

Housing Market Signals and Beliefs about Social Mobility*

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Abstract

We study how housing market signals shape beliefs about social mobility. Using a survey experiment that exogenously varies information on house price changes and housing policies, we elicit beliefs about future mobility at the bottom and the top of the income distribution. We find that increases in house prices and housing taxes reduce perceived upward mobility for individuals at the bottom, while leaving beliefs about mobility at the top unchanged. In contrast, information about slower house price growth and housing subsidies has no effect on mobility beliefs. These asymmetric responses are difficult to reconcile with affordability-based explanations and instead support a reference-dependent account of belief formation, in which worsening housing conditions receive disproportionate weight in shaping perceptions of economic opportunity.

JEL Classification: D84, D63, R21, H31

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1 Introduction

Beliefs about social mobility play a central role in shaping economic behavior and political attitudes, including support for redistribution, views on inequality, and perceptions of fairness (Benabou and Ok 2001; Alesina et al. 2018). These beliefs also shape how households evaluate government actions, particularly policies perceived as expanding or restricting economic opportunity. When forming views about who moves up and who falls behind, individuals rely not only on realized outcomes but also on market and policy signals that convey opportunities and constraints. Despite their importance, relatively little is known about how mobility beliefs respond to salient market developments and policy actions. Standard economic frameworks model beliefs about social mobility as reflecting income dynamics and returns to human capital (Piketty 1995; Benabou 1996). In contrast, a growing literature on belief formation emphasizes that individuals rely disproportionately on readily interpretable signals when forming economic expectations (Gennaioli and Shleifer 2018). From this perspective, widely observed market outcomes and policy interventions may exert an outsized influence on perceptions of opportunity by shaping beliefs about who advances and who falls behind. Yet empirical evidence on which market signals shape mobility beliefs, and how they are interpreted across the income distribution, remains limited.

In this study, we examine housing market signals as a widely observed source of information shaping perceptions of social mobility. Across advanced economies, housing costs have risen sharply relative to incomes, making affordability one of the most visible economic developments facing households. A growing literature shows that housing prices are not only salient economic outcomes but also powerful signals that shape beliefs about future prices, wealth accumulation, and economic prospects (Kuchler et al. 2023; Armona et al. 2019). Importantly, rising housing prices carry clear distributional implications: existing homeowners benefit from capital gains, while non-owners face higher barriers to entry and delayed or foregone ownership. Governments have responded with a wide range of housing policies, including demand-side taxes to curb speculative demand, targeted subsidies to support affordability, and programs to expand access to homeownership. It remains unclear how households interpret these housing market developments and policy interventions when forming beliefs about social mobility. In particular, do housing-related policies alter how rising housing prices are interpreted as signals of economic opportunity, and do these interpretations differ across the income distribution?

To answer these questions, we conduct a survey experiment that exogenously varies information about recent house price changes and housing-related policies. Our approach builds on a growing literature that uses survey experiments to study how individuals update beliefs in response to information about economic conditions and public policy

(D’Acunto and Weber 2024; Haaland et al. 2023). Respondents are randomly exposed to information describing either increases or slower growth in housing prices, as well as policy interventions such as housing taxes and housing subsidies. We then elicit beliefs about the future social mobility of other individuals in society at the bottom (bottom-origin mobility) and at the top (top-origin mobility) of the income distribution, allowing us to assess whether belief updating is asymmetric across signals and across groups. This design isolates the causal effect of housing market signals on mobility beliefs while holding constant respondents’ own economic circumstances and experiences, allowing us to directly test how different housing signals are mapped into beliefs about economic opportunity.

We find pronounced asymmetries in belief updating. Adverse housing signals, including rising house prices and higher housing taxes, significantly reduce perceived upward mobility for individuals at the bottom of the income distribution, while leaving beliefs about mobility at the top largely unchanged. These signals also depress broader optimism about economic conditions and government effectiveness, indicating that worsening housing affordability is interpreted as a tightening of constraints on economic opportunity. By contrast, favorable housing signals, including slower house price growth and housing subsidies, generate little response and have no meaningful effect on beliefs about mobility or economic conditions. Consequently, negative housing developments exert broad and persistent effects on perceived opportunity, while corresponding gains are largely discounted.

Our experiment is conducted in Singapore, a setting well suited for studying how housing market and policy signals are interpreted. Housing plays a central role in households’ economic lives. More than 80 percent of residents live in public Housing and Development Board (HDB) flats, over 90 percent of these households are homeowners, and public housing serves as the primary asset, savings vehicle, and channel for inter-generational wealth transmission for most citizens. Housing affordability has become a focal concern, as resale HDB prices have risen sharply, often outpacing wage growth.¹ Crucially, Singapore combines extensive housing subsidies and access programs with active use of housing-related taxes and purchase restrictions, exposing households to both affordability-enhancing and affordability-constraining policy signals. Unlike settings that rely primarily on either subsidies or taxes, Singapore features both instruments simultaneously, allowing us to study how households interpret opposing housing policy signals within a single institutional environment. This makes Singapore a natural setting for studying how housing market developments and policy interventions shape beliefs about

¹HDB flats are publicly built housing units sold to eligible households on long-term leases (typically 99 years). After satisfying minimum occupancy requirements, owners may sell these units on a regulated secondary (“resale”) market. Resale prices are market-determined transaction prices for existing HDB units and are distinct from subsidized prices of newly built flats sold directly by the government.

social mobility.

Formally, we implement a randomized information experiment that varies housing-related signals to study how households form beliefs about social mobility. The experiment varies information along two dimensions that are central to housing affordability and widely observed: housing market price dynamics and housing-related government policies. This design allows us to examine whether different housing signals are interpreted asymmetrically and whether belief responses vary across the income distribution. Respondents are randomly assigned to one of five groups. The first two treatments provide information about housing market conditions. Treatment 1 (T1) informs respondents that resale prices for existing public housing flats have risen, while Treatment 2 (T2) emphasizes that the growth rate of resale prices has slowed in recent years. Two additional treatments provide information about housing policies. Treatment 3 (T3) describes an expansion of government housing subsidies for first-time homebuyers, while Treatment 4 (T4) reports an increase in property tax rates for owner-occupied residential properties. A fifth group serves as a control and receives no information. Together, these treatments allow us to assess whether rising prices and housing taxes are interpreted as adverse signals for economic opportunity, while slowing price growth and housing subsidies are interpreted more favorably, and whether these interpretations differ across the income distribution.

The experiment reveals stark asymmetries in how households update beliefs in response to housing-related information. Adverse housing signals that worsen affordability or tighten constraints trigger broad and coordinated belief revisions. When households are informed that house prices have risen (T1), they expect higher future house prices, higher inflation, and report lower trust in government. Information about higher housing taxes (T4) generates a similar erosion of trust in government, even though respondents revise expected inflation and economic growth downward. Notably, declines in trust accompany both adverse price and policy signals, despite their differing implications for macroeconomic expectations. These responses indicate that negative housing developments are interpreted not merely as changes in housing costs, but as signals about the government’s ability to sustain economic opportunity.

In contrast, favorable housing signals generate little response. Information that house price growth has slowed affects expectations about future house prices but leaves beliefs about inflation, the broader economy, and trust in government unchanged. Information about housing subsidies has no statistically significant effect on expectations related to house prices, economic growth, inflation, or trust in government. Thus, we find little evidence that favorable housing developments or policy interventions meaningfully alter beliefs about economic conditions, government effectiveness, or economic opportunity. Overall, belief updating is sharply asymmetric: adverse housing signals shift beliefs

broadly and persistently, while favorable signals are largely discounted.

These asymmetries in belief updating extend directly to perceptions of economic opportunity and social mobility. Rising house prices and higher property taxes reduce perceived upward mobility for bottom-origin children by about 0.10 rungs on a five-rung mobility ladder, a quantitatively meaningful shift in beliefs about prospects for advancement. In contrast, none of the treatments affect beliefs about mobility at the top of the income distribution. Favorable housing signals, including slower house price growth and housing subsidies, likewise have no statistically significant effect on perceived mobility for either bottom- or top-origin children.

This pattern closely parallels the broader belief responses documented above. Negative housing signals disproportionately depress optimism about advancement among those at the bottom, while partial improvements fail to offset pessimism. By contrast, perceived advantage at the top appears largely insulated from housing market developments and housing-related policies. Overall, housing market signals shape beliefs about advancement in a sharply asymmetric and distribution-specific manner: adverse signals exert powerful effects at the bottom, while favorable signals generate little response across the distribution.

We interpret these patterns as evidence of reference-dependent expectation formation in beliefs about economic opportunity. Rising housing prices and housing-related taxes are perceived as salient barriers that disproportionately depress beliefs about upward mobility at the bottom of the income distribution, while corresponding gains are discounted and fail to restore optimism. By contrast, beliefs about the prospects of those at the top appear anchored in perceived structural advantage and are largely insensitive to housing market conditions. Together, these findings suggest that housing market signals shape beliefs about opportunity in an asymmetric and distribution-specific manner.

To further pin down the mechanisms underlying belief updating, we complement the experimental design with open-ended survey questions that elicit respondents' reasoning in their own words (Haaland et al. 2025). Open-ended responses allow us to observe how individuals interpret housing price changes and housing-related policies as signals about opportunity and constraint, without imposing ex ante categories on their thought process. This approach helps distinguish between competing mechanisms, such as rational updating about affordability, reference-dependent interpretations of changing benchmarks, and salience-driven emphasis on losses versus gains.

Our findings are important for how housing markets and housing policies are interpreted within the broader study of economic opportunity, and for how governments assess the societal consequences of housing interventions. A large literature documents how housing prices and housing policies shape wealth accumulation, consumption, credit

access, and residential sorting, through channels such as housing wealth effects, collateral constraints, and location choice (Sodini et al. 2023). A separate literature examines beliefs about social mobility, inequality, and economic opportunity, often using survey and experimental methods to study perceptions of advancement, fairness, and redistribution (Benabou and Ok 2001; Cruces et al. 2013). Despite the central role of housing in shaping economic outcomes, relatively little is known about whether and how housing market conditions and housing policies shape beliefs about social mobility itself, rather than realized outcomes.

This distinction is relevant for policy interpretation. Governments often justify housing policies, such as affordability measures, subsidies, or macroprudential regulations, in part by their expected effects on economic opportunity and perceived fairness. Yet existing research provides limited guidance on whether perceptions of opportunity respond symmetrically to housing-related gains and losses across the income distribution, or whether changes in housing affordability disproportionately affect beliefs about prospects at the bottom versus perceived advantages at the top. As a result, it remains unclear how housing affordability pressures and housing policy interventions translate into broader perceptions of inequality and economic opportunity, even when their effects on realized outcomes are well understood.

These issues also matter for how standard economic frameworks are applied in policy analysis. Canonical models of housing markets and social mobility emphasize affordability constraints, borrowing limits, and realized outcomes, while largely abstracting from how individuals form beliefs about mobility across the income distribution (Becker and Tomes 1979; Benabou 1996). In such frameworks, housing price changes and policy incentives primarily affect the constraints households face, with limited implications for perceptions of who advances or falls behind. Under this view, improvements and deteriorations in housing affordability would be expected to generate broadly similar belief responses regarding mobility at both the bottom and the top. The asymmetric belief responses documented in this paper suggest that policy evaluations based solely on realized outcomes may miss an important belief-based dimension of how housing markets shape perceived economic opportunity.

Related Literature. This paper contributes to several strands of literature. First, we relate to the literature on housing 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; Botta 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 by showing that housing prices shape not only housing and consumption decisions, but also households' beliefs about long-run economic opportunity. Our contribution is to provide causal evidence that housing price movements affect expectations about social mobility, a forward-looking belief that lies outside the housing market itself.

Second, this paper relates to a growing literature on how salient economic information shapes household beliefs. A central insight from this work is that belief formation depends not only on realized economic outcomes, but also on how economic signals are framed, presented, and attended to (Coibion et al. 2022; D'Acunto et al. 2021). Agarwal et al. (2022) show that in Singapore, providing households with price information about higher-quality goods raises inflation expectations, illustrating how the content of information can shift beliefs even in the absence of changes in underlying fundamentals. 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 treating housing prices as salient economic signals that influence beliefs about long-horizon outcomes, rather than as information about near-term prices or policy conditions alone.

Third, we contribute to the literature on beliefs about social mobility and fairness. A substantial 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; Fisman et al. 2022; Moore et al. 2025). Karadja et al. (2017) show 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. A related strand emphasizes reference dependence in the formation of fairness and redistribution beliefs. Fisman et al. (2022) demonstrate that reference points shape redistributive behavior in controlled experiments, and Alesina et al. (2023) show that perceived relative income positions within salient reference groups influence fairness views and policy attitudes. We add to this literature by providing causal, market-based evidence from Singapore that housing market conditions and housing policies shape social mobility beliefs in a reference-dependent manner.

The remainder of the paper proceeds as follows. Section 2 outlines the 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 mechanisms through a reference-dependent framework. Section 5 evaluates alternative

explanations and discusses policy implications. Section 6 concludes.

2 Experimental Design and Data

This section describes the institutional context, experimental design, and data used to study how housing market developments and housing-related policies shape beliefs about social mobility and related expectations. First, we outline the institutional features of Singapore’s housing market that render housing prices and housing policies salient signals of economic opportunity. We then describe the sampling strategy and survey implementation, the elicitation of baseline beliefs, and the randomized information treatments. Finally, we discuss the measurement of post-treatment beliefs, the construction of the main outcome variables, summary statistics for the analysis sample, and the integrity of the randomization.

2.1 Institutional Background: Housing Markets in Singapore

We begin with a brief overview of the institutional structure of Singapore’s public housing market, which provides the context for the housing price and policy information used in the survey. Public housing in Singapore is administered by a centralized government agency, the Housing and Development Board (HDB), and operates within a tightly regulated framework that links housing access, government subsidies, and housing-related taxes. HDB flats account for roughly 80 percent of resident households and more than 90 percent of owner-occupied housing, making housing the dominant asset for most Singaporean households. Consequently, changes in housing prices and housing policy are highly visible and are widely interpreted as signals of economic opportunity and government support.

Within this institutional framework, access to newly built public housing is tightly regulated. Eligibility is restricted to citizen households that meet requirements related to family structure, income, and prior property ownership, and applicants typically face longer waiting times before newly built units become available. Moreover, households above specified income ceilings are ineligible to purchase new public housing altogether. New units are sold at government-determined subsidized prices and are subject to resale restrictions during a fixed minimum occupation period ([Housing & Development Board 2023](#)). Together, these features channel many households, including higher-income households and those with urgent housing needs, toward the secondary market, namely the public housing resale market.

Unlike the primary market, transactions in the public housing resale market occur at

market-determined prices and under substantially broader eligibility conditions. Resale transactions involve previously occupied HDB units traded on a secondary market in which prices are negotiated between buyers and sellers rather than set by the government. Both Singapore Citizens and Permanent Residents are eligible to participate, and resale purchases are not subject to binding income ceilings. Prices in the resale market therefore reflect housing demand, credit conditions, and policy announcements, and serve as the primary price signal households observe when assessing housing affordability, wealth accumulation, and economic opportunity. For this reason, our analysis and experimental treatments focus on resale HDB prices and resale-related housing policies. The resale market is the main channel through which households experience housing price movements and respond to housing-related policy changes.

In addition to market prices, government policy directly shapes housing costs and access in the resale market through subsidies. First-time buyers in the resale market may qualify for substantial, means-tested government support through the Central Provident Fund (CPF), a mandatory individual savings system used to finance housing purchases. The Enhanced CPF Housing Grant provides income-linked subsidies that vary discretely with household earnings and can represent a large share of annual income ([Central Provident Fund Board 2025](#)). Because these subsidies are explicitly quantified and directly applied at the point of purchase, changes in subsidy policy are easily understood and widely discussed.

Housing policy also affects households through property taxation. Owner-occupied residential properties are subject to progressive property taxes based on assessed rental values, and recent reforms have increased marginal tax rates, particularly for higher-value properties. These taxes are billed annually, vary discretely with property values, and are frequently adjusted in conjunction with broader fiscal and redistribution debates. Consequently, housing-related taxes are interpreted not only as changes in housing costs, but also as signals of government priorities and redistribution.

Taken together, housing in Singapore functions as a central gateway to homeownership that is shaped directly by government policy and market prices. Eligibility thresholds, income-linked subsidies, progressive housing taxes, and resale prices play visible roles in determining access and costs, and generate clear, widely observed signals about economic opportunity. This institutional setting provides a clean context for isolating how housing price movements and housing-related policies shape beliefs about social mobility.

2.2 Experiment Set-Up

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, with eligibility restricted to Singapore Citizens or Permanent Residents aged 21 and above. Recruitment is conducted through Rakuten Insight, a large commercial survey platform widely used for academic and market research in Asia.

Rakuten Insight maintains an extensive 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 final 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. First, we exclude respondents with total interview times below 280 seconds, which 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, we exclude respondents in the policy treatment arms who misinterpret the direction of the policy signal. Together, these restrictions reduce noise arising from inattention, misunderstanding, and implausible inputs. Online Appendix C reports the complete survey questionnaire.

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.

2.2.1 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) beliefs about intergenerational mobility for bottom and top origin groups, 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.1 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 income 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 income distribution. The resulting allocations generate full destination distributions that summarize expected upward mobility from the bottom of the income 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 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.

2.2.2 Treatment

Following the elicitation of baseline beliefs, respondents are exposed to a randomized information intervention. Respondents are assigned either to receive factual information or to a pure control group that receives no information, allowing us to identify the causal effects of housing market signals and housing-related policy information on beliefs while holding fixed baseline views. The intervention introduces exogenous variation along two dimensions that are central to housing affordability and widely observed by households: housing market conditions and housing-related government policies. Respondents are randomly assigned to one of four information treatments or to a baseline control group.

The four treatments are organized into two conceptually parallel pairs. As discussed earlier, we focus on the resale public housing market, which dominates Singapore’s hous-

ing system and renders price movements and housing-related policies salient signals of economic opportunity. The first pair varies information about recent housing price dynamics, capturing market-generated signals about access to housing and asset accumulation. The second pair varies information about housing-related government policies, capturing policy-generated signals about government support for, or constraints on, access to housing. Across all treatments, information is drawn from official sources, 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) in Figure 1, which shows that the HDB Resale Price Index has increased markedly over time. Rising housing prices constitute a salient market signal of deteriorating affordability 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 delaying or foreclosing pathways to asset accumulation. This treatment therefore allows us to study how adverse housing market signals shape beliefs about upward social mobility, particularly for individuals starting at the bottom of the income distribution, and whether beliefs about mobility at the top respond in a similar manner.

In Treatment 2 (T2), respondents receive the information summarized in Panel (b) of Figure 1. A deceleration in housing price growth may signal a moderation in housing market pressures. At the same time, when price levels remain elevated, slower growth need not translate into a meaningful expansion of access to housing. This treatment therefore allows us to examine whether more favorable or neutral housing market signals generate corresponding revisions in beliefs about upward social mobility, or whether beliefs respond asymmetrically to positive and negative housing 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. In contrast, Treatment 4 (T4) emphasizes an increase in housing-related taxes. Figure 2 displays the information shown to respondents in these treatments.

<Insert Figure 2 Here>

In T3, respondents receive 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**. This information is presented in tabular form, as shown in Figure 2 Panel (a).

Here, expanded housing subsidies represent a policy signal intended to ease access to homeownership and mitigate affordability constraints. 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 policy signals are perceived as insufficient to alter underlying beliefs about mobility.

In T4, respondents receive information about an increase in housing-related taxes. Respondents are informed that property tax rates for owner-occupied residential properties have risen from 2024 onward. For homes with an annual value of **S\$100,000**, the annual property tax payable has increased from **S\$8,730** to **S\$11,980**. In addition, the highest marginal tax rate on owner-occupied residential properties has increased from **23 percent** to **32 percent**. This information is presented in a format parallel to Treatment 3, as shown in Figure 2 Panel (b).

Higher housing-related taxes constitute a policy signal that increases the cost of holding housing assets and may be interpreted as tightening constraints on wealth accumulation. This treatment allows us to examine whether policy-induced increases in housing costs shape beliefs about upward social mobility in a manner comparable to adverse housing market developments, and whether beliefs about mobility at different points of the income distribution respond symmetrically to market and policy signals.

2.2.3 Post-Treatment Beliefs

After the information is shown, we elicit respondents' post-treatment expectations using a format that closely parallels the baseline. In order to reduce consistency pressures and mitigate mechanical anchoring to earlier answers, 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. Perceptions of social mobility are measured using the same ladder framework as in the baseline, but respondents are now asked to allocate outcomes for 300 children rather than 100 and to reassess their own household's position ten years ahead. This allows us to capture genuine belief updating rather than repetition of previously stated values.

2.3 Data

We now turn to our data. Table 1 reports summary statistics for the main variables used in the analysis. The analysis sample consists of 2,299 respondents who completed the survey and passed standard data cleaning procedures. The table summarizes demographic characteristics, socioeconomic status, and subjective expectations elicited before and after information exposure.

<Insert Table 1 Here>

The sample spans a wide age range, with a mean age of approximately 45 years, and includes substantial variation in household size, income, and educational attainment. Gender and marital status are balanced, and a large majority of respondents report being employed. Housing characteristics indicate that most respondents live in public housing, reflecting the dominant role of HDB housing in Singapore, while a smaller share reside in private housing. The table also reports respondents' birthplace and parental education, capturing background characteristics relevant for beliefs about intergenerational mobility. Exact variable definitions and coding are reported in the table notes. This table further documents respondents' baseline expectations prior to receiving any information. 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. Trust in government with respect to enhancing social mobility is measured on a five-point scale and has a mean of 3.44.

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

$$ER_i = \sum_{r=1}^5 r \cdot P_{ir} \quad (1)$$

where P_{ir} is the proportion of children that respondent i assigns to rung r (the proportions sum to 1). A higher ER_i means a higher expected social position. We compute this measure separately for children born to families in the bottom 20 percent and for children born to families in the top 20 percent of the social distribution. For bottom-origin children, higher expected rung values indicate greater perceived upward mobility. For top-origin children, higher expected rung values indicate stronger expected persistence at the top of the distribution.

Prior to information exposure, respondents place their own household at an average of 6.13 on the ten-rung social ladder. For intergenerational mobility, the expected rung for children born to families in the bottom 20 percent of the social distribution averages

2.86 on the five-rung ladder, while the expected rung for children born to families in the top 20 percent averages 3.71. The table further reports the same expected-rung measures after information exposure.

Integrity of Randomization. We assess the integrity of the randomization by testing for balance in observable characteristics across treatment and control groups. Appendix Table A.1 reports differences in means between each treatment group and the control group for a broad set of demographic, socioeconomic, and pre-treatment belief variables. Baseline social mobility beliefs are balanced across treatment and control groups. In particular, prior expected rung for bottom-origin children shows no statistically significant differences across groups, with p-values ranging from 0.105 to 0.908. Expected rungs for top-origin children are similarly balanced, with p-values between 0.173 and 0.720, as are respondents' expectations about their own future social position, for which p-values range from 0.288 to 0.900.²

3 Main Results

3.1 Determinants

We begin with a descriptive analysis of the cross-sectional relationships between mobility beliefs, macroeconomic expectations, and individual characteristics, to provide context for the experimental results that follow. Table 2 reports pairwise correlations among mobility beliefs, macroeconomic expectations, and demographic characteristics. Housing price expectations exhibit a pronounced asymmetry across mobility dimensions. Higher expected housing prices are negatively correlated with perceived individual mobility (-0.175, $p < 0.01$) and bottom-origin mobility (-0.053, $p < 0.05$), but positively correlated with top-origin mobility (0.235, $p < 0.01$). This pattern indicates that rising housing prices are associated with perceived advantages for those already at the top, while simultaneously weakening perceived opportunities for others, motivating the focus on housing price signals in the experimental design.

<Insert Table 2 Here>

Furthermore, macroeconomic expectations are meaningfully related to mobility beliefs. Expected economic growth is positively correlated with higher mobility, while expected inflation is negatively correlated with perceived individual mobility (-0.176, $p < 0.01$) and bottom-origin mobility (-0.064, $p < 0.01$). Government trust is strongly

²Figures A.2 and A.3 present tests of balance for baseline beliefs using cumulative distribution functions (CDFs).

positively correlated with perceived individual upward mobility (0.297, $p < 0.01$) and bottom-origin mobility (0.179, $p < 0.01$), and negatively correlated with top-origin mobility (-0.088, $p < 0.01$).

This evidence suggests that beliefs about social mobility are closely intertwined with broader perceptions of economic conditions and institutional effectiveness, highlighting the importance of accounting for these channels when examining how housing-related information shapes mobility expectations. This section presents the main empirical results from the survey experiment. We begin with visual evidence on pre- and post-treatment belief updating across information arms. We then document the correlates of mobility beliefs and estimate the causal effects of housing market and policy signals on economic expectations. Finally, we examine treatment effects on intergenerational mobility beliefs and present evidence on the perceived channels linking housing conditions to social mobility.

3.2 Pre- vs Post-Treatment Beliefs: Visual Evidence.

We present visual evidence on the main empirical patterns documented in the data. Figures 3-5 plot the distributions of pre-treatment and post-treatment beliefs across the four treatment arms for respondents' expected mobility for their own household, expected upward mobility for bottom-origin children, and expected persistence for top-origin children. Each panel overlays the pre- and post-treatment histograms for the corresponding treatment arm.

<Insert Figure 3 Here>

The visual evidence indicates that belief updating is concentrated among expectations for bottom-origin mobility in the adverse signal treatments. In particular, Panels A and D of Figure 4 show a leftward shift in post-treatment beliefs following information about rising housing prices (T1) and higher housing-related taxes (T4). In contrast, the corresponding distributions in the cooling housing price growth (T2) and subsidy (T3) treatments exhibit only weak or negligible changes, suggesting limited belief updating in response to these more neutral or supportive signals. For beliefs about one's own future mobility and about persistence among top-origin children, the pre- and post-treatment distributions remain largely stable across all treatment arms. While small shifts can be detected in some panels, these movements are modest relative to the dispersion of beliefs and do not display a consistent directional pattern across treatments. This visual stability suggests that information shocks primarily affect perceptions of vulnerability and upward mobility at the bottom of the distribution, rather than expectations about one's own position or the durability of advantage at the top.

<Insert Figure 4 Here>

Across all treatment arms, expected mobility for bottom-origin children is consistently evaluated at substantially lower levels than expected persistence for top-origin children, as seen by comparing Figures 4 and 5. This ordering aligns with respondents' baseline perceptions of intergenerational inequality and indicates that the treatments operate on a shared and coherent belief structure rather than generating implausible or mechanically induced shifts. The clear separation between bottom- and top-origin distributions thus supports the internal integrity of the experimental design and the validity of the elicited belief measures.

<Insert Figure 5 Here>

3.3 Housing Signals and Economic Expectations

Next, we analyze treatment effects on respondents' expectations about the housing market and the macroeconomic environment. For this analysis, we focus on post-information expectations of housing price growth over the next 12 months, aggregate economic growth, perceived inflation, and trust in government. 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 treatment effects using the following specification:

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

where Y_i^{post} denotes respondent i 's post-information 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. Treat_i is an indicator equal to one if respondent i is assigned to the relevant information treatment and zero if assigned to the control group. X_i is a vector of control variables including demographic characteristics and baseline expectations for the corresponding outcome. The coefficient β captures the causal effect of the information treatment on post-information expectations.

<Insert Table 3 Here>

Table 3 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 0.884 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 1.456 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, indicating that respondents sharply differentiate between market-based price signals and policy interventions when forming price expectations.

We next turn to expectations about broader macroeconomic growth, reported in Columns (5)–(8). Consistent with the price-expectation results, respondents exposed to rising housing price information (T1) revise expected economic growth upward by 0.585 percentage points. None of the remaining treatments lead to statistically significant changes in expected growth, with point estimates close to zero and relatively precisely estimated. This pattern suggests that housing price signals, but not housing policy signals, translate into revisions in perceived aggregate economic performance.

We then examine inflation expectations in Columns (9)–(12). Information about rising housing prices (T1) increases expected inflation by 0.399 percentage points, consistent with respondents interpreting price increases as reflecting broader inflationary pressures. In contrast, information about higher property taxes (T4) leads to a modest decline in expected inflation of 0.340 percentage points, statistically significant at the 10% level. Information about slower price growth and housing subsidies does not significantly affect inflation expectations. Together, these results indicate that price- and policy-based housing signals can move inflation expectations in opposite directions.

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, with the effect statistically significant at the 10% level. Information about higher property taxes generates a larger and statistically significant decline in trust. No statistically significant effects are observed for the remaining treatments. Notably, declines in trust arise under both adverse price and adverse policy treatments, despite their differing implications for macroeconomic expectations.

Overall, the experimental treatments produce strongly asymmetric belief responses. Information about adverse housing developments leads to sizable and coordinated revisions across multiple belief dimensions, whereas favorable signals generate little adjustment. When respondents are informed that house prices have risen (T1), they revise expectations of future house prices and inflation upward and report a significant decline in trust in government. Exposure to higher housing taxes (T4) produces a comparable decline in trust, despite respondents revising expected inflation and economic growth downward. Thus, reductions in trust arise under both adverse price and policy treatments, even though these signals imply opposite movements in macroeconomic expectations.

3.4 Treatment Effects on Intergenerational Mobility

In what follows, we examine how the information treatments affect beliefs about intergenerational social mobility for children born to families at different points of 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 rung separately for children born to families in the bottom 20 percent and in the top 20 percent of the social distribution. Our main outcome of interest is the post-information expected rung. We estimate treatment effects using the following specification:

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

where ER_{ig}^{post} denotes respondent i 's post-information expected rung for children from origin group $g \in \{\text{bottom}, \text{top}\}$. Treat_i is an indicator equal to one if respondent i is assigned to the relevant information treatment and zero if assigned to the control group. X_i is the same vector of covariates as in the previous specification. The coefficient β captures the causal effect of the information treatment on intergenerational mobility beliefs.

<Insert Table 4 Here>

Table 4 reports treatment effects on post-treatment beliefs about intergenerational mobility. We first examine mobility beliefs for children born to families at the bottom in order to assess whether housing-related information is interpreted as constraining upward mobility. Column (1)-(4) show mobility expectations for bottom-origin children. Exposure to information about rising housing prices (T1) leads to a statistically significant decline in expected mobility for children born to families in the bottom 20 percent, with the expected rung falling by 0.101 relative to the control group (statistically significant at the 5% level). Similarly, exposure to information about higher property taxes (T4) produces a negative revision in bottom-origin mobility beliefs. Specifically, respondents revise the expected rung attained by children born to families in the bottom 20% downward by approximately 0.104 rungs relative to the control group, statistically significant at the 5% level. In contrast, information about cooling housing price growth (T2) and housing subsidies (T3) does not produce statistically significant changes in expected bottom-origin mobility, with point estimates close to zero.

We then turn to mobility beliefs for children born to families at the top of the income distribution in order to assess whether the same housing-related information alters perceptions of persistence at the top. Columns (5)-(8) present results for top-origin children. Across all four treatments, the estimated effects on expected top-origin mobility are small in magnitude and statistically insignificant. Information about housing prices, housing

policies, or property taxes does not lead respondents to revise beliefs about mobility persistence at the top of the distribution.

Taken together, the results reveal a clear asymmetry in belief updating across origin groups. Housing-related information systematically affects perceptions of mobility for children starting at the bottom of the income distribution, while leaving beliefs about mobility at the top largely unchanged. For bottom-origin children, responses are uniformly pessimistic when information highlights either rising housing costs or increased fiscal burdens associated with housing. Overall, these patterns are consistent with reference-dependent belief formation, in which adverse housing signals disproportionately shape perceptions of mobility constraints at the bottom, with little corresponding revision in expectations at the top.

3.5 Perceived Channels Linking Housing and Social Mobility

To provide additional evidence on how individuals conceptualize the link between housing and social mobility, Figure 6 summarizes respondents' assessments of factors they considered when forming views about people's social standing or upward mobility. Respondents evaluated five housing-related channels: home values, living costs, borrowing costs, government action, and overall economic conditions, rating each on a five-point scale from "not at all" to "extremely."

<Insert Figure 6 Here>

The figure reveals clear heterogeneity in the perceived importance of different channels. Living costs, borrowing costs, and overall economic conditions receive the largest shares of responses in the "very" and "extremely" categories. This pattern indicates that respondents primarily associate upward mobility with affordability, access to credit, and broader economic conditions that shape households' ability to accumulate resources. These channels are closely linked to day-to-day financial constraints and are therefore viewed as central to moving up the social ladder.

By contrast, home values (housing prices) and government action (housing policy) attract substantially fewer top-end responses. While these channels are not viewed as irrelevant, respondents are considerably less likely to regard rising housing prices or government intervention as key drivers of upward mobility. In other words, improvements in housing prices or policy conditions are not widely perceived as primary mechanisms through which individuals advance economically.

Importantly, because the survey question explicitly focuses on upward mobility, the figure is silent about whether these same channels matter for downward mobility or perceived risks of falling behind. In particular, the weaker association between housing prices

and upward mobility does not imply that housing market conditions are unimportant. Rather, it suggests that respondents do not view favorable housing price movements as generating large mobility gains. Our experimental evidence directly complements this pattern by showing that housing price signals appear to operate primarily on the downside, increasing perceived risks of reduced opportunity rather than enhancing expectations of upward mobility. Taken together, the survey and experimental results point to an asymmetric role of housing market signals: they are weakly associated with beliefs about upward mobility, but strongly shape perceptions of downside risk. We build on this insight in the next section.

4 Conceptual Framework: Reference Dependence

This section develops a reference-dependent framework to explain the asymmetric belief updating across housing signals and origin groups. We demonstrate that the heterogeneity in responses across socioeconomic characteristics and prior beliefs is consistent with reference-dependent belief formation.

4.1 Interpreting Asymmetric Belief Updating: Reference Dependence

Our empirical results show that belief updating in response to these signals is strongly asymmetric. Adverse housing signals, such as rising housing costs or higher housing-related taxes, generate large and coordinated revisions in beliefs, while favorable housing signals generate little response. This asymmetry is difficult to reconcile with interpretations based solely on affordability constraints, borrowing limits, or wealth effects. Under such views, improvements and deteriorations in housing conditions should lead to broadly symmetric belief revisions, and beliefs at the bottom and the top of the income distribution should move in parallel. Neither pattern is observed in the data.

A natural way to interpret these findings is through reference-dependent belief formation. Households evaluate housing market developments relative to prevailing benchmarks shaped by recent conditions and lived experience. These benchmarks reflect commonly held expectations about affordability, access to ownership, and the feasibility of economic advancement. New information is interpreted relative to these reference points rather than processed symmetrically around a fixed standard.

Within this framework, adverse housing signals are interpreted as losses relative to existing benchmarks. Such signals are especially salient when they reinforce the perception that economic advancement increasingly depends on asset ownership that is out of

reach for many households. As a result, negative housing signals exert a strong influence on beliefs about upward mobility, particularly at the bottom of the income distribution. By contrast, favorable housing signals, such as housing subsidies or slowing price growth, generate weaker belief responses when they are perceived as insufficient to materially relax constraints relative to prevailing affordability challenges. Improvements that do not restore affordability to prior benchmarks do little to reverse pessimism about long-run opportunity.

The same logic explains why beliefs about mobility at the top of the income distribution are largely insensitive to housing-related signals. For higher-income households, access to housing is less constrained and housing affordability is less informative about long-run opportunity. Perceived advantage is instead anchored in factors such as education, networks, and occupational status, which are only weakly affected by housing market conditions. As a result, housing-related signals carry limited informational content for beliefs about mobility at the top.

Overall, housing market developments and housing-related policies shape beliefs about economic advancement in a strongly asymmetric and distribution-specific manner. Adverse signals substantially depress perceived upward mobility at the bottom, favorable signals fail to offset pessimism, and beliefs about mobility at the top remain largely unchanged.

A Reduced-Form Representation

To fix ideas, consider a simple reduced-form representation of belief formation. Let B_g denote beliefs about future social mobility for children from origin group $g \in \{b, t\}$, where b refers to the bottom of the income distribution and t refers to the top. Higher values of B_b indicate greater perceived upward mobility, while higher values of B_t indicate greater perceived persistence at the top.

Individuals observe a housing-related signal s , defined relative to a reference point normalized to zero. Adverse housing signals, such as rising housing costs or higher housing-related taxes, correspond to $s < 0$, while favorable signals, such as housing subsidies or slowing price growth, correspond to $s > 0$.

Beliefs are given by

$$B_g(s) = \alpha_g v(s), \tag{4}$$

where $\alpha_g \geq 0$ captures the salience of housing-related information for group g , and $v(s)$

is a reference-dependent valuation function defined as

$$v(s) = \begin{cases} s, & s < 0, \\ 0, & s \geq 0. \end{cases} \quad (5)$$

This representation captures two features of the data. First, adverse housing signals reduce perceived mobility, while favorable signals generate weak or no belief revisions.³ Second, belief responses differ across groups. For bottom-origin mobility, housing affordability is highly salient, implying $\alpha_b > 0$. For top-origin households, housing signals are less informative about long-run opportunity, implying $\alpha_t \approx 0$.

This reduced-form representation provides a compact way to summarize the asymmetric belief responses documented in the data and to clarify how reference points and differential salience across groups jointly shape beliefs about economic advancement.

4.2 Heterogeneity in Belief Updating

To further validate the reference-dependent interpretation, this subsection examines heterogeneity in belief updating across socioeconomic characteristics and prior beliefs. We show that identical housing signals generate sharply different responses depending on respondents' income, liquidity, education, and perceived social position, consistent with belief updating relative to group-specific reference points.

Intergenerational Heterogeneity: Education. We begin with education. Table 5 examines heterogeneity in belief updating by educational attainment, separately for beliefs about upward mobility from the bottom and persistence at the top. High education is defined as completion of at least post-secondary education.

For beliefs about bottom-origin mobility, average treatment effects are small and statistically insignificant, but there is meaningful heterogeneity by educational attainment. Across columns (1)-(4), interaction terms with high education are consistently negative and modest in magnitude, indicating more pessimistic updating among highly educated respondents. In particular, for the rising housing price treatment (T1), the interaction with high education is -0.216 rungs and statistically significant at the 5% level, implying that highly educated respondents revise beliefs about bottom-origin mobility downward relative to less educated respondents. A similar pattern emerges for the tax treatment (T4), where the interaction term is -0.167 rungs and statistically significant at the 10% level. Taken together, these results suggest that while housing-related information does not shift average beliefs about bottom-origin mobility, highly educated respondents re-

³For simplicity, we assume no gain response; allowing weakly positive responses would not change the qualitative implications.

spond more pessimistically to adverse housing signals.

On the other hand, education heterogeneity is strong and statistically significant for beliefs about top-origin mobility. In columns (5)-(7), the baseline treatment effects are negative, indicating that respondents with lower education revise beliefs about top persistence downward following exposure to housing information. In contrast, the interaction terms associated with high education are positive and statistically significant at the 5% level for T1 and T2 and at the 1% level for T3, with coefficients between 0.221 and 0.326 rungs. This implies that highly educated respondents revise beliefs about top-origin mobility upward relative to less educated respondents when exposed to the same information.

<Insert Table 5 Here>

One possible explanation is that educational attainment shapes the reference point against which housing-related information is evaluated. Highly educated respondents evaluate housing market and policy information relative to a reference point that emphasizes institutional stability and the persistence of advantage. From this perspective, rising prices, cooling growth, and subsidies are interpreted as reinforcing the mechanisms through which advantage at the top is maintained, such as asset ownership, policy design, and market structure, rather than as forces that equalize opportunities. Consequently, these signals increase expected persistence at the top without improving expectations about mobility from the bottom. By contrast, respondents with lower education are more likely to interpret the same information relative to a reference point centered on potential redistribution or equalization. Housing market interventions and policy actions may therefore be viewed as limiting elite advantage or increasing fluidity, leading to downward revisions in beliefs about top persistence.

Intergenerational Heterogeneity: Family and Connections. Next, we turn to heterogeneity by respondents' beliefs about the role of family background and social connections in shaping social mobility. Table 6 examines heterogeneity in mobility belief updating by respondents' beliefs about the importance of family background and social connections in shaping social mobility, defined as those ranking these factors 4 and 5 in importance. This classification captures a subjective assessment of how opportunity is structured, distinguishing respondents who view mobility as strongly shaped by inherited advantage from those who place less weight on such factors.

For bottom-origin mobility, baseline treatment effects are small and statistically insignificant across all four treatments. However, the interaction terms with family background are consistently negative and statistically significant. Specifically, the interaction coefficients are -0.185 rungs for T1 (statistically significant at the 5% level), -0.176 rungs

for T2 (statistically significant at the 1% level), and -0.145 rungs for T3 (statistically significant at the 5% level), with a smaller and statistically insignificant effect for T4. A similar pattern emerges for beliefs about social connections: the interaction terms are negative and statistically significant for the subsidy and tax treatments, with magnitudes of -0.172 rungs for T3 and -0.164 rungs for T4. These results indicate that respondents who believe family background or connections matter revise expectations about upward mobility from the bottom downward relative to other respondents when exposed to housing-related information.

For top-origin mobility, the pattern is symmetric but opposite in sign. Baseline treatment effects are negative across all treatments, indicating that respondents who do not emphasize family background or connections revise beliefs about persistence at the top downward. In contrast, the interaction terms with family background are positive and statistically significant for all four treatments, with coefficients of 0.184 rungs for T1 (statistically significant at the 5% level), 0.178 rungs for T2 (statistically significant at the 5% level), 0.253 rungs for T3 (statistically significant at the 1% level), and 0.239 rungs for T4 (statistically significant at the 1% level). Interaction effects for social connections are similarly positive and statistically significant for the subsidy and tax treatments, with magnitudes of 0.197 and 0.204 rungs, respectively. These estimates indicate that respondents who view family background or connections as important revise expectations about top persistence upward relative to others.

<Insert Table 6 Here>

Respondents who believe mobility is strongly determined by family background or connections evaluate housing-related information relative to a reference point in which advantage is inherited and institutionally reinforced. Relative to this benchmark, housing price movements and policy interventions are interpreted not as equalizing forces, but as signals that existing hierarchies will persist. As a result, information exposure reinforces pessimism about opportunities at the bottom and optimism about persistence at the top. By contrast, respondents who place less weight on family background or connections evaluate the same information relative to a more meritocratic reference point, leading to weaker or opposite revisions. While baseline specifications yield statistically insignificant average treatment effects on perceived individual upward mobility, the heterogeneity results reveal large and systematic differences in belief updating across income, liquidity and self-evaluation groups.

Individual Upward Mobility Heterogeneity: Income and Liquidity We now focus on income. Each column reports a treatment-versus-control regression in which the main treatment coefficient captures the effect for the low-income group, and the interaction term captures the differential response of high-income respondents.

For low-income respondents, all four treatments reduce perceived individual upward mobility. Three of the four effects are statistically significant and economically meaningful. Information about cooling housing price growth (T2) lowers expected individual mobility by 0.221 rungs, information about housing subsidies (T3) reduces expected mobility by 0.349 rungs, and information about higher property taxes (T4) reduces expected mobility by 0.32 rungs. The estimate for rising housing prices (T1) is also negative but insignificant. In contrast, high-income respondents exhibit systematically attenuated or offsetting responses. The interaction terms are positive and statistically significant at the 1% level for T2, T3, and T4, with coefficients of 0.430, 0.585, and 0.413 rungs, respectively. While low-income respondents revise perceived individual mobility beliefs downward, these statistically significant interaction effects indicate that high-income respondents revise their perceived individual mobility beliefs upward in response to the same information.

Panel B examines heterogeneity by housing coverage which proxies for liquidity. Respondents without coverage represent those for whom housing market and policy shocks are more likely to bind, while covered respondents possess sufficient buffers to absorb such shocks. For uncovered respondents, all four treatments reduce perceived individual mobility, with large and statistically significant effects in most cases. Rising housing prices (T1) reduce perceived individual mobility by 0.566 rungs, statistically significant at the 1% level. Cooling price growth (T2) lowers expected mobility by 0.419 rungs, statistically significant at the 10% level. The largest effect arises for the subsidy treatment (T3), which reduces perceived individual mobility by 0.847 rungs. Higher property taxes (T4) also reduce perceived mobility by 0.408 rungs. In contrast, covered respondents exhibit sharply different responses. The interaction terms are positive and statistically significant at the 1% level for T1 and T3, and at the 5% level for T2, with coefficients of 0.665, 0.949, and 0.477 rungs, respectively. These results indicate that respondents with sufficient liquidity revise perceived individual mobility beliefs upward relative to uncovered respondents when exposed to the same information. For the tax treatment (T4), the interaction term is positive but not statistically significant, suggesting that fiscal extraction signals are less strongly differentiated by coverage.

<Insert Table 7 Here>

For low-income respondents, the reference point is centered on the feasibility of upward mobility through housing, specifically, whether homeownership and asset accumulation constitute a realistic path to advancement. Relative to this benchmark, all four treatments are interpreted as failing to restore meaningful opportunity. Information about rising housing prices (T1) signals worsening affordability, but also carries ambiguous implications about future asset values, which weakens salience and yields an insignificant

estimated effect. Cooling price growth (T2) does not relax binding constraints, and therefore represents stagnation rather than improvement, leading to a modest but negative belief revision. The strongest responses occur for policy-based treatments. Subsidy information (T3) is interpreted not as a gain, but as evidence that housing affordability has become so strained that access increasingly depends on policy discretion; when perceived as insufficient or uncertain, subsidies highlight the persistence of structural barriers and generate downward revisions in perceived individual mobility beliefs. Higher property taxes (T4) similarly signal government extraction and tighter conditions for asset accumulation, reinforcing perceptions of constrained advancement.

For high-income respondents, the reference point is fundamentally different. It is defined not by the feasibility of entry, but by asset preservation, financial flexibility, and control over timing. Relative to this benchmark, price signals (T1 and T2) carry limited negative implications. Rising prices imply little erosion of purchasing power and may preserve relative advantage, while cooling price growth reduces volatility and downside risk, increasing the option value of waiting and stabilizing future prospects. Policy interventions (T3 and T4) are likewise interpreted as positive, either because benefits are additive rather than binding, or because fiscal changes pose limited threat to advancement. Consequently, high-income respondents revise individual mobility beliefs upward relative to low-income respondents, as reflected in large and highly statistically significant interaction effects.

Individual Upward Mobility Heterogeneity: Bottom Perception Table 8 examines heterogeneity in individual upward mobility belief updating by respondents' perceived position in the social distribution, distinguishing those who perceive themselves to be near the bottom from those who do not. This dimension captures a subjective reference point that is distinct from income or liquidity but closely related to perceived vulnerability and exposure to downside risk.

For respondents not perceiving themselves as bottom, all four treatments are associated with positive and statistically significant revisions in perceived individual upward mobility. The estimated treatment effects range from 0.488 to 0.738 rungs and are statistically significant at the 1% level across T1-T4. This indicates that, for respondents who view themselves as relatively secure, housing market and policy information is interpreted as an opportunity for personal advancement. In sharp contrast, respondents who perceive themselves as bottom exhibit large and statistically significant downward revisions in individual upward mobility beliefs across all treatments. The interaction terms between bottom perception and treatment are uniformly negative and statistically significant at the 1% level. The interaction effects are economically large and statistically significant, ranging from -1.438 to -1.876 rungs across treatments.

<Insert Table 8 Here>

These patterns are strongly consistent with reference-dependent belief updating. Respondents who perceive themselves as near the bottom evaluate housing-related information relative to a reference point defined by acute vulnerability and limited scope for upward mobility. Relative to this benchmark, all four treatments—whether price-based or policy-based—signal that constraints remain binding or that advancement depends on forces beyond individual control. As a result, the information is coded as a loss, producing sharp downward revisions in perceived individual mobility.

By contrast, respondents who do not perceive themselves as bottom evaluate the same information relative to a reference point characterized by security and control. Relative to this benchmark, rising prices, cooling growth, subsidies, and even higher taxes carry limited negative implications and may signal stability or policy engagement, resulting in upward belief revisions.

5 Discussion

In this section, we show that alternative explanations such as wealth effects, affordability considerations, and generalized economic sentiment cannot account for the observed patterns. We then discuss the implications of belief-based responses for the design and communication of housing policies.

5.1 Alternative Explanations

We now evaluate three alternative channels through which housing-related information could affect beliefs about social mobility: wealth effects, affordability-based channels, and general economic pessimism or optimism. These channels differ in how housing market information is mapped into beliefs about opportunity and therefore imply distinct empirical predictions. While each channel captures certain features of the data, none can account for the pronounced asymmetry in belief updating across signals, outcomes, and socioeconomic groups documented above.

Wealth Effects. One alternative interpretation is that the observed belief updating reflects a pure wealth effect, whereby information about housing prices or housing-related policies mechanically alters perceived household wealth and thereby shifts expectations about social mobility. Under this view, rising housing prices or housing subsidies should increase perceived mobility by raising expected asset values, while cooling price growth or higher housing-related taxes should reduce perceived mobility by lowering expected

wealth. This mechanism predicts that belief updating should be strongest among households with greater housing exposure or asset holdings, and that responses should be broadly symmetric for favorable and adverse signals.

Several features of the results are inconsistent with this interpretation. First, belief updating is concentrated in perceptions of upward mobility for bottom-origin children, rather than in beliefs about persistence at the top of the income distribution, where wealth-based effects should be most salient. Second, high-income and high-liquidity respondents, who would experience smaller expected capital losses when housing prices cool, revise mobility beliefs upward in response to cooling price growth information. In contrast, low-income respondents revise mobility beliefs downward even in response to information about housing subsidies. These patterns are difficult to reconcile with a mechanism driven primarily by changes in perceived household wealth.

Affordability-Based Channels. A second explanation is that housing information affects beliefs about social mobility through perceived changes in affordability and living costs. Under this mechanism, rising housing prices or higher housing-related taxes tighten affordability constraints and should reduce perceived upward mobility, while cooling price growth or housing subsidies relax constraints and should increase perceived mobility. Unlike wealth effects, affordability-based channels operate through current and expected budget constraints and therefore predict belief updating that is symmetric around improvements and deteriorations in affordability.

While affordability considerations are clearly salient for respondents, the empirical patterns are not fully consistent with this channel alone. Information about cooling housing price growth and housing subsidies does not systematically increase perceived upward mobility for bottom-origin children, despite representing clear improvements in affordability. More broadly, a pure affordability-based model implies symmetric belief updating around changes in constraints. If housing-related information primarily operates by relaxing or tightening budget constraints, then improvements and deteriorations of comparable magnitude should generate correspondingly symmetric revisions in perceived mobility. The sharp asymmetry observed in the data, where adverse housing signals consistently depress perceived mobility while favorable signals generate little response, is difficult to reconcile with such a framework. These patterns indicate that housing information is not interpreted solely through immediate affordability constraints, but also through broader assessments of opportunity structure and persistence.

General Economic Pessimism or Optimism. A third possibility is that housing-related information shifts respondents' overall economic sentiment, which then spills over into beliefs about social mobility. Under this view, treatments that convey adverse housing conditions would induce broad pessimism, leading to uniformly lower mobility beliefs

across outcomes and groups, while more favorable information would generate generalized optimism.

The evidence does not support this interpretation. First, belief updating is not uniform across outcomes. Responses are substantially stronger for intergenerational mobility, particularly for bottom-origin children, than for beliefs about one’s own future mobility, which would be equally affected under a general sentiment channel. Second, respondents exposed to the same information often revise beliefs in opposite directions depending on income, liquidity, education, and beliefs about the structural determinants of mobility. Such sharply heterogeneous responses are difficult to reconcile with a common shift in mood or sentiment.

Taken together, these findings indicate that housing-related information does not operate primarily by changing perceived household wealth, symmetrically relaxing or tightening affordability constraints, or shifting overall economic sentiment. Instead, the evidence points to belief formation that depends on how housing market signals are interpreted relative to salient reference points. Adverse housing signals receive disproportionate weight in shaping perceptions of opportunity, particularly for those at the bottom of the income distribution, while corresponding improvements are discounted. This interpretation accounts for both the asymmetry in average belief updating and the pronounced heterogeneity across socioeconomic and belief groups, and highlights the importance of accounting for belief formation when assessing the broader social impacts of housing market developments and policy interventions.

5.2 Policy Implications

Our results suggest that housing market conditions and housing-related policies shape beliefs about social mobility primarily through how households interpret signals about economic opportunity, rather than through mechanical wealth or affordability effects alone. Adverse housing developments and policy changes that are perceived as tightening access or increasing housing-related costs disproportionately depress perceived upward mobility at the bottom of the income distribution, while comparable improvements 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 be as important as policy content itself. When housing policies are experienced as salient

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 salient reference points 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 affordability constraints or expanding access in equilibrium, households may continue to perceive opportunity as limited if policy interventions are interpreted as evidence of persistent structural barriers. 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 reference dependence and 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 reference points anchored in affordability and expected access to homeownership, particularly for households at the bottom of the income distribution. By contrast, improvements in housing conditions may be less salient or insufficient to reset these reference points, 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, it is important to clarify the scope and external validity of these findings. Singapore is not intended to be representative of housing markets more broadly. Its centralized housing system, near-universal homeownership, and strong government presence render housing prices and housing policies unusually salient and widely interpreted as signals of economic opportunity. These institutional features allow us to isolate belief formation mechanisms in a setting where housing-related information is highly visible and policy-relevant, rather than to assert that the magnitude of the estimated effects will necessarily generalize to other contexts.

At the same time, the mechanisms highlighted in this paper are not inherently specific to Singapore. Reference dependence, loss asymmetry, and salience in belief formation are broad features of how individuals process economic information. In many advanced economies, housing prices, property taxation, and affordability policies are among the most prominent and widely discussed economic signals, even in more decentralized hous-

ing systems. To the extent that households elsewhere interpret housing market developments and policy interventions as signals about opportunity and constraint, similar asymmetric belief responses may arise. What is likely to be context-specific is the strength and clarity of these signals, which depend on institutional features such as policy credibility, market transparency, and the role of housing in household balance sheets. Singapore therefore serves as a clean laboratory for identifying these mechanisms, rather than a special case to which they are confined.

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 income distribution. Three findings emerge. First, increases in house prices and housing-related taxes significantly reduce perceived upward mobility at the bottom of the income distribution, while leaving beliefs about mobility at the top largely unchanged. Second, symmetric favorable signals, 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 affordability 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 income distribution. When adverse housing signals are salient and widely observed, they disproportionately depress optimism about upward mobility, while comparable improvements 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.
- Central Provident Fund Board (2025). A Guide to Enhanced CPF Housing and Proximity Grant. <https://www.cpf.gov.sg/member/infohub/educational-resources/a-guide-to-enhanced-cpf-housing-and-proximity-grant>. Accessed: January 2026.

- 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.
- D’Acunto, F. and Weber, M. (2024). Why survey-based subjective expectations are meaningful and important. *Annual Review of Economics*, 16(1):329–357.
- 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.
- Fisman, R., Kuziemko, I., Charite, J., and Zhang, K. (2022). Reference points and redistributive preferences: experimental evidence. *Journal of Public Economics*.
- Gennaioli, N. and Shleifer, A. (2018). A crisis of beliefs: Investor psychology and financial fragility.
- Haaland, I., Roth, C., Stantcheva, S., and Wohlfart, J. (2025). Understanding economic behavior using open-ended survey data. *Journal of Economic Literature*, 63(4):1244–1280.
- Haaland, I., Roth, C., and Wohlfart, J. (2023). Designing information provision experiments. *Journal of economic literature*, 61(1):3–40.
- Housing & Development Board (2023). Flat and Grant Eligibility. <https://www.hdb.gov.sg/residential/buying-a-flat/understanding-your-eligibility-and-housing-loan-options/flat-and-grant-eligibility>. Accessed: January 2026.
- 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.
- 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.
- 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.
- Piketty, T. (1995). Social mobility and redistributive politics. *The Quarterly journal of economics*, 110(3):551–584.
- 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.

Tables and Figures

Table 1: Summary Statistics

Variable	<i>N</i>	Mean	SD	Min	Max
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
Housing Type	2299	0.216	0.412	0	1
Birthplace	2299	0.828	0.377	0	1
Housing Price Expectations (Pre)	2299	4.354	3.666	-10	10
Economic Growth Expectations (Pre)	2299	2.018	3.195	-10	10
Inflation Expectations (Pre)	2299	3.873	3.305	-10	10
Trust Expectation (Pre)	2299	3.440	0.896	1	5
Bottom Mobility (Pre)	2299	2.858	0.726	1	5
Top Mobility (Pre)	2299	3.713	0.781	1	5
Individual Mobility (Pre)	2299	6.130	1.853	1	10
Housing Price Expectations (Post)	2299	6.749	3.453	-10	10
Economic Growth Expectations (Post)	2299	4.885	3.713	-10	10
Inflation Expectations (Post)	2299	5.539	3.271	-10	10
Trust (Post)	2299	3.644	0.902	1	5
Bottom Mobility (Post)	2299	2.822	0.749	1	5
Top Mobility (Post)	2299	3.693	0.774	1	5
Individual Mobility (Post)	2299	6.105	1.773	1	10

Notes: This table reports summary statistics for variables used in the empirical analysis. The sample includes 2,299 respondents. Outcome variables include post-information expectations about housing prices, economic growth, inflation, trust, mobility for top and bottom 20% children, and participants' perceived upward mobility. Demographic controls include age, household size, gender, marital status, household income, education, employment status, housing type, birthplace, and parental education. 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. Married equals 1 if the respondent reports being married and 0 otherwise. Household income is reported in brackets. We convert this to a continuous measure, Income (midpoint), by assigning each bracket its midpoint (and assigning the top-coded bracket a value of 22,000 SGD). 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. Employment status is recoded into Employed, 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). Housing type equals 1 if the respondent lives in private housing and 0 otherwise. Finally, Birthplace is an indicator equal to 1 if the respondent reports being born in Singapore and 0 otherwise.

Table 2: Pairwise Correlations

	Individual mobility	Top Mobility	Bottom Mobility	Housing Price	Economic Growth	Inflation	Trust	Age	Household Size	Female	Married	Income	Education	Employed
Individual Mobility	1.000													
Top Mobility	-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						
Household Size	0.129***	-0.033	0.074***	-0.057***	0.022	-0.056***	0.077***	-0.138***	1.000					
Female	-0.019	0.013	0.024	0.068***	0.022	0.023	0.021	-0.121***	-0.006	1.000				
Married	0.038*	0.001	0.051**	0.023	0.028	0.066***	0.037*	0.211***	0.215***	-0.072***	1.000			
Income	0.251***	0.091***	-0.053**	0.068***	0.055***	0.033	-0.004	-0.053**	0.185***	-0.077***	0.232***	1.000		
Education	0.143***	0.119***	-0.106***	0.050**	-0.018	-0.007	-0.004	-0.242***	-0.006	-0.063***	-0.002	0.290***	1.000	
Employed	0.091***	0.003	0.007	0.026	0.019	-0.038*	-0.020	-0.177***	0.064***	-0.065***	0.033	0.282***	0.150***	1.000

Notes: Table reports pairwise correlations. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 3: 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	0.884*** (0.208)				0.585*** (0.212)				0.399** (0.201)				-0.088* (0.048)			
T2		-1.457*** (0.228)				-0.262 (0.206)				-0.279 (0.199)				0.063 (0.047)		
T3			0.250 (0.212)				0.156 (0.210)				0.186 (0.201)				0.037 (0.045)	
T4				-0.140 (0.214)				-0.337 (0.216)					-0.340* (0.206)			-0.130*** (0.049)
_cons	6.671*** (0.828)	7.672*** (0.920)	6.378*** (0.853)	7.303*** (0.854)	6.247*** (0.846)	6.526*** (0.919)	6.416*** (0.873)	5.378*** (0.876)	7.386*** (0.861)	6.183*** (0.902)	6.935*** (0.888)	5.660*** (0.889)	2.278*** (0.227)	2.103*** (0.227)	2.167*** (0.209)	1.898*** (0.238)
<i>N</i>	917	935	939	891	917	935	939	891	917	935	939	891	917	935	939	891
<i>R</i> ²	0.107	0.106	0.091	0.106	0.265	0.233	0.279	0.267	0.172	0.153	0.153	0.130	0.401	0.352	0.379	0.392

Notes: This table reports OLS estimates of the effects of housing-related information treatments on post-information expectations. Columns (1)-(4) examine expectations about housing prices, 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, and pre-treatment expectations of the macro variables. Robust standard errors are reported in parentheses. Standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table 4: Treatment Effects on Post-Treatment Mobility Beliefs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable	Post Bottom-Origin Mobility Expectation				Post Top-Origin Mobility Expectation			
T1	-0.101** (0.049)				0.007 (0.051)			
T2		-0.015 (0.048)				-0.009 (0.050)		
T3			-0.032 (0.047)				-0.027 (0.049)	
T4				-0.104** (0.049)				-0.002 (0.051)
Constant	2.182*** (0.211)	2.106*** (0.217)	1.886*** (0.194)	1.956*** (0.210)	3.452*** (0.236)	3.660*** (0.225)	3.428*** (0.217)	3.713*** (0.233)
Observations	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 post-treatment beliefs about bottom and top intergenerational mobility. Columns (1)–(4) use post-treatment bottom 20% mobility beliefs as the dependent variable, while columns (5)–(8) use post-treatment top 20% mobility beliefs. 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. Standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table 5: Treatment \times Education: Effects on Mobility Beliefs (Bottom vs Top)

	Bottom-Origin Mobility				Top-Origin Mobility			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T1	0.080				-0.182*			
	(0.083)				(0.103)			
Education (High) \times T1	-0.216**				0.226**			
	(0.088)				(0.107)			
T2		0.099						
		(0.085)						
Education (High) \times T2		-0.137						
		(0.088)						
T3			0.052					
			(0.088)					
Education (High) \times T3			-0.099					
			(0.091)					
T4				0.034				
				(0.095)				
Education (High) \times T4				-0.167*				
				(0.098)				
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	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: Each column reports OLS estimates comparing treatment arms T1–T4 to the control arm (C). High Education are defined as those complete at least post-secondary education. All specifications include common demographic controls, pre-treatment expectations of economic growth and trusts. Robust standard errors are in parentheses. *, **, *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 6: Treatment \times Family Background: Effects on Bottom- vs Top-Origin Mobility

	Bottom Mobility				Top Mobility			
	(1) T1 vs C	(2) T2 vs C	(3) T3 vs C	(4) T4 vs C	(5) T1 vs C	(6) T2 vs C	(7) T3 vs C	(8) T4 vs C
Panel A: Treatment \times Family								
T1	0.025 (0.070)				-0.119 (0.073)			
Family \times T1	-0.185** (0.075)				0.184** (0.079)			
T2		0.097 (0.062)				-0.123* (0.068)		
Family \times T2		-0.176*** (0.067)				0.178** (0.072)		
T3			0.064 (0.064)				-0.195*** (0.067)	
Family \times T3			-0.145** (0.067)				0.253*** (0.072)	
T4				-0.044 (0.067)				-0.162** (0.070)
Family \times T4				-0.090 (0.072)				0.239*** (0.075)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	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
Panel B: Treatment \times Connection								
T1	-0.062 (0.071)				-0.005 (0.073)			
Connection \times T1	-0.055 (0.075)				0.016 (0.079)			
T2		0.067 (0.068)				-0.031 (0.072)		
Connection \times T2		-0.117 (0.072)				0.031 (0.076)		
T3			0.090 (0.067)				-0.167** (0.070)	
Connection \times T3			-0.172** (0.070)				0.197*** (0.074)	
T4				0.008 (0.067)				-0.140* (0.072)
Connection \times T4				-0.164** (0.073)				0.204*** (0.077)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	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: Each column reports OLS estimates comparing treatment arms T1–T4 to the control arm (5), with common demographic controls and pre-treatment expectations. Family and Connection captures respondents' beliefs about the role of family background and social connections in shaping social mobility. The coefficients on T1 to T4 represent the treatment effects for treatment arms 1 through 4 relative to the control group, while the interaction terms measure the differential treatment effects for respondents with high perceived importance of family and connections. Robust standard errors in parentheses. *, **, *** denote significance at the 10%, 5%, and 1% levels.

Table 7: Income Heterogeneity

	(1)	(2)	(3)	(4)
Dependent variable	Individual Mobility Expectations			
Panel A: Treatment \times Income				
T1	-0.111 (0.125)			
High Income \times T1	0.176 (0.152)			
T2		-0.221* (0.126)		
High Income \times T2		0.430*** (0.146)		
T3			-0.349*** (0.135)	
High Income \times T3			0.585*** (0.163)	
T4				-0.316** (0.127)
High Income \times T4				0.413*** (0.155)
Constant	4.392*** (0.450)	4.189*** (0.454)	3.743*** (0.505)	3.787*** (0.452)
R^2	0.229	0.217	0.212	0.286
Panel B: Treatment \times Cover				
T1	-0.566*** (0.196)			
Cover \times T1	0.665*** (0.199)			
T2		-0.419* (0.224)		
Cover \times T2		0.477** (0.226)		
T3			-0.847*** (0.209)	
Cover \times T3			0.949*** (0.215)	
T4				-0.408* (0.228)
Cover \times T4				0.342 (0.230)
Constant	4.543*** (0.440)	4.251*** (0.446)	3.805*** (0.483)	3.826*** (0.445)
R^2	0.262	0.246	0.252	0.305
Observations	917	935	939	891

Notes: This table reports treatment effects on perceived individual upward mobility with heterogeneity. Each column estimates a separate regression for the indicated treatment-versus-control comparison and includes a common set of controls. The coefficient on T1-T4 corresponds to the effect for the low-income group, while the interaction term captures the differential effect for the high-income group relative to the low-income group. Robust standard errors are in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 8: Treatment \times Bottom Perception: Effects on Perceived Individual Upward Mobility

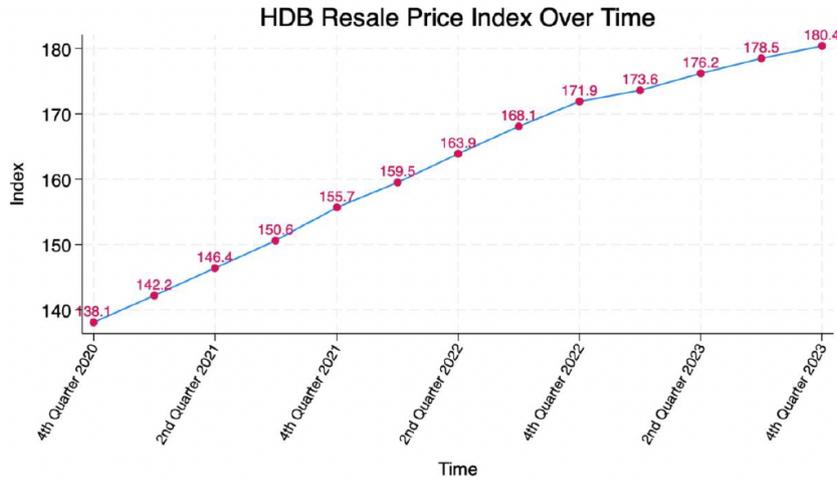
	(1)	(2)	(3)	(4)
	Individual Mobility	Individual Mobility	Individual Mobility	Individual Mobility
T1	0.578*** (0.105)			
bottom perception \times T1	-1.451*** (0.138)			
T2		0.592*** (0.100)		
bottom perception \times T2		-1.480*** (0.137)		
T3			0.738*** (0.100)	
bottom perception = 1 \times T3			-1.876*** (0.145)	
T4				0.488*** (0.103)
bottom perception \times T4				-1.438*** (0.143)
Controls	Yes	Yes	Yes	Yes
Observations	917	935	939	891
R^2	0.331	0.327	0.358	0.372

Notes: Each column reports OLS estimates for perceived individual upward mobility comparing treatment arms T1-4 to the control arm (5). All specifications include common demographic controls, pre-treatment expectations of economic growth and trusts. Robust standard errors are 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 shown to respondents in the housing market 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 and Development Board.

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%

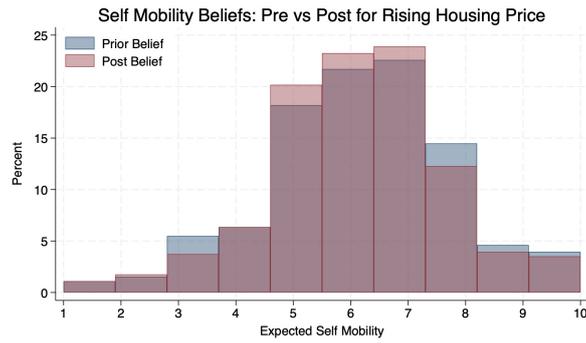
For example, for an owner-occupied property with an annual value (AV) of \$100,000, the **property tax payable will increase from \$8,730 to \$11,980**.

*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.

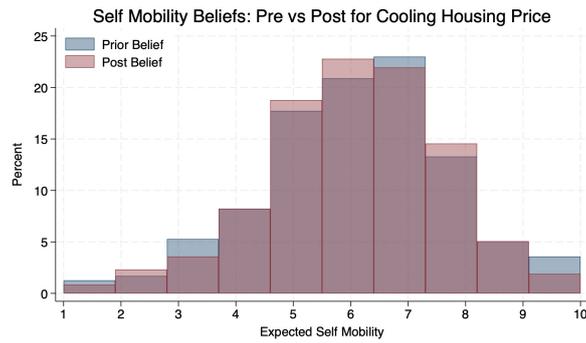
Source: iras.gov.sg

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 buyer. 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.

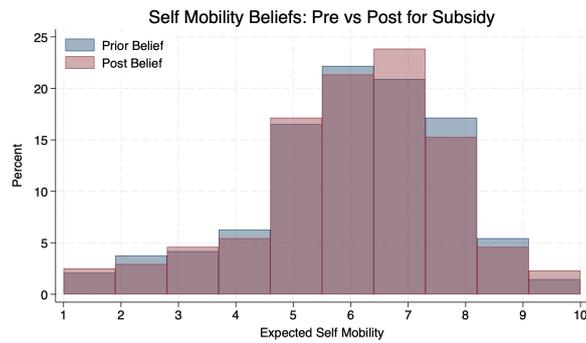
Figure 3: Pre- vs Post-Treatment Beliefs about Perceived Individual Upward Mobility.



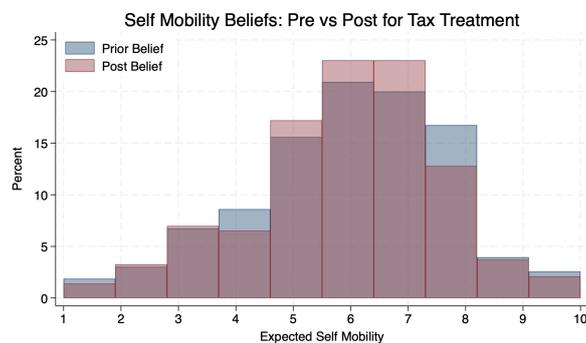
Panel A: Treatment 1



Panel B: Treatment 2



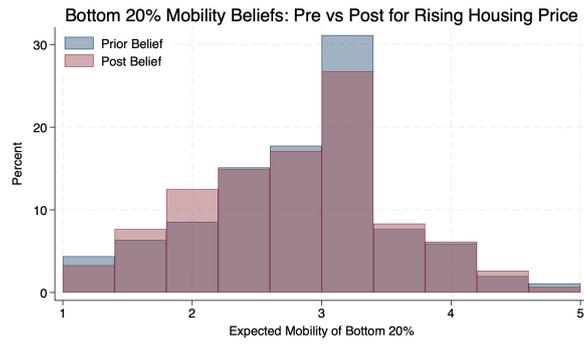
Panel C: Treatment 3



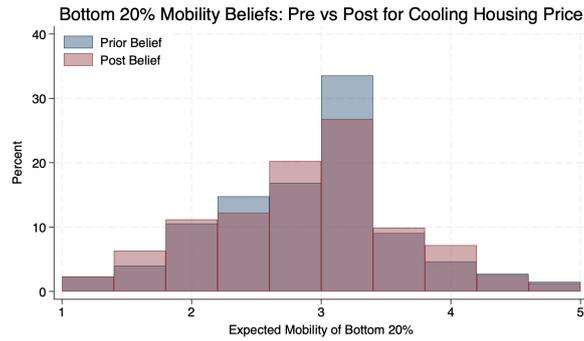
Panel D: Treatment 4

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. 45

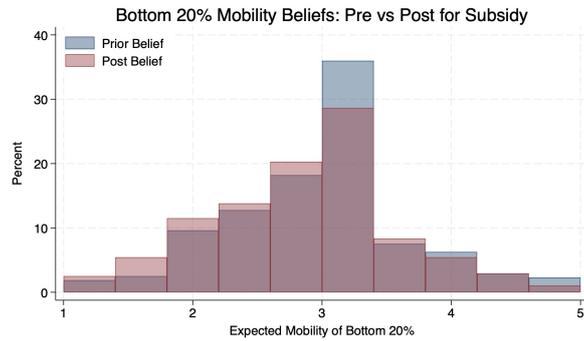
Figure 4: Pre- vs Post-Treatment Beliefs about Upward Mobility of the Bottom 20%.



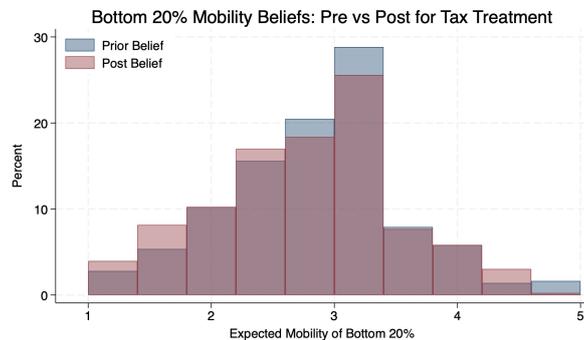
Panel A: Treatment 1



Panel B: Treatment 2



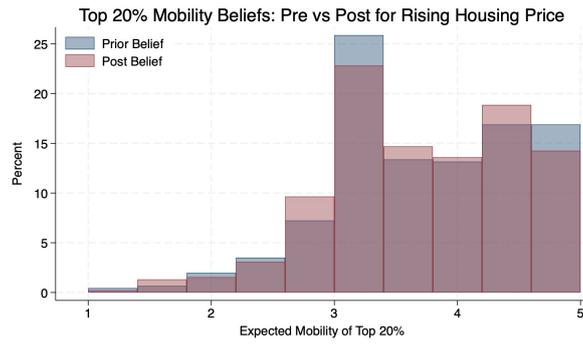
Panel C: Treatment 3



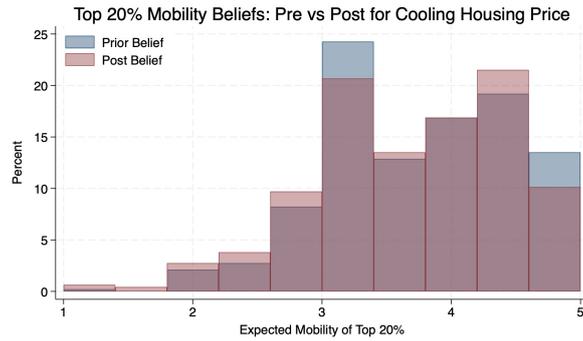
Panel D: Treatment 4

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.

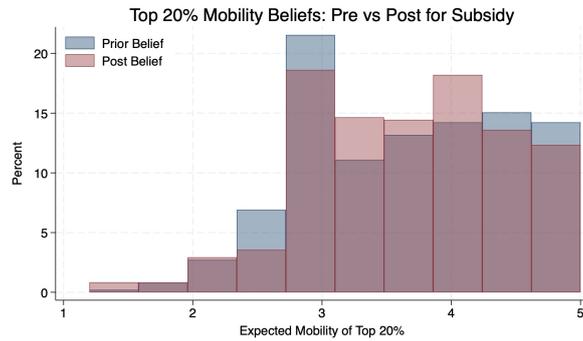
Figure 5: Pre- vs Post-Treatment Beliefs about Upward Mobility of the Top 20%



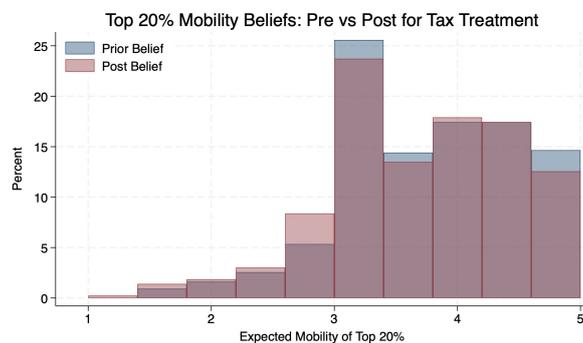
Panel A: Treatment 1



Panel B: Treatment 2



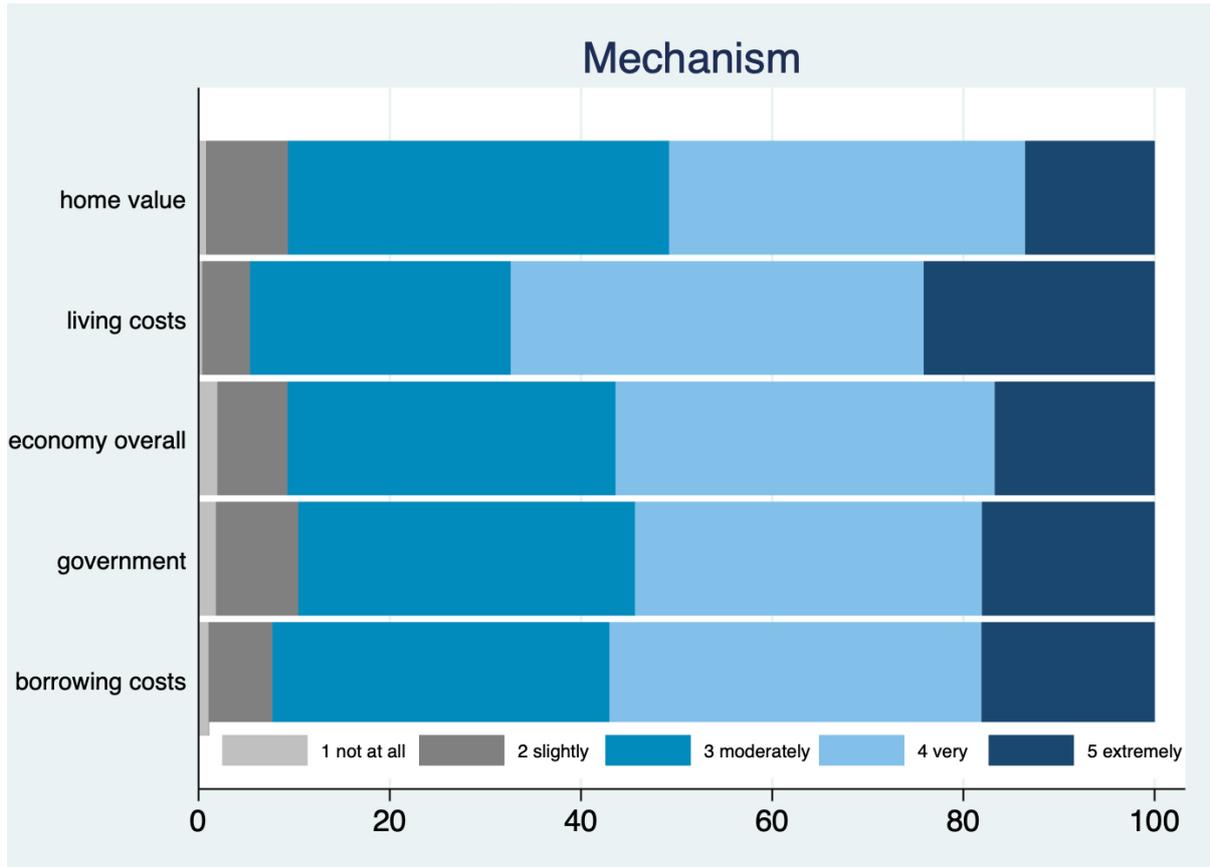
Panel C: Treatment 3



Panel D: Treatment 4

Notes: This figure presents the distribution of respondents' beliefs about intergenerational mobility 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 6: Mechanism



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

Social Mobility and Housing Price Expectations

A	Additional Tables and Figures	50
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A Additional Tables and Figures

A.1 Test of Balance

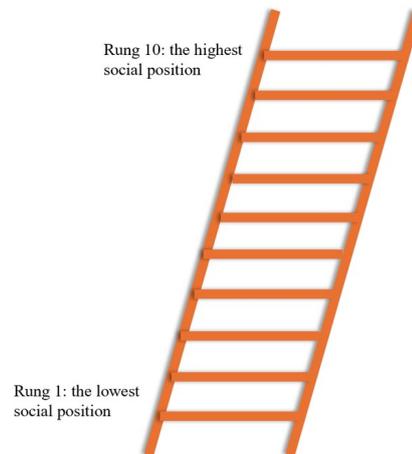
Table A.1: Test of Balance

	T1		T2		T3		T4	
	Diff	p	Diff	p	Diff	p	Diff	p
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)
Parent 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)
Cover	0.026	(0.305)	0.004	(0.873)	0.011	(0.658)	0.010	(0.704)
Prior: Bottom Mobility	0.080	(0.105)	0.005	(0.908)	-0.067	(0.157)	0.061	(0.216)
Top Mobility	-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)
<i>N</i>	917		935		939		891	

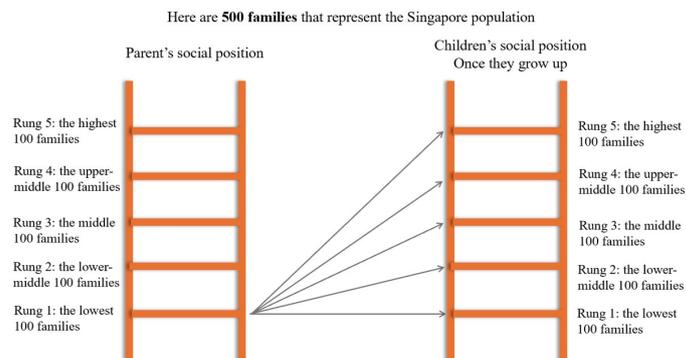
Notes: Table reports coefficient estimates and corresponding p-values in parentheses. Each column corresponds to a separate treatment regression. T1 provides information about rising housing prices; T2 provides information about cooling housing price growth; T3 provides information about housing subsidies for first-time buyers; T4 provides information about property taxes. Female is an indicator equal to one if the respondent is female and zero if male. Income is measured using the midpoint of self-reported monthly household income brackets, with unemployed respondents assigned a value of zero. High education equals one if the respondent has at least post secondary education and zero otherwise. Parental education indicators equal one if the respondent's father has at least post-secondary education and zero otherwise. Employed equals one if the respondent is currently employed and zero otherwise. Private home equals one if the respondent resides in private housing and zero if residing in public housing. Born in Singapore equals one if the respondent was born in Singapore and zero otherwise. Pre-treatment controls include baseline beliefs about bottom, top 20% mobility, perceived individual upward mobility, housing price expectations, economic growth expectations, inflation expectation, and government trust.

A.2 Social Mobility Ladders

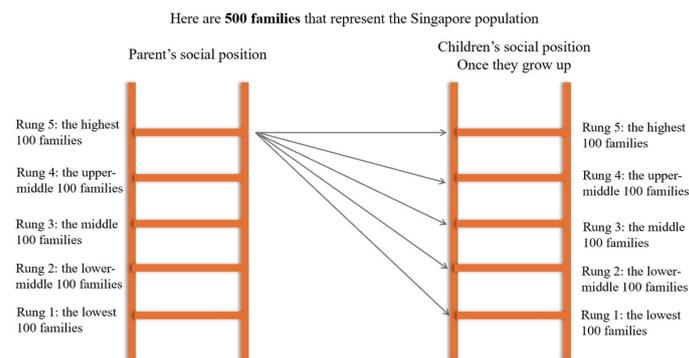
Figure A.1: Social Mobility Ladders



(a) Perceived Individual Upward Mobility Ladder



(b) Bottom-Origin Mobility Ladder

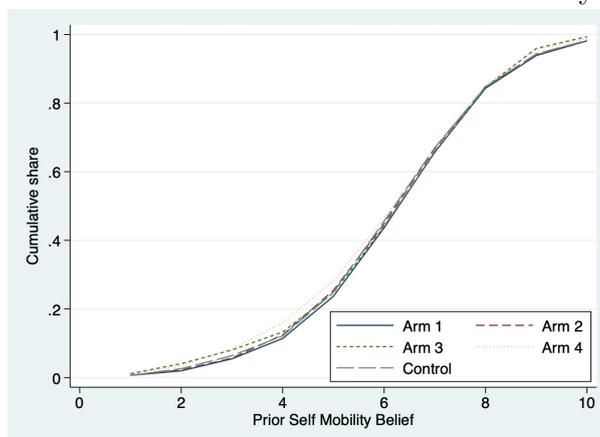


(c) Top-Origin Mobility Ladder

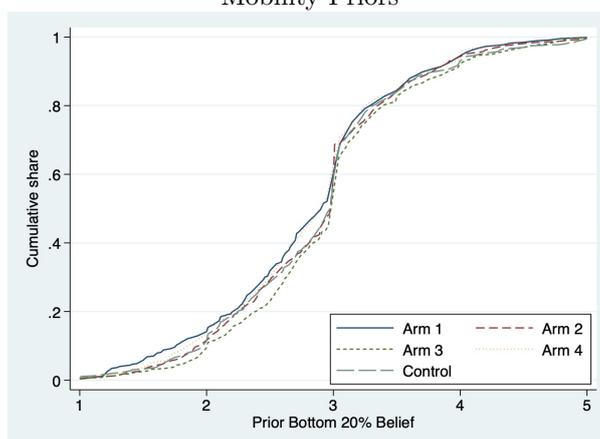
Notes: This figure illustrates the social mobility ladder framework used in the survey. Panel (a) presents the perceived individual upward mobility ladder, where respondents locate their own expected social position on a 10-rung scale. Panels (b) and (c) depict intergenerational mobility ladders for bottom-origin and top-origin 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.

A.3 Prior Social Mobility Test of Balance

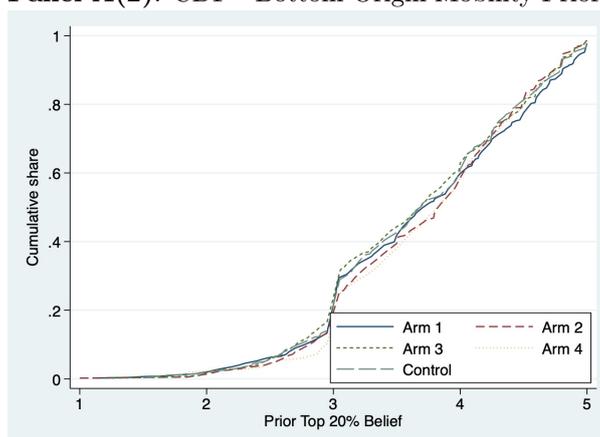
Figure A.2: Test of balance for baseline mobility beliefs



Panel A(1): CDF - Perceived Individual Upward Mobility Priors



Panel A(2): CDF - Bottom-Origin Mobility Priors



Panel A(3): CDF - Top-Origin Mobility 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 bottom-origin children, and Panel A(3) plots the distribution of prior beliefs about mobility for top-origin children. Each panel compares distributions across all treatment arms and the control group.

A.4 Prior Macro Test of Balance

Figure A.3: Figure A3 (1)-(4): Test of Balance - Baseline Housing & Macro Expectations

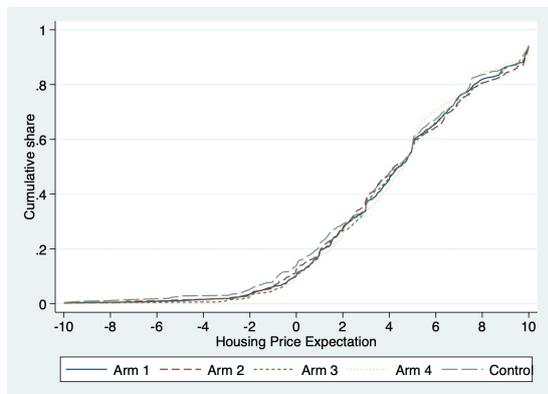


Figure A3(1): CDF — Housing Price Expectations

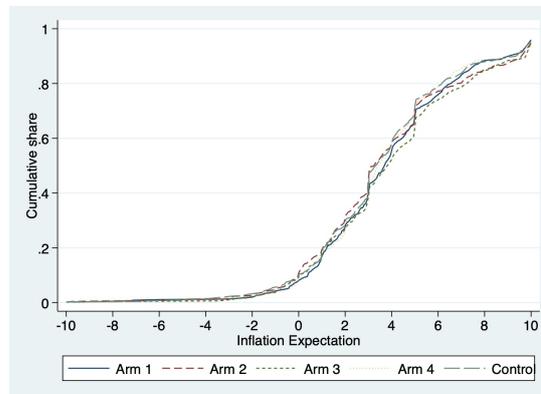


Figure A3(2): CDF — Inflation Expectations

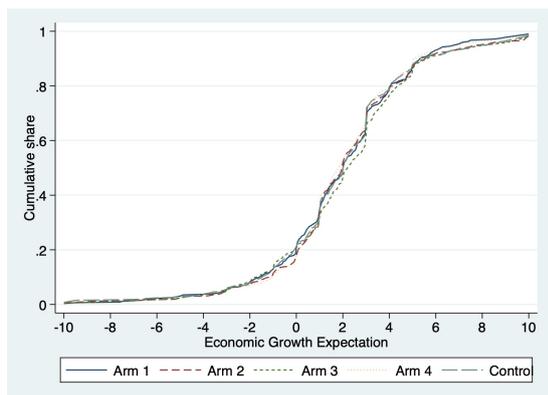


Figure A3(3): CDF — GDP Growth Expectations

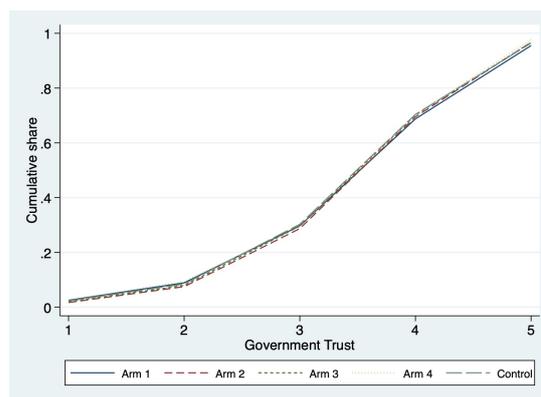
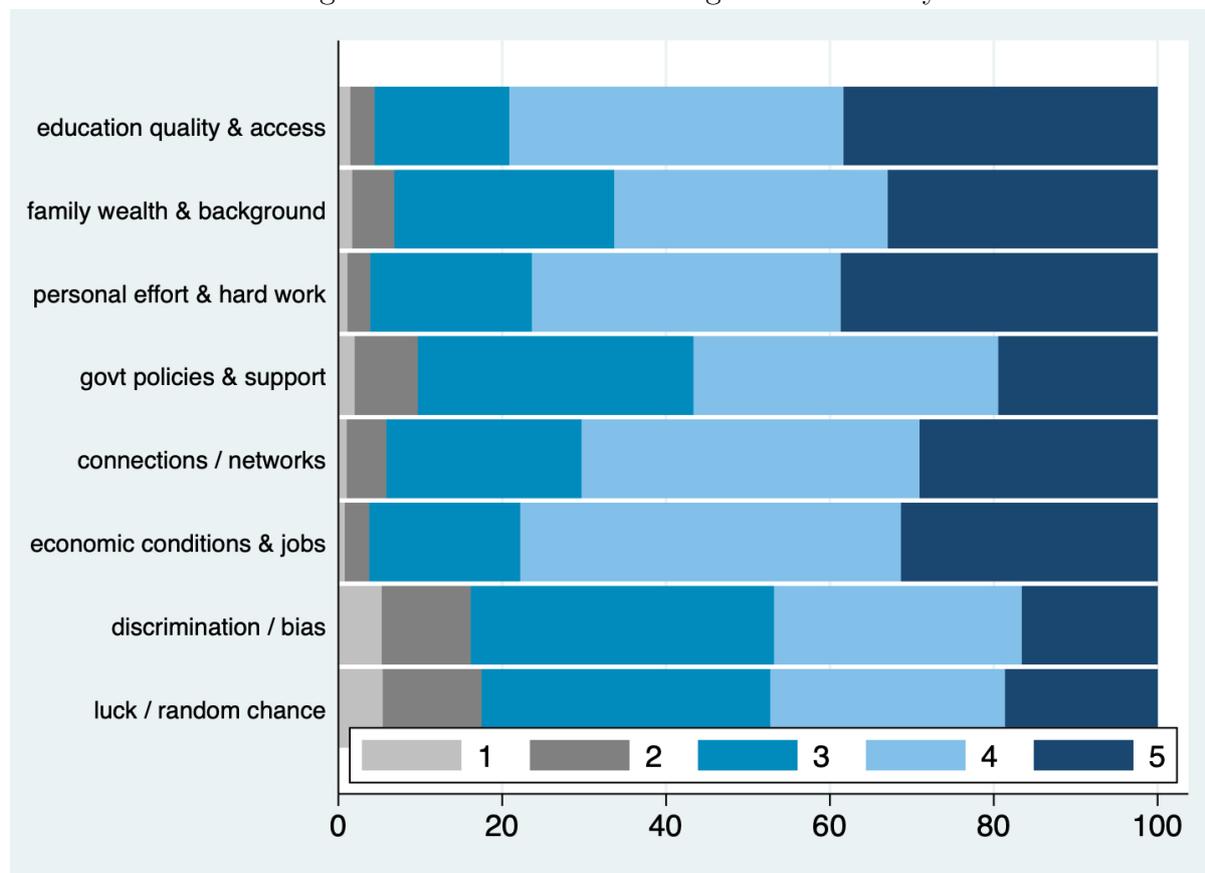


Figure A3(4): CDF — Trust Expectations

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.

A.5 Prior: Factors Influencing Social Mobility

Figure A.4: 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.

B Treatment Effects on Perceived Individual Upward Mobility Beliefs

We now examine whether the information treatments affect respondents’ perceptions of their own future social mobility. In particular, we compare each treatment group to the pure control group. The outcome of interest is respondents’ post-information assessment of their own future social position, measured on the ten-rung social ladder.

We estimate the following regression specification:

$$Y_i^{\text{post}} = \alpha + \beta \text{Treat}_i + \gamma' X_i + \varepsilon_i, \quad (1)$$

where Y_i^{post} denotes respondent i ’s post-information perceived future social position, Treat_i is an indicator equal to one if respondent i is assigned to the relevant information treatment and zero if assigned to the control group, and X_i is a vector of covariates including demographic characteristics and baseline personal mobility beliefs. The coefficient β captures the causal effect of the information treatment on personal mobility beliefs.

Table B.1: Treatment Effects on Perceived Individual Upward Mobility

	(1)	(2)	(3)	(4)
Dependent variable	Individual Mobility Expectations			
T1	-0.027 (0.099)			
T2		-0.017 (0.099)		
T3			-0.064 (0.104)	
T4				-0.125 (0.102)
Constant	4.395*** (0.439)	4.180*** (0.443)	3.674*** (0.497)	3.790*** (0.445)
Observations	917	935	939	891
R^2	0.251	0.240	0.232	0.303
Controls	Yes	Yes	Yes	Yes

Notes: This table reports OLS estimates of the effects of housing-related information treatments on post-treatment beliefs about participants’ individual upward mobility. 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. Standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table B.1 reports treatment effects on respondents’ perceptions of their own future

social mobility. Across all four information treatments, the estimated effects are small in magnitude and statistically insignificant. Information about rising housing prices (T1), cooling price growth (T2), housing subsidies (T3), and property taxes (T4) does not lead to revisions in respondents' self-assessed future social position.

This pattern is consistent with a reference dependent framework. Respondents differ in their baseline social position, housing status, and life stage, implying that the same housing market or policy signal is evaluated against different benchmarks. As a consequence, identical information can imply positive deviations from the reference point for some individuals and negative deviations for others. When belief updating is reference-dependent in this way, these opposing revisions can offset each other in the cross-section, leading to small and statistically insignificant average treatment effects. This mechanism explains why information that meaningfully shifts beliefs about aggregate or intergenerational mobility does not translate into detectable average changes in perceived individual upward mobility.

C Survey Questionnaires

Study Information Sheet and Consent Form for Research Participants

IRB Reference number:	IRB-2025-548
Study Title:	Social Mobility Expectations
Principal Investigator & Contact Details:	Dr. Chua Yeow Hwee Email: yeowhwee.chua@ntu.edu.sg .

Introduction

You are invited to join our research study. Please read and understand this information sheet carefully. We will explain the study, answer your questions, and provide a Consent Form to sign when you are ready. You can print a copy for your record.

You are invited because you are a Singapore Citizen or Permanent Resident aged 21 years or older, and we are seeking individuals who can share their views on social mobility in Singapore. Recruitment is conducted through an external online survey company, which may have contacted you through their platform.

This research aims to understand how individuals perceive social mobility in Singapore. We are interested in your background and expectations, as well as the factors that shape these views. Your responses will help us gain insights that can inform academic research.

We plan to recruit 3000 participants from the general public in Singapore over a period of 2 to 3 months.

Procedures

If you decide to join our study, you will be asked to complete a one-time online survey about your background and your views on social mobility in Singapore. Your participation will last approximately 10 minutes. The study will involve *one (1)* visit.

If you choose to take part, you'll first answer a few short questions about yourself. After that, you'll be asked about your views on a variety of topics about the economy and everyday life.

Voluntary Participation and Participant's Rights

Your participation in this study is entirely voluntary. You can withdraw at any time without giving a reason. Your decision to withdraw or not participate will not affect any benefits you are otherwise entitled to.

You may withdraw at any point by closing your browser or exiting the survey. There are no penalties or consequences for withdrawing from the study. If you withdraw before completing the survey, you will not be eligible for reimbursement, as compensation is provided only for completed participation.

The investigators may stop your participation at any time if it is in your best interests, or if you do not follow the study instructions.

If any new information arises (including but not limited to serious adverse events, or changes in research plans) that may affect your willingness to continue participation, the Principal Investigator (or their representative) will promptly inform you (or your Legally Acceptable Representative, if relevant) and seek further consent if required.

Risks and Discomforts

We do not anticipate any physical, psychological, social, legal, or economic risks greater than those encountered in daily life. However, some participants may experience mild discomfort when reflecting on personal opinions or responding to questions about their beliefs or expectations. All responses will be collected anonymously, and no identifying information such as your name, NRIC, or IP address will be recorded by the researchers. These safeguards are in place to ensure your privacy and to minimize any risk of identification or unintended consequences.

Benefits

There is no direct personal benefit. Your participation will help advance research on public views of social mobility.

Compensation

Participants will receive compensation directly from the online survey company, in accordance with the platform's policies. The research team does not directly handle or have access to your payment details. Please note that participants who do not complete the study will not be eligible for compensation.

Confidentiality of Data

Your participation in this study **will** involve the collection, use and disclosure of data in an individually-identifiable form (or "**Personal Data**"). "Personal Data" means data about you / your child / your ward, which makes you / your child / your ward identifiable from (i) such data, and/or from (ii) other information which we have or likely have access to. This includes written, visual, video, and audio data/recordings.

Personal Data and data collected for this study will be kept confidential and stored for a minimum of 10 years in a secure environment within NTU. Access will be restricted to the Principal Investigator, study team members, and School Administrators. Your records, to the extent of the applicable laws and regulations, will not be made publicly available, in accordance with the NTU Privacy Statement.

However, government ministries, or regulatory agencies and the NTU Institutional Review Board will be granted direct access to your Personal Data to check study procedures and data, without making any of your information public. Your Personal Data may be shared with government bodies when acquisitioned by law or when ordered to do so by a court or legislations.

By clicking 'I Agree' at the Informed Consent Form in the next page, you agree and consent to the: (i) collection, access to, use and storage of your Personal Data and research data, and (ii) disclosure to, and use and storage by, authorised service providers and relevant third parties, whether located in Singapore or overseas, for the purposes of this study or future research studies.

Data collected are the property of NTU. Data will also be deposited at LKYSPP's repository for 3 years. Thereafter, it shall be publicly made available to allow convenient access by other potential users. In the event of any publication regarding this study, only de-identified research data will be used. Such de-identified research data may also be deposited in a publicly-accessible data repository (such as the Digital Repository of NTU).

Any individually-identifiable data obtained during the course of this study will be used **only** for the purposes of this study. Your *Personal Data* will **not** be used for future research, unless otherwise consented by you in the accompanying Consent Form.

Whom to Contact if You Have Questions

If you have any questions, complaints, or feedback about this research, or in the event of any injuries during the study, please contact the Principal Investigator, Chua Yeow Hwee by email at: yeowhwee.chua@ntu.edu.sg.

The study has undergone ethics approval by the NTU Institutional Review Board. If you want an independent opinion to address concerns, questions, complaints, or feedback; or require information regarding your rights as a research participant, please contact:

NTU Institutional Review Board

Research Integrity and Ethics Office
Blk N1.2, B1-02A
62 Nanyang Drive
Singapore 637459
Email: irb@ntu.edu.sg, Tel: 6904 1293

ONLINE CONSENT FORM

I voluntarily consent to take part in this research study. I have fully read, discussed, and understood the purpose and procedures of this study as stated in the Study Information Sheet attached to this consent form. My questions concerning the study have been answered to my satisfaction, and I acknowledge that I am participating in this study of my own free will.

I understand that I may withdraw my consent and stop participating in the study at any time without giving any reasons, and without penalty.

By participating in this research study, I confirm that I consent to the collection, use and disclosure of my Personal Data for the purposes set out in the Study Information Sheet.

I agree that I might be contacted for **additional consent**, including but not limited to changes in the proposed research, serious adverse events that would lead to a change in the proposed research, and any other circumstances which is specific to this research study.

NOTE: By completing this consent form, you agree that research data (which cannot be used to re-identify you) can be used in the study's publication, and that includes putting it on the Digital Repository of NTU (DR-NTU). Your choices below will not change this agreement.

I have read and understood the above consent form. I certify that I am 21 years old or older and I am a Singapore Citizen or Permanent Resident. By clicking the next button to enter the survey, I indicate my willingness to voluntarily participate in this study.	<input type="checkbox"/> (route to survey page)
I do not wish to participate in this study.	<input type="checkbox"/> (route to home page)

Demographics Section

1. Age

What is your current age?

I am _____ years old.

2. Gender

What is your gender?

- Male
 Female
-

3. Marital Status

What is your current marital status?

- Single, never married
 Married
 Other
-

4. Household Composition

How many other people usually live in your household, not counting yourself?

(Include family members who live with you, even if they are temporarily away. Do not count unrelated roommates or tenants)

I live with _____ other person(s).

5. Monthly Household Income

What was your total monthly household income before taxes and government transfers (excluding employer CPF Contributions)? (in SGD)

- Unemployed / No Income
 Below \$2,000

- \$2,000 - \$3,999
- \$4,000 - \$4,999
- \$5,000 - \$6,999
- \$7,000 - \$8,999
- \$9,000 - \$10,999
- \$11,000 - \$12,999
- \$13,000 - \$14,999
- \$15,000 - \$19,999
- \$20,000 & Over

6. Highest Education Level Completed

What is the highest level of education you have completed?

- Primary School
- Secondary School
- Junior College
- Polytechnic Diploma
- Bachelor's degree
- Master's/PhD degree

7. Employment Status

What is your current employment status?

- Full-time employee
- Part-time employee
- Self-employed / small-business owner
- Unemployed and looking for work
- Student
- Not in labor force (e.g., retired, full-time parent)

8. Homeownership

Who owns your primary residence (the place where you usually live)?

- Owned by my parents or family members
- Owned by myself (or jointly with others)
- Rented

8a. What type of dwelling do you currently live in?

- HDB 1-room flat
- HDB 2-room flat
- HDB 3-room flat
- HDB 4-room flat or larger
- Condominium / Apartment
- Landed property (e.g., terrace, semi-detached, bungalow)
- Other (please specify): _____

If owner:

8b. Is your primary residence a Build-to-Order (BTO) flat

- Yes No

8c. When did you purchase your current residence?

Purchased: _____ years ago Don't know

8d. If your residence is leasehold, how many years remain before the lease expires?

Lease remaining: _____ years Not leasehold Don't know

8e. How many properties do you currently own (including your primary residence)?

- 0
- 1
- 2
- 3
- 4 or more

8f. Are you planning to sell any property within the next 12 months?

- Yes
 No

If rental:

8(i). When do you plan to purchase your own housing in the future:

- Next 1 year
- Next 2 to 5 years
- More than 5 years
- I don't plan to purchase my own house

9. Birthplace & Immigration Status

Were you born in Singapore?

- Yes No

If "No":

9a. Where were you born? _____

10. Ethnicity

Which of the following best describes your ethnicity?

- Chinese
- Malay
- Indian
- Other (please specify): _____

11. Parental Education

a. Which category best describes your father's highest level of education?

- Primary School
- Secondary School
- Junior College
- Polytechnic Diploma
- Bachelor's degree
- Master's/PhD degree
- My father was not present

b. Which category best describes your mother’s highest level of education?
(same options as above)

12. Housing-Market Engagement

What are the first two digits of the zip code of your primary residence?

13. Housing-Cost Burden

What percentage of your monthly household income goes toward housing-related costs (rent or mortgage payments, property tax, maintenance, etc.)?

- 0 – 19 %
- 20 – 39 %
- 40 – 59 %
- 60 – 79 %
- 80 – 100 %

14. Risk Tolerance

On a scale from 1 to 10, how willing are you to take financial risks?

1 = Not at all willing (Only keeps saving in a bank account of fixed deposit)

10 = Very willing (Take big risks, like putting money into crypto leveraged trading or very risky investments)

1 2 3 4 5 6 7 8 9 10

15. Liquid-Asset Buffer

If an unexpected expense arose, could your household cover three months of living costs (rent/mortgage, food, utilities, etc.) using your current savings?

- Yes
- No

16. In your opinion, how important are the following factors in influencing a person’s chances of moving up economically or socially over time in Singapore?

(1 = Not at all important, 5 = Extremely important)

Factor	1	2	3	4	5
Education quality and access	<input type="checkbox"/>				
Family wealth and background	<input type="checkbox"/>				

Factor	1	2	3	4	5
Personal effort and hard work	<input type="checkbox"/>				
Government policies and support schemes	<input type="checkbox"/>				
Connections and networks (e.g., who you know)	<input type="checkbox"/>				
Economic conditions and job opportunities	<input type="checkbox"/>				
Discrimination or social biases (e.g., race, gender)	<input type="checkbox"/>				
Luck or random chance	<input type="checkbox"/>				

Do you think anything else might be playing a role? _____

17. Basic Numeracy Check

If a loaf of bread costs \$2, how much would 3 loaves cost?

End of Demographics Section

18. Attention Check

Before proceeding to the next set of questions, we want to ask for your feedback about the responses you provided so far. It is vital to our study that we only include responses from people who devoted their full attention to this study. In your honest opinion, should we use your responses, or should we discard your responses since you did not devote your full attention to the questions so far?

Yes, I have devoted full attention to the questions so far and I think you should use my responses for your study.

No, I have not devoted full attention to the questions so far and I think you should not use my responses for your study.

Block 1 –Baseline expectations

Now, we would like to understand your perceptions and expectations about the Singapore economy.

To begin, please share your views on housing prices in Singapore.

Q1. Thinking about HDB resale flat prices in Singapore **over the past 5 years**. By what percentage do you think the **overall house prices** have changed on average each year?

*Please give your best estimate of **the average annual percentage change** over this five-year period.*

___ %

Q2. Looking ahead, **over the next 12 months**, what do you think is the chance of each possible outcome for **house prices** in Singapore?

Please enter percentages that add up to 100% before you can continue.

<u>House Price change over the next 12 months</u>	<u>Percent chance</u>
House Prices will increase by 6% or more	___ %
House Prices will increase by 4% or more, but less than 6%	___ %
House Prices will increase by 2% or more, but less than 4%	___ %
House Prices will increase by less than 2%	___ %
House Prices will decrease by less than 2%	___ %
House Prices will decrease by 2% or more, but less than 4%	___ %
House Prices will decrease by 4% or more, but less than 6%	___ %
House Prices will decrease by 6% or more	___ %
Total (the points should sum to 100)	100

Q3. Now, thinking about the **Singapore economy as a whole**, by how much do you think it will **grow or shrink over the next 12 months**?

Please enter percentages that add up to 100% before you can continue.

<u>Economic growth over the next 12 months</u>	<u>Percent chance</u>
The economy will grow by 6% or more	___ %
The economy will grow by 4% or more, but less than 6%	___ %
The economy will grow by 2% or more, but less than 4%	___ %

<u>Economic growth over the next 12 months</u>	<u>Percent chance</u>
The economy will grow by less than 2%	___ %
The economy will shrink by less than 2%	___ %
The economy will shrink by 2% or more, but less than 4%	___ %
The economy will shrink by 4% or more, but less than 6%	___ %
The economy will shrink by 6% or more	___ %
Total (the points should sum to 100)	100

Q4. Next, we would like you to think about how much **prices in general** in Singapore are likely to change **12 months from now**.

Please enter percentages that add up to 100% before you can continue.

<u>General Price change over the next 12 months</u>	<u>Percent chance</u>
General Prices will increase by 6% or more	___ %
General Prices will increase by 4% or more, but less than 6%	___ %
General Prices will increase by 2% or more, but less than 4%	___ %
General Prices will increase by less than 2%	___ %
General Prices will decrease by less than 2%	___ %
General Prices will decrease by 2% or more, but less than 4%	___ %
General Prices will decrease by 4% or more, but less than 6%	___ %
General Prices will decrease by 6% or more	___ %
Total (the points should sum to 100)	100

Q5. Overall, how effective do you think the Singapore government has been in enhancing social mobility

- Very ineffective
- Ineffective
- Neither effective nor ineffective
- Effective
- Very effective

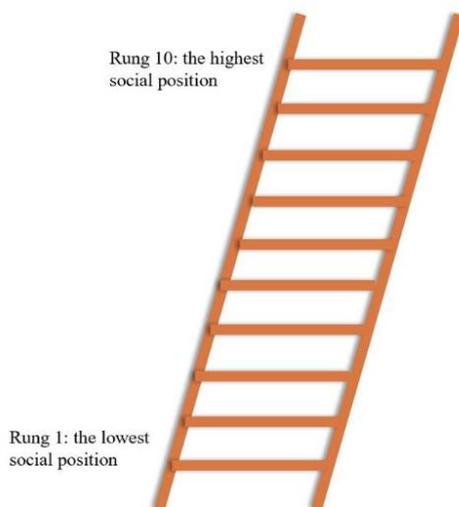
Block 2 – Baseline mobility ladder

Instruction:

We would now like to ask about your views on social positions that people may reach in Singapore.

In the following questions, you will see ladders with **10 rungs** that represent the adult population in Singapore.

- **Rung 1** (the very bottom) represents people who are **worst off**.
- **Rung 10** (the very top) represents people who are **best off in society**.
- Everyone else falls somewhere in between.



Each rung represents a step-wise improvement in social standing.

Higher rungs always mean doing better than all the people on the rungs below.

On the next screens, you will use a **slider from 1 to 10** to indicate which rung you think different individuals or groups are (or will be) on.

Comprehensive check: What does a higher rung represent?

A. higher social position. B. Lower social position.

Q1. First, please think about yourself. Considering your **current** household conditions, where would you place **your own household** on the 10-rung ladder you just read about?

Slider 1 - 10

(1 = lowest rung, 10 = highest rung)

Q2. Again, thinking about yourself, **10 years from now**, where would you place **your own household** on the 10-rung ladder you just read about?

Slider 1 - 10

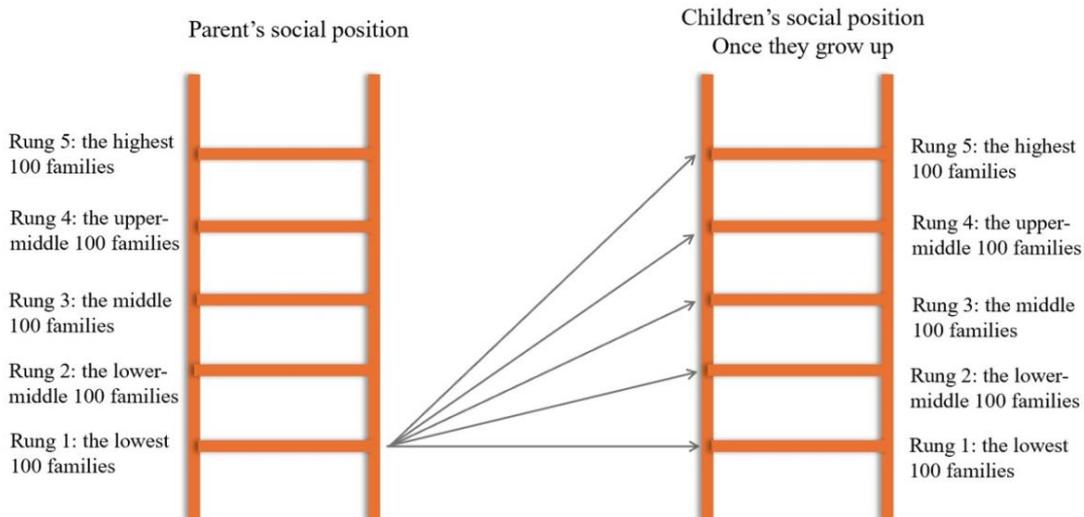
(1 = lowest rung, 10 = highest rung)

Next, please think about children born to families at different levels of this social ladder.

To make these questions easier, we will use a **5-rung version** of the ladder to represent social positions, from **lowest** to **highest**. Rung 1 represents people who are worst off, while Rung 5 represents people who are best off in society.

Q3. Consider 100 children born today to families in the **bottom 20 percent** (the lowest rung) of the current ladder.

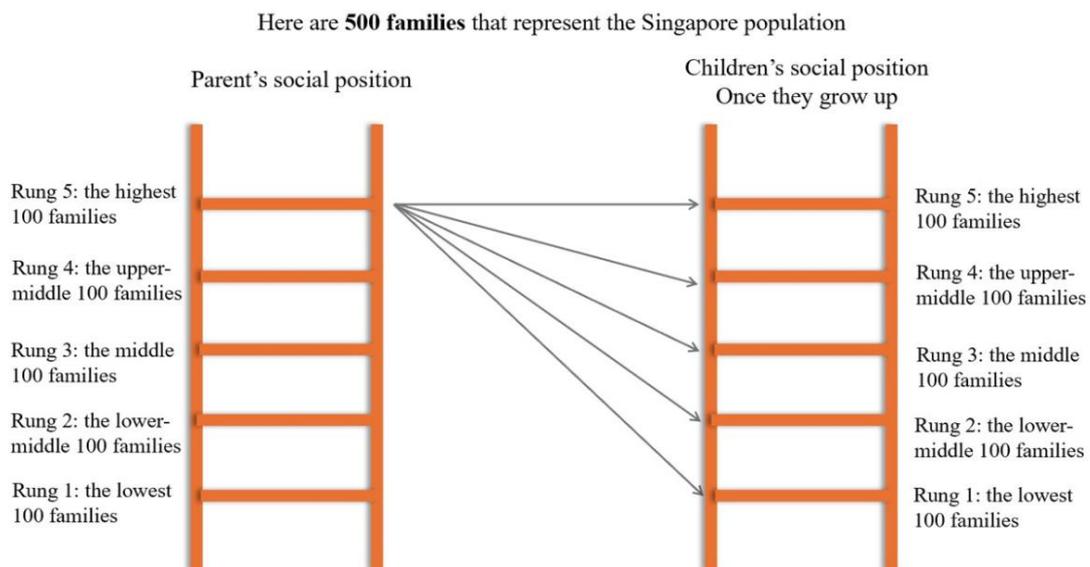
Here are **500 families** that represent the Singapore population



When these children grow up, how many do you think will be found on each rung of the 5-rung ladder?

For each rung below, enter a number between 0 and 100. The five numbers must add up to exactly 100 before you can continue.

Q4. Now, consider 100 children born today to families in the **top 20 percent** (the highest rung) of the current ladder.



When these children grow up, how many do you think will be found on each rung of the 5-rung ladder?

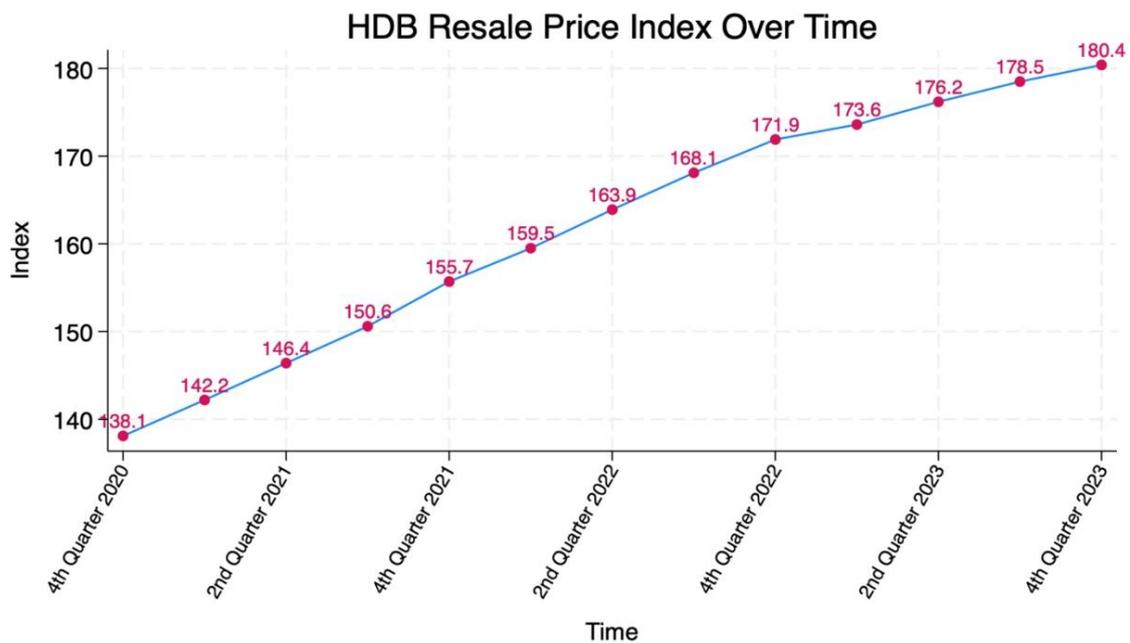
For each rung below, enter a number between 0 and 100. The five numbers must add up to exactly 100 before you can continue.

Block 3 - Information page (5 Treatment Groups)

T1. Resale Price Levels have increased

Before you answer the next question, here is some background information for you to consider.

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.

T2. Resale Price Growth has decreased

Before you answer the next question, here is some background information for you to consider.

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

T3. Increase in Government Subsidy

Before you answer the next question, here is some background information for you to consider.

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

Given the above government intervention, how do you perceive this change?

- Strongly as financial support
- Somewhat as financial support
- Neutral, neither support nor pressure
- Somewhat as added financial pressure
- Strongly as added financial pressure

T4. Increase in Property Tax

Before you answer the next question, here is some background information for you to consider.

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

Given the above government intervention, how do you perceive this change?

- Strongly as financial support
- Somewhat as financial support
- Neutral, neither support nor pressure
- Somewhat as added financial pressure
- Strongly as added financial pressure



T5. No Additional Information given

Block 4 – Post-treatment Expectations

Next, we would like to learn more about your views on Singapore’s economy and society over the coming year.

Q1. By what percentage do you expect average **housing prices** to change **over the next 12 months**?

(If you expect prices to rise, enter a positive number; if you expect prices to fall, enter a negative number.)

___ % average annual change

Q2. What is your best single estimate of Singapore’s **economic growth** over the **next 12 months**?

(If you expect economy to grow, enter a positive number; if you expect economy to contract, enter a negative number.)

___ % average annual change

Q3. Now, please think about **inflation** in Singapore over the **next 12 months**. What is your best estimate of the inflation rate during this period?

(Please provide a single number (in percent), which may be positive or negative.)

___ %

Q4. We would also like to understand your views about the government in Singapore.

How much do you trust the Singapore government to do what is right to enhance social mobility?

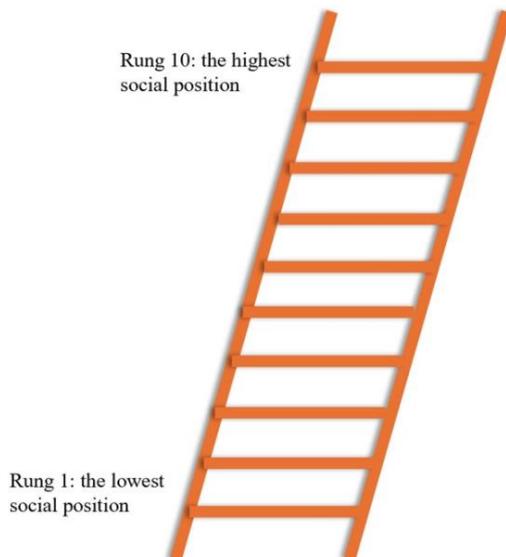
(Please answer on a scale from 1 to 10, where 1 means very poorly and 10 means very well.)

1 2 3 4 5 6 7 8 9 10

Block 5 – Post-treatment mobility ladder

Now, please recall the social ladder you saw earlier.

Each rung represents a different level of social standing. We would now like you to think about where households (including your own, and others in Singapore) might be on this ladder in the future.



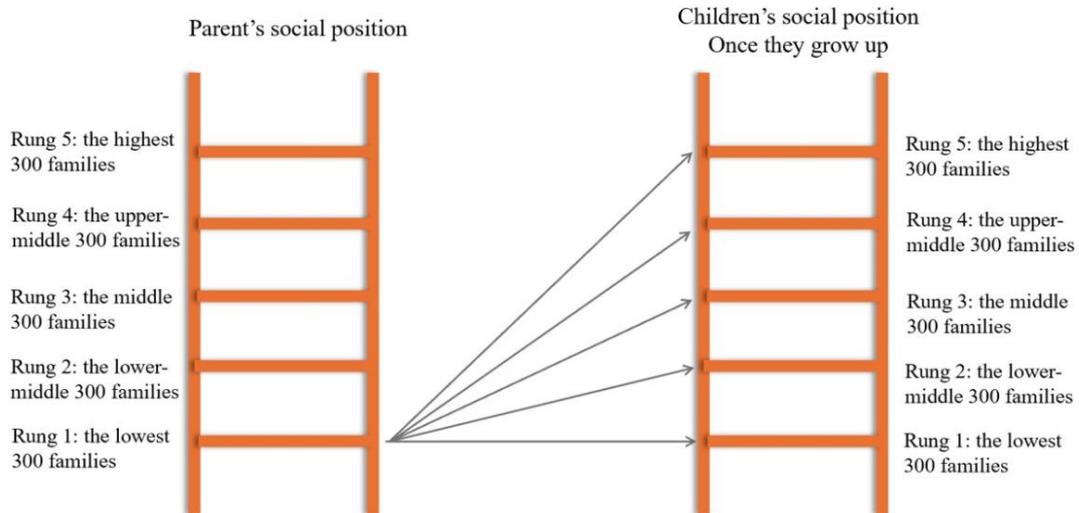
Q1. Where do you think **your household** will be on the 10-rung ladder **in 10 years**, from the lowest (1) to the highest (10)?

Slider 1 - 10

(1 = lowest rung, 10 = highest rung)

Q2. Now, consider 300 children born today to families in the **bottom 20 percent** (the lowest rung) of the current ladder.

Here are **1500 families** that represent the Singapore population

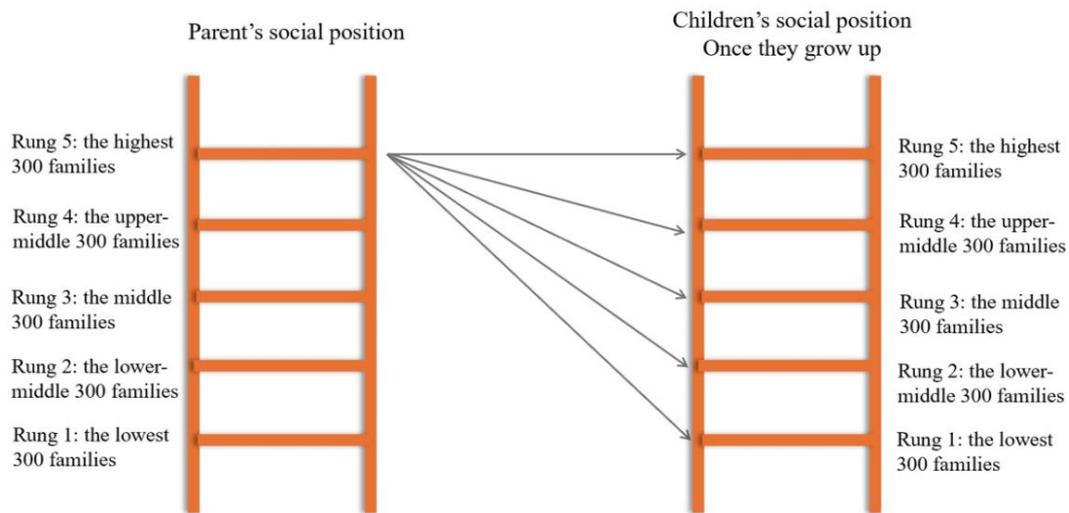


How do you think these children will fare when they grow up? Specifically, when these children become adults, how many do you think will be found on each rung of the 5-rung ladder?

For each rung below, enter a number between 0 and 300. The five numbers must add up to exactly 300 before you can continue.

Q3. Now, consider 300 children born today to families in the **top** 20 percent (the highest rung) of the current ladder.

Here are **1500 families** that represent the Singapore population



How do you think these children will fare when they grow up?

Specifically, when these children become adults, how many do you think will be found on each rung of the 5-rung ladder?

For each rung below, enter a number between 0 and 300. The five numbers must add up to exactly 300 before you can continue.

Mechanism:

Q4. On a 5-point scale, to what extent do you think housing policies affect social mobility in Singapore?

(1 = Not at all important, 5 = Extremely important)

Q5. What factors did you consider when thinking about people’s social standing or upward mobility?

(Please rate how much each factor influenced your thinking.)

Factor	1 = Not at all	2 = Slightly	3 = Moderately	4 = Very	5 = Extremely
1. Home Value: When housing prices change, the value of homes that families already own goes up or down.	<input type="checkbox"/>				
2. Living Costs: Higher housing prices mean people spend more on housing and have less left for other things.	<input type="checkbox"/>				
3. Economy: Housing prices can reflect how well the economy is doing overall.	<input type="checkbox"/>				
4. Government Support: Housing prices may influence how much help people expect from the government.	<input type="checkbox"/>				
5. Borrowing costs: Housing prices are linked to how expensive it is to borrow money or get a home loan.	<input type="checkbox"/>				

If there’s anything else you thought about that helped shape your views on social positions after reading the passage, please tell us here:
