta\big(1 - H_i(-\delta)\big) + \eta\lambda\, H_i(-\delta) \end{aligned} \tag{B17}$$

where $H_i(\cdot)$ denotes the cumulative distribution function of Z_i.

Substituting (B17) into (B14) yields

$$\frac{dY_i(\delta)}{d\delta} = 1 + \eta\, \Pr(Z_i + \delta \geq 0) + \eta\lambda\, \Pr(Z_i + \delta < 0) = 1 + \eta + \eta(\lambda - 1)H_i(-\delta), \tag{B18}$$

which establishes (B12).

Proposition 1 shows that heightened housing cost signals can generate larger belief revisions than moderate housing cost signals. Importantly, the model does not require slower price growth or subsidies to be interpreted as positive shifts in perceived access. If these signals are viewed as insufficient or as evidence that housing remains difficult to afford, then $\delta_i(T2)$ and $\delta_i(T3)$ may be close to zero or negative, leading to muted or pessimistic belief updating.

B.3 Proposition 2

Proposition 2 (Boundary Sensitivity and Vulnerability)**.** *The curvature of the attainability-based belief function is*

$$\frac{d^2Y_i(\delta)}{d\delta^2} = -\eta(\lambda - 1)\, h_i(-\delta), \tag{B19}$$

and at the benchmark $\delta = 0$*,*

$$\left.\frac{d^2Y_i(\delta)}{d\delta^2}\right|_{\delta=0} = -\eta(\lambda - 1)\varphi_i. \tag{B20}$$

A high value of $\varphi_i = h_i(0)$ *means that much of the perceived-access distribution lies near the boundary between attainable and inattainable mobility. Small negative housing signals can therefore shift a relatively large share of perceived outcomes below the benchmark, producing larger downward revisions in posterior mobility beliefs. Thus, belief updating is most sensitive for respondents whose perceived housing access is close to the attainability benchmark.*

Proof: From (B12), we have

$$\frac{dY_i(\delta)}{d\delta} = 1 + \eta\Big(1 + (\lambda - 1)H_i(-\delta)\Big), \tag{B21}$$

where $H_i(\cdot)$ is the CDF of respondent i's comparison gap $Z_i = X_{i0} - R_{i0}$. Differentiating (B21) once more with respect to δ yields

$$\frac{d^2Y_i(\delta)}{d\delta^2} = \eta(\lambda - 1)\,\frac{d}{d\delta}H_i(-\delta). \tag{B22}$$

By the chain rule,

$$\frac{d}{d\delta}H_i(-\delta) = H_i'(-\delta)\cdot\frac{d(-\delta)}{d\delta} = h_i(-\delta)\cdot(-1) = -h_i(-\delta), \tag{B23}$$

where $h_i(\cdot) = H_i'(\cdot)$ denotes the density of Z_i (which exists under the maintained regu-

larity conditions). Substituting (B23) into (B22) gives

$$\frac{d^2Y_i(\delta)}{d\delta^2} = -\eta(\lambda - 1)\, h_i(-\delta), \tag{B24}$$

which is (B19).

Evaluating (B24) at the benchmark $\delta = 0$ yields

$$\left.\frac{d^2Y_i(\delta)}{d\delta^2}\right|_{\delta=0} = -\eta(\lambda - 1)\, h_i(0). \tag{B25}$$

Defining respondent i's boundary sensitivity as $\varphi_i \equiv h_i(0)$ implies

$$\left.\frac{d^2Y_i(\delta)}{d\delta^2}\right|_{\delta=0} = -\eta(\lambda - 1)\, \varphi_i, \tag{B26}$$

which establishes (B20).

In the housing context, this means that respondents who see housing-based advancement as only barely attainable should respond most strongly to signals of heightened housing costs. Such signals push these respondents below the benchmark required for upward mobility to feel attainable, leading to a large decline in posterior mobility beliefs.

Corollary 1 (Heterogeneous Reference Benchmarks)**.** *Consider two individuals i and j who receive the same housing signal and share identical gain-loss parameters (η, λ). If individual i holds a more demanding attainability benchmark than individual j, so that R_{i0} is higher and $Z_i = X_{i0} - R_{i0}$ tends to take lower values, then for any given negative signal-induced shift, individual i experiences a larger decline in reported mobility beliefs.*

The corollary follows from how the benchmark shifts the comparison-gap distribution. A more demanding benchmark R_{i0} lowers the comparison gap $Z_i = X_{i0} - R_{i0}$, placing more probability mass near or below the attainability boundary. Therefore, for the same negative signal-induced shift $\delta < 0$, a larger share of respondent i's perceived-access distribution lies in the loss region. Since losses below the benchmark are amplified by $\lambda > 1$, the same worsening in perceived housing access produces a larger decline in reported mobility beliefs. The corollary implies that respondents with more demanding benchmarks should update more pessimistically when housing information makes housing cost pressures visible.