Demand for Home Pension and Reverse Mortgage: An Information Provision Survey Experiment*

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Abstract

Population aging and the sustainability of retirement financing are critical challenges facing many developed economies. In South Korea, elderly poverty remains a critical issue, despite widespread homeownership among older adults. Although the home pension program allows retirees to unlock housing wealth, uptake remains below 2% as of 2024. Using a large-scale survey of adults aged 55–79, we conduct an information provision experiment to assess how policy reforms and belief corrections affect demand. We find that enrollment intention rises by 6 percentage points when monthly pension payments are adjusted with house price changes, and by 5 percentage points when bequest conditions are made more flexible. Notably, merely informing that the fixed monthly payments—often perceived as disadvantageous during housing price increases—do not result in a loss when house prices rise because the amount bequeathed to their children increases accordingly, led to a 7%p increase in enrollment intention. Our results suggest that addressing informational barriers may be as effective as structural reforms in increasing program uptake.

JEL Classification: D14, C93, H55

Keywords: Home Pension, Reverse Mortgage, Survey Experiment

1   Introduction

Population aging and the sustainability of retirement financing are critical challenges facing many developed economies. As life expectancy increases and public pension replacement rates often remain insufficient, policymakers globally have turned their attention to housing wealth, typically the largest asset held by elderly households, as a vital resource for consumption smoothing. Consequently, equity release markets, such as reverse mortgages in the United States and Australia, or equity release schemes in the United Kingdom, have gained prominence as mechanisms to convert illiquid housing assets into liquid retirement income. However, despite the theoretical appeal, the actual uptake of these products often lags behind expectations globally. Against this backdrop, South Korea presents a unique and compelling case study due to its rapidly aging population and the government's active role in establishing the Home Pension, a public reverse mortgage program designed to address these liquidity constraints.

South Korea is one of the fastest aging countries in the world. The country became a so-called super-aged society in December 2024, whereby the proportion of people aged over 65 reached 20% of the total population. By 2050, this proportion is anticipated to more than double.[1] Among several issues associated with this demographic shift, elderly poverty is distinctive. According to an OECD report,[2] the income poverty rate of older people (aged over 65) ranks South Korea first out of all OECD countries at 40.4%. A noticeable feature of elderly poverty in South Korea is that many elderly who suffer from a lack of flow income possess an illiquid asset: a residential house. Recent studies (Choi et al., 2023b; Lee, 2023) estimate that the elderly poverty rate would decrease by 13%p to 16%p if households liquidated their assets by adopting existing schemes such as the home pension, farmland pension, or reverse mortgages.[3] Since these studies claim that elderly poverty can be significantly alleviated through asset liquidation, the problem seems easy to tackle: allow the elderly to liquidate their wealth via the home pension. Strikingly, however, only 1.89% of eligible elderly had enrolled in the home pension program as of 2024. Although two major commercial banks provide private reverse mortgage plans comparable to the home pension,

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[1]Statistics Korea. (2023). Population Projections for Korea (2022–2072). Retrieved from the Ministry of Data and Statistics of the Republic of Korea.

[2]OECD Income Distribution Database (2023), available at https://stat.link/pv3isj

[3]A reverse mortgage is a loan that provides cash flows opposite to a standard mortgage. In this paper, we distinguish between the 'Home Pension' (the program guaranteed and administered by a government institution) and 'reverse mortgages' (similar products offered by commercial financial institutions). The Home Pension dominates the Korean market. See Section 2 for details.

adoption is negligible. Since both the home pension and private reverse mortgage plans can be terminated at any point, commitment problems are likely not the primary friction. The primary goal of this paper is to investigate why the uptake of the home pension is so low, even though many 'wealthy hand-to-mouth' (Kaplan et al., 2014) elderly households would benefit from liquidating their housing assets.

What would facilitate elderly demand for liquidating their housing wealth? Should specific features of the home pension scheme be improved? Should the government agency (Korea Housing Finance Corporation) focus on emphasizing the positive aspects of the existing home pension to eligible households? Or, should commercial reverse mortgage plans be promoted more aggressively?

To answer these questions, we design an information provision survey experiment, presenting different sets of information to participants to examine the causal impact on their demand (the treatment effect). We believe this experimental approach is particularly appropriate given the lack of recent policy changes that would allow for observational studies. Furthermore, since reform plans for the home pension have not yet been finalized, we can present various virtual conditions to participants without the confounding effects of prior beliefs about imminent reforms.

We conduct the survey experiment as follows: A total of 3,820 participants were recruited as a representative sample of South Korean adults aged 55–79 who own a residential property but have not enrolled in the home pension scheme. The sample was selected using proportional stratified sampling based on gender, age, residential area (16 regions), and property type (apartments vs. others). Participants first reported their awareness of the home pension scheme and their baseline interest in enrollment. They were then randomly assigned to four groups, each receiving different information regarding the home pension—either in the form of a hypothetical structural amendment or a re-framing of the current scheme. We compare the changes in intention to sign up across treatments to estimate causal effects. Afterwards, we ask whether similar structural modifications to commercial reverse mortgage plans would raise demand. Details are provided in Section 3.

Consistent with previous studies, the major reasons cited for non-enrollment were (1) concerns about receiving less than the fair home value, (2) fixed (inflation-adjusted) payments that do not reflect potential appreciation in housing prices, and (3) the difficulty of bequeathing the house to children. We found that the intention to enroll increased by 6%p when the home pension scheme was hypothetically reformed to periodically redetermine monthly payments based on housing price changes, and by 5%p when reformed to facilitate

bequeathing the remaining housing value. A more striking finding, however, is that merely correcting misperceptions—specifically, informing participants that fixed monthly payments do not imply a loss because the bequeathed value increases accordingly—also increased the intention to enroll by 7%p. Our findings suggest that correcting informational frictions produces an effect of comparable magnitude to structural policy reforms that would likely be far more costly to implement.

Furthermore, we find that although people generally prefer the government-guaranteed home pension over commercial reverse mortgages, preferences shift significantly if private products are designed with more attractive features. This suggests a potential for burgeoning private markets for housing asset liquidation.

Although we report interesting changes in stated intentions, it is worth noting that while stated intentions may not perfectly predict subsequent behavior, they provide a necessary first step toward understanding behavioral change. According to the theory of planned behavior (Ajzen, 1985), intention represents the most immediate determinant of action. Our experimental results should therefore be interpreted as evidence on how information affects the formation of such intentions. As corroborative evidence, we also present historical data in the Appendix showing a strong positive correlation between aggregate stated intentions and actual enrollment rates over the last decade (Figure A.1).

This paper contributes to the literature in three main ways. First, we contribute to the literature on the behavioral impediments to the uptake of welfare-enhancing reverse mortgages (Davidoff et al., 2017; Hanewald et al., 2020; Han et al., 2024; Han and Zhang, 2024; Fong et al., 2023) and annuities (Brown et al., 2008, 2021). To our knowledge, this is the first study to conduct a large-scale information provision experiment with a randomized controlled trial (RCT) setup in this domain. While Han and Zhang (2024) investigate "demand willingness" for reverse mortgages using a smaller sample (n=342) in China, our study utilizes a representative sample of 3,820 Korean homeowners. This design allows for the examination of both 'between-group variation' (comparing effects across different treatment arms) and 'within-individual variation' (measuring changes in intention before and after information provision), providing a more robust framework for causal inference.

Second, we contribute to the broader literature on pension design and household finance by highlighting the role of non-incentive-based interventions. Atalay et al. (2019) report that structural incentives in pension design have strong behavioral effects. Our findings complement this by showing that addressing misperceptions and loss aversion, a key barrier for insurance uptake (Hwang, 2021, 2024), can be equally effective. Specifically, our results

align with Ha et al. (2019) and Kwon et al. (2021), demonstrating that Korean households are highly sensitive to framing effects. Furthermore, our finding that facilitating bequests increases enrollment aligns with Nakajima and Telyukova (2017), who demonstrated that bequest motives significantly deter reverse mortgage adoption in the United States.

Third, we contribute to the specific literature on the Korean home pension system (Choi et al., 2023a, 2020) and elderly poverty (Hwang et al., 2023; Choi et al., 2022). By presenting the first experimental evidence on uptake under real-world conditions, we offer crucial insights for the Korea Housing Finance Corporation (KHFC) and policymakers.

The remainder of the paper is organized as follows. Section 2 briefly introduces the institutional background of the home pension and reverse mortgage market in South Korea. Section 3 describes the experimental survey design and data collection. Section 4 presents the results and estimates the average treatment effects. Section 5 concludes.

2   Background: Home pension and reverse mortgages

This section serves as a brief introduction to two specific forms of house loans: the home pension and the reverse mortgage. The denominations might be different by country, so we focus on the two long-term payment schemes associated with the value of a residential house, offered in South Korea. Both share a common feature of generating an income flow to the homeowner by liquidating the residential house, but their operations somewhat differ.

	Home Pension	Reverse Mortgage
Eligibility	Aged over 55 House value* ≤ 1,200M KRW	Aged over 40 no restrictions
Maturity	When both spouses die	up to 30 years
Payment stability	Guaranteed by the government	Stopped when the bank goes bankruptcy
Recourse	No recourse	When the sum of payments exceeds the market value

*Official land value appraised by the government. The official value of 1,200M KRW is priced around 1,700M KRW in the market.

Table 1: Comparison between the home pension and reverse mortgage

A reverse mortgage is a loan provided by commercial financial institutions. As the name suggests, the reverse mortgage generates income flows in the opposite direction of a typical mortgage. By collateralizing the house, the borrower receives monthly loan payments from

a bank over a contract period (up to 30 years), and the repayment is made at the end of the contract. Either when the lender declares bankruptcy or when the sum of payments exceeds the market value of the house, the payments are stopped during the contract period.

A home pension can be regarded as a government-backed reverse mortgage for life. Even if the sum of the pension payments exceeds the market value of the house, the Korea Housing-Finance Corporation (KHFC) continues to pay the pensioner until both spouses die. This lifetime annuity effectively functions as insurance against longevity risk—the risk of living too long. Since the home pension has such a feature of social insurance, only those who possess a house with a value less than 1.2 billion KRW in terms of the official land value, or less than 1.7 billion KRW in market value, are eligible to enroll in the home pension. A reverse mortgage doesn't have such an upper limit of the value of an eligible house.

According to KHFC's data as of September 2024,[4] the average home pensioner is 72 years old and receives a monthly pension payment of 1.22 million KRW (about 870 USD), living in a house worth 388 million KRW.

There are several subtle issues worth mentioning about the home pension and reverse mortgages, especially regarding the payment schemes and the bequest taxes. KHFC also provides other types of home pensions, for example, paying a larger amount for the first five years of enrollment or after some years of enrollment. Obtaining a reverse mortgage loan or a home pension payment lowers the remaining value of the house that children wish to inherit, effectively reducing the inheritance tax. Addressing these subtle issues are beyond of the scope of this study.

3   Experimental Design

Our primary research questions are (1) whether changes of the current home pension scheme would facilitate demand for it, (2) whether demand for the home pension would increase if information pointing out that the two major reasons for reluctance to the home pension may counteract each other is presented, and (3) whether reverse mortgage plans offered by commercial financial institutions could be more effectively promoted. To address these questions, we designed an information provision survey experiment that provides different sets of information about the home pension to survey participants. This approach allows us to examine the difference (the treatment effect) driven by the information provided.[5]

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[4]Source: Korea Housing-Finance Corporation webpage. Last access: December 5, 2024

[5]See Online Appendix for the complete survey questions in Korean. The survey questions translated into English are available upon request.

We believe an information provision survey is an appropriate method, especially given the lack of policy changes to observe how enrollment might respond to such changes. Since no reform of the home pension has been considered, various hypothetical conditions can be presented to survey participants without being influenced by their prior beliefs. Since some of the survey questions ask respondents' unobservable beliefs and valuations, some may consider advanced methods with strategy-proof monetary incentives, such as a binarized scoring rule (Hossain and Okui, 2013). However, we decided against using complicated incentive-compatible payment methods because the elicitation of beliefs might not be behaviorally incentive compatible (Danz et al., 2022).[6]

The survey experiment was conducted as follows: All participants (aged 55 or older, owning a residential house, and not enrolled in the home pension scheme[7]) were initially informed about the home pension (See Figure 1) in section A of the survey. This section assesses their awareness and intention to enroll in the home pension.

In section B, participants were randomly divided into four groups, each presented with information about the home pension, either as potential amendments or reinterpretations of the current scheme. All treatment arms are summarized in Table 2. Participants were then asked again their intention to enroll in the home pension after receiving the information.
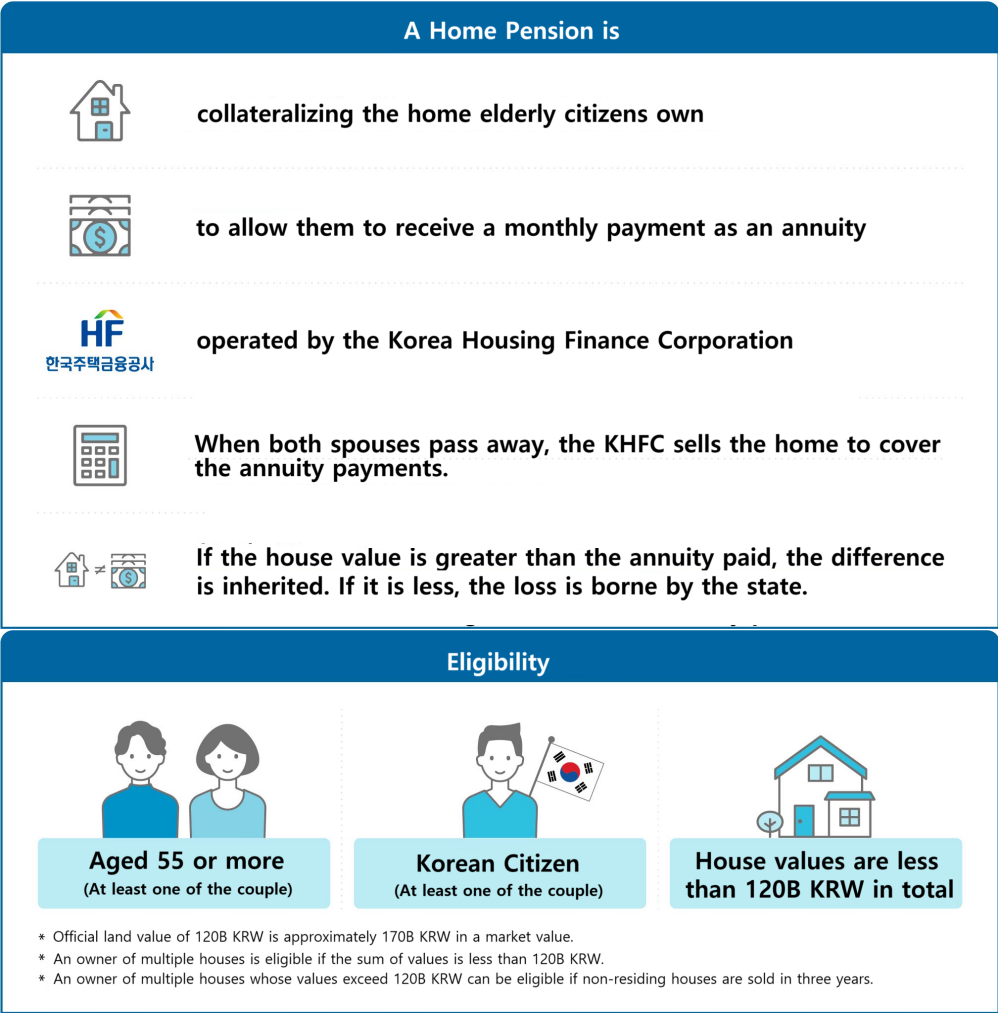
Group	Treatment	Information provided
G1	Placebo	A negligible partial refund of the initial enrollment fee
G2	Varying Payments	Pension payments varying with the house value changes
G3	Easing Bequests	Longer repayment periods for the house being bequeathed
G4	Changing Perceptions	Benefits of stable pension payments

Table 2: Experimental Design

The G1 (Placebo) group was informed about a negligible change: See Figure 2. The par-

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[6]Two additional reasons guided our decision not to use incentive-compatible payment methods. First, given our budget constraints, the scale of payments under incentive-compatible methods would have been drastically smaller. While this might work in a laboratory setting, it seems irrelevant to the context of the home pension information we provide during the survey. Second, many questions ask for personal beliefs or private information, making it challenging to determine which questions should be incentivized. Given the respondents' ages (55 or older), we believe that adopting strategy-proof incentive schemes for many questions would be unproductive.

[7]Although including participants who are not eligible for the home pension but qualify for reverse mortgages could be insightful, we excluded participants under 55 because our primary focus is on why the most eligible elderly have not enrolled. We also exclude participants already enrolled in the home pension for two reasons: First, including them would require tailoring the first set of survey questions, complicating comparisons. Second, since only a small fraction (1.16% in 2022) of eligible elderly have enrolled, excluding them does not significantly affect the sample's representativeness.

A Home Pension is

collateralizing the home elderly citizens own

to allow them to receive a monthly payment as an annuity

operated by the Korea Housing Finance Corporation

When both spouses pass away, the KHFC sells the home to cover the annuity payments.

If the house value is greater than the annuity paid, the difference is inherited. If it is less, the loss is borne by the state.

Eligibility

Aged 55 or more
(At least one of the couple)

Korean Citizen
(At least one of the couple)

House values are less than 120B KRW in total

∗ Official land value of 120B KRW is approximately 170B KRW in a market value.
∗ An owner of multiple houses is eligible if the sum of values is less than 120B KRW.
∗ An owner of multiple houses whose values exceed 120B KRW can be eligible if non-residing houses are sold in three years.

Figure 1: Commonly provided information (translated in English)

ticipants were told that under the current home pension, an enrollment fee of 1.5% of the home value is due on the first day of receiving pension payments. Under the hypothetical new scheme,[8] a small amount (10,000 KRW) would be refunded from the enrollment fee. Considering the average home value of 386 million KRW and an average enrollment fee of approximately 5,790,000 KRW, this refund is negligible.
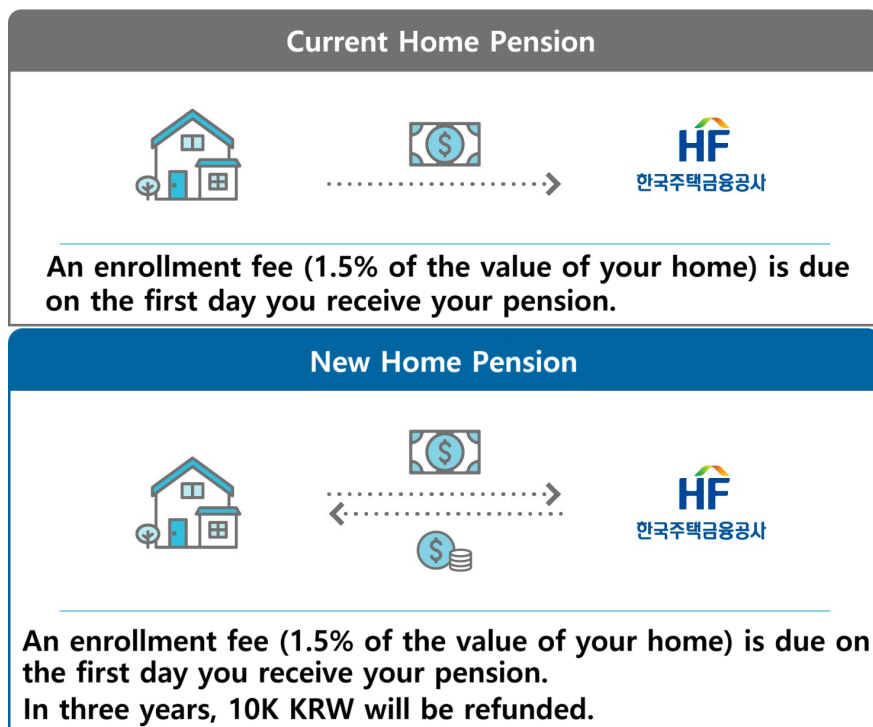

Figure 2: Information provided to G1 (translated in English)

G1 serves as the control group, instead of introducing a separate treatment arm without providing additional information, to account for potential experimenter demand effects—participants' tendency to respond to perceived implicit demands. By structuring the survey to elicit intentions before and after providing seemingly favorable information, changes in responses could arise from perceived demand rather than actual treatment effects. Although the experimenter demand effects were not severe in the laboratory (de Quidt et al., 2018), we want to ensure that the changes in their reported intention are not driven by the mere fact that we have provided something in the middle. The monetary benefit suggested in G1 is negligible, so would be the changes in intention to enrollment. Making the survey structure and length identical to the treatment conditions is another benefit of the placebo treatment.

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[8]We emphasized the suggested changes introduced during the survey might not be implemented.

To further reduce experimenter demand effects, we carefully worded the information to avoid framing it as inherently positive. For example, we avoided calling the new schemes in G1–G3 "improvements." Instead, we explicitly stated, "the new home pension discussed in this survey might be better, worse, or indifferent compared to the current home pension."

The G2 (Varying Payments) group was informed about potential changes to monthly payments in later years: See Figure 3.[9] Participants were told that the current home pension pays fixed monthly amounts regardless of changes in the market value of the collateralized house. If some regard the home pension enrollment as an investment, they may mistakenly believe that delaying enrollment until house prices peak maximizes income streams. This belief, influenced by sharp historical increases in South Korean house prices, is a significant behavioral impediment to enrollment, as noted by previous surveys conducted by KHFC.[10]

Current Home Pension

Even if the house's market value changes

Monthly payments are unaffected

New Home Pension

If the house's market value changes a lot

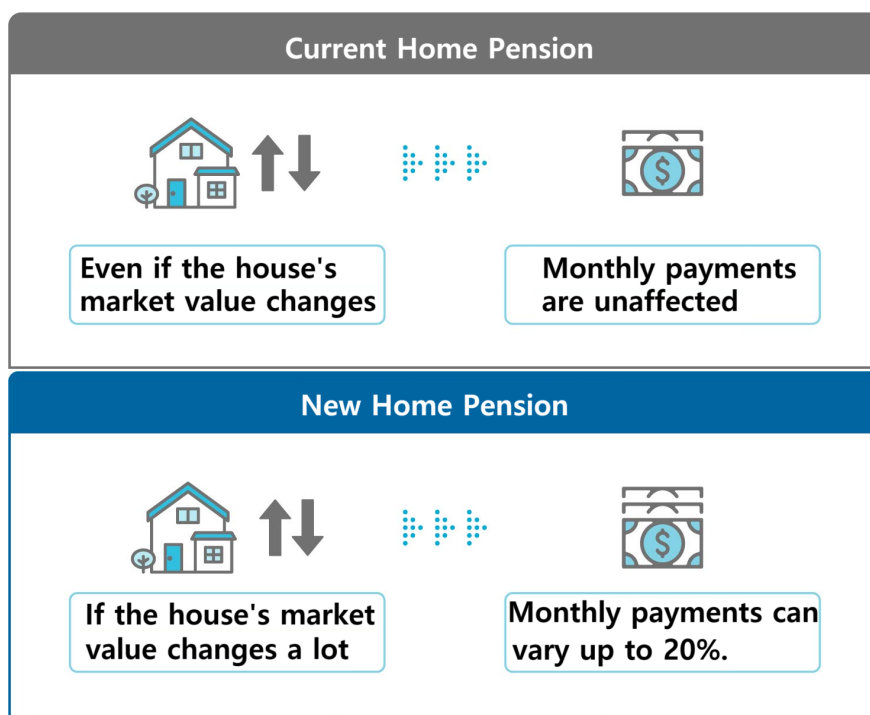Monthly payments can vary up to 20%.

Figure 3: Information provided to G2 (translated in English)

However, waiting for higher monthly payments may not align with the home pension's purpose of providing stable income for asset-rich, income-poor elderly. Beneficiaries gain

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[9]While borrowers could theoretically terminate and re-enroll (refinance) to increase monthly payments when home values rise, this strategy is cost-prohibitive due to the initial enrollment fee (1.5% of home value), the requirement of a lump-sum repayment of past benefits, and a mandatory three-year re-enrollment ban. Thus, G2 can be understood to test demand for a product that adjusts payments without this friction.

[10]Our survey differs from KHFC's annual surveys by focusing on the effects of information provision, rather than describing current conditions.

from stable income streams now rather than enduring current financial struggles while speculating on future house prices. Even if house prices increase significantly, they could still profit by selling the house and terminating the pension without penalties. This concern about higher payments contrasts with another major reluctance regarding home pensions: bequest motives.

According to the previous survey conducted by KHFC, the eligible elderly citizens' second most common reason for not enrolling is that bequeathing a collateralized house seems difficult.[11] G3 (Easing Bequests) treatment addresses this concern: The G3 group is informed that the process of getting bequeathed is easier under the new home pension: See Figure 4. Participants were told that under the new scheme, the repayment period for inheritors would be extended from six months to three years, with more accessible loans for repayment.
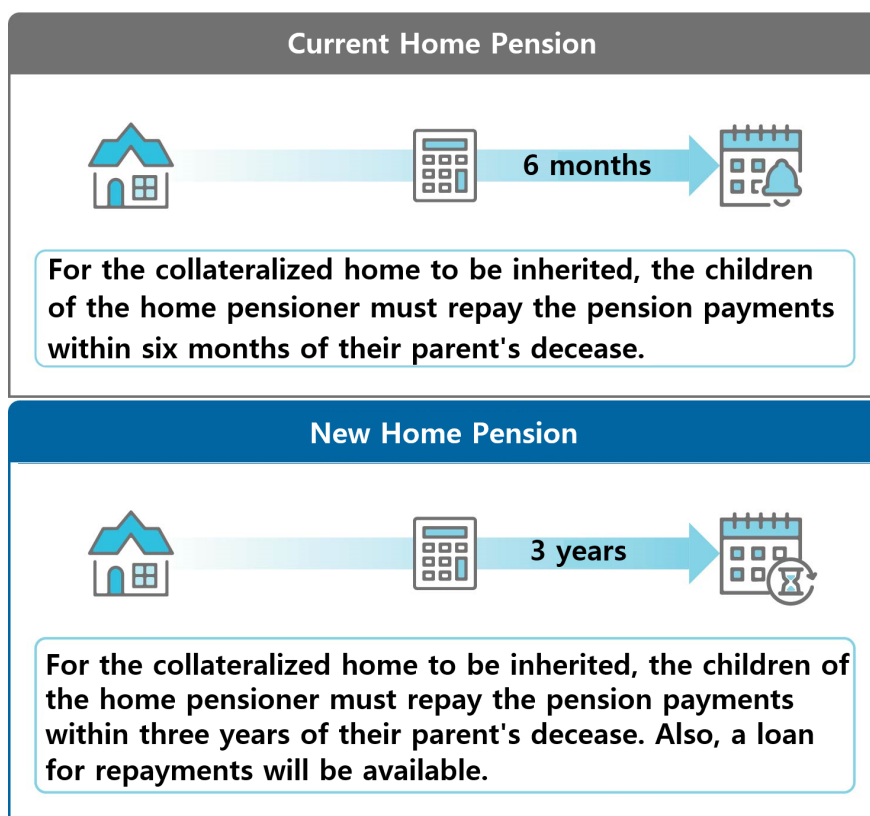

Current Home Pension

6 months

For the collateralized home to be inherited, the children of the home pensioner must repay the pension payments within six months of their parent's decease.

New Home Pension

3 years

For the collateralized home to be inherited, the children of the home pensioner must repay the pension payments within three years of their parent's decease. Also, a loan for repayments will be available.

Figure 4: Information provided to G3 (translated in English)

Note that the two information treatment conditions in G2 and G3 address somewhat con-

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[11]A recent study (De Nardi et al., 2025) also shows that bequest motives are a key determinant of aggregate retirement wealth.

trasting concerns about the home pension. Suppose that an eligible elderly citizen changes her intention to enroll in the home pension in G2 and G3. It means that she wants to receive (possibly increasing) pension payments that reflect the (possibly increasing) house price, and at the same time, she is concerned about her children's repayment, which will be larger when her monthly payments are associated with the increased house price. In G4 (Changing Perceptions) treatment, the survey participants were informed that the two main concerns may seem to counteract each other, without suggesting an change in the home pension scheme: See Figure 5.

Figure 5: Information provided to G4 (translated in English)

G4 group is told that the perception about the stable monthly payment that does not reflect ex-post changes in house price may not necessarily be negative. Stable monthly payments help the pensioner to appreciate smoothed consumption for life, which is the essentially desirable feature of the lifetime utility maximization given that people prefer a convex combination of two extreme consumption bundles across periods. Also, it reiterates a simple point that getting stable monthly payments when the house price increases means that the remaining value of the house, which will be bequeathed, increases. Even if the children want to inherit the house, the sum of their parents' pension payments compared to the value of the house is less burdensome. Note that the 'information' provided in G4 is not an introduction of a new feature, but a reiteration of what they can rationally infer.

Although the G4 treatment adopts a more directive tone, it does not present any new or persuasive content. Rather, it reorganizes existing factual information about the home pension scheme to make key mechanisms, such as consumption smoothing and bequest retention, more salient. In this sense, G4 represents an informational reframing intervention,

comparable in policy relevance to G2 and G3, which model potential structural reforms. The content of G4 may influence respondents through several overlapping mechanisms—framing effects, salience, perceived credibility, or cognitive clarification—and we do not claim to isolate a single channel. Instead, our primary aim is to assess the effectiveness of this type of intervention as a policy-relevant communication strategy. While the G2–G4 treatments engage different mechanisms, structural change versus informational reframing, they represent distinct but relevant policy options. Our comparison therefore focuses on relative policy effectiveness rather than strict experimental equivalence.

Two upfront sections A (the intention to enroll in the current home pension) and B (the intention to enroll after being informed) are of our main interest. Sections C to H of the survey collected respondent characteristics for control variables. Section C asked how they prospect the housing prices in 20 years and how long they anticipate to live in a healthy shape. In section D, we introduced the reverse mortgage plans that are currently provided by commercial banks and asked whether they are aware of these plans and whether they would prefer the reverse mortgage over the home pension. We also asked their general tendency of appreciating services and products provided by the government versus the private sector. Section E assessed the respondent's risk and time preferences, by adopting similar questions from World Values Survey and Gächter et al. (2022), and their time inconsistency and willingness to pay for insurances. Sections F and G included demographic and economic status questions. Section H measured financial literacy using OECD international survey items.

3.1   Experimental Procedure

The survey was conducted by Hankook Research, a professional survey agency, using a nationally representative sample of 3,820 participants, from August 26 to October 2, 2024.[12] Upon completing the survey, online respondents received the participation fee of 1,500 KRW (about 1.06 USD as of December 5, 2024) and in-person respondents received a small gift whose value is greater than 1,500 KRW. Since the standard web-based survey may lose its representativeness for the elderly, especially for those aged 70 or over, the agency collected the responses in person: the trained survey agents asked survey questions to the

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[12]We also had pilot data from 205 respondents. The pilot survey was conducted online in June 2024. Whether to merge the pilot data does not change the results in any qualitatively meaningful ways, but we decided to exclude the pilot data for two reasons. First, the pilot data was collected online, so the responses from those aged 70 or over would be more deviating from the representative sample responses. Second, we changed the wording and images used in the survey slightly.

participants aged 70 or over and recorded their answers on-site. Because random assignment occurred only after screening and consent, survey completion rates were similar across treatment groups, ranging 89–91% by treatment. Combined with the balance of observable characteristics at baseline, these patterns suggest that potential attrition bias is unlikely to meaningfully affect our results.

Table A.1 shows that our samples are representative of the South Korean population aged 55 or over. Since the survey participants were randomly assigned to one of the four treatment conditions with an equal probability, the sample characteristics of each treatment group should share those of the population distribution. χ^2 homogeneity test results of some un-targeted variables (Table A.2) show that there are no significant differences among groups, implying that survey samples are randomly split into the four treatment groups as designed.

4   Results

4.1   Treatment Effects on Demand for Home Pension

Since each survey respondent reports their intentions to enroll in the home pension both before and after the information provision, we use the individual change in intention to enroll as a key dependent variable to test how each treatment arm affects changes in intention. Because we randomly assigned the survey participants to four treatment conditions, other control variables capturing individual characteristics are, at least by design, orthogonal to the treatment condition.[13] Table 3 presents the main results without controlling for other explanatory variables, where positive response is defined as fraction of the responses indicating "likely to enroll" and "surely likely to enroll" combined.

As expected, the intention changes in G1 were the smallest, with a 0.74 percentage point change that is statistically insignificant (p =0.419)[14]. The treatment effects for G2–G4 are

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[13]In a similar vein, inaccurate responses—such as overstatement or understatement of their willingness to enroll in the pension—do not bias the treatment effect estimates as long as such noise is not systematically related to the treatment conditions. However, inaccurate responses may reduce the statistical significance of the estimates by increasing their standard errors. Accordingly, we report statistical results in a conservative manner.

[14]Unless otherwise stated, we report the p-value of the two-sided test about the null hypothesis of zero estimated coefficients. Table 3, for example, report the two-sided t test results of zero differences in mean. Because the hypotheses were defined ex ante and correspond to direct pairwise comparisons, multiple-testing correction is not strictly required, but adjusted p-values computed using the Bonferroni and Benjamini–Hochberg (FDR) procedures are reported in Table A.4. Results remain statistically significant.

| | | Positive Response (%) | | | |
	N	Before Informed	After Informed	Δ (p-value)	Between group
Total	3,820	35.29	40.21	+4.92 (0.000)	-
G1 (Placebo)	946	35.86	36.60	+0.74 (0.419)	base
G2 (Varying Payments)	967	33.02	39.23	+6.21 (0.000)	+5.47 (0.000)
G3 (Easing Bequests)	956	36.69	41.93	+5.24 (0.000)	+4.50 (0.001)
G4 (Changing Perceptions)	951	35.61	43.07	+7.46 (0.000)	+6.72 (0.000)

Table 3: Changes in the intention to enroll, by treatment

Notes: The respondents answered their intention to enroll in the home pension in a five-point Likert scale. Positive response is defined as fraction of the responses indicating "likely to enroll" and "surely likely to enroll" combined.

statistically significant at the 1% level of significance, and those are significantly larger than the treatment effect for G1 at the same level of significance, as indicated in the last column of Table 3. Specifically, the intention to enroll increases by 6.21 percentage points if the home pension scheme is reformed to periodically redetermine the monthly pension payment based on changes in house prices and by 5.24 percentage points if it is reformed so that the remaining house value can be bequeathed to children in a less burdensome way.

A particularly interesting finding is that merely informing participants that the two major concerns regarding the home pension are contrasting each other also increases the intention to enroll by 7.46 percentage points. Although the treatment effect in G4 is not statistically different from those in G2 and G3, the G4 result is particularly noteworthy as it does not involve any structural policy change, highlighting the powerful role of framing and perception correction. These findings suggest that reconciling some of the concerns about the uptake of the home pension can produce an effect of comparable magnitude to the direct policy reforms that have been considered most effective.[15]

These findings do not appear to be driven by eligible elderly respondents being unaware of the home pension and discovering it for the first time during the survey. In fact, 96% of respondents reported that they were already familiar with the home pension before it was introduced in the survey. Additionally, the responses align with their self-reported reasons for why people are reluctant to enroll in the home pension. Figure 6 summarizes the top reasons respondents believe people are hesitant to enroll in the home pension.[16]

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[15]Although the KHFC does make efforts to correct common misconceptions by, for example, offering brief informational videos, these outreach activities remain limited in reach and depth, and thus have not effectively penetrated the broader public despite high overall awareness of the home pension program.

[16]The exact survey question was, "Researchers consider the following (randomly ordered) list as potential reasons why people are reluctant to enroll in the home pension. Please indicate the most crucial reasons, up to three." Combining the top three reasons does not lead to meaningful analytical changes.

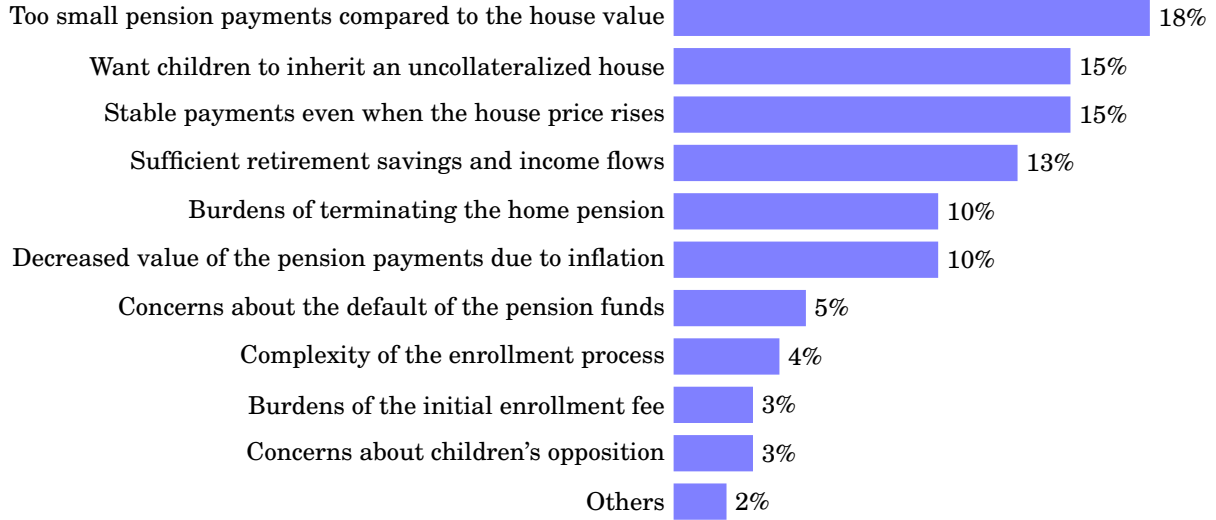| Too small pension payments compared to the house value | 18% |
Want children to inherit an uncollateralized house	15%
Stable payments even when the house price rises	15%
Sufficient retirement savings and income flows	13%
Burdens of terminating the home pension	10%
Decreased value of the pension payments due to inflation	10%
Concerns about the default of the pension funds	5%
Complexity of the enrollment process	4%
Burdens of the initial enrollment fee	3%
Concerns about children's opposition	3%
Others	2%

Figure 6: Reasons about the reluctance of the home pension

Consistent with previous findings from the survey conducted by the KHFC, the survey participants identified the following as the most crucial reasons for reluctance to enroll in the home pension: (1) pension payments are too small compared to the (potentially increasing) future house value, (2) a desire for children to inherit the home without dealing with the clearance of collateralization, and (3) concerns about stable payments when house prices rise. Considering that reasons (1) and (3) both stem from the lack of responsiveness to house price changes, the main reluctance arises from dissatisfaction with stable pension payments and concerns about bequests. G2 and G3 effectively address these concerns. Result 1 summarizes the first findings.

Result 1. *The intention to enroll in the home pension increases by 6 percentage points if the home pension is reformed to periodically redetermine the monthly pension payment based on house market prices and by 5 percentage points if it is reformed enable easier bequeathal of the remaining house value to children. Additionally, emphasizing the benefits of stable pension payments increases the intention to enroll by 7 percentage points.*

4.2 Treatment Effects on Demand for Reverse Mortgage

Next, we examine whether similar products offered by private lenders, such as banks and insurance companies, can serve as suitable substitutes for the home pension. This question is of interest because the current market for collateralized retirement plans in Korea is predominantly concentrated in the public sector.

In section D, we introduced the reverse mortgage (Figure 7) and asked whether the survey participants were aware of it. We then inquired which they would prefer—the home pension or the reverse mortgage—if the terms and conditions of the reverse mortgage were identical to those of the current home pension.

Reverse Mortgage by Commercial Banks

is collateralizing the home an individual owns

to receive monthly payments as a loan

operated by commercial institutions (Shinhan and Kookmin banks).

The loan contract term is limited up to 30 years.

The payment can be halted if the sum of the payments exceeds the market value of the collateral.
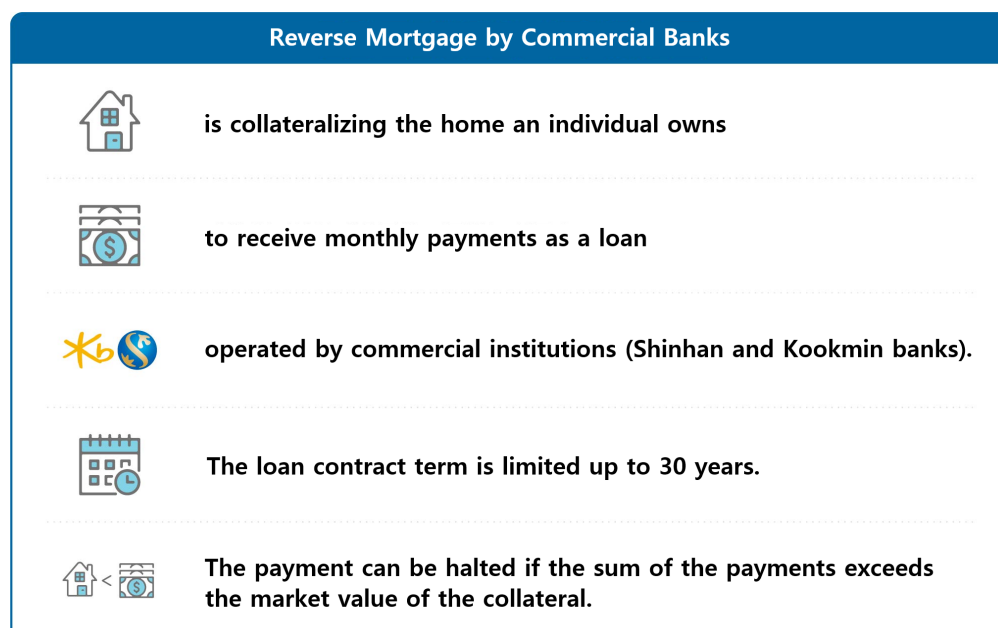
Figure 7: Provided information about the Reverse Mortgage (translated in English)

After that, we asked participants to choose between the current home pension and a reverse mortgage with additional features corresponding to the treatment conditions. Specifically, in G1, participants were asked to choose between the current home pension and a reverse mortgage with a small refund of the initial enrollment fee. In G2 (G3), they were asked to choose between the current home pension and a reverse mortgage whose monthly payments reflect house price changes (a reverse mortgage with an easier repayment process and simplified access to new loans for repayment). In G4, since no new information about the home pension was provided, we reminded participants of one feature of the reverse mortgage: there is no upper limit on house price for eligibility.

Evidence suggests that respondents were less familiar with the reverse mortgage. While 96% stated that they had heard about the home pension before it was introduced in the survey, only 54% reported that they had heard about the reverse mortgage. Given identical conditions, the majority (67%) of respondents indicated a preference for the home pension over the reverse mortgage, while only 4% preferred the reverse mortgage over the home pension. Among those who preferred the home pension, 63% chose 'trust in government

agencies' as the primary reason for their preference, which aligns with the fact that the current market for collateralized retirement plans is exclusively concentrated in the public sector.

However, we find some evidence suggesting that the private sector could play a role. When the current home pension is compared to the reverse mortgage with the treatment condition, preferences for the reverse mortgage significantly increase under all treatments; See Table 4. Notably, in G2 and G3, preference for the reverse mortgage with the treatment condition increases by 14 percentage points. Although the changes in preference for the reverse mortgage in G1 and G4 are smaller, they remain significantly positive, implying that people may respond to positive incentives, no matter how minor. The treatment effects in G2 and G3 are significantly larger than that of G1 at the 1% level of significance, while the treatment effect in G4 is not statistically different (p=0.716).

	Prefer Mortgage over Pension (%)		Δ(p-value)
	Under the same condition	Reverse mortgage with the treatment condition	
G1	4.75	9.70	4.96 (0.000)
G2	4.76	18.84	14.08 (0.000)
G3	3.25	17.19	13.94 (0.000)
G4	3.68	9.14	5.46 (0.000)

Table 4: Changes in preferences for the reverse mortgage

The survey participants selected the features they would most like to see added to reverse mortgage loans. Figure 8 summarizes the features they found most favorable. Extending the loan contract for life essentially makes the reverse mortgage identical to the home pension, reflecting the majority response of preferring the home pension over the reverse mortgage. The other three most frequently chosen features were incentives related to medical care expenses and taxes, flexible options including emergency withdrawals, and mortgage loans tied to medical care expenses. These findings suggest that reverse mortgages could become more attractive not by merely mimicking the home pension (which is not feasible, as the commercial financial institutions are not obligated to bear the potential loss associated with longevity risk) but by offering diverse service features. Result 2 summarizes these observations.

Result 2. *While most respondents prefer the home pension over reverse mortgages offered by private lenders, reverse mortgages have potential for growth if they provide competitive*

advantages such as house price-responsive payments, simplified inheritance processes, and additional incentives.
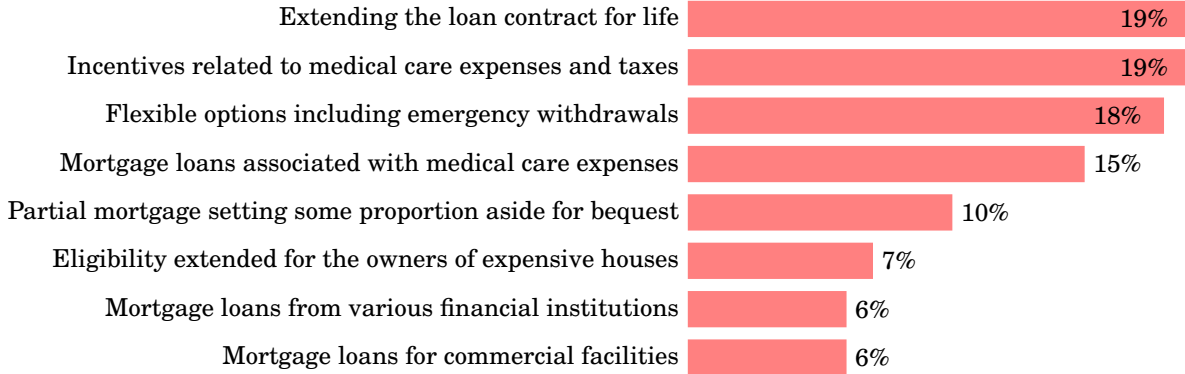
Extending the loan contract for life	19%
Incentives related to medical care expenses and taxes	19%
Flexible options including emergency withdrawals	18%
Mortgage loans associated with medical care expenses	15%
Partial mortgage setting some proportion aside for bequest	10%
Eligibility extended for the owners of expensive houses	7%
Mortgage loans from various financial institutions	6%
Mortgage loans for commercial facilities	6%

Figure 8: Desirable improvements of the reverse mortgage

4.3 Individual Heterogeneities to Treatment Effects

Although we claim that the random assignment to each treatment condition eliminates concerns about sample selection bias by design, this does not mean that we disregard heterogeneous individual characteristics, as these could influence changes in the intention to enroll *within* each treatment condition. To illustrate how individual characteristics may affect the responses to the treatment conditions, Figure 9 presents how survey respondents perceive future house prices at both the national and local levels. While the majority expect house prices to rise over the next 20 years, a non-negligible proportion (24.66% for national prices and 27.09% for local prices) of respondents anticipate that the house prices will decrease. If concerns about the house value depreciation outweigh expectations of the house value appreciation—possibly due to loss aversion—then people may view G2 treatment (varying payments based on the market price of the collateralized house) negatively, as it implies that their payments might decrease. Similarly, the G4 treatment (highlighting the benefits of stable payments) could have an adverse effect by reminding respondents that bequeathed value of the house would diminish. This illustration underscores the importance of examining the effects of individual heterogeneities.

To examine the effects of individual heterogeneities, we first regress the initial intention to enroll in the home pension on explanatory variables of interest, as follows:

$$y_i^* = \beta_0 + \sum_{k=1}^{K} \beta_k x_{ik} + \varepsilon_i, \tag{1}$$
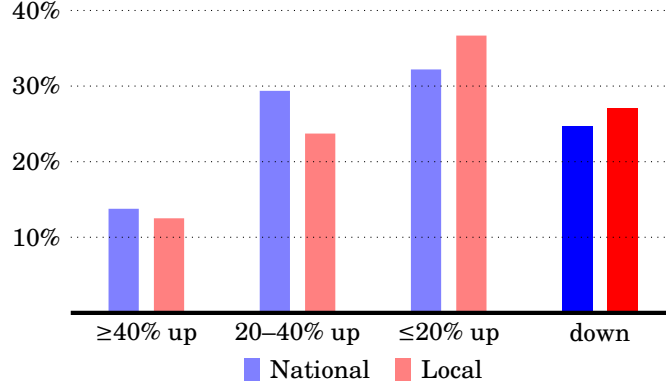
18

Figure 9: House price expectations in the next 20 years

Notes: The x-axis labels refer to the expected house price appreciation rates over the the next 20 years. For example, "≥40% up" is the proportion of respondents who report that the house price will be 40% or higher than the current price in the next 20 years.

where y_i^* is individual i's underlying initial intention to enroll in the home pension, and x_{ik} represents i's explanatory variable k, which includes individual socioeconomic characteristics such as gender, age, education level, and preparedness for retirement. The explanatory variables also include their expectations about future house prices, life expectancy, risk and time preferences, and financial literacy. Since survey participants' initial intentions were asked before the information treatment, this regression does not include a binary indicator for the treatment group. Given that the observed dependent variable—intention to enroll in the home pension—is a discrete ordinal variable, we adopted ordered logit model. Figure 10 presents the results of our preferred model specification. For each horizontal line, a dot represents a point estimate, and the line indicates the 95% confidence interval. If the line does not intersect with the vertical axis, the point estimate is statistically significant at the 5% significance level. Some additional model specification results are available in Table A.3 in the Appendix. The results align with Figure 10. Additional variables, such as monthly income, income sufficiency, and home value, were not statistically significant.[17]

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[17]The descriptive statistics show that the intention to enroll in the current or reformed pension schemes is relatively lower among the low-income group compared to the overall average. For households with a monthly income of less than 2 million KRW (n=696), the intention to enroll in the current pension scheme is 25.1%, lower than the overall average (N=3,820) of 35.3%, and for the reformed pension scheme (G1-G4), it is 27.7%, lower than the overall average of 40.2%. One thing to note is that the low-income group includes many older adults and individuals with lower education levels, who tend to show less responsiveness to the home pension. Therefore, while the descriptive statistics indicate that the low-income group shows less response to the home pension, after controlling for factors such as age and education level (Table A.3), the direct effect of monthly income appears to be small.
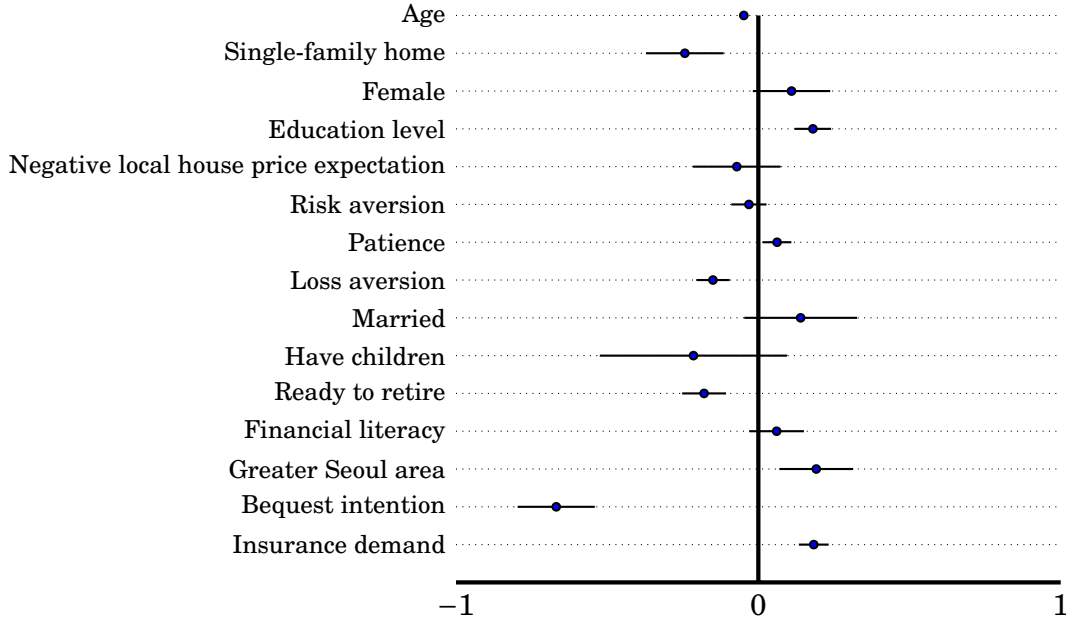
Figure 10: Effects of individual characteristics on the intention to enroll

The results show that their intention to enroll in the home pension is weaker for relatively older respondents; weaker for single-family homeowners (as opposed to the residents of the apartment unit); stronger for the more educated; stronger for the more patient; weaker for the more loss averse; weaker for those who are prepared for retirement; stronger for those who live in greater Seoul area, including Seoul, Incheon, and Gyeonggi-do; and stronger for those who have demand for insurance. These are all aligned with commonsensical narratives. For example, people with a higher education attainment level are more likely to intend to enroll in the home pension as they would appreciate the insurance values of the home pension, and people who intend to bequest their house to children are less likely to intend to enroll.[18] It is worth noting that merely having children does not necessarily imply that they are less likely to enroll in the home pension: Only the parents who intend to bequest their home to children matter. The effects of gender, negative housing price expectations, risk aversion, marital status, and the financial literacy measure are statistically insignificant.

With having in mind such heterogeneous intentions to enroll, we further examine how

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[18]Our findings corroborate with the findings in a previous study (Lee et al., 2015) comparing the characteristics of those who enrolled in the home pension and others. They reported that people with higher real estate holdings, lower financial assets, and higher education levels, who live in an apartment in the metropolitan area are more likely to enroll in the home pension. This suggests that our data are consistent with empirical demand for the home pension.

these heterogeneities influence the treatment effects—the changes in positive intention before and after information provision. We adopted the following regression model:

$$y_i^t = \beta_0^t + \sum_{k=1}^{K} \beta_k^t x_{ik}^t + \varepsilon_i, \quad \text{for } t \in \{1, 2, 3, 4\}, \tag{2}$$

where y_i^t is individual i's change in positive intention in treatment t, and x_{ik}^t is i's explanatory variable k in treatment t. There was a small fraction of respondents (2.7%) whose changes were in the negative direction, so y_i^t takes values +1, 0, or −1. To visualize[19] the results in a more straightforward manner, we binarized the explanatory variables. For example, instead of ages ranging from 55 to 79, we consider two age categories, aged 69 or under and aged 70 or over. This way, we can examine whether relatively younger participants responded more to the treatment conditions. Similarly, "high education level" is a binary variable indicating a college degree or more; "negative price expectation" indicates whether the respondent expects local house prices to decline in the future; "high risk aversion" indicates those who prefer to surely receive the current salary over to receive 200% or 80% of the current salary with an equal probability; "high patience" indicates those who prefer to receive 17,000 KRW a year later over to receive 10,000 KRW immediately; "high loss aversion" indicates those who prefer not to participate in the gamble gaining 6,000 KRW or losing 3,000 KRW with an equal probability; "prepared for retirement" indicates those who self-report that their preparation for retirement is sufficient; "high financial literacy" indicates those who answered both financial literacy questions correctly; and "demand for insurance" indicates those who prefer to buy an insurance that fully covers a loss of 100 million KRW with a 5% chance for 7 million KRW. Other variables such as "single-family home," "female," "married," and "have children" are binary variables to begin with. Figure 11 shows linear[20] regression results with using the subsample of each treatment. Similar to Figure 10, for each horizontal line, four dots represent point estimates in each treatment, and lines present the 95% confidence interval of each estimate. If the line does not intersect the vertical axis, then the point estimate is statistically significant at the 5% significance level.

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[19]Although Figure 11 shows the estimates and confidence intervals in the aggregate, we can present two bar graphs per treatment condition for each control variable so that the heterogeneity in treatment effects can be demonstrated easily. Such figures are available upon request.

[20]Since the dependent variable is the difference of two binary variables, it has three discrete values, −1, 0, and 1. Although ordered logit model would be more appropriate in this case, we considered linear regression as the interpretation of the estimated coefficients is more intuitive. Results from different model specifications are not noticeably different, and they are available upon request.
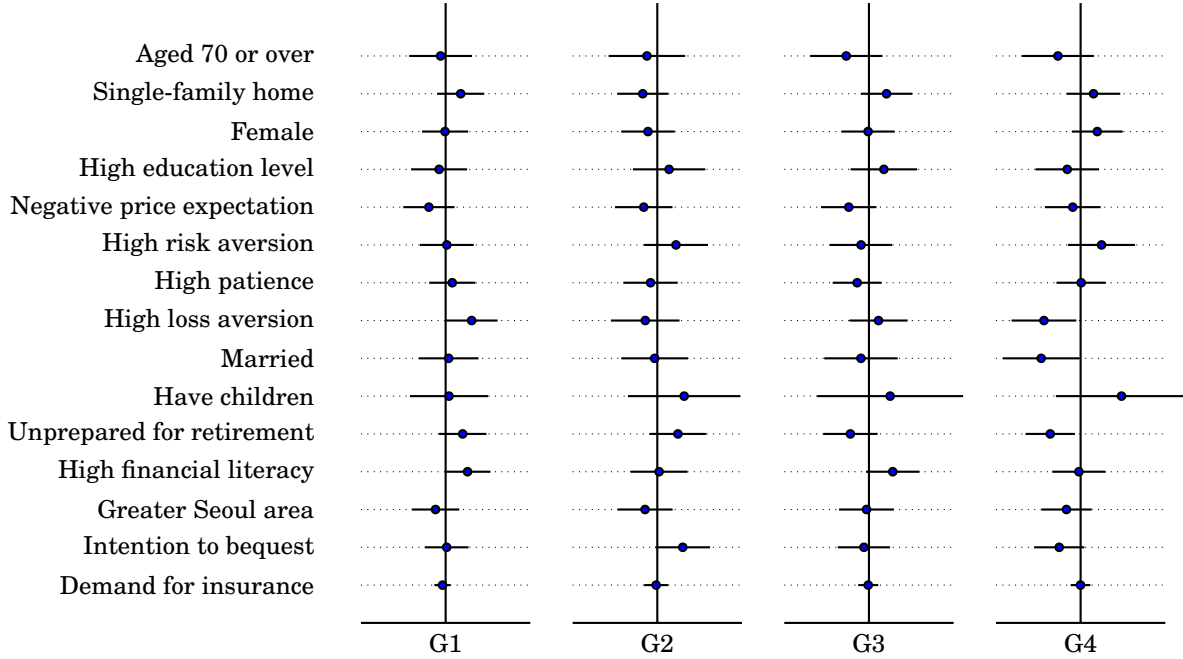
Figure 11: Effects of individual characteristics to the changes in intention, by treatment

The first observation from Figure 11 ia near zero effect on the G1 (Placebo) treatment, as expected. This finding is in line with our claim that the treatment effects we have observed are not due to the experimenter demand effect. The effects of the explanatory variables in the other treatments, although they are aligned to the conventional wisdom to some degree, are not statistically significant at the 5% level of significance. Result 3 summarizes our findings.

Result 3. *Some of individual heterogeneities, such as age, type of the house, education level, loss aversion, preparedness for retirement, intention to bequest, and demand for insurance help to explain their untreated intention to enroll in the home pension. However, most of them do not affect the positive change in intention as a response to the provided information in each treatment.*

One caveat is that our power to detect heterogeneous effects is limited because subgroup analyses substantially reduce sample size within each treatment arm. The absence of statistically significant differences should therefore not be interpreted as evidence of complete effect homogeneity; rather, it may reflect insufficient statistical power (Type II error). Future work with larger samples or pooled data could test these differences more precisely.

5 Concluding Remarks

Elderly poverty is one of the issues that need to be addressed immediately in the fastest aging country, South Korea. Our study is motivated by the fact that although there is a room for significant welfare enhancement among those who possess an illiquid asset—house—while whose income level is meager, surprisingly little proportion of eligible elderly enrolled in the home pension. In this study's sample, 32.8% of households headed by individuals aged 65 and older were found to be living in poverty (defined as having an equivalized disposable income below the poverty line).

We conduct an information provision survey experiment to examine how additional features or the change of the stereotypical beliefs about the home pension scheme would affect the intention to demand it. We report three sets of results. First, we found that the intention of enrollment increases by 6 percentage points when the home pension scheme is reformed to periodically redetermine the monthly pension payment based on the changes of the housing price and by 5 percentage points when it is reformed so that the remaining housing value can be bequeathed to their children more easily. A more interesting finding is that merely informing that the two major concerns—constant pension payment not responding to the recent changes in housing prices and bequeathing the remaining housing value—are contrasting each other also increases the intention of enrollment by 7 percentage points. These are not due to the experimenter demand effect of providing something (information) in the middle of the survey, as our placebo treatment does not lead to any significant changes. Our findings suggest that reconciling some concerns about the uptake of the home pension produces an effect of comparable magnitude to the policy reforms that could have been considered most effective. Given the rapidly aging populations in many OECD and East Asian countries, these findings would offer scalable lessons for encouraging retirement security through communication-based interventions.

We also find that while most respondents prefer the home pension over the reverse mortgages offered by private lenders, the reverse mortgages also have potential for growth if they offer competitive advantages such as house price-responsive payments, ease of inheritance, and additional incentives associated with medical care expenses and emergency withdrawals.

Lastly, we find that some individual heterogeneities, such as age, education level, loss aversion, and the level of financial literacy can help to explain their intention to enroll in the home pension, as well as the positive change in intention as a response to the provided information.

A key limitation of our study is that it measures stated intentions, which do not always translate into actual enrollment—especially for complex financial decisions. Given the gap between stated interest in our data (35.29%) and the actual enrollment rate (1.89%), a 7 percentage point increase in intention might translate to a modest absolute increase in realized demand (approximately 0.38 percentage points). Nevertheless, the magnitude of our findings remains economically meaningful: a 7 percentage point increase represents a 20% relative expansion in the pool of interested individuals (from 35% to 42%). For a low-cost informational intervention, expanding the potential applicant pool by such a margin is substantial. Moreover, by demonstrating that correcting specific misunderstandings significantly boosts demand, our results clarify which behavioral barriers are most binding. Future research should investigate the specific mechanisms driving the intention-action gap, such as time delays or institutional frictions, to better understand how to convert this interest into enrollment.

Another limitation is that the informational reframing intervention may affect respondents through multiple, potentially overlapping mechanisms. It could correct misperceptions about the fixed-payment structure, increase the salience of benefits, or shift evaluative framing from a perceived 'loss' of house appreciation to a 'gain' in smoothed consumption and bequest value. Our experiment was not designed to isolate these channels, and we therefore interpret this treatment as capturing the overall impact of improved informational framing rather than any single mechanism. Future research could disentangle these channels to inform more targeted policy communication.

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Appendices

Additional Tables and Figures

Population Info.	Home Ownership Statistics (2022) by Statistics Korea
Sampling Method	Proportional stratified sampling by gender, age, region (16 regions), and housing type (apartment, non-apartment)
Target Population	i) Adults aged 55 to 79 in South Korea ii) Homeowners or spouses of homeowner iii) Not currently enrolled in the home pension scheme (as of 2022 home pension enrollment rate was only 1.16)

		Population		Targeted		Sampled	
		N	%	N	$	N	%
	Total	7,106,756	100%	3,800	100%	3,820	100%
Age	55–59	1,925,760	27%	1,030	27%	1,049	27%
	60–69	3,386,411	48%	1,811	48%	1,808	47%
	70–79	1,794,585	25%	959	25%	963	25%
Gender	Male	3,704,815	52%	1,982	52%	1,996	52%
	Female	3,401,942	48%	1,818	48%	1,824	48%
Residence	Apartment	4,407,975	62%	2,357	62%	2,411	63%
	Others	2,698,781	38%	1,443	38%	1,409	37%
Region	Seoul	1,242,011	17%	662	17%	673	18%
	Busan	526,310	7%	283	7%	285	7%
	Daegu	345,045	5%	185	5%	189	5%
	Incheon	386,157	5%	207	5%	213	6%
	Gwangju	193,435	3%	103	3%	103	3%
	Daejeon	197,338	3%	104	3%	103	3%
	Ulsan	166,247	2%	89	2%	87	2%
	Gyeonggi-do	1,651,634	23%	883	23%	893	23%
	Gangwon-do	247,012	3%	130	3%	130	3%
	Chungchukbuk-do	238,958	3%	128	3%	127	3%
	Chungchungnam-do	334,790	5%	179	5%	171	4%
	Jeollabuk-do	270,142	4%	144	4%	145	4%
	Jeollanam-do	285,164	4%	153	4%	154	4%
	Gyeongsangbuk-do	429,161	6%	230	6%	228	6%
	Gyeongsangnam-do	505,291	7%	273	7%	274	7%
	Jeju	88,065	1%	47	1%	45	1%

Table A.1: Representativeness of the surveyed sample

Notes: This table juxtaposes statistics for the South Korean population aged 55 or over and the targeted samples with those of the actual samples.

Variable	Responses	G1	G2	G3	G4
Education level	High school or GED	420 (44%)	395 (41%)	406 (43%)	407 (43%)
	College	85 (9%)	115 (12%)	92 (10%)	94 (10%)
	Bachelor	323 (34%)	352 (36%)	363 (38%)	348 (37%)
	Postgraduate	120 (13%)	104 (11%)	93 (10%)	103 (11%)
	χ^2-test statistic for homogeneity: 1.2318, p-value=0.9987				
Intention to enroll	Very unlikely	43 (5%)	41 (4%)	41 (4%)	37 (4%)
	Unlikely	259 (27%)	276 (29%)	275 (29%)	251 (26%)
	Neutral	306 (32%)	330 (34%)	288 (30%)	325 (34%)
	Likely	325 (34%)	304 (31%)	337 (35%)	326 (34%)
	Highly likely	15 (2%)	15 (2%)	13 (1%)	13 (1%)
	χ^2-test statistic for homogeneity: 0.3931, p-value=0.9417				
Have spouse	Yes	787 (83%)	817 (85%)	793 (83%)	803 (84%)
	No	161 (17%)	149 (15%)	161 (17%)	149 (16%)
	χ^2-test statistic for homogeneity: 0.2021, p-value=0.9773				

Table A.2: Group homogeneity test results

Notes: This table shows some results of the χ^2 test for homogeneity of three un-targeted variables—education level, intention to enroll in the home pension, and whether to have a spouse. We do not reject null hypotheses that the groups are homogeneous.

Dependent variable: Intention to enroll in the home pension (before treatment)				
	(1)	(2)	(3)	(4)
Age	-0.071***	-0.0708***	-0.0481***	-0.046***
	(0.0054)	(0.0055)	(0.0059)	(0.0063)
Single-family house	-0.2204***	-0.2183***	-0.2431***	-0.2442***
	(0.0643)	(0.0644)	(0.0655)	(0.0658)
Female	0.0337	0.0357	0.1098	0.1167
	(0.0622)	(0.0623)	(0.0653)	(0.0659)
Education level	0.1878***	0.1854***	0.1805	0.1739***
	(0.029)	(0.029)	(0.0307)	(0.0316)
Negative national housing price expectation	-0.0182			
	(0.072)			
Negative local housing price expectation		-0.126	-0.0712	-0.0648
		(0.0713)	(0.0739)	(0.0743)
Risk aversion			-0.0312	-0.0302
			(0.0296)	(0.0298)
Patience			0.062**	0.0627**
			(0.0241)	(0.0241)
Loss aversion			-0.1502***	-0.1475***
			(0.0281)	(0.0281)
Married			0.1399	0.1242
			(0.0952)	(0.0964)
Have children			-0.2146	-0.2373
			(0.1581)	(0.1593)
Retire ready			-0.1794***	-0.1791***
			(0.037)	(0.0503)
Financial literacy			0.0605	0.0627
			(0.0461)	(0.0463)
Greater Seoul area			0.1915**	0.1872**
			(0.0623)	(0.0648)
Bequest intention			-0.6684***	-0.6683***
			(0.0651)	(0.0658)
Insurance demand			0.1833***	0.183***
			(0.0251)	(0.0252)
Self-evaluated health level				-0.0547
				(0.0382)
Economic activities				-0.0553
				(0.0793)
Monthly income				0.0000
				(0.0000)
Income sufficiency				0.0326
				(0.0482)
High house value				0.0182
				(0.1246)
Net asset value				0.0000
				(0.0000)
N	3820	3820	3820	3820
Pseudo R2	0.0484	0.0487	0.0777	0.0782

Table A.3: Effects of individual characteristics on the intention to enroll

Notes: The numbers in parentheses are robust standard errors. *,**, and *** imply $p < 0.05$, $p < 0.01$, and $p < 0.001$. Ordered logit models are used. Control variables include age (55–79), dummy variables for single-family house and female, education level (1–5), a dummy for negative national/local housing price expectation, levels of risk aversion, patience, and loss aversion (1–4, respectively), dummies for marital status and children, readiness for retirement (0–4), level of financial literacy (0–2), dummies for residing in the greater Seoul area and intention of bequest, demand for insurance (1–4), health condition (1–5), a dummy for economic activity, average income (0–30,000), level of income sufficiency (1–5), a dummy for high house value, and net assets (−350,000–1,330,000).

Comparison	Unadjusted		Bonferroni Adjusted		Benjamini–Hochberg (FDR)	
	Effect (pp)	p-value	Adjusted p	Sig.	Adjusted p	Sig.
G2 vs. G1	5.47	0.000	0.001	***	0.000	***
G3 vs. G1	4.50	0.002	0.012	**	0.004	***
G4 vs. G1	6.72	0.000	0.000	***	0.000	***
	Three treatments (G2, G3, and G4) versus control (G1)					

Table A.4: Adjusted Significance Levels for Pairwise Treatment Comparisons

Notes: This table reports unadjusted and adjusted p-values for the three pre-specified pairwise comparisons between each treatment group (G2–G4) and the control group (G1). Adjusted p-values are computed using the Bonferroni and Benjamini–Hochberg (FDR) procedures. Because the hypotheses were defined *ex ante* and correspond to distinct policy treatments, multiple-testing correction is not strictly required. Results remain statistically significant at the 5% level under both methods. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
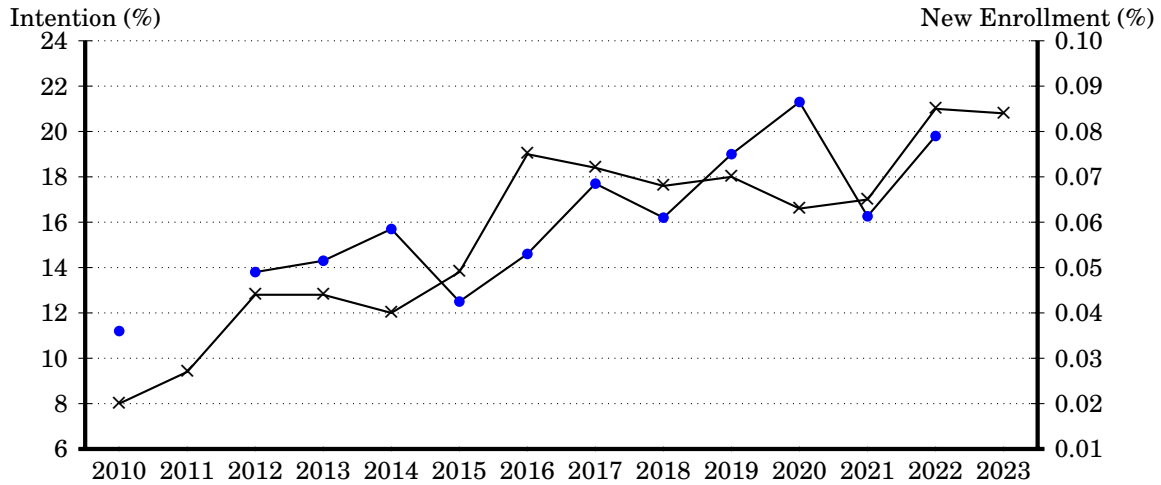

Figure A.1: Correlation between Intention and New Enrollment (2010–2023)

Notes: Solid line with circles (—o—) denotes enrollment intentions, while that with crosses (—x—) denotes the new enrollment rate. The left y-axis represents the percentage of homeowners aged 55+ expressing intention to enroll (Source: KHFC Annual Housing Finance Survey). The right y-axis represents the percentage of eligible households newly enrolling in the home pension. The two series exhibit a positive correlation ($\rho > 0.6$), suggesting that stated intentions track with realized demand at the aggregate level. Note that these surveys were conducted independently of this study.