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# Pension Reform Preferences in Germany: Does Information Matter?

## Abstract

Demographic change has an impact on pay-as-you-go pension systems. To maintain their financial sustainability, reforms are necessary, but often lack public support. Based on representative survey data from Germany, we conduct a survey experiment which allows investigating whether salience of or information about demographic change enhances preferences towards reforms in general as well as towards specific reform measures. We find that salience and information provision significantly increase the perceived reform necessity. Furthermore, salience increases preferences for an increase of the retirement age over other reform measures, while information provision reduces preferences for tax subsidies. In addition, we highlight the impact of prior beliefs on the treatment effects. As the salience and the information treatments barely differ, we conclude that it is not the information about the demographic change, which matters. Rather, being made aware of the challenges of the pension system impacts reform preferences.

JEL-Codes: H550, J260, C900.

Keywords: pension reform preference, survey experiment, demographic change, information provision.

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## 1 Introduction

According to the OECD (2019), most western societies are characterized by low fertility rates, while life expectancy has been steadily increasing. The resulting ageing of the population causes severe problems for the financial sustainability of pension systems, especially when they are organized as pay-as-you-go systems and rely on intergenerational redistribution. To deal with this challenge, reforms of old-age security are necessary (Börsch-Supan et al. 2020). At the same time, they are a widely and often controversially discussed topic.

Our paper addresses the questions whether salience of and information about demographic change have an impact on preferences towards pension reforms. We conduct a computer assisted telephone interview (CATI) study with a representative sample of 1000 respondents in Germany. The main feature is a survey experiment which asks respondents about their beliefs about demographic change in Germany for 2020 and 2050 (relative to 1990). Afterwards we ask respondents about their preferences towards pension reforms regarding the German statutory pension insurance in general as well as towards specific reform measures. This experiment allows us to draw conclusions about the causal effect of salience and information on reform preferences.

The German pension system consists of three pillars, which are the public, the private and the occupational pillar. Similar to other (western) countries, the statutory pension insurance, which is part of the public pillar, is organized as a pay-as-you-go system, implying that the contributions of the current working generation are used to pay the pension benefits of the current retired generation. Against the background of demographic change, the necessity of reforms to enhance the financial sustainability is part of a larger public debate in Germany. Several reforms of the public pension system were implemented during the last decades to deal with the challenges that are linked to demographic change. More recent reforms include an increase in the retirement age from 65 to 67 until 2029. Other reforms, however, had opposing effects on the financial sustainability: One reform limited the increase in the contribution rate to a maximum of 20% until 2025 while keeping the pension level at 48% or above. Another reform reduced the retirement age to 63 for those with a working history of 45 years (Board of Academic Advisors 2021).[1] Economic experts frequently push for more reform effort (Deutsche Bundesbank 2019; German Council of Economic Experts 2020) and focus on four reform measures,which are suitable to take the demographic change into account and to improve the sustainability of the German statutory pension insurance: increasing the retirement age, decreasing the pension level, increasing the contribution rate or increasing tax subsidies. But as discussed by Boeri and Tabellini (2012), the willingness to accept the necessity of reforms is rather limited. The question of interest in this paper is whether this acceptance can be increased by improving the understanding and knowledge about the statutory pension insurance and the role of demographic change.

In the literature there are two broad strands, which investigate the effects of information provision in the context of pensions – one focusing on the impact on behavior and one on the impact on

[1] The retirement age for early-retirement for those with a working history of 45 years increases gradually to 65 years until 2029, while the general retirement age increases to 67.

understanding and reform preferences. Research focusing on pension planning behavior finds that providing information about expected pension payments via annual letters has a positive effect on labor supply and retirement savings in Germany (Dolls et al. 2018), while receivers in the United States (US) who are more aware of their expected benefits do not change their retirement behavior (Mastrobuoni 2011). However, a simplification of the choice related to a retirement savings plan increases plan participation in the US (Beshears et al. 2013). Angelici et al. (2022) find that if they show female survey respondents three short videos informing them about the pension system, the treated women are more interested in learning more about the pension system and are also significantly more likely to have additional savings in a pension fund. Evidence on the effects of peer information is mixed, however, since Duflo and Saez (2003) find positive effects on pension plan enrolment in the context of a benefit fair, while Beshears et al. (2015) find negative effects on savings when providing information on the savings of peers.

Our paper contributes to the second strand of the literature on the effect of providing information on understanding, knowledge and pension reform preferences. Some recent studies focusing on financial literacy and pension reforms use survey experiments to analyze the effect of information provision on understanding the pension system and on reform preferences. They find that information about changes in the pension system makes respondents think that the pension system is easier to understand after the reform (Finseraas and Jakobsson 2014a). It also increases their actual understanding of the new pension system, but does not have an impact on their pension planning behavior (Finseraas and Jakobsson 2014b). Furthermore, Finseraas et al. (2017) study the effect of information campaigns on short- and medium-term knowledge. They find that the effect of providing information does not persist four months after the intervention and therefore, they conclude that information only has a limited effect on increasing public knowledge about reforms. According to Fornero and Lo Prete (2019), a higher level of economic and financial knowledge reduces the electoral costs of enforcing reforms of the pension system. Although pension reforms are necessary, the acceptance of pension reforms tends to be rather low and therefore might come at a cost for politicians in terms of a reduced reelection probability. The authors, however, do not find a significant relation between implementing a major pension reform and reelection for a sample of 21 advanced countries, including Germany, Italy and Denmark. In addition, they show that the electoral cost of a major pension reform is lower in countries where the level of economic and financial literacy is higher (Fornero and Lo Prete 2019). This finding is in line with Boeri and Tabellini (2012) who find for Italy that more informed individuals also have a higher acceptance of pension reforms.

Furthermore, Gouveia (2017) studies the effect of providing information about the Portuguese social security system on the support for pension reforms that enhance the sustainability of the system. She finds, that the information treatment only has an impact on respondents who are treated the most, i.e. spent the most time reading the provided information. In addition, Kangas et al. (2022) find that explaining a Finnish pension reform to treated individuals by sending them an information letter increases their perceived overall fairness of the reform. But it does neither impact fairness views of individual parts of the reforms nor concerns about different aspects of the pension system. Furthermore, receiving the letter has no significant impact on the

objective knowledge. Therefore, when implementing an information experiment, it is important to understand whether any treatment effect is due to improved knowledge or increased salience. This is the aim of this paper.

Another related study using a survey experiment is Naumann (2017), who evaluates the impact of reform pressure on welfare state support in Germany from a political science perspective. As part of the experiment, participants are informed that demographic change is a risk for the financing of the statutory pension insurance in order to increase the perceived reform pressure. Following this experiment, respondents are asked about their most and least preferred reform proposal. He finds that treated individuals are less likely to oppose an increase of the retirement age.

We extend the experiment conducted by Naumann (2017) in two ways: First, we do not only inform respondents about the importance of demographic change, but also ask them about their prior beliefs, i.e. how they think the old-age to working-age ratio will develop. This allows us to analyze heterogeneous treatment effects based on prior beliefs. Second, other than Naumann (2017), we ask respondents about their preferred option for each of six pairwise policy comparisons derived from the four reform measures mentioned above. This allows us to analyze in a more detailed way the individual rankings of policy measures and how preferences are affected by the treatments.

A further contribution of our paper is that due to the sample composition, we have representative subsamples of East and West Germany and are therefore able to see, whether the effects of salience and information differ for the two parts of Germany. This question is especially relevant, since ageing is more advanced in East Germany. While the old-age dependency ratio in all West German states but one is below 40, the old-age dependency ratio in all East German states is above 40, with Berlin being the only exception (Destatis 2019a). In addition, the experience with the pension system is less pronounced in East Germany – especially for the older cohorts – as the pension system of the western part of Germany was extended to the eastern part only after German reunification.[2] For the last three decades, the system was not fully harmonized as far as the calculation of pension benefits was concerned. This has led to constant discontent as East Germans felt disadvantaged, and, finally in 2017, to legal steps towards full harmonization until 2025. Therefore, attitudes towards the statutory pension insurance and reforms might differ between respondents from East and West Germany and this might also hold for the treatment effects.

We consider preferences towards reforms in general and towards specific reform measures. We find that salience of and information provision on demographic change has significant positive effects on the perceived reform necessity for respondents of the full sample, covering all of Germany, as well as for West German respondents. East German respondents on the other hand do not change their perceived reform necessity due to the salience treatment, but increase it when

[2]After reunification, the pension system of the German Democratic Republic (GDR), which primarily aimed at securing a minimum pension level, was replaced by the wage- and contribution-based pension system of the western part of Germany (BMAS 2021).

they receive the information treatment. When analyzing the treatment effects dependent on respondents' prior beliefs about the demographic change, we find for the full sample and the West German respondents that overestimating the old-age dependency ratio for 2020 decreases both the salience and the information effect, while the effect is positive for the overestimating respondents in the control group. Overestimating the ratio for 2050, on the contrary, increases the salience effect significantly. Overall, however, we do not find significant differences between the two treatment groups. We therefore conclude that individuals react to the increased salience of demographic change rather than the provided information. But differences exist when we compare the two treatment groups on the one hand and the control group on the other hand, where the latter serves as the baseline comparison. Contrary to the two treatment groups, individuals in the control group are only introduced to the topic of demographic change after answering the questions about their reform preferences.

Regarding the more specific reform measures, our main focus is on the most preferred option, increasing the tax subsidies, and the least preferred option, increasing the retirement age. We find that salience of demographic change increases the likelihood that respondents prefer an increase in the retirement age over a decrease in the pension level for the full sample as well as for West German respondents. Overestimating the ratio for 2020 further adds to the positive treatment effect, while overestimating the ratio for 2050 has the opposite effect. Furthermore, the salience treatment makes respondents more likely to prefer an increase in the retirement age over an increase in tax subsidies to the statutory pension insurance for the full sample as well as for the East and West German subsamples.

The remainder of the paper is organized as follows: Section 2 presents our experimental design as well as our hypotheses and our data basis and section 3 provides some descriptive evidence. Section 4 introduces our method, while in section 5 the treatment results for the perceived reform necessity and for the preferences towards specific reform measures are discussed. Finally, section 6 concludes.

## 2 Design and Hypotheses

### 2.1 Sample

Our analysis is based on a sample of 1000 German inhabitants of working age. The sample was collected by computer assisted telephone interviews (CATI), which were conducted by a professional survey company between November 2020 and May 2021 using the dual frame approach.[3] Our sample is representative for East and West Germany, respectively, regarding age, gender and state of residence. With respect to education, our sample is more educated than the average population. Additionally, the share of respondents with a migration background equals the share in the East German population but is somewhat lower than the share for West Germany. Civil servants are excluded from the sample.

We oversample respondents from East Germany and end up with 400 respondents from the Eastern part and 600 respondents from the Western part of Germany. Around half of the

[3]The dual frame approach implies that both, landlines and mobile numbers were called.

respondents are female and nearly half of them are aged 50 and above. Furthermore, one third graduated from university. The majority of the respondents is currently employed and half of the respondents are married. Additionally, two thirds of the respondents have children and the average household size is 2.55. Every seventh respondent has a migration background.

For the analysis in the following, we restrict our sample based on respondents' prior beliefs and only include respondents with prior beliefs above the 5th and below the 95th percentile. By trimming the data in this way, we take outliers into account, who likely did not understand the questions they were asked in the experiment (see Section 2.2 for a detailed explanation of the belief elicitation). In doing so, we follow Roth and Wohlfart (2020) who account for outliers in reported spending growth in a similar way.[4] This reduces our sample to 881 observations. Additionally we exclude respondents for whom we do not have complete information on all control variables. This further reduces our sample to 856 respondents for the full sample. We do the same for the subsamples of East and West Germany and end up with 338 and 518 respondents respectively.[5] We refer to this sample as the main sample. Appendix B provides descriptions of all variables and Appendix C shows descriptive statistics.

### 2.2 Experimental Design and Balance

We conduct a survey experiment to examine the relationship between salience of or information about demographic change and pension reform preferences. The experiment consists of four stages (see Figure 1). Respondents are randomly assigned to one of three groups, which vary with regard to the information provided. In the first stage, the two treatment groups (T1 and T2) are asked about their beliefs about demographic change. More precisely, the information provision experiment introduces the fact that the German pension system is organized as a pay-as-you-go system and that it is therefore necessary to look at the ratio between people of retirement age and people of working age to assess the system's financial sustainability. Before eliciting respondents' beliefs, we inform individuals in the treatment groups, that there were 24 people of retirement age for every 100 people of working age in the year 1990 (Destatis 2019a). We then ask about their beliefs about this ratio for the years 2020 and 2050 in order to evaluate how they view demographic change (see Appendix A for the exact wording of the experiment). The control group (C) is not asked about demographic change before answering the questions about their reform preferences and is therefore not actively confronted with the topic of demographic change until a later point in the survey.

In the second stage, respondents of treatment group 2 (T2) are provided with the correct ratios combined with feedback regarding their individual beliefs, i.e. whether the beliefs were too high, too low or quite accurate. For 2020, the correct value is 37 (Destatis 2019b). Respondents receive the feedback that their estimate was quite accurate when it was between 33 and 41. The correct value for 2050 is 55 (Destatis 2019b). Correspondingly, respondents receive the feedback that their estimate was quite accurate when they estimated a value between 51 and 59. We assume

[4] They set values below the 2nd and above the 98th percentile to missing, but find that the results are similar if they use cutoffs at the 1st or 5th percentile.

[5] The sample size might vary due to missing values in the outcome variables.

that by informing respondents about the correct ratios they update their beliefs and therefore form posterior beliefs that are closer to the correct values. Furthermore, we assume that, this updating results in a shift of their reform preferences. Respondents of treatment group 1 (T1), on the contrary, do not receive any information about the correct ratios. This allows us to identify the role of salience in the framework of the experiment and compare it to the role of information.

In the third stage, respondents in all three groups are asked about their reform preferences. This includes a general question about the perceived reform necessity as well as six questions about pairwise comparisons of the four specific reform measures mentioned above (see Appendix B for the exact wording). In the fourth stage, we elicit posterior beliefs about the old-age dependency ratio for respondents of treatment group 2 at the very end of the survey (in order to reduce concerns about experimenter demand). This elicitation allows us to investigate whether respondents in this group update their beliefs after the receipt of the demographic information.[6]

Figure 2 displays the prior beliefs of our main sample for respondents in all three experimental groups on the left-hand side and the posterior beliefs of respondents in treatment group T2, i.e. respondents who received the information treatment, on the right-hand side. The figures for the prior beliefs show that the majority of respondents overestimated demographic change. To be more precise, we find that for 2020 around one fourth of respondents hold prior beliefs in the range of being "quite accurate", while nearly two thirds overestimate the old-age dependency ratio for 2020 and only 11 percent underestimate the ratio. The mean value of the 2020 prior beliefs is 53.46 with a standard deviation of 23.53. For 2050, the picture looks a bit more diverse. While only 4.8 percent of the respondents hold prior beliefs which are considered "quite accurate", about one third underestimates the ratio for 2050 and the remaining 62 percent overestimate the ratio. For 2050 the mean value of the prior beliefs is 73.70 while the standard deviation is 36.43. More than half of the respondents (459) overestimate the old-age dependency ratio for both years. For the posterior beliefs of treatment group T2, it can be seen that the majority of respondents who received information of the correct ratios indeed update their beliefs. The mean values for the posterior beliefs are 38.93 (2020, standard deviation of 18.09) and 55.65 (2050, standard deviation of 17.98), respectively. When we additionally check the within-subject belief updating using a t-test, the results confirm that respondents in treatment group T2 significantly update their beliefs for both years (p-value 0.00).

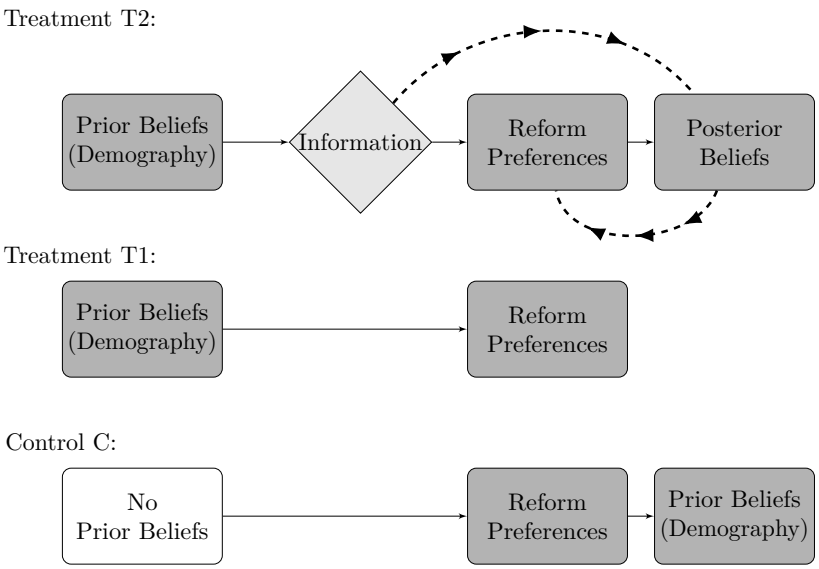
To see whether randomization to one of the three experimental groups was successful we conduct balance tests (see Table A.2 for the full sample and Tables A.3 and A.4 for the East and West German subsamples). As the three groups are well balanced regarding the most important characteristics, this allows us to interpret our results causally.

### 2.3 Hypotheses

Our setting is meant to capture the salience effect via treatment T1 and the information effect via treatment T2. Consequently, when comparing control group C with treatment group T1, we hypothesize that creating salience of demographic change leads to a larger preference for reforms

[6] We also ask respondents of the control group near the end of the survey about their prior beliefs for comparison with the prior beliefs of T1 and T2.

Figure 1: Set-up of the information provision experiment



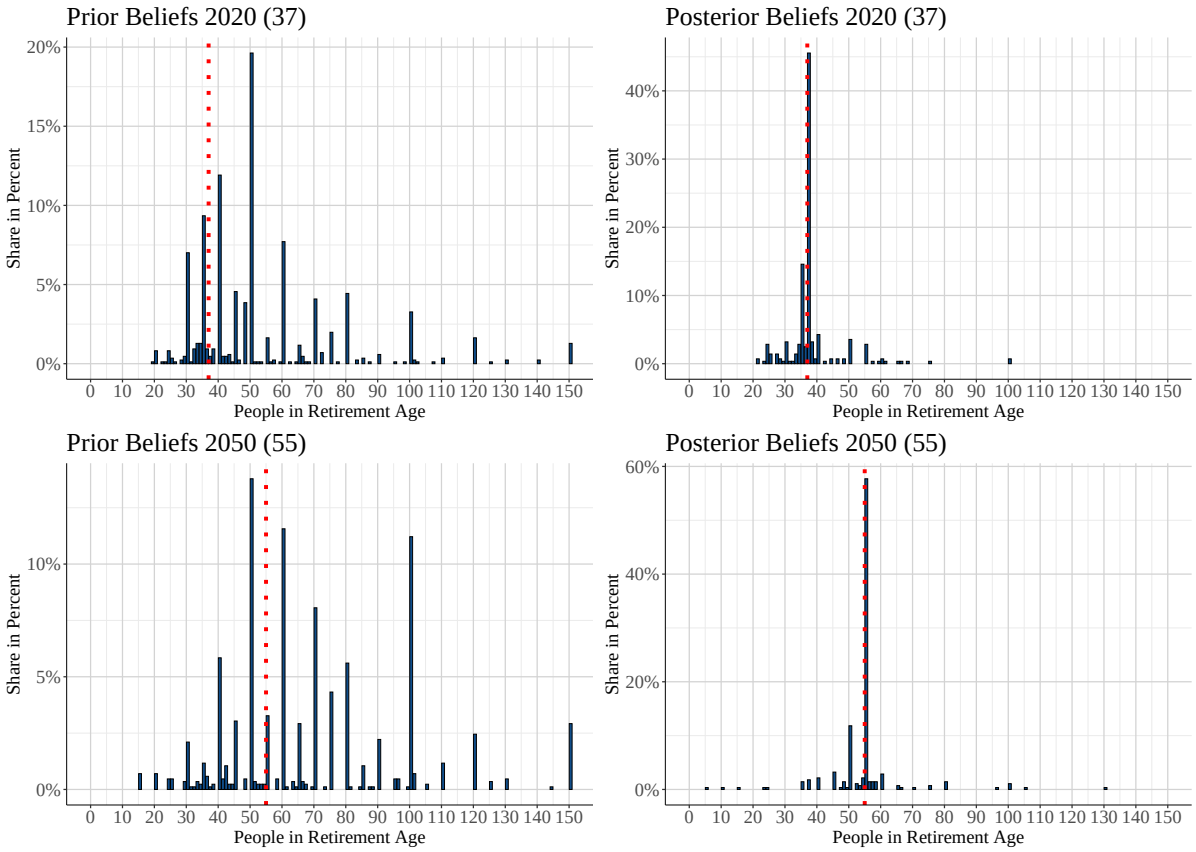

in general as well as to a larger preference for specific reform measures that positively affect the financial sustainability of the statutory pension insurance. While all four considered measures contribute to a more balanced budget of the public pension system, increasing tax subsidies presents an external source of financing and does not correspond to what we understand as a measure which increases the financial sustainability of the public pension system. We expect the effects to be larger for higher prior beliefs, since respondents with a higher estimate of demographic change are expected to view the situation as more severe and therefore should have a stronger preference towards reforms in general and towards specific reforms which increase the financial sustainability.

With respect to treatment group T2, we hypothesize that the effect of providing the correct information depends on the prior beliefs about demographic change, i.e. whether respondents overestimated or underestimated the change. In case of underestimation, we expect an increase in the preferences for reforms in general as well as for reform measures that support the financial sustainability of the statutory pension insurance. Respondents learn that aging of the German population is more severe than they believed. Following an analogous line of reasoning, in the case of overestimation we expect that the correct information reduces the preference for reforms in general as well as for specific reform measures targeted at financial sustainability. Respondents are informed that the situation is less severe. Therefore, reforms might no longer seem to be so necessary. With the chosen experimental design, we are thus able to address the question of salience versus information provision and highlight changes caused by differences in prior beliefs.

## 3 Descriptives

For our analysis, we focus on two types of outcomes as already discussed above: perceived reform necessity and preferences towards specific reform measures. To capture the perceived reform necessity we ask respondents whether they think that reforms are necessary for the German pension system. Answers are measured on a 7 point Likert scale, where 1 stands for “no reforms

Figure 2: Prior and Posterior Beliefs

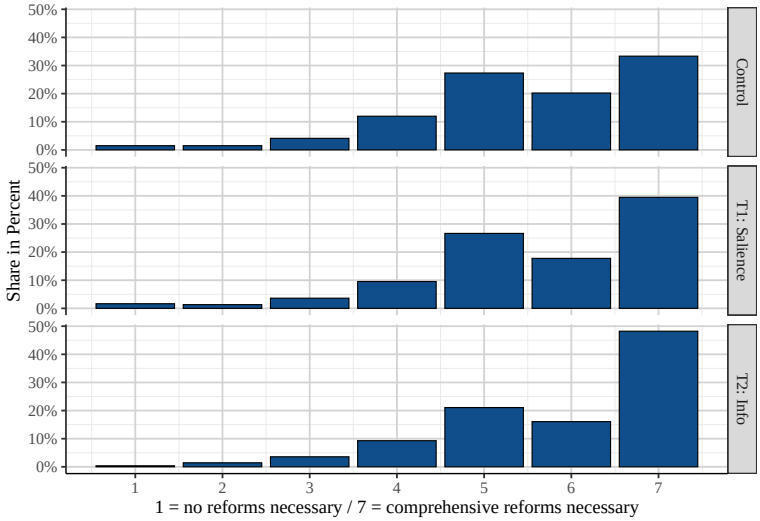



Notes: The figures show prior beliefs of the survey respondents about the old-age dependency ratio for the years 2020 and 2050. The left-hand side displays the prior beliefs of our main sample for the year 2020 (top) and 2050 (bottom). On the right-hand side the posterior beliefs of treatment group T2, i.e. those who receive the correct information, are displayed. The red line indicates the correct value, i.e. 37 for the year 2020 and 55 for the year 2050. We exclude respondents with prior beliefs below the 5th or above the 95th percentile as well as respondents for whom we do not have complete information on the control variables. Therefore, for the full sample we exclude respondents whose prior beliefs for 2020 are below 19 or above 159 or whose prior beliefs for 2050 are below 15 or above 201. Note that the figures only show estimates between 0 and 150. There are 35 respondents (of whom 15 are in T2) who estimate that the ratio for 2050 is above 150, who are part of the main sample, but not included in the 2050 graphs.

necessary" while 7 stands for "comprehensive reforms necessary". Figure 3 shows the distributions of the answers by experimental group. From the figure it becomes obvious that all respondents, including respondents in the control group, think that reforms are necessary to some extent. Over all groups only 22 respondents give a value of 1 or 2, implying that they do not see any necessity of reforms of the German pension system. The mean value for the control group is 5.56 with a standard deviation of 1.37 and 5.69 (1.38) for T1 and 5.90 (1.30) for T2, respectively.

Additionally, we asked respondents to indicate which reform measure they would prefer if they had to choose between two options. These reform measures comprise increasing the retirement age *(age)*, decreasing the pension level *(level)*, increasing contributions *(contribution)* and increasing the tax subsidy to the statutory pension insurance *(tax)* (see Appendix B for the exact wording).

Figure 3: Reform Necessity by Experimental Group



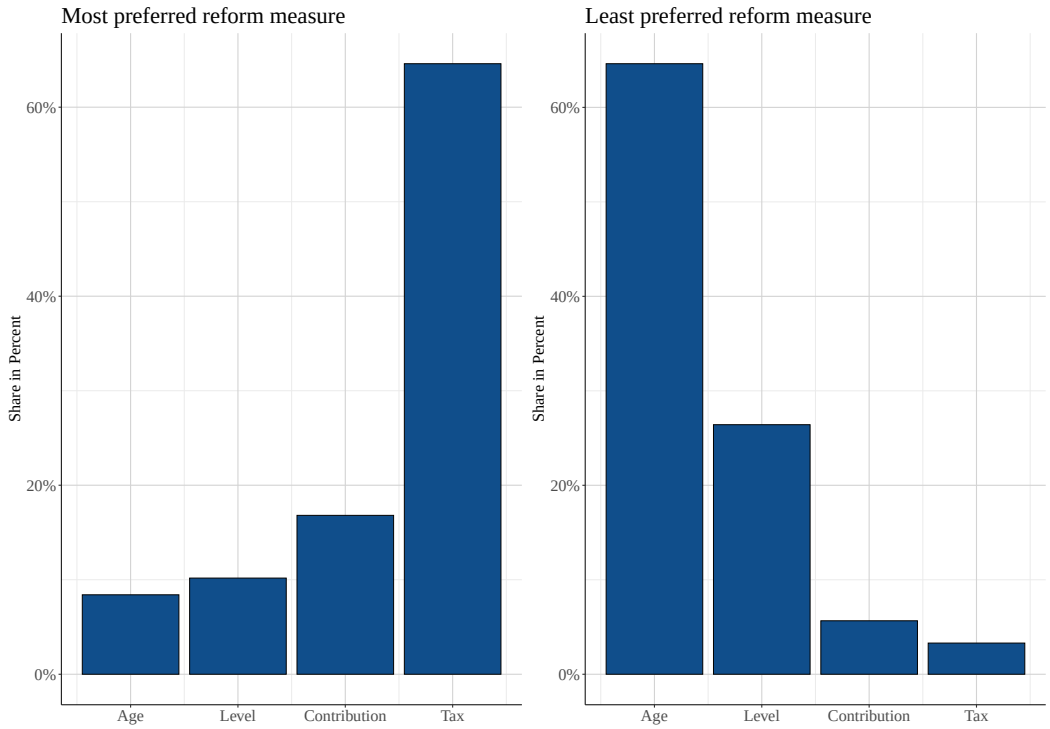

Notes: The figure shows the perceived reform necessity of all respondents in the main sample by experimental group. Responses are measured on a 7 point Likert scale from 1 "no reforms necessary" to 7 "comprehensive reforms necessary".

Respondents stated their preferences for each of the six pairs which result from the four options. This allows us to create individual rankings for the four measures, including the most and the least preferred measures, while it also allows us to shed light on the individual comparisons. Overall 582 respondents of our main sample provided answers for all six questions in a consistent way.[7] Additionally, we identify further 128 respondents for the most preferred measure who always prefer one measure over the three other measures. In an analogous way, we identify 69 additional respondents for the least preferred measure. This results in 710 observations for the most preferred pension reform measure and 651 observations for the least preferred one. The number of consistent answers appears to be quite high. This might be partially due to the fact that respondents strongly prefer increasing the tax subsidy while, at the same time, they strongly oppose an increase in the retirement age. Figure 4 illustrates this for the control group, i.e. in the absence of any treatment effects. The part on the left depicts the distribution for the most preferred reform measure and the part on the right for the least preferred reform measure. While the figure for the most preferred measure shows that a large majority of around 60% of respondents in the control group prefers increasing the tax subsidy, the figure for the least preferred measure shows that nearly the same share ranks an increase in the retirement age as their least preferred measure.

As we have discussed above (see the Introduction), for the next few years at least, the *level* and the *contribution* measures are no policy options. Similarly, the current government has ruled out a further increase of the retirement age (Federal Government 2021). Balancing the budget of the statutory pension insurance at the moment happens mostly via tax subsidies, which turns out as the most preferred policy measure also in our sample. The *age* measure, on the contrary,

[7] We say that someone responds consistently when we can identify a clear preference ranking for the measures based on the six pairwise comparisons.

Figure 4: Most and Least Preferred Reform Measures



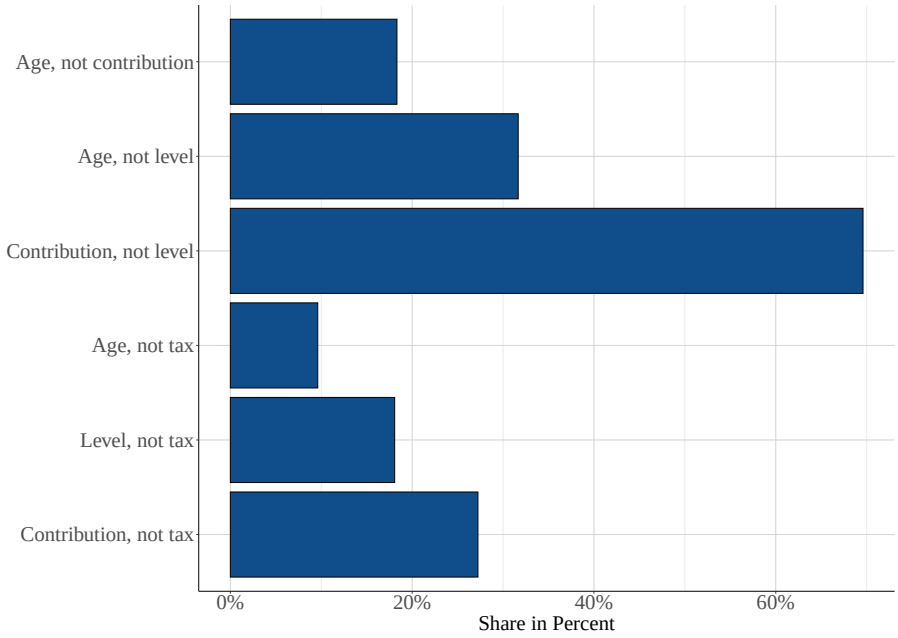

Notes: This figure shows which out of the four reform options is the most (left) or least (right) preferred reform option of the control group. Preferences were calculated based on the answers to the six questions about the pairwise comparisons.

which is favoured by Deutsche Bundesbank (2019) and German Council of Economic Experts (2020) among others, is the least preferred option. Consequently, it is important to understand if a survey experiment, which focuses on demographic change, is able to change the preference for reforms, in general, and the preference for the *age* or the *tax* measures more specifically.

When it comes to the specific measures, Figure 5 shows the control group's responses for each of the six pairwise comparisons. Here, the comparisons without the *tax* option come first. From the figure it becomes clear, that a majority of respondents would rather increase the contributions, decrease the pension level or increase tax subsidies than increase the retirement age. In general, respondents would rather increase tax subsidies to the statutory pension insurance than changing the retirement age, the pension level or the contributions. Obviously, this reflects the insights from Figure 4. When asked whether they prefer an increase in contribution payments or a decrease in the pension level, a majority of around 70% prefers an increase in contributions.

In terms of heterogeneity, Table 1 sheds light on differences and similarities between respondents in East and West Germany, respondents aged 50 or above compared to respondents below the age of 50 and between male and female respondents for the control group. Regarding the comparison of East and West German respondents, the table suggests that the responses are quite similar. However, West German respondents are significantly more likely to prefer an increase in the retirement age over an increase in contributions and over an increase in tax subsidies. When

Figure 5: Specific Reform Measures




Notes: This figures shows the preferences of respondents in the control group for each of the pairwise comparisons.

comparing respondents based on their age, we do not find any significant differences in the responses dependent on whether a respondent is above or below the age of 50. Male and female respondents, on the other hand, seem to differ quite a bit. Male respondents are significantly more likely to have a preference for increasing the retirement age over increasing contributions as well as over increasing tax subsidies compared to female respondents. Furthermore, male respondents in the control group also have a significantly higher preference for increasing contributions instead of increasing tax subsidies.

Table 1: Outcomes - Mean Values

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | West/ East | | | Age: Below 50/ 50+ | | | Male/ Female | | |
| | West | East | p-Value | Below 50 | 50+ | p-Value | Male | Female | p-Value |
| Reform necessity | 5.494 | 5.673 | 0.302 | 5.579 | 5.545 | 0.839 | 5.523 | 5.599 | 0.654 |
| Age, not contribution | 0.217 | 0.128 | 0.079* | 0.178 | 0.189 | 0.835 | 0.234 | 0.134 | 0.041** |
| Age, not level | 0.342 | 0.275 | 0.277 | 0.306 | 0.328 | 0.716 | 0.364 | 0.270 | 0.119 |
| Contribution, not level | 0.697 | 0.695 | 0.973 | 0.696 | 0.696 | 1.000 | 0.748 | 0.646 | 0.079 |
| Age, not tax | 0.123 | 0.051 | 0.055* | 0.106 | 0.086 | 0.584 | 0.147 | 0.046 | 0.005*** |
| Level, not tax | 0.165 | 0.208 | 0.379 | 0.200 | 0.162 | 0.422 | 0.189 | 0.173 | 0.738 |
| Contribution, not tax | 0.267 | 0.281 | 0.806 | 0.308 | 0.234 | 0.182 | 0.326 | 0.219 | 0.055* |

*Notes:* The table shows the comparison of respondents in the Control group using t-tests for East/ West, age and gender. Every third column displays the p-value indicating whether the difference between the two mean values is significant; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

## 4 Method

For estimating the causal effect of our survey experiment, we use equation (1)

$$y_i = \gamma_0 + \gamma_1 T1_i + \gamma_2 T2_i + \gamma^T X_i + \varepsilon_i \tag{1}$$

$$\begin{aligned} y_i \quad = \quad & \gamma_0 + \gamma_1 T1_i + \gamma_2 T2_i + \gamma_3 T1_i \times P_i^{2020} + \gamma_4 T2_i \times P_i^{2020} + \gamma_5 P_i^{2020} + \\ & + \gamma_6 T1_i \times P_i^{2050} + \gamma_7 T2_i \times P_i^{2050} + \gamma_8 P_i^{2050} + \gamma^T X_i + \varepsilon_i \end{aligned} \tag{2}$$

where $y_i$ denotes our outcome variables for individual $i$, which capture different reform preferences. $T1_i$ and $T2_i$ denote the treatment indicators for both treatment arms, respectively, which are dummy variables that are equal to 1 if a respondent is part of the respective treatment group. $\varepsilon_i$ denotes the error term.

In equation (2), we include interactions of the treatment indicators and a dummy variable $P_i^j$, which indicates whether a respondent overestimated the old-age dependency ratio in $j = 2020, 2050$.[8]

Since our sample is well balanced over the three treatment groups we do not need to include control variables. To see the sensitivity of our result, however, we show results with and without control variables. The variable $X_i$ indicates the vector of control variables, which include socio-economic controls for age, gender, residency in East/ West Germany, migration background, education, children a well as employment status. We further include variables about trust in public institutions, time and equality preference. Related to pension planning behavior, we further add variables which capture if participants look optimistic at their life in old age, if they are interested in the topic of pension planning, if they have gathered information about their retirement income and if they pay contributions to the statutory pension insurance (see Appendix B for the variable description).

## 5 Results

### 5.1 Necessity of Reforms – Main Results

First, we evaluate the effect of our treatment on respondents' preference for reforms of the German public pension system in general as described in Section 3. We standardize the outcome variable using the mean and standard deviation of the control group. The results are presented in Table 2. Panel A of the table presents the results for the full sample and Panels B and C present the effects for the East and West German subsamples, respectively. While columns (1) and (2) show the pure treatment effects, columns (3) and (4) show the treatment effects interacted with dummy variables, which capture whether respondents overestimated the old-age dependency ratio for 2020 or 2050, respectively.

[8] The definition of overestimation is based on the feedback respondents in T2 receive. Therefore, prior beliefs above 41 for 2020 and above 59 for 2050 are coded as overestimation.

Table 2: Necessity of Reforms

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Reform necessity | | | |
| **Panel A: Full Sample** | | | | |
| T1: Salience | 0.164* | 0.183** | 0.200 | 0.169 |
| | (0.088) | (0.085) | (0.167) | (0.161) |
| T2: Information | 0.228** | 0.230*** | 0.364** | 0.370** |
| | (0.090) | (0.085) | (0.164) | (0.154) |
| Overest 2020 | | | 0.349** | 0.350** |
| | | | (0.151) | (0.144) |
| T1: Salience × Overest 2020 | | | -0.436** | -0.462** |
| | | | (0.220) | (0.221) |
| T2: Info × Overest 2020 | | | -0.504** | -0.520** |
| | | | (0.226) | (0.218) |
| Overest 2050 | | | -0.102 | -0.176 |
| | | | (0.150) | (0.146) |
| T1: Salience × Overest 2050 | | | 0.383* | 0.492** |
| | | | (0.224) | (0.229) |
| T2: Info × Overest 2050 | | | 0.289 | 0.301 |
| | | | (0.228) | (0.219) |
| Controls | No | Yes | No | Yes |
| Observations | 851 | 851 | 851 | 851 |
| **Panel B: East Germany** | | | | |
| T1: Salience | -0.081 | -0.038 | -0.159 | -0.077 |
| | (0.131) | (0.129) | (0.249) | (0.242) |
| T2: Information | 0.249* | 0.253** | 0.322 | 0.325 |
| | (0.130) | (0.127) | (0.234) | (0.217) |
| T1: Salience × Overest 2020 | | | 0.151 | 0.044 |
| | | | (0.348) | (0.334) |
| T2: Info × Overest 2020 | | | -0.404 | -0.440 |
| | | | (0.333) | (0.308) |
| Overest 2050 | | | 0.068 | -0.031 |
| | | | (0.276) | (0.256) |
| T1: Salience × Overest 2050 | | | -0.029 | 0.025 |
| | | | (0.350) | (0.338) |
| T2: Info × Overest 2050 | | | 0.290 | 0.332 |
| | | | (0.346) | (0.311) |
| Controls | No | Yes | No | Yes |
| Observations | 334 | 334 | 334 | 334 |
| **Panel C: West Germany** | | | | |
| T1: Salience | 0.197* | 0.222** | 0.197 | 0.156 |
| | (0.105) | (0.102) | (0.197) | (0.194) |
| T2: Information | 0.222** | 0.226** | 0.343* | 0.349* |
| | (0.104) | (0.099) | (0.189) | (0.180) |
| Overest 2020 | | | 0.350* | 0.339** |
| | | | (0.180) | (0.170) |
| T1: Salience × Overest 2020 | | | -0.567** | -0.570** |
| | | | (0.275) | (0.277) |
| T2: Info × Overest 2020 | | | -0.434 | -0.436 |
| | | | (0.279) | (0.269) |
| Overest 2050 | | | -0.146 | -0.215 |
| | | | (0.178) | (0.173) |
| T1: Salience × Overest 2050 | | | 0.573** | 0.681** |
| | | | (0.281) | (0.287) |
| T2: Info × Overest 2050 | | | 0.247 | 0.247 |
| | | | (0.280) | (0.272) |
| Controls | No | Yes | No | Yes |
| Observations | 517 | 517 | 517 | 517 |

*Notes:* The table shows the treatment effects on perceived reform necessity. Reform necessity is measured on a 7-point Likert scale and it is standardized using mean and standard deviation of the control group. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95th or below the 5th percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Regarding the treatment (T1), we find for the full sample that salience of the topic leads to a significant increase in the perceived reform necessity of 18.3% of a standard deviation when including control variables. Similarly, the information treatment (T2) has a positive and significant effect of 23% of a standard deviation (Panel A, column 2).

When considering explicitly respondents who overestimate demographic change (Panel A, column 4), Table 2 shows that overestimation of the old-age dependency ratio for 2020 increases the preference for reforms by 35% of a standard deviation for the control group. Interacting the treatment variables with the overestimation-dummies of prior beliefs for 2020 and 2050, we find that overestimating the ratio for 2020 significantly decreases both, the salience effect (T1) and the information effect (T2). The findings for T2 are in line with our hypotheses. When overestimating respondents learn that demographic change is less severe than they believed, they reduce their preferences for reforms. The findings for T1 are not in line with our hypotheses, however. Overestimating individuals, who do not receive information, which corrects their beliefs, should increase their reform preferences. But this is not supported by the results for 2020; only for overestimation of the old-age dependency ratio in 2050 do we find a positive and significant effect for T1. It should also be noted that the non-interacted information effect (T2), which amounts to 37% of a standard deviation, captures those respondents who underestimate demographic change. In line with our hypothesis, they increase their reform preference if they learn that demographic change is more severe.

When focusing on the East German respondents (Panel B), we do not find a significant effect of the salience treatment (T1). But we find that the information treatment (T2) significantly increases the perceived reform necessity by 25.3% of a standard deviation when including controls (Panel B, column 2). There are no significant effects, however, when we consider explicitly overestimating respondents. For the West German respondents (Panel C) on the other hand, we find similar results as for the full sample. The most notable difference is that the interaction of overestimation of the old-age dependency ratio in 2020 and the information treatment (T2) is no longer significant.

As the results for the two treatments show similar patterns, we want to see if the salience and the information treatments lead to significantly different results. Therefore, we run our analysis again excluding the control group and using the salience group as the baseline (see Table A.5 in the appendix). The results for the full sample indicate that there is no significant treatment effect when comparing the salience to the information group. This does not change, when we include the interaction of the treatment indicator with the overestimation-dummies (Panel A). The results for West German respondents are very similar to those for the full sample (Panel C). For East German respondents, however, we find that the information treatment increases respondents' perceived reform necessity by 27.0% of a standard deviation when including control variables compared to the salience treatment (Panel B, column 2). But the effect vanishes when we include the interaction with the overestimation-dummies (Panel B, column 4).

Overall, the results for the two treatments do not differ significantly and neither do they differ when interacted with the overestimating-dummies for the old-age dependency ratio. Our evidence,

on the contrary, points towards a difference between the control group on the one hand and individuals in any of the two treatment groups on the other hand. This is contrary to our hypotheses. We need, however, to take one important difference in the set-up of the survey experiment into account: Individuals in the control group are only asked about their prior beliefs after the question about their reform preference (see Figure 1). Only then are they explicitly induced to think about demographic change. Individuals in any of the two treatment groups have to think about demographic change already before the reform question. Overestimating individuals seem to see a large old-age dependency ratio for 2020 – no matter if corrected in the information treatment or uncorrected in the salience treatment – not as a reason for more reforms. We can only speculate about the underlying reasons. Possibly, they consider the present situation of the statutory pension insurance. While there are discussions about problems of the financial sustainability in the next years and decades, there are no indications of an immediate financial difficulty: The contribution rate has been unchanged at 18.6% since 2018 and old-age pension payments have increased every year – in July 2020, i.e. the year relevant for the survey, the rise was 3.45% in West Germany and 4.20% in East Germany (Fasshauer 2021).[9] Thinking about the ratio for 2050, on the contrary, seems to make respondents aware that demographic change is not a short-term phenomenon. Overestimating individuals thus seem to see a large dependency ratio as making reforms more necessary. As there might be differences across age groups and gender regarding the impact of short-term and long-term demographic change, we consider possible heterogeneous treatment effect in the following.

### 5.2 Necessity of Reforms – Further Heterogeneity Analysis

Additionally to the analyses for the full sample as well as for the subsamples of East and West German respondents, we analyze treatment effects dependent on age and gender of the respondents. Obviously, younger and older individuals can be expected to view the statutory pension insurance and its reform necessity differently as the years as contributors and the time until retirement differ. Similarly, the different employment biographies and the difference in the accumulated pension claims of men and women can also affect their preferences for reforms differently. Here we are interested in whether the treatments have a differential effect on the subgroups' reform preferences. The results are shown in Table 3.

When analyzing the treatment effects for different age groups, we split our sample into two groups of relatively equal size, where one group covers respondents aged 50 and older and the other group covers respondents aged 18 to 49. For the full sample, we find a positive and strongly significant treatment effect for both treatments for respondents above the age of 50 (Panel A, column 1). When interacting the treatment variables with the overestimation-dummies for 2020 and 2050, respectively, we see a pattern similar to the one for the full sample. Both treatments significantly decrease the perceived reform necessity for the respondents who overestimate the ratio for 2020, while both treatments have a significant positive effect for those who overestimate the ratio for 2050 (Panel A, column 2). In both cases, the results for the two treatments do not differ - as before, while we find a difference compared to the control group. For respondents

[9] Rising tax-financed transfers to the statutory pension insurance might not be so present in people's minds.

Table 3: Necessity of Reforms (Heterogeneity)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| | Reform necessity | | | | | | | |
| | Age: 50+ | | Age: below 50 | | Female | | Male | |
| **Panel A: Full Sample** | | | | | | | | |
| T1: Salience | 0.340*** | 0.466* | 0.058 | -0.090 | 0.075 | 0.216 | 0.261** | 0.167 |
| | (0.127) | (0.252) | (0.111) | (0.211) | (0.117) | (0.223) | (0.124) | (0.238) |
| T2: Information | 0.347*** | 0.475* | 0.142 | 0.308 | 0.137 | 0.386* | 0.349*** | 0.426* |
| | (0.123) | (0.246) | (0.113) | (0.206) | (0.113) | (0.214) | (0.131) | (0.228) |
| Overest 2020 | | 0.459** | | 0.317 | | 0.576*** | | 0.019 |
| | | (0.220) | | (0.197) | | (0.165) | | (0.226) |
| T1: Salience × Overest 2020 | | -0.830** | | -0.230 | | -0.953*** | | 0.135 |
| | | (0.339) | | (0.276) | | (0.279) | | (0.340) |
| T2: Info × Overest 2020 | | -0.850*** | | -0.170 | | -0.578** | | -0.367 |
| | | (0.304) | | (0.318) | | (0.283) | | (0.317) |
| Overest 2050 | | -0.265 | | -0.185 | | -0.446*** | | 0.207 |
| | | (0.211) | | (0.199) | | (0.168) | | (0.229) |
| T1: Salience × Overest 2050 | | 0.634* | | 0.481* | | 0.749** | | 0.018 |
| | | (0.361) | | (0.278) | | (0.302) | | (0.339) |
| T2: Info × Overest 2050 | | 0.648** | | -0.072 | | 0.252 | | 0.238 |
| | | (0.299) | | (0.315) | | (0.287) | | (0.318) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 398 | 398 | 453 | 453 | 423 | 423 | 428 | 428 |
| **Panel B: East Germany** | | | | | | | | |
| T1: Salience | -0.028 | 0.130 | 0.010 | -0.196 | 0.091 | 0.084 | -0.152 | -0.150 |
| | (0.230) | (0.410) | (0.160) | (0.276) | (0.195) | (0.380) | (0.179) | (0.362) |
| T2: Information | 0.202 | 0.170 | 0.345** | 0.650** | 0.134 | 0.272 | 0.316* | 0.280 |
| | (0.200) | (0.338) | (0.159) | (0.281) | (0.200) | (0.361) | (0.173) | (0.315) |
| Overest 2020 | | -0.016 | | 0.717*** | | 0.358 | | 0.105 |
| | | (0.370) | | (0.255) | | (0.390) | | (0.311) |
| T1: Salience × Overest 2020 | | 0.103 | | -0.450 | | -0.317 | | 0.161 |
| | | (0.505) | | (0.374) | | (0.475) | | (0.478) |
| T2: Info × Overest 2020 | | -0.248 | | -0.981*** | | -0.452 | | -0.500 |
| | | (0.484) | | (0.328) | | (0.534) | | (0.398) |
| Overest 2050 | | 0.221 | | -0.533** | | -0.409 | | 0.179 |
| | | (0.391) | | (0.244) | | (0.413) | | (0.333) |
| T1: Salience × Overest 2050 | | -0.371 | | 0.776** | | 0.394 | | -0.177 |
| | | (0.530) | | (0.363) | | (0.509) | | (0.472) |
| T2: Info × Overest 2050 | | 0.267 | | 0.571* | | 0.279 | | 0.496 |
| | | (0.492) | | (0.316) | | (0.472) | | (0.421) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 153 | 153 | 181 | 181 | 160 | 160 | 174 | 174 |
| **Panel C: West Germany** | | | | | | | | |
| T1: Salience | 0.444*** | 0.577* | 0.023 | -0.200 | 0.060 | 0.118 | 0.346** | 0.206 |
| | (0.149) | (0.306) | (0.140) | (0.258) | (0.141) | (0.271) | (0.148) | (0.289) |
| T2: Information | 0.398*** | 0.583** | 0.100 | 0.213 | 0.136 | 0.350 | 0.352** | 0.415 |
| | (0.145) | (0.290) | (0.138) | (0.250) | (0.129) | (0.256) | (0.158) | (0.270) |
| Overest 2020 | | 0.543** | | 0.237 | | 0.603*** | | -0.037 |
| | | (0.260) | | (0.244) | | (0.185) | | (0.272) |
| T1: Salience × Overest 2020 | | -1.104** | | -0.177 | | -1.093*** | | 0.071 |
| | | (0.427) | | (0.342) | | (0.353) | | (0.430) |
| T2: Info × Overest 2020 | | -0.911** | | 0.054 | | -0.550 | | -0.249 |
| | | (0.361) | | (0.420) | | (0.345) | | (0.395) |
| Overest 2050 | | -0.349 | | -0.178 | | -0.522*** | | 0.218 |
| | | (0.250) | | (0.252) | | (0.191) | | (0.275) |
| T1: Salience × Overest 2050 | | 0.891* | | 0.567 | | 0.994*** | | 0.169 |
| | | (0.457) | | (0.348) | | (0.382) | | (0.427) |
| T2: Info × Overest 2050 | | 0.624* | | -0.194 | | 0.278 | | 0.141 |
| | | (0.356) | | (0.429) | | (0.355) | | (0.395) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 244 | 244 | 273 | 273 | 263 | 263 | 254 | 254 |

*Notes:* The table shows the treatment effects on perceived reform necessity. Reform necessity is measured on a 7-point Likert scale and it is standardized using mean and standard deviation of the control group. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95th or below the 5th percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

below the age of 50, on the other hand, we do not find any significant treatment effects (Panel A, columns 3 and 4).

The results for the West German respondents are very similar to those for the full sample (Panel C). For East German respondents, the results look very different, however. In this subsample, respondents above the age of 50 do not react to the treatments, neither with nor without including interactions with the overestimation-dummies (Panel B, columns 1 and 2). The young respondents below the age of 50, however, react to the treatments. For the pure treatment effect, young respondents are 34.5% of a standard deviation more likely to think that reforms are necessary after being informed about the correct old-age dependency ratios (Panel B, column 3). When we include the interaction with the overestimation-dummies, we find a significant negative information effect for overestimating the ratio for 2020, while overestimating respondents of the control group see a larger reform necessity. On the contrary, respondents of the control group who overestimate the ratio for 2050 are less concerned about the reform necessity. Differently, we find (marginally) significantly positive effects for both treatments when considering the overestimation of the ratio for 2050 (Panel B, column 4). Thinking about this ratio, seems to make this subgroup aware that demographic change is not a short-term phenomenon.

Furthermore, we are interested in treatment effects for male and female respondents separately (Table 3). As indicated by our results for the full sample (Panel A, column 5), female respondents do not change their perceived reform necessity significantly if they are treated. However, when we include the interaction of the treatment variables with the overestimation-dummies, we find a significant negative effect of overestimating the old-age dependency ratio for 2020 for both treatments. Furthermore, we find a significant positive effect for the salience treatment for overestimating the ratio for 2050 (Panel A, column 6). For male respondents, we find that the treatments significantly increases their perceived reform necessity by 26.1% (T1) and 34.9% (T2) of a standard deviation, respectively (Panel A, column 7). When we interact the treatment variables with the dummy variables indicating overestimation of the 2020 or 2050 old-age dependency ratio, respectively, we no longer find any significant effects for male respondents (Panel A, column 8). Summing up, female respondents seem to respond to the treatments, but underestimating and overestimating respondents do so differently. For male respondents, on the contrary, we only find a reaction to the treatmenets if underestimating and overestimating respondents are looked at together.

In the subsample of East German respondents, we neither find treatment effects for female nor for male respondents (Panel B), while the results for West German respondents are again very similar to those of the full sample (Panel C).

Therefore, for the full sample as well as for the West German subsample, we conclude, that our treatments mainly affect older respondents above the age of 50 as well as female respondents, while the effects on younger and male respondents are mostly insignificant. For the East Germany subsample, the results are different and indicate that only young respondents, i.e. respondents below the age of 50, react to the treatments.

### 5.3 Preferences Towards Specific Reforms

Besides the general perceived necessity of reforms, we are also interested in specific reform measures. As already presented in Section 3, we make use of respondents' answers to six pairwise comparisons of four reform measures.

Table 4 displays the results for the three reform measures increasing the retirement age (*age*), decreasing the pension level (*level*) and increasing the contribution payments to the statutory pension insurance (*contribution*), but abstracts from an increase in the tax subsidy for the moment. Considering the comparison *age, not level*, we find for the full sample (Panel A) that treatment T1, i.e. the treatment which increases salience of the demographic change without providing the correct information, significantly increases the probability that respondents choose an increase in the retirement age over a decrease in the pension level by up to 12.4 percent. When interacting the treatments with the dummy variables indicating overestimation of the old-age dependency ratios, we find a similar positive effect, however somewhat less significant, for the underestimating respondents while overestimating the 2050 ratio significantly decreases the treatment effects of both, the information and the salience treatment, by 19.9% (T1) and 25.4% (T2), respectively (Panel A, column 4).

When analyzing the subsamples of East and West German respondents, the results are quite different from each other. While East German respondents barely change their preferences when considering *age, not level*, they react to the information treatment (T2) when it comes to their preferences about *age, not contribution*. While overestimation of the 2020 ratio increases their preference for increasing the retirement age over increasing contributions after being informed about the correct ratio, overestimating the 2050 ratio has a significant negative effect on the treatment (Panel B, column 2). For the question whether they prefer increasing the contributions or decreasing the pension level (*contribution, not level*), the results suggest that overestimating the old-age dependency ratio for 2050 has a significant negative treatment effect for both treatments (Panel B, column 6). The effects for West German respondents on the other hand are rather similar to those for the full sample. Respondents only change their preferences due to the treatments when considering the comparison *age, not level*. Receiving the salience treatment (T1) makes West German respondents 14.4% more likely to prefer an increase in the retirement age over a decrease of the pension level (Panel C, column 3). When interacting the treatment effects with the overestimation-dummies, the results show that overestimating the old-age dependency ratio for 2020 significantly increases the effect of both treatments, while overestimating the ratio for 2050 has a significant negative effect on both treatments (Panel C, column 4).

Adding the measure to increase the tax subsidy (*tax*) for the statutory pension insurance (Table 5) – the measure most preferred by more than 60% of the respondents in the control group (see Figure 4), we find for the full sample that both treatments make it significantly more likely that respondents prefer an increase in the retirement age over an increase in the tax subsidy (*age, not tax*, Panel A, column 1). When including the interaction with the overestimation-dummies, we do not find any significant treatment effects anymore (Panel A, column 2). We find, however, that the information treatment (T2) has a significant positive effect on the preference to choose an

Table 4: Pension Reform Measures

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Age, not contribution | | Age, not level | | Contribution, not level | |
| **Panel A: Full Sample** | | | | | | |
| T1: Salience | 0.035 | 0.032 | 0.124*** | 0.142* | 0.072* | 0.030 |
| | (0.038) | (0.066) | (0.045) | (0.080) | (0.041) | (0.070) |
| T2: Information | 0.060 | 0.089 | 0.047 | 0.086 | 0.047 | -0.016 |
| | (0.041) | (0.074) | (0.046) | (0.083) | (0.043) | (0.074) |
| Overest 2020 | | -0.075 | | -0.112 | | -0.022 |
| | | (0.063) | | (0.082) | | (0.074) |
| T1: Salience × Overest 2020 | | 0.004 | | 0.163 | | 0.054 |
| | | (0.095) | | (0.120) | | (0.103) |
| T2: Info × Overest 2020 | | 0.118 | | 0.191 | | -0.077 |
| | | (0.101) | | (0.119) | | (0.109) |
| Overest 2050 | | 0.079 | | 0.124 | | -0.044 |
| | | (0.059) | | (0.078) | | (0.073) |
| T1: Salience × Overest 2050 | | -0.004 | | -0.199* | | 0.015 |
| | | (0.091) | | (0.117) | | (0.101) |
| T2: Info × Overest 2050 | | -0.165 | | -0.254** | | 0.173 |
| | | (0.101) | | (0.118) | | (0.110) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 793 | 793 | 752 | 752 | 783 | 783 |
| **Panel B: East Germany** | | | | | | |
| T1: Salience | 0.048 | -0.027 | 0.033 | 0.059 | 0.009 | 0.171 |
| | (0.050) | (0.090) | (0.064) | (0.107) | (0.064) | (0.116) |
| T2: Information | 0.038 | -0.040 | 0.040 | 0.139 | 0.030 | 0.156 |
| | (0.054) | (0.096) | (0.065) | (0.117) | (0.065) | (0.117) |
| Overest 2020 | | -0.107 | | 0.160* | | -0.113 |
| | | (0.080) | | (0.096) | | (0.119) |
| T1: Salience × Overest 2020 | | 0.029 | | -0.189 | | 0.087 |
| | | (0.119) | | (0.152) | | (0.166) |
| T2: Info × Overest 2020 | | 0.332*** | | -0.175 | | 0.066 |
| | | (0.116) | | (0.152) | | (0.165) |
| Overest 2050 | | 0.085 | | -0.110 | | 0.296** |
| | | (0.071) | | (0.100) | | (0.116) |
| T1: Salience × Overest 2050 | | 0.085 | | 0.155 | | -0.355** |
| | | (0.113) | | (0.155) | | (0.160) |
| T2: Info × Overest 2050 | | -0.213* | | 0.027 | | -0.274* |
| | | (0.122) | | (0.157) | | (0.164) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 308 | 308 | 295 | 295 | 308 | 308 |
| **Panel C: West Germany** | | | | | | |
| T1: Salience | 0.044 | 0.060 | 0.144*** | 0.177* | 0.083* | 0.013 |
| | (0.045) | (0.080) | (0.054) | (0.095) | (0.048) | (0.085) |
| T2: Information | 0.065 | 0.101 | 0.034 | 0.069 | 0.054 | -0.050 |
| | (0.048) | (0.086) | (0.055) | (0.097) | (0.050) | (0.087) |
| Overest 2020 | | -0.069 | | -0.159 | | 0.007 |
| | | (0.074) | | (0.097) | | (0.085) |
| T1: Salience × Overest 2020 | | -0.006 | | 0.241* | | 0.039 |
| | | (0.118) | | (0.145) | | (0.126) |
| T2: Info × Overest 2020 | | 0.022 | | 0.254* | | -0.098 |
| | | (0.127) | | (0.149) | | (0.135) |
| Overest 2050 | | 0.074 | | 0.186** | | -0.125 |
| | | (0.070) | | (0.093) | | (0.083) |
| T1: Salience × Overest 2050 | | -0.025 | | -0.303** | | 0.077 |
| | | (0.113) | | (0.141) | | (0.122) |
| T2: Info × Overest 2050 | | -0.086 | | -0.313** | | 0.261* |
| | | (0.126) | | (0.148) | | (0.135) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 486 | 486 | 457 | 457 | 475 | 475 |

*Notes:* The table shows the treatment effects on the pairwise choices for increasing the retirement age, decreasing the pension level and increasing contributions to the statutory pension insurance. All outcome variables are binary variables. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95th or below the 5th percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Pension Reform Measures (incl. Tax Subsidies)

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Age, not tax | | Level, not tax | | Contribution, not tax | |
| **Panel A: Full Sample** | | | | | | |
| T1: Salience | 0.072** | 0.060 | -0.036 | 0.014 | 0.034 | 0.046 |
| | (0.032) | (0.060) | (0.035) | (0.052) | (0.042) | (0.070) |
| T2: Information | 0.059* | 0.088 | 0.013 | 0.094 | 0.072* | 0.178** |
| | (0.032) | (0.065) | (0.036) | (0.065) | (0.043) | (0.076) |
| Overest 2020 | | 0.006 | | 0.025 | | -0.011 |
| | | (0.040) | | (0.044) | | (0.085) |
| T1: Salience × Overest 2020 | | 0.015 | | 0.046 | | -0.014 |
| | | (0.086) | | (0.091) | | (0.119) |
| T2: Info × Overest 2020 | | 0.011 | | -0.083 | | -0.127 |
| | | (0.067) | | (0.092) | | (0.119) |
| Overest 2050 | | -0.039 | | 0.065 | | 0.042 |
| | | (0.040) | | (0.043) | | (0.085) |
| T1: Salience × Overest 2050 | | 0.006 | | -0.124 | | -0.006 |
| | | (0.085) | | (0.092) | | (0.119) |
| T2: Info × Overest 2050 | | -0.054 | | -0.046 | | -0.045 |
| | | (0.068) | | (0.089) | | (0.119) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 827 | 827 | 816 | 816 | 816 | 816 |
| **Panel B: East Germany** | | | | | | |
| T1: Salience | 0.075* | 0.011 | -0.039 | -0.118 | -0.033 | 0.026 |
| | (0.039) | (0.076) | (0.055) | (0.094) | (0.063) | (0.105) |
| T2: Information | 0.062 | -0.007 | -0.012 | -0.136 | 0.020 | 0.071 |
| | (0.039) | (0.085) | (0.059) | (0.098) | (0.066) | (0.109) |
| Overest 2020 | | -0.050 | | -0.121 | | -0.200* |
| | | (0.045) | | (0.128) | | (0.118) |
| T1: Salience × Overest 2020 | | -0.068 | | 0.192 | | 0.091 |
| | | (0.101) | | (0.162) | | (0.160) |
| T2: Info × Overest 2020 | | 0.061 | | 0.188 | | 0.043 |
| | | (0.077) | | (0.154) | | (0.162) |
| Overest 2050 | | -0.035 | | 0.037 | | 0.266** |
| | | (0.038) | | (0.122) | | (0.112) |
| T1: Salience × Overest 2050 | | 0.170* | | -0.070 | | -0.206 |
| | | (0.100) | | (0.156) | | (0.153) |
| T2: Info × Overest 2050 | | 0.050 | | 0.001 | | -0.138 |
| | | (0.076) | | (0.152) | | (0.157) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 321 | 321 | 317 | 317 | 319 | 319 |
| **Panel C: West Germany** | | | | | | |
| T1: Salience | 0.081** | 0.091 | -0.029 | 0.057 | 0.047 | 0.089 |
| | (0.039) | (0.073) | (0.040) | (0.064) | (0.050) | (0.084) |
| T2: Information | 0.057 | 0.112 | 0.013 | 0.125* | 0.069 | 0.187** |
| | (0.037) | (0.076) | (0.041) | (0.073) | (0.051) | (0.090) |
| Overest 2020 | | 0.024 | | 0.047 | | 0.027 |
| | | (0.049) | | (0.044) | | (0.100) |
| T1: Salience × Overest 2020 | | 0.063 | | 0.002 | | -0.024 |
| | | (0.105) | | (0.114) | | (0.147) |
| T2: Info × Overest 2020 | | -0.023 | | -0.140 | | -0.119 |
| | | (0.079) | | (0.108) | | (0.144) |
| Overest 2050 | | -0.043 | | 0.068 | | 0.019 |
| | | (0.050) | | (0.044) | | (0.101) |
| T1: Salience × Overest 2050 | | -0.076 | | -0.133 | | -0.041 |
| | | (0.107) | | (0.114) | | (0.148) |
| T2: Info × Overest 2050 | | -0.061 | | -0.039 | | -0.070 |
| | | (0.081) | | (0.104) | | (0.146) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 506 | 506 | 500 | 500 | 497 | 497 |

*Notes:* The table shows the treatment effects on the pairwise choices for increasing the retirement age, decreasing the pension level, increasing contributions to the statutory pension insurance or increasing tax subsidies. All outcome variables are binary variables. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95th or below the 5th percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

increase in contributions over an increase in tax subsidies (*contribution, not tax*, Panel A, columns 5 and 6). This seems to stem from the underestimating respondents. Again, the interactions of the treatments with the overestimation-dummies are not significant.

When analyzing the treatment effects separately for respondents from East and West Germany we find that the salience treatment (T1) has a significant positive effect on the likelihood that respondents from both parts of the country prefer an increase in the retirement age over an increase in tax subsidies (Panels B and C, column 1). Additionally, the information treatment has a positive and significant effect on the likelihood that West German respondents choose decreasing the pension level or increasing contributions over increasing tax subsidies when interactions are included, implying that these effects are driven by respondents who underestimated the old-age dependency ratio (Panel C, columns 4 and 6).

Similar to the question about the perceived reform necessity, we are also interested whether the effect of the information treatment (T2) significantly differs from the effect of the salience treatment (T1) for the six pairwise comparisons. Therefore, we run our analysis again, excluding the control group and using the salience group as the benchmark. From Tables A.6 and A.7, we conclude, that there are again no significant differences between the two treatment groups for the full sample (Panel A). For East German respondents on the other hand, we find that receiving the information significantly increases the preference for increasing the retirement age over increasing contributions when overestimating the ratio for 2020, while it significantly decreases this preference when overestimating the ratio for 2050 (Table A.6, Panel B, column 2). West German respondents react very similarly to the full sample and only show a significant positive treatment effect for the question whether they prefer an increase in the retirement age over a decrease in the pension level (Table A.6, Panel C, column 3).

Overall, we find tentative evidence that the treatments, which make respondents think about demographic change before answering the reform questions, increase preferences for the reform measure *age*, which is the measure least preferred by more than 60% of the control group (see Fig. 4) compared to *level*, *contribution* or *tax* measures. A treatment effect in favour of increasing the retirement age shows up for both underestimating participants and participants who overestimate the ratio for 2020 depending on the specific pairwise comparison. Treatment effects interacted with overestimation of the ratio for 2050 are, however, negative, if significant. Furthermore, there is also tentative evidence that the treatments make the reform measure *tax* less preferred for some of the subsamples considered.

As we expect effects to differ across age and gender at least for some of the pairwise comparisons (cf. Table 1), we also consider corresponding subsamples for the full sample similarly to Section 5.2. Table A.8 presents results for the two age groups. Results do not differ much across age-groups, however. Effects for the overestimation-dummies only show up for the older age-group for the *age, not level* comparison. When considering the gender subsamples (Table A.9), treatment effects can mostly be found for the female group. The salience treatment (and less so the information treatment) makes them prefer more the *age* measure compared to the *level* or *tax* measure and also leads to a positive effect for the *contributions, no level* comparison.

## 6 Conclusion

In this paper, we use a survey experiment to analyze the effect of salience of and information about demographic change on preferences towards pension reforms regarding the German statutory pension insurance. For the experiment, we ask survey respondents about their beliefs of the old-age dependency ratio for the years 2020 and 2050. Our analysis shows that the majority of respondents overestimates at least one of the two values. This implies that people in Germany overestimate the demographic change, i.e. they think that the situation is more severe than it actually is. Against this background, we are in particular interested in seeing if our information treatment can increase acceptance of reforms of the public pension system in general and when we distinguish between underestimating and overestimating respondents.

Regarding the perceived general reform necessity, we find that both, the salience and the information treatment, significantly increase the perceived necessity for reform of the German statutory pension insurance. When considering interaction effects with a dummy-variable indicating overestimation of the old-age dependency ratio for each of the two years, it becomes clear that overestimation of the ratio for 2020 leads to a reduction of both treatment effects, while overestimating the ratio for 2050 increases the salience effect. Thinking about this ratio, seems to make the latter subgroup of overestimators aware that demographic change is not a short-term phenomenon. In terms of heterogeneity between respondents above or below the age of 50 we find that both treatments significantly increase the perceived reform necessity of respondents aged 50 or above in the full sample as well as for West German respondents. In East Germany on the other hand we find that only respondents below the age of 50 react to the information treatment.

For the specific reform measures both, the salience and the information treatment, have significant effects on respondents preferences towards reforms – especially when we consider the least preferred measure (*age*) and the most preferred one (*tax*). The salience effect points towards an increased preference for a higher retirement age to avoid a reduction of the pension level or an increase in tax subsidies. The information treatment on the other hand points towards a stronger preference for increasing contributions instead of increasing tax subsidies.

Overall, the results imply that making respondents aware of the demographic change and giving them correct information about the topic can increase the likelihood that they choose reform measures that work towards increasing the financial sustainability of the German statutory pension insurance. Especially the *age* measure is not very popular among the general public, which underlines the relevance of our findings. Since our results also suggest, that the effect of the salience treatment barely differs from the effect of the information treatment, we conclude that it is not the concrete information about the demographic challenge, which matters. Rather, being made aware of the challenges the pension system faces impacts reform preferences. Therefore, it is important that people understand the broader picture to support policy reforms, while detailed information might not add to their support. This might provide some guidelines for communication and (financial) education. Our study has provided a further step towards a more comprehensive analysis.

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# Appendix

## Appendix A - Information Provision Experiment

### Wording of belief elicitation questions

Old-age provision in Germany is based on the idea that the working generation finances the pensions of people in retirement. Therefore it is important to look at the ratio of people of retirement age starting from 65 years of age to people of working age between 20 and 64 years of age. In the year 1990, there were 24 people of retirement age for every 100 people of working age.

What do you estimate: in 2020, how many people of retirement age are there for every 100 people of working age?

And what do you estimate: in 2050, how many people of retirement age will be there for every 100 people of working age?

### Feedback + Information (Treatment group T2)

You have estimated *xyz* for 2020 and *abc* for 2050 [insert estimates here], the correct answers are 37 for the year 2020 and 55 for the year 2050. There are thus currently about three people of working age for every person of retirement age, and there will be more and more people of retirement age and fewer and fewer people of working age.

Estimation *xyz* (2020):

- Correct ($33 - 41$): So your estimate of *xyz* for the year 2020 was quite accurate.
- Overestimated ($41 <$): So your estimate of *xyz* for the year 2020 was too high.
- Underestimated ($< 33$): So your estimate of *xyz* for the year 2020 was too low.

Estimation *abc* (2050):

- Correct ($51 - 59$): So your estimate of *abc* for the year 2050 was quite accurate.
- Overestimated ($59 <$): So your estimate of *abc* for the year 2050 was too high.
- Underestimated ($< 51$): So your estimate of *abc* for the year 2050 was too low.

## Appendix B - Relevant Variables

| Variable name | Type | Description |
|---|---|---|
| **Reform variables** | | |
| Reform necessity | Numerical (1 – 7) | Perceived reform necessity based on the question *"Do you think that reforms are necessary for the German pension system?"* With answer options from 1 "no reforms necessary" to 7 "comprehensive reforms necessary". |
| Age, not contribution | Dummy | =1, if increasing the retirement age is preferred over increasing contributions based on the question *"Should the retirement age be raised or the contribution rate be increased?"* |
| Age, not level | Dummy | = 1, if increasing the retirement age is preferred over decreasing the pension level based on the question *"Should the retirement age be increased or the pension level be decreased?"* |
| Contribution, not level | Dummy | = 1, if increasing the contributions is preferred over decreasing the pension level based on the question *"Should the contribution rate be increased or the pension level be decreased?"* |
| Age, not tax | Dummy | = 1, if increasing the retirement age is preferred over increasing the tax subsidy based on the question *"Should the tax-financed federal subsidy to the statutory pension insurance be increased or the retirement age be increased?"* |
| Level, not tax | Dummy | = 1, if decreasing the pension level is preferred over increasing the tax subsidy based on the question *"Should the tax-financed federal subsidy to the statutory pension insurance be increased or the contribution rate be increased?"* |
| Contribution, not tax | Dummy | = 1, if increasing the contribution rate is preferred over increasing the tax subsidy based on the question *"Should the tax-financed federal subsidy to the statutory pension insurance be increased or the pension level be lowered?"* |

| Variable name | Type | Description |
|---|---|---|
| **Individual characteristics** | | |
| Age old (50+) | Dummy | = 1, if age is 50 or above |
| Female | Dummy | = 1, if gender is female |
| East | Dummy | = 1, if respondent lives in East Germany |
| Educ: 12th grade | Dummy | = 1, if school degree after 12th grade |
| Educ: uni | Dummy | = 1, if respondent has an university degree |
| Risk attitude | Numerical (1 – 7) | *"How willing are you to take risks in money and financial matters?"* Answer options range from 1 "not at all willing to take risks" to 7 "very willing to take risks" |
| Trust: finance | Numerical (1 – 7) | Trust in private financial service providers based on the question *"Do you think that banks, insurance companies and other financial service providers in Germany can be trusted?"* Answer options range from 1 "I do not trust them at all" to 7 "I trust them completely" |
| Trust: own decision | Numerical (1 – 7) | Trust in own decisions based on the question *"How much do you trust yourself in making the right decisions for your pension planning?"* Answer options range from 1 "not at all" to 7 "fully" |
| Children | Dummy | = 1, if respondent has children |
| Employed | Dummy | = 1, if employed |
| Migration background | Dummy | = 1, if respondent has migration background |
| Married | Dummy | = 1, if respondent is married or in a registered same-sex partnership |
| Household size | Numerical | Number of people in the household |
| Trust: public | Numerical (1 – 7) | Trust in public institutions based on the question *"Do you think that the public institutions in Germany relevant to old-age pension, such as the German Pension Insurance or the Federal Ministry of Labor and Social Affairs, can be trusted?"* Answer options range from 1 "I do not trust them at all" to 7 "I trust them completely" |
| Time preference | Numerical (1 –7) | Time preference based on the question *"Since you don't know how long you will live, you should rather spend your money to-day than save for old age."* Answer options range from 1 "do not agree at all" to 7 "agree completely". |
| Equality preference | Numerical (1 – 7) | Equality Preference based on the question *"The state should ensure greater equality of financial living conditions in old age."* Answer options range from 1 "do not agree at all" to 7 "agree completely". |
| Contributions SPI | Dummy | = 1, if respondent pays contributions to the statutory pension insurance |

| Variable name | Type | Description |
|---|---|---|
| Optimism old-age | Dummy | = 1, if respondent states that they look quite optimistic or more optimistic than pessimistic at their life in old age |
| Interest topic | Numerical (1 –7) | Interest in Old-age provision based on the question *"How interested are you in the topic of pension planning?"* Answer options range from 1 "no interest at all" to 7 "very high interest" |
| Old-age income | Dummy | = 1 if the respondents answers yes to the question *"Have you already gathered information about how much income you will receive in retirement?"* |

A.1: Descriptive overview of variables.

## Appendix C - Balance

A.2: Balance Tests - Germany

| | (1) All Mean | (2) C Mean | (3) T1 Mean | (4) C vs. T1 p-Value | (5) T2 Mean | (6) C vs. T2 p-Value | (7) T1 vs. T2 p-Value |
|---|---|---|---|---|---|---|---|
| Age old (50+) | 0.47 | 0.50 | 0.45 | 0.21 | 0.45 | 0.28 | 0.88 |
| Female | 0.50 | 0.51 | 0.49 | 0.56 | 0.50 | 0.79 | 0.75 |
| East | 0.40 | 0.38 | 0.42 | 0.36 | 0.39 | 0.75 | 0.54 |
| Educ: 12th grade | 0.54 | 0.55 | 0.52 | 0.44 | 0.57 | 0.66 | 0.22 |
| Educ: uni | 0.34 | 0.35 | 0.34 | 0.79 | 0.35 | 0.92 | 0.71 |
| Risk attitude | 3.06 | 3.12 | 3.00 | 0.38 | 3.09 | 0.82 | 0.51 |
| Trust: finance | 3.82 | 3.79 | 3.84 | 0.68 | 3.82 | 0.79 | 0.89 |
| Trust: own decision | 5.15 | 5.19 | 5.14 | 0.66 | 5.12 | 0.60 | 0.91 |
| Children | 0.67 | 0.70 | 0.64 | 0.14 | 0.67 | 0.38 | 0.56 |
| Employed | 0.84 | 0.83 | 0.84 | 0.71 | 0.84 | 0.62 | 0.89 |
| Migration background | 0.14 | 0.13 | 0.16 | 0.31 | 0.13 | 0.98 | 0.31 |
| Married | 0.52 | 0.56 | 0.53 | 0.44 | 0.46 | $0.02^{**}$ | 0.11 |
| Household size | 2.54 | 2.59 | 2.50 | 0.39 | 2.54 | 0.63 | 0.70 |
| Trust: public | 4.45 | 4.40 | 4.51 | 0.42 | 4.44 | 0.77 | 0.62 |
| Time preference | 2.94 | 3.05 | 2.89 | 0.29 | 2.88 | 0.25 | 0.95 |
| Equality preference | 5.00 | 5.01 | 5.00 | 0.91 | 5.00 | 0.94 | 0.96 |
| Contributions SPI | 0.88 | 0.88 | 0.87 | 0.77 | 0.89 | 0.63 | 0.43 |
| Optimism old-age | 0.57 | 0.57 | 0.58 | 0.86 | 0.56 | 0.73 | 0.60 |
| Interest topic | 4.75 | 4.72 | 4.70 | 0.87 | 4.85 | 0.40 | 0.29 |
| Old-age income | 0.76 | 0.78 | 0.76 | 0.47 | 0.75 | 0.33 | 0.78 |
| Observations | 856 | 268 | 306 | 574 | 282 | 550 | 588 |

*Notes:* This table shows the mean for the full sample as well as for each of the experimental groups. Furthermore, p-values of the comparison between groups resulting from t-tests are shown; $^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$.

A.3: Balance Tests - East Germany

| | (1) All Mean | (2) C Mean | (3) T1 Mean | (4) C vs. T1 p-Value | (5) T2 Mean | (6) C vs. T2 p-Value | (7) T1 vs. T2 p-Value |
|---|---|---|---|---|---|---|---|
| Age old (50+) | 0.46 | 0.46 | 0.45 | 0.86 | 0.45 | 0.84 | 0.97 |
| Female | 0.48 | 0.46 | 0.49 | 0.68 | 0.49 | 0.75 | 0.93 |
| Educ: 12th grade | 0.49 | 0.49 | 0.44 | 0.39 | 0.54 | 0.51 | 0.11 |
| Educ: uni | 0.33 | 0.38 | 0.30 | 0.21 | 0.30 | 0.19 | 0.90 |
| Risk attitude | 2.98 | 2.87 | 3.06 | 0.36 | 2.99 | 0.59 | 0.73 |
| Trust: finance | 3.77 | 3.59 | 3.89 | 0.16 | 3.80 | 0.34 | 0.65 |
| Trust: own decision | 5.06 | 5.20 | 4.88 | 0.10 | 5.14 | 0.74 | 0.18 |
| Children | 0.67 | 0.69 | 0.68 | 0.91 | 0.65 | 0.56 | 0.61 |
| Employed | 0.82 | 0.82 | 0.80 | 0.80 | 0.84 | 0.71 | 0.51 |
| Migration background | 0.09 | 0.06 | 0.13 | 0.10 | 0.09 | 0.42 | 0.39 |
| Married | 0.49 | 0.51 | 0.51 | 0.97 | 0.47 | 0.60 | 0.55 |
| Household size | 2.45 | 2.34 | 2.41 | 0.70 | 2.60 | 0.13 | 0.23 |
| Trust: public | 4.39 | 4.29 | 4.49 | 0.39 | 4.35 | 0.81 | 0.53 |
| Time preference | 3.04 | 3.07 | 3.18 | 0.67 | 2.86 | 0.40 | 0.17 |
| Equality preference | 5.13 | 5.11 | 5.15 | 0.88 | 5.14 | 0.92 | 0.95 |
| Contributions SPI | 0.90 | 0.91 | 0.88 | 0.42 | 0.92 | 0.80 | 0.27 |
| Optimism old-age | 0.50 | 0.49 | 0.48 | 0.88 | 0.51 | 0.79 | 0.65 |
| Interest topic | 4.75 | 4.72 | 4.59 | 0.61 | 4.95 | 0.33 | 0.10* |
| Old-age income | 0.73 | 0.80 | 0.70 | 0.11 | 0.70 | 0.11 | 0.99 |
| Observations | 338 | 99 | 128 | 227 | 111 | 210 | 239 |

*Notes:* This table shows the mean for the East German sample as well as for each of the experimental groups. Furthermore, p-values of the comparison between groups resulting from t-tests are shown; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A.4: Balance Tests - West Germany

| | (1) All Mean | (2) C Mean | (3) T1 Mean | (4) C vs. T1 p-Value | (5) T2 Mean | (6) C vs. T2 p-Value | (7) T1 vs. T2 p-Value |
|---|---|---|---|---|---|---|---|
| Age old (50+) | 0.47 | 0.52 | 0.44 | 0.17 | 0.45 | 0.24 | 0.87 |
| Female | 0.51 | 0.54 | 0.48 | 0.33 | 0.51 | 0.65 | 0.60 |
| Educ: 12th grade | 0.58 | 0.58 | 0.57 | 0.83 | 0.59 | 0.87 | 0.70 |
| Educ: uni | 0.36 | 0.33 | 0.36 | 0.55 | 0.39 | 0.22 | 0.51 |
| Risk attitude | 3.13 | 3.28 | 2.98 | 0.07* | 3.13 | 0.38 | 0.35 |
| Trust: finance | 3.85 | 3.89 | 3.80 | 0.60 | 3.86 | 0.85 | 0.76 |
| Trust: own decision | 5.21 | 5.20 | 5.31 | 0.48 | 5.12 | 0.64 | 0.24 |
| Children | 0.67 | 0.71 | 0.62 | 0.08* | 0.68 | 0.54 | 0.26 |
| Employed | 0.85 | 0.83 | 0.87 | 0.36 | 0.85 | 0.66 | 0.63 |
| Migration background | 0.17 | 0.17 | 0.18 | 0.72 | 0.15 | 0.66 | 0.42 |
| Married | 0.54 | 0.61 | 0.54 | 0.25 | 0.46 | 0.01*** | 0.12 |
| Household size | 2.61 | 2.76 | 2.57 | 0.18 | 2.50 | 0.08* | 0.65 |
| Trust: public | 4.50 | 4.47 | 4.52 | 0.77 | 4.52 | 0.80 | 0.98 |
| Time preference | 2.88 | 3.04 | 2.73 | 0.11 | 2.88 | 0.40 | 0.43 |
| Equality preference | 4.93 | 5.00 | 4.89 | 0.58 | 4.91 | 0.64 | 0.93 |
| Contributions SPI | 0.87 | 0.87 | 0.87 | 0.90 | 0.88 | 0.77 | 0.87 |
| Optimism old-age | 0.62 | 0.62 | 0.64 | 0.65 | 0.59 | 0.61 | 0.32 |
| Interest topic | 4.75 | 4.70 | 4.77 | 0.73 | 4.78 | 0.70 | 0.95 |
| Old-age income | 0.78 | 0.77 | 0.80 | 0.51 | 0.78 | 0.86 | 0.63 |
| Observations | 518 | 166 | 180 | 346 | 172 | 338 | 352 |

*Notes:* This table shows the mean for the West German sample as well as for each of the experimental groups. Furthermore, p-values of the comparison between groups resulting from t-tests are shown; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

## Appendix D - Salience vs. Information

A.5: Necessity of Reforms - Salience vs. Info

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Reform necessity | | | |
| **Panel A: Full Sample** | | | | |
| T2: Info | 0.064 | 0.054 | 0.164 | 0.174 |
| | (0.085) | (0.082) | (0.152) | (0.145) |
| Overest 2020 | | | -0.087 | 0.104 |
| | | | (0.160) | (0.166) |
| T2: Info × Overest 2020 | | | -0.068 | -0.049 |
| | | | (0.232) | (0.231) |
| Overest 2050 | | | 0.281* | 0.297* |
| | | | (0.166) | (0.173) |
| T2: Info × Overest 2050 | | | -0.093 | -0.146 |
| | | | (0.239) | (0.237) |
| Controls | No | Yes | No | Yes |
| Observations | 584 | 584 | 584 | 584 |
| **Panel B: East Germany** | | | | |
| T2: Info | 0.330*** | 0.270** | 0.481* | 0.353 |
| | (0.127) | (0.125) | (0.253) | (0.237) |
| Overest 2020 | | | 0.296 | 0.134 |
| | | | (0.226) | (0.219) |
| T2: Info × Overest 2020 | | | -0.555* | -0.404 |
| | | | (0.303) | (0.286) |
| Overest 2050 | | | 0.039 | 0.041 |
| | | | (0.214) | (0.210) |
| T2: Info × Overest 2050 | | | 0.319 | 0.276 |
| | | | (0.299) | (0.295) |
| Controls | No | Yes | No | Yes |
| Observations | 236 | 236 | 236 | 236 |
| **Panel C: West Germany** | | | | |
| T2: Info | 0.025 | 0.025 | 0.147 | 0.156 |
| | (0.100) | (0.098) | (0.176) | (0.170) |
| Overest 2020 | | | -0.217 | -0.209 |
| | | | (0.208) | (0.211) |
| T2: Info × Overest 2020 | | | 0.133 | 0.167 |
| | | | (0.298) | (0.294) |
| Overest 2050 | | | 0.427* | 0.425* |
| | | | (0.218) | (0.219) |
| T2: Info × Overest 2050 | | | -0.326 | -0.376 |
| | | | (0.307) | (0.304) |
| Controls | No | Yes | No | Yes |
| Observations | 351 | 351 | 351 | 351 |

*Notes:* The table shows the treatment effects on perceived reform necessity, where the salience group is used as the baseline. Reform necessity is measured on a 7-point Likert scale and it is standardized using mean and standard deviation of the control group. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95% or below the 5% percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A.6: Pension Reform Measures - Salience vs. Info

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Age, not contribution | | Age, not level | | Contribution, not level | |
| **Panel A: Full Sample** | | | | | | |
| T2: Info | 0.020 | 0.051 | -0.077* | -0.052 | -0.023 | -0.045 |
| | (0.040) | (0.071) | (0.046) | (0.081) | (0.039) | (0.068) |
| Overest 2020 | | -0.076 | | 0.057 | | 0.045 |
| | | (0.071) | | (0.087) | | (0.073) |
| T2: Info × Overest 2020 | | 0.114 | | 0.022 | | -0.141 |
| | | (0.105) | | (0.121) | | (0.107) |
| Overest 2050 | | 0.081 | | -0.073 | | -0.037 |
| | | (0.070) | | (0.088) | | (0.072) |
| T2: Info × Overest 2050 | | -0.159 | | -0.056 | | 0.170 |
| | | (0.108) | | (0.123) | | (0.109) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 542 | 542 | 512 | 512 | 533 | 533 |
| **Panel B: East Germany** | | | | | | |
| T2: Info | -0.013 | 0.001 | 0.021 | 0.107 | 0.015 | -0.033 |
| | (0.055) | (0.082) | (0.064) | (0.116) | (0.063) | (0.116) |
| Overest 2020 | | -0.068 | | 0.001 | | -0.024 |
| | | (0.090) | | (0.124) | | (0.115) |
| T2: Info × Overest 2020 | | 0.286** | | -0.015 | | -0.016 |
| | | (0.128) | | (0.170) | | (0.169) |
| Overest 2050 | | 0.173** | | 0.038 | | -0.070 |
| | | (0.086) | | (0.121) | | (0.109) |
| T2: Info × Overest 2050 | | -0.308** | | -0.117 | | 0.090 |
| | | (0.132) | | (0.169) | | (0.163) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 216 | 216 | 206 | 206 | 215 | 215 |
| **Panel C: West Germany** | | | | | | |
| T2: Info | 0.014 | 0.033 | -0.113** | -0.099 | -0.023 | -0.052 |
| | (0.047) | (0.083) | (0.054) | (0.094) | (0.047) | (0.079) |
| Overest 2020 | | -0.082 | | 0.085 | | 0.068 |
| | | (0.094) | | (0.108) | | (0.093) |
| T2: Info × Overest 2020 | | 0.021 | | 0.001 | | -0.160 |
| | | (0.139) | | (0.154) | | (0.138) |
| Overest 2050 | | 0.054 | | -0.109 | | -0.057 |
| | | (0.092) | | (0.109) | | (0.092) |
| T2: Info × Overest 2050 | | -0.051 | | -0.016 | | 0.198 |
| | | (0.142) | | (0.157) | | (0.139) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 329 | 329 | 308 | 308 | 320 | 320 |

*Notes:* The table shows the treatment effects on the pairwise choices for increasing the retirement age, decreasing the pension level and increasing contributions to the statutory pension insurance. All outcome variables are binary variables. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95th or below the 5th percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A.7: Pension Reform Measures (incl. Tax Subsidies) - Salience vs. Info

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Age, not tax | | Level, not tax | | Contributions, not tax | |
| **Panel A: Full Sample** | | | | | | |
| T2: Info | -0.012 | 0.031 | 0.044 | 0.078 | 0.042 | 0.143* |
| | (0.035) | (0.066) | (0.035) | (0.062) | (0.044) | (0.075) |
| Overest 2020 | | 0.020 | | 0.065 | | -0.018 |
| | | (0.077) | | (0.079) | | (0.083) |
| T2: Info × Overest 2020 | | -0.003 | | -0.127 | | -0.114 |
| | | (0.092) | | (0.112) | | (0.117) |
| Overest 2050 | | -0.033 | | -0.051 | | 0.032 |
| | | (0.078) | | (0.081) | | (0.084) |
| T2: Info × Overest 2050 | | -0.064 | | 0.072 | | -0.049 |
| | | (0.094) | | (0.114) | | (0.119) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 567 | 567 | 556 | 556 | 559 | 559 |
| **Panel B: East Germany** | | | | | | |
| T2: Info | -0.016 | -0.018 | 0.033 | -0.015 | 0.050 | 0.035 |
| | (0.047) | (0.082) | (0.053) | (0.087) | (0.062) | (0.112) |
| Overest 2020 | | -0.107 | | 0.075 | | -0.110 |
| | | (0.090) | | (0.098) | | (0.108) |
| T2: Info × Overest 2020 | | 0.118 | | 0.003 | | -0.043 |
| | | (0.115) | | (0.139) | | (0.157) |
| Overest 2050 | | 0.132 | | -0.020 | | 0.060 |
| | | (0.092) | | (0.093) | | (0.104) |
| T2: Info × Overest 2050 | | -0.114 | | 0.068 | | 0.070 |
| | | (0.116) | | (0.133) | | (0.147) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 226 | 226 | 223 | 223 | 226 | 226 |
| **Panel C: West Germany** | | | | | | |
| T2: Info | -0.025 | 0.027 | 0.037 | 0.068 | 0.024 | 0.110 |
| | (0.042) | (0.079) | (0.041) | (0.072) | (0.051) | (0.089) |
| Overest 2020 | | 0.088 | | 0.040 | | 0.008 |
| | | (0.096) | | (0.103) | | (0.108) |
| T2: Info × Overest 2020 | | -0.089 | | -0.145 | | -0.095 |
| | | (0.112) | | (0.142) | | (0.151) |
| Overest 2050 | | -0.118 | | -0.055 | | -0.025 |
| | | (0.098) | | (0.106) | | (0.109) |
| T2: Info × Overest 2050 | | 0.006 | | 0.091 | | -0.043 |
| | | (0.117) | | (0.144) | | (0.154) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 344 | 344 | 336 | 336 | 336 | 336 |

*Notes:* The table shows the treatment effects on the pairwise choices for increasing the retirement age, decreasing the pension level, increasing contributions to the statutory pension insurance or increasing tax subsidies. All outcome variables are binary variables. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95th or below the 5th percentile. For Panel A we are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; $^{*}$ $p < 0.10$, $^{**}$ $p < 0.05$, $^{***}$ $p < 0.01$.

## Appendix E - Preferences Towards Specific Reforms - Further Heterogeneity Analysis

A.8: Pension Reform Measures - Heterogeneity by Age

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age, not contribution | | Age, not level | | Contribution, not level | | Age, not tax | | Level, not tax | | Contributions, not tax | |
| **Panel A: Age Below 50** | | | | | | | | | | | | |
| T1: Salience | 0.002 | 0.095 | 0.119* | 0.236** | 0.029 | 0.030 | 0.043 | 0.003 | -0.037 | 0.005 | 0.011 | 0.017 |
| | (0.050) | (0.088) | (0.062) | (0.107) | (0.058) | (0.094) | (0.043) | (0.073) | (0.050) | (0.061) | (0.058) | (0.093) |
| T2: Information | 0.021 | 0.078 | 0.075 | 0.148 | 0.028 | -0.004 | 0.035 | 0.011 | 0.024 | 0.183* | 0.119* | 0.241** |
| | (0.054) | (0.107) | (0.062) | (0.115) | (0.061) | (0.106) | (0.042) | (0.090) | (0.054) | (0.105) | (0.061) | (0.109) |
| Overest 2020 | | -0.016 | | 0.026 | | -0.097 | | -0.025 | | 0.036 | | 0.023 |
| | | (0.071) | | (0.120) | | (0.111) | | (0.047) | | (0.063) | | (0.126) |
| T1: Salience × Overest 2020 | | -0.127 | | -0.026 | | 0.087 | | 0.102 | | -0.027 | | -0.122 |
| | | (0.117) | | (0.166) | | (0.150) | | (0.121) | | (0.121) | | (0.170) |
| T2: Info × Overest 2020 | | 0.109 | | 0.155 | | -0.035 | | 0.030 | | -0.155 | | -0.175 |
| | | (0.126) | | (0.158) | | (0.148) | | (0.074) | | (0.124) | | (0.169) |
| Overest 2050 | | 0.089 | | 0.051 | | 0.020 | | 0.006 | | 0.081 | | 0.009 |
| | | (0.069) | | (0.118) | | (0.112) | | (0.046) | | (0.062) | | (0.126) |
| T1: Salience × Overest 2050 | | -0.026 | | -0.168 | | -0.090 | | -0.036 | | -0.044 | | 0.113 |
| | | (0.115) | | (0.163) | | (0.150) | | (0.117) | | (0.119) | | (0.170) |
| T2: Info × Overest 2050 | | -0.194 | | -0.261 | | 0.084 | | 0.006 | | -0.088 | | -0.003 |
| | | (0.133) | | (0.159) | | (0.152) | | (0.073) | | (0.122) | | (0.170) |
| Observations | 431 | 431 | 409 | 409 | 427 | 427 | 445 | 445 | 438 | 438 | 443 | 443 |
| **Panel B: Age 50+** | | | | | | | | | | | | |
| T1: Salience | 0.069 | -0.048 | 0.141** | 0.046 | 0.127** | 0.032 | 0.092* | 0.128 | -0.045 | 0.029 | 0.085 | 0.134 |
| | (0.061) | (0.106) | (0.068) | (0.122) | (0.057) | (0.102) | (0.049) | (0.100) | (0.049) | (0.089) | (0.062) | (0.107) |
| T2: Information | 0.096 | 0.070 | 0.021 | -0.002 | 0.078 | 0.013 | 0.067 | 0.135 | -0.035 | -0.007 | 0.040 | 0.149 |
| | (0.063) | (0.110) | (0.071) | (0.122) | (0.061) | (0.102) | (0.049) | (0.093) | (0.051) | (0.087) | (0.062) | (0.107) |
| Overest 2020 | | -0.155 | | -0.283*** | | 0.002 | | 0.041 | | 0.017 | | -0.017 |
| | | (0.104) | | (0.107) | | (0.101) | | (0.062) | | (0.064) | | (0.115) |
| T1: Salience × Overest 2020 | | 0.176 | | 0.363** | | 0.107 | | -0.131 | | 0.105 | | 0.050 |
| | | (0.159) | | (0.176) | | (0.145) | | (0.115) | | (0.132) | | (0.168) |
| T2: Info × Overest 2020 | | 0.165 | | 0.284 | | -0.101 | | -0.008 | | -0.005 | | -0.105 |
| | | (0.154) | | (0.173) | | (0.154) | | (0.105) | | (0.140) | | (0.169) |
| Overest 2050 | | 0.068 | | 0.218** | | -0.040 | | -0.090 | | 0.050 | | 0.052 |
| | | (0.096) | | (0.100) | | (0.100) | | (0.067) | | (0.062) | | (0.120) |
| T1: Salience × Overest 2050 | | 0.004 | | -0.227 | | 0.046 | | 0.075 | | -0.210 | | -0.124 |
| | | (0.152) | | (0.174) | | (0.139) | | (0.121) | | (0.139) | | (0.173) |
| T2: Info × Overest 2050 | | -0.138 | | -0.277 | | 0.208 | | -0.115 | | -0.029 | | -0.092 |
| | | (0.150) | | (0.168) | | (0.157) | | (0.109) | | (0.129) | | (0.171) |
| Observations | 362 | 362 | 343 | 343 | 356 | 356 | 382 | 382 | 378 | 378 | 373 | 373 |

*Notes:* The table shows the treatment effects on the pairwise choices for increasing the retirement age, decreasing the pension level and increasing contributions to the statutory pension insurance. All outcome variables are binary variables. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95% or below the 5% percentile. We are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A.9: Pension Reform Measures - Heterogeneity by Gender

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age, not contribution | | Age, not level | | Contribution, not level | | Age, not tax | | Level, not tax | | Contributions, not tax | |
| **Panel A: Male** | | | | | | | | | | | | |
| T1: Salience | 0.066 | 0.011 | 0.128* | 0.149 | 0.038 | 0.026 | 0.042 | 0.009 | -0.028 | 0.032 | -0.055 | -0.091 |
| | (0.061) | (0.104) | (0.067) | (0.111) | (0.056) | (0.094) | (0.053) | (0.089) | (0.055) | (0.079) | (0.061) | (0.101) |
| T2: Information | 0.032 | 0.065 | 0.043 | 0.093 | -0.002 | 0.016 | 0.039 | 0.049 | 0.016 | 0.046 | 0.070 | 0.145 |
| | (0.061) | (0.101) | (0.068) | (0.110) | (0.060) | (0.095) | (0.052) | (0.090) | (0.054) | (0.085) | (0.063) | (0.106) |
| Overest 2020 | | -0.068 | | -0.170 | | -0.070 | | 0.036 | | 0.022 | | -0.039 |
| | | (0.098) | | (0.114) | | (0.105) | | (0.076) | | (0.062) | | (0.143) |
| T1: Salience × Overest 2020 | | 0.075 | | 0.181 | | 0.038 | | -0.006 | | 0.099 | | 0.042 |
| | | (0.156) | | (0.180) | | (0.140) | | (0.166) | | (0.135) | | (0.203) |
| T2: Info × Overest 2020 | | 0.048 | | 0.213 | | -0.131 | | -0.017 | | 0.042 | | -0.236 |
| | | (0.155) | | (0.165) | | (0.155) | | (0.113) | | (0.123) | | (0.173) |
| Overest 2050 | | -0.003 | | 0.177 | | 0.017 | | -0.100 | | 0.065 | | 0.025 |
| | | (0.097) | | (0.110) | | (0.105) | | (0.079) | | (0.059) | | (0.142) |
| T1: Salience × Overest 2050 | | 0.015 | | -0.223 | | -0.019 | | 0.060 | | -0.198 | | 0.017 |
| | | (0.152) | | (0.176) | | (0.133) | | (0.166) | | (0.137) | | (0.200) |
| T2: Info × Overest 2050 | | -0.122 | | -0.311* | | 0.090 | | -0.009 | | -0.088 | | 0.090 |
| | | (0.157) | | (0.161) | | (0.155) | | (0.114) | | (0.119) | | (0.170) |
| Observations | 402 | 402 | 379 | 379 | 398 | 398 | 421 | 421 | 415 | 415 | 418 | 418 |
| **Panel B: Female** | | | | | | | | | | | | |
| T1: Salience | -0.012 | 0.054 | 0.129** | 0.171 | 0.088 | 0.016 | 0.103*** | 0.139* | -0.050 | -0.013 | 0.131** | 0.207** |
| | (0.047) | (0.078) | (0.062) | (0.116) | (0.060) | (0.109) | (0.038) | (0.080) | (0.045) | (0.067) | (0.058) | (0.100) |
| T2: Information | 0.084 | 0.112 | 0.055 | 0.071 | 0.068 | -0.093 | 0.086** | 0.120 | 0.011 | 0.155 | 0.067 | 0.181 |
| | (0.052) | (0.106) | (0.064) | (0.130) | (0.062) | (0.122) | (0.037) | (0.088) | (0.048) | (0.104) | (0.060) | (0.114) |
| Overest 2020 | | -0.058 | | -0.048 | | 0.026 | | 0.006 | | 0.011 | | 0.001 |
| | | (0.077) | | (0.114) | | (0.103) | | (0.038) | | (0.057) | | (0.104) |
| T1: Salience × Overest 2020 | | -0.050 | | 0.120 | | 0.077 | | -0.007 | | 0.027 | | -0.079 |
| | | (0.109) | | (0.161) | | (0.151) | | (0.079) | | (0.116) | | (0.146) |
| T2: Info × Overest 2020 | | 0.158 | | 0.179 | | -0.014 | | 0.006 | | -0.212 | | 0.025 |
| | | (0.118) | | (0.173) | | (0.145) | | (0.066) | | (0.138) | | (0.169) |
| Overest 2050 | | 0.159** | | 0.075 | | -0.105 | | 0.004 | | 0.085 | | 0.076 |
| | | (0.071) | | (0.110) | | (0.099) | | (0.035) | | (0.060) | | (0.106) |
| T1: Salience × Overest 2050 | | -0.067 | | -0.188 | | 0.043 | | -0.050 | | -0.086 | | -0.047 |
| | | (0.101) | | (0.157) | | (0.147) | | (0.080) | | (0.117) | | (0.150) |
| T2: Info × Overest 2050 | | -0.212* | | -0.202 | | 0.247* | | -0.052 | | -0.002 | | -0.189 |
| | | (0.126) | | (0.182) | | (0.146) | | (0.071) | | (0.128) | | (0.175) |
| Observations | 391 | 391 | 373 | 373 | 385 | 385 | 406 | 406 | 401 | 401 | 398 | 398 |

*Notes:* The table shows the treatment effects on the pairwise choices for increasing the retirement age, decreasing the pension level and increasing contributions to the statutory pension insurance. All outcome variables are binary variables. Control variables include Age old (50+), Female, East, Educ: 12th grade, Children, Employed, Migration background, Trust: public, Time preference, Equality preference, Optimism old-age, Interest topic, Old-age income and Contributions SPI. We drop outliers with prior beliefs above the 95% or below the 5% percentile. We are using a weight that balances the oversampling of respondents from East Germany. Robust standard errors are displayed in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.