

Dolls, Mathias; Schüle, Paul; Windsteiger, Lisa

Conference Paper

Affecting Public Support for Economic Policies: Evidence from a Survey Experiment about Rent Control in Germany

Beiträge zur Jahrestagung des Vereins für Socialpolitik 2022: Big Data in Economics

Provided in Cooperation with:

Verein für Socialpolitik / German Economic Association

Suggested Citation: Dolls, Mathias; Schüle, Paul; Windsteiger, Lisa (2022) : Affecting Public Support for Economic Policies: Evidence from a Survey Experiment about Rent Control in Germany, Beiträge zur Jahrestagung des Vereins für Socialpolitik 2022: Big Data in Economics, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

This Version is available at:

<https://hdl.handle.net/10419/264060>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Why is Support for Rent Control So High? Evidence from a Survey Experiment

Mathias Dolls, Paul Schüle, Lisa Windsteiger*

February 25, 2022

Abstract

This paper uses a large-scale randomized survey experiment among 18,000 respondents in Germany to examine the determinants of support for rent control. By comparing the effects of various information treatments about (the consequences of) rent control policies and the Berlin housing market, we analyze which aspects affect respondents' support for the Berlin rent cap. Our paper demonstrates that it is possible to both increase and decrease approval with rent controls by pointing out certain positive and negative (side-) effects of such policies. In particular, undesirable price and supply effects as well as preventing displacement of low-income renters matter in people's considerations. However, our treatments are not successful in convincing those respondents who have (large) misperceptions about these issues ex-ante. Instead, they predominantly affect respondents who already know about the aspects mentioned in the treatments.

JEL Classification: R21, R31, R38

Keywords: Rent Control, Redistribution, Survey Experiment

Declaration of Interests: None

Ethics Clearance: Ethics Commission, Department of Economics, University of Munich, Project 2021-02

***Dolls:** ifo Munich (dolls@ifo.de); **Schüle:** ifo Munich (schuele@ifo.de); **Windsteiger:** Max Planck Institute for Tax Law and Public Finance (lisa.windsteiger@tax.mpg.de). We are grateful for comments by Andreas Peichl and seminar participants in Munich.

1 INTRODUCTION

Individuals hold strongly diverging views where and to what extent the government should intervene in the economy. In many countries, one area of the economy in which the government is particularly active is the housing market (Gyourko and Molloy, 2015). A common regulatory tool aimed at ensuring affordable housing is rent control. Supporters of rent control argue that it acts as an insurance against unaffordable housing and displacement. However, economic research has shown that rent control can adversely affect the quantity and quality of housing if landlords respond by selling apartments to owner-occupiers or refrain from required maintenance. Furthermore, it may lead to misallocation and overconsumption of housing (Glaeser and Luttmer, 2003; Autor et al., 2014; Diamond et al., 2019).

In Germany, the state of Berlin introduced a new and drastic form of rent control in February 2020, the so-called ‘Berlin rent cap’ (‘Berliner Mietendeckel’). The Berlin rent cap froze rents at their June 2019 level. The law stipulated upper limits for rents from newly signed rental contracts. If existing rental contracts exceeded the upper limit by more than 20%, the rent had to be reduced to the upper limit.¹ The Berlin rent cap pertained to all apartments in Berlin, with only few exceptions. Most importantly, newly constructed apartments which became ready for occupancy after January 2014 were excluded from the Berlin rent cap. The rent cap was initially introduced for a period of 5 years. On April 15 2021, the Federal Constitutional Court declared the Berlin rent cap unconstitutional, since the federal government had already made a law regulating rents and a state government could not impose its own law that infringed upon that, and thus rendered the Berlin rent cap null and void.

The rent cap constituted a particularly restrictive form of rent control. In line with what one would have expected from prior literature, first empirical evidence suggests that it might have led to a two-tier rental market in Berlin (Hahn et al., 2020; Dolls et al., 2021). Based on rental offers advertised by immowelt.de, a large German online property portal, Dolls et al. (2021) show that one year after the introduction of the Berlin rent cap, the number of rental offers of regulated apartments had dropped, while no such effect was observed for unregulated apartments. As intended by the law, rents of regulated apartments had plummeted significantly. At the same time, rents of unregulated apartments had continued their upward trend and even risen faster than in other major German cities.

¹The upper limit was based on the rent index from 2013 which itself reflects the evolution of rents from 2008–2012. It further depended on the residential area (poor, middle, high), the year of construction and the equipment of the apartment. There were limits to rent increases after modernization (1 EUR per square meter).

According to a representative opinion poll from Infratest dimap conducted in the month the law became effective, there was large majority support for the Berlin rent cap among voters in Germany. 71% of respondents were in favor of the rent cap. Support among tenants was even higher and amounted to 81%.²

In the present paper, we investigate a simple question: Why is support for rent control so high? By means of a randomized survey experiment among a representative sample of 18,000 German respondents, we aim at getting a better understanding of how people reason about regulation in the housing market. We confront groups of participants with certain (intended and unintended) consequences of rent control policies as well as different aspects of the housing market in Berlin, and subsequently elicit their attitudes towards the Berlin rent cap. By comparing the effect of various information treatments, we can infer which aspects of rent control drive respondents' support for the Berlin rent cap.

We find that respondents who are told that rent caps lower the supply of rental flats and increase rents in the unregulated sector agree with the rent cap less on average compared to the control group, while approval rises for those who are informed that rent control policies can help prevent displacement of low-income renters. However, both treatments affect predominantly those respondents who already know about these effects, and do not change the opinion of those whose prior beliefs about these effects are wrong. We also find that the latter group tends to rate the information provided in the respective treatment as less credible than those whose prior beliefs were mostly correct. Information about the income distribution between landlords and renters, the share of private-sector companies on the Berlin rental market and the evolution of the income share spent on housing does not affect respondents' opinion about the rent cap, irrespective of whether or not they were correct about these issues ex-ante.

Our paper demonstrates that it is possible to both increase and decrease approval with rent controls by pointing out certain positive and negative (side-) effects of such policies. In particular, undesirable price and supply effects as well as preventing displacement of low-income tenants matter in people's considerations. However, our treatments are not successful in convincing those respondents who hold wrong beliefs about these effects ex-ante. Instead, they predominantly affect respondents who already know about the aspects mentioned in the treatments. Our treatments thus seem to work mostly via the priming channel - i.e. by putting certain aspects front and centre in people's minds while they evaluate rent control policies - rather than via the information provision channel.

Our paper relates to the growing strand of literature analyzing how people reason about the effects of taxes and other economic policies. For instance, [Stantcheva \(2021\)](#) examines how people understand, reason and learn about income and estate taxation.

²Cf. <https://www.tagesschau.de/inland/deutschlandtrend-2085.html>.

Concerning in particular attitudes towards rent control policies, [Brandts et al. \(2022\)](#) use refutational and non-refutational messages to affect support for rent control. They find that both types of messages moderately reduce misperceptions, but do not eliminate them. In a recent survey experiment, [Müller and Gsottbauer \(2021\)](#) show that information about the price and supply effects of rent caps lowers agreement with such policies. The main difference compared to our paper is that they do not examine (and compare) the effects of (information about) other aspects, such as displacement prevention or distributional concerns. In addition, while our paper explores the effect of priming *and* information provision, their treatments are pure information treatments.

2 EXPERIMENTAL DESIGN AND DATA

2.1 *Sample and Sample Size*

Our survey experiment was part of a large-scale online survey in cooperation with immowelt.de, a German online property portal. The survey was conducted in Germany in May 2021 and our final sample includes 18,000 respondents between 18 and 70 years of age from a representative sample of the country’s population (representative with respect to gender, age and occupational status), stratified by the place of residence being in an urban, suburban or rural environment. Urban areas were deliberately oversampled for this study.³ Respondents were randomly allocated into one control and five treatment groups. This implies that each sub-group (treatment groups and control group) consists of roughly 3,000 individuals, respectively.

The panel, the programming of the survey, the distribution of the survey and the payments were administered by the professional survey company INNOFACT AG. Participation was voluntary and the average completion time was around 20 minutes. All respondents in our sample fully completed the survey and received a remuneration of about 3 Euros.

2.2 *Experimental Design*

The questionnaire is structured as follows. At the beginning of the survey, respondents are asked to provide socio-demographic characteristics such as age, gender, occupation and region of residence which are used for the quotas. This is followed by a block of questions designed by immowelt.de concerning the housing situation of respondents and the Covid-19 pandemic’s effect on their future housing preferences.

³This was mainly in the interest of immowelt.de, but also served us, since rent control policies matter mostly for urban areas, and thus getting a clear picture of the opinion towards such policies in cities is important.

Next, we elicit attitudinal variables that will be used for heterogeneity analyses, in particular political preferences, the frequency of economic news consumption, and whether the state should intervene in market processes.

Afterwards, respondents are randomly allocated into one control and five treatment groups. First, both respondents in the control and the treatment groups are provided basic information about the Berlin rent cap. Respondents in the treatment group then receive an information treatment in addition. Information treatments include various aspects of the Berlin rent cap and the Berlin housing market (see Section 2.3 for more details). Before each information treatment, we elicit respondents' beliefs regarding the provided information and ask them how certain they are about their beliefs.

In the final part of our survey, we ask respondents how they generally assess the Berlin rent cap (on an 11 point Likert scale ranging from 0 = very negatively to 10 = very positively). This is our main outcome question. We also ask some additional questions which are meant to shed light on the underlying mechanisms. In addition, we elicit beliefs on all the issues that were presented in the information treatments except the one that was already elicited in the beginning (if a respondent was in one of the five treatment groups). Since respondents who receive these questions did not receive any information on the respective issues, the answers can be regarded as "prior beliefs" for these respondents.⁴ For the respective information treatment that a given treatment group has already received in the beginning, we elicit how well respondents are able to recall the information we provided earlier. Finally, we ask how credible respondents found the provided information and whether they regarded the survey as politically biased.

The following list provides an overview of the questionnaire structure:⁵

1. Socio-demographic characteristics.
2. Questions by immowelt.de.
3. Pre-Treatment questions: attitudinal questions.
4. Basic information about the Berlin rent cap.
5. Random allocation of respondents into control and treatment groups.

⁴In contrast, we elicit prior beliefs for the respective treatment group before the information treatment. The reason why we do not elicit prior beliefs at the beginning for everybody is that we expect that our treatments will impact views about rent control not only via the *information provision* per se, but also by simply making respondents *aware* of a certain aspect. For instance, when we ask people about the effects of rent controls on displacement, the question alone could be enough to make respondent *think* about this aspect, and if this is something they did not have in mind before, this could already change their views on rent controls, even without them receiving the information treatment that "rent control policies can help to avoid displacement". By eliciting prior beliefs in advance for everybody, we would miss that part of the impact of our treatments.

⁵The English translation of our survey can be found [here](#).

6. Elicitation of prior beliefs (only respondents who are in one of the treatment groups).
7. Information Treatment (only respondents who are in one of the treatment groups).
8. Post-Treatment questions: Main Outcome question and additional questions aimed at shedding light on the underlying mechanisms.
9. Elicitation of beliefs (on those issues for which beliefs were not elicited in 6.).
10. Attention check, credibility and political bias questions.

2.3 Treatment Groups and Hypotheses

Respondents are randomly assigned to a control and five treatment groups. All respondents are first informed about the Berlin rent cap in a neutral way.⁶

Control Group. No beliefs are elicited and no additional information about Berlin’s housing market, the rent cap and its effects is provided.

Efficiency Treatment (T1). We first elicit respondents’ beliefs about the effect of the Berlin rent cap on the supply of rental apartments and on rents not subject to the Berlin rent cap. Then we inform them that studies show that rent controls tend to reduce the supply of rental apartments, while non-regulated rents increase due to the rent controls.

Distribution Treatment (T2). We first ask respondents which group, landlords or renters, they believe has a higher income on average. Next, we elicit respondents’ beliefs on how much the average income of renters (landlords) is higher (in percent) compared to landlords (renters). Then we inform them that landlords earn on average 54% more than renters.

Landlords Treatment (T3). We first ask respondents which type of landlord (private-sector companies, private individuals, public authorities and housing cooperatives) constitutes the largest group in Berlin, and what percentage of rental flats they own. Then we inform them that private-sector companies are the largest group and that they own 29% of all rental flats in Berlin.

Affordable Housing treatment (T4). We first elicit respondents’ beliefs about how the income share spent on housing has developed for tenants in Berlin from 2006-2018. We then inform respondents that the income share spent on housing has been largely unchanged during this period.

⁶The exact wording of this statement and our treatments (translated to English) can be found in Appendix B.

Displacement Treatment (T5). We first elicit respondents’ beliefs about whether the rent cap will help to avoid displacement of low-income tenants from the city. We then inform respondents that studies show that rent control measures like the rent cap help to prevent displacement of low-income tenants, similar to an insurance against rising rents.

Our treatments are expected to have both a priming effect (making people think about a certain aspect) and an information effect (correcting people’s prior beliefs). The treatment effects will thus depend on a) whether the presented aspect matters for respondents’ views on the rent cap and b) if and in what direction people’s prior beliefs are corrected.

For the Efficiency treatment (T1), we expect a negative treatment effect on average, since it informs about undesirable (side-)effects of rent control policies. We expect this effect to be stronger for those respondents with larger misperceptions ex-ante.

In contrast, we expect a positive average treatment effect for the Distribution treatment (T2), because it informs respondents that landlords earn higher incomes on average than renters. Since the rent cap is often viewed as a policy that “redistributes” from landlords to renters, informing about the unequal income distribution between those groups should increase agreement with the rent cap. Again, we expect this effect to be stronger for those respondents with incorrect prior beliefs about this issue ex-ante.

Similarly, we expect respondents to assess the rent cap more positively after the Landlords treatment (T3). That private-sector companies such as *Deutsche Wohnen* and *Vonovia* are big players in the Berlin rental housing market and might benefit “unfairly” from rapidly increasing rents at the expense of (low-income) tenants was often mentioned as one of the reasons for introducing the Berlin rent cap. Informing respondents that private-sector companies are indeed the largest group of landlords in the Berlin rental housing market should thus increase agreement with the Berlin rent cap, in particular for respondents who were not aware of this fact ex-ante.

The effect of our Affordable Housing treatment (T4) should depend predominantly on respondents’ prior beliefs. Since the rent cap is often viewed as an instrument to bring down (or slow down the increase of) housing costs for tenants, informing respondents that the share of income spent on housing has in fact remained constant in the last 25 years should decrease agreement with the rent cap for those respondents who thought this share has increased. On the other hand, agreement with the rent cap should go up for those respondents who thought that this share has decreased in the past.

Finally, we expect an increase in agreement with the rent cap after the Displacement treatment (T5), because it informs about a positive effect of rent control policies (preventing displacement of low-income tenants). Again, we expect the effect to be

stronger for respondents with misperceptions (i.e. those who were not aware of this aspect ex-ante).

3 SUPPORT FOR THE RENT CAP

3.1 *Descriptive Evidence*

Table A.1 in the Appendix presents key descriptive statistics for our sample as well for the general German population. Our sample is on average slightly younger and more educated than the average population, and less likely to own their homes. These differences mainly result from sampling only 18- to 70-year-old respondents and from oversampling urban areas. However, the differences compared to the general German population are minor. There are no significant differences in these variables between treatment groups (compare Table A.2).

We find high support for the Berlin rent cap in our control group. On a 0-10 Likert scale (where higher values signify higher approval), the sample mean (median) is 6.23 (7). 22% of respondents in the control group rate the rent cap as negative, 62% as positive and 16% as neutral.⁷ 72% favour introducing similar legislation also in other cities with tight housing markets.

Figure 1 presents descriptive evidence on agreement with the Berlin rent cap by demographic characteristics in the control group. Unsurprisingly, landlords and homeowners are less in favour of the rent cap than renters and people who do not own property. In addition, respondents who live in Berlin are more in favour of the rent cap than those who live in (other parts of) West Germany, and agreement is increasing with age and decreasing with income.

3.2 *Average Treatment Effects*

To examine average treatment effects, we estimate the following OLS regression:

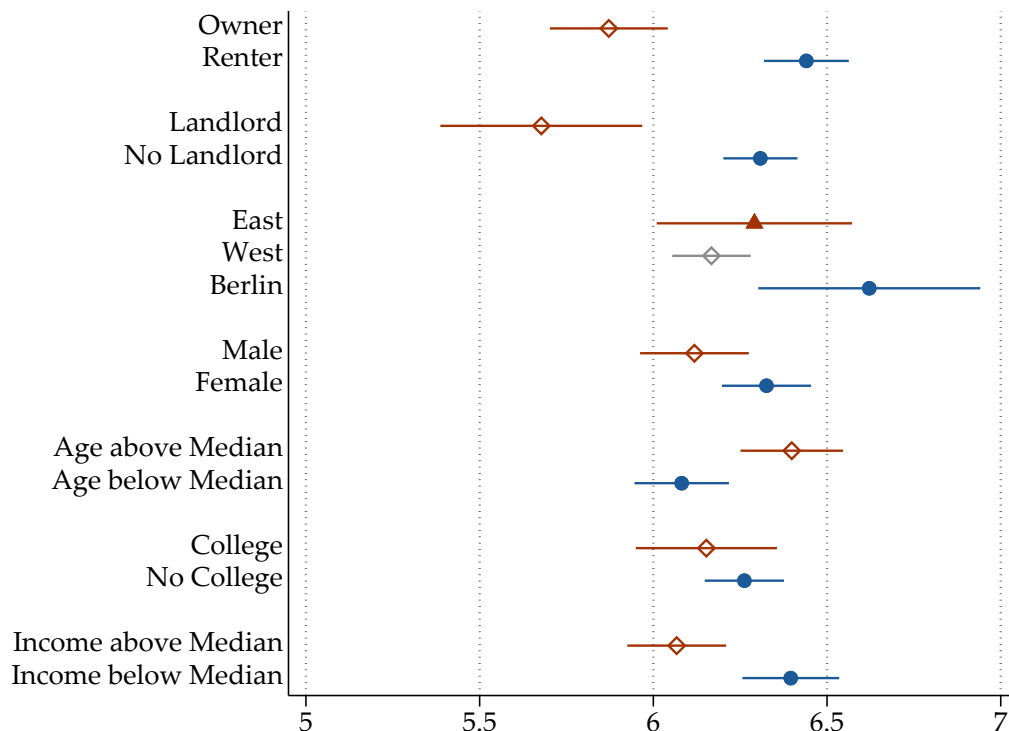
$$Y_i = \alpha + \beta T_i + \gamma X_i + \varepsilon_i \tag{1}$$

where Y_i measures the respondents' views about the Berlin rent cap, T_i is a treatment dummy and X_i is a vector of individual (and regional) controls. In this regression, β provides an estimate of the average treatment effect (ATE).

Regarding our main outcome question, where we elicit general agreement with rent control policies such as the Berlin rent cap, we find a significant negative average treatment

⁷“Negative” here means a rating of 0-4 on the 11 point Likert scale, “positive” implies an assessment of 6-10 and “neutral” is 5.

Figure 1 – Support for the Rent Cap by Subgroups



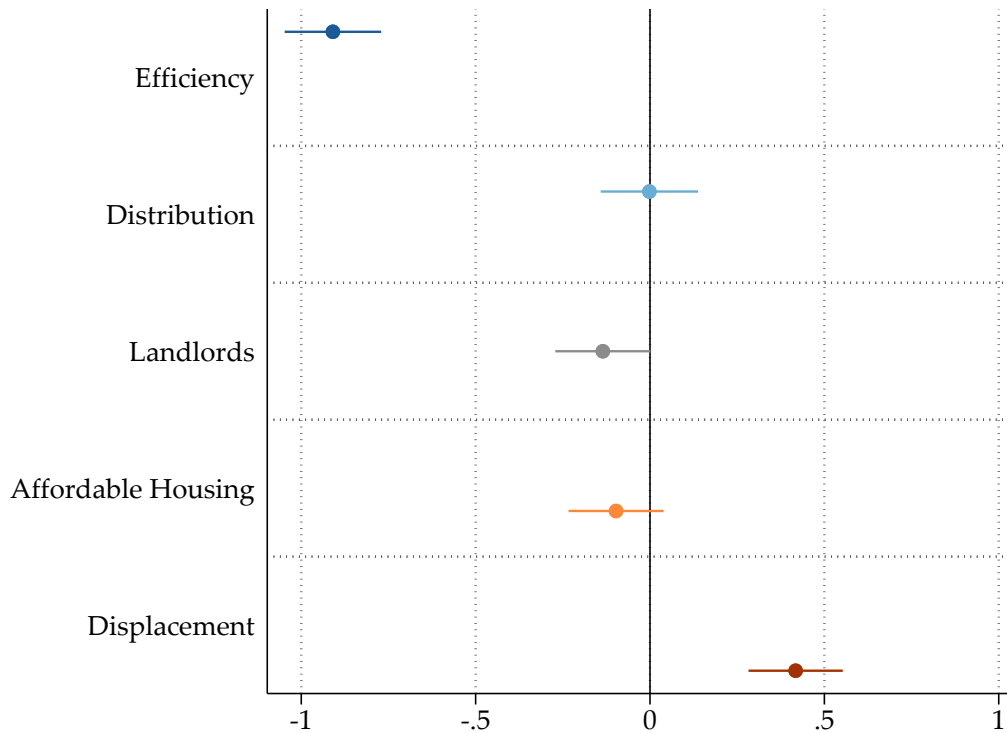
Notes: This figure shows how agreement with the Berlin rent cap varies by subgroup. “East” indicates whether respondents live in former GDR states, “West” comprises respondents who live in (former) West German states. Both categories exclude respondents who reside in Berlin, which is the third (separate) category in this graph.

effect for the Efficiency treatment, and a significant positive ATE for the Displacement treatment (see Figure 2). For respondents who receive the Efficiency treatment, positive assessment of rent control policies like the Berlin rent cap is on average 1 point lower (on a 0-10 Likert scale) compared to the control group, while positive assessment in the Displacement treatment increases by 0.5 points compared to the control group.

We find similar results for our additional outcome question, where we ask respondents whether they are in favour of introducing the rent cap also in other German cities with tight housing markets (see Figure A.1). The Efficiency treatment has a negative effect on average, while the Displacement effect affects agreement positively.

We do not find significant average treatment effects for the three other treatments. As outlined in Section 2.3, this could either mean that the respective aspect does not matter in people’s assessment of the rent cap, or that the direction of the treatment effect depends on respondents’ prior beliefs (or their misperceptions, respectively) and cancels out on average. For instance, if half of respondents in the Affordable Housing treatment think that the income share spent on housing has increased, and half think

Figure 2 – Average treatment effects: general agreement with the rent cap



Notes: This figure plots the estimated coefficients from OLS regression (1) (as well as 95% confidence intervals) per treatment for our main outcome variable (general assessment of the Berlin rent cap, elicited on a 0-10 Likert scale).

that this share has decreased, the former group's agreement with the rent cap might decline and the latter group's agreement might go up after informing them that the share has in fact remained constant. As a result, we might observe no average treatment effect. Alternatively, respondents might be perfectly aware that the income share spent on housing has remained largely constant. In this case, our treatment would not provide new information and might leave respondents' assessment of the rent cap unchanged.

Similarly, we might observe significant average treatment effects for the Efficiency and Displacement treatment because the respective aspects matter for respondents' opinion about the rent cap irrespective of prior beliefs, or because prior beliefs on these issues are distributed in such a way that treatment effects do not cancel out on average. Further analysis of our treatment effects with respect to prior beliefs (or misperceptions) is thus needed to find out which mechanisms are at play.

3.3 Treatment Effects with Respect to Respondents' Misperceptions

To test for treatment effects with respect to respondents' misperceptions we estimate an extended model:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 M_i + \beta_3 T_i \times M_i + \beta_4 X_i + \varepsilon_i \quad (2)$$

where Y_i measures the respondents' views about the Berlin rent cap, T_i is a treatment dummy, M_i measures respondents' misperceptions and X_i is a vector of individual (and regional) controls. In this regression, β_3 provides an estimate of the treatment effect with respect to misperceptions.

In each treatment group, we first elicit respondents' prior beliefs on the respective issue and then inform them about the truth. Respondents' misperceptions are thus quantified via the answers respondents gave to these initial questions. Since the prior belief questions were phrased differently for each treatment, this quantification is treatment-specific.

For our Efficiency treatment, we had two prior belief questions: one about the effect of the Berlin rent cap on the supply of rented flats and one on the effect of the rent cap on rent prices for flats that are not subject to the rent cap. Respondents could choose between three options for each of the questions ("has/have increased", "has/have decreased", "has/have remained constant"). Each of these questions could thus be answered correctly (if respondents chose the options "supply has decreased" or "unregulated rents have increased", respectively), slightly wrong (if respondents said that supply or rents "have remained constant") or completely wrong (if respondents said that "supply has increased" or "unregulated rents have decreased"). For respondents who chose the correct answer for both questions, misperceptions are coded as '0'. If they got one of the questions slightly wrong and the other one correct, misperceptions are coded as '1' (very small). If they got one question completely wrong and the other question correct, misperceptions are coded as '2' (small). For respondents who got both questions slightly wrong, misperceptions are '3' (medium). Respondents with one completely wrong and one slightly wrong answer have misperceptions coded at '4' (large), and if both answers are completely wrong, this yields the highest value of misperceptions at '5' (very large).

In our Distribution treatment, we tell respondents that landlords have higher incomes (on average) than renters. Before providing this information, we ask them to guess who of these two groups earns more. Respondents' misperceptions are subsequently coded as '0' if they answer correctly and '1' their answer is wrong (i.e. they answer either that renters earn more than landlords or that both groups earn roughly the same).

In our Landlords treatment, we ask respondents which group owns the highest share of rental flats in Berlin. They can choose between five options: individuals, private-

sector companies, housing associations, public authorities or homeowner associations. We thus code misperceptions as ‘0’ if respondents answer correctly (i.e. they choose option “private-sector companies”) and ‘1’ if they choose one of the other options.

For our Affordable Housing treatment we ask people how they think the income share spent on housing has changed from 2006 to 2018. They can choose between options “increased”, “decreased” and “remained constant”. We thus code misperceptions as ‘0’ if respondents correctly chose option “remained constant”, ‘1’ if they say the share has decreased and ‘2’ if they say the share has increased.

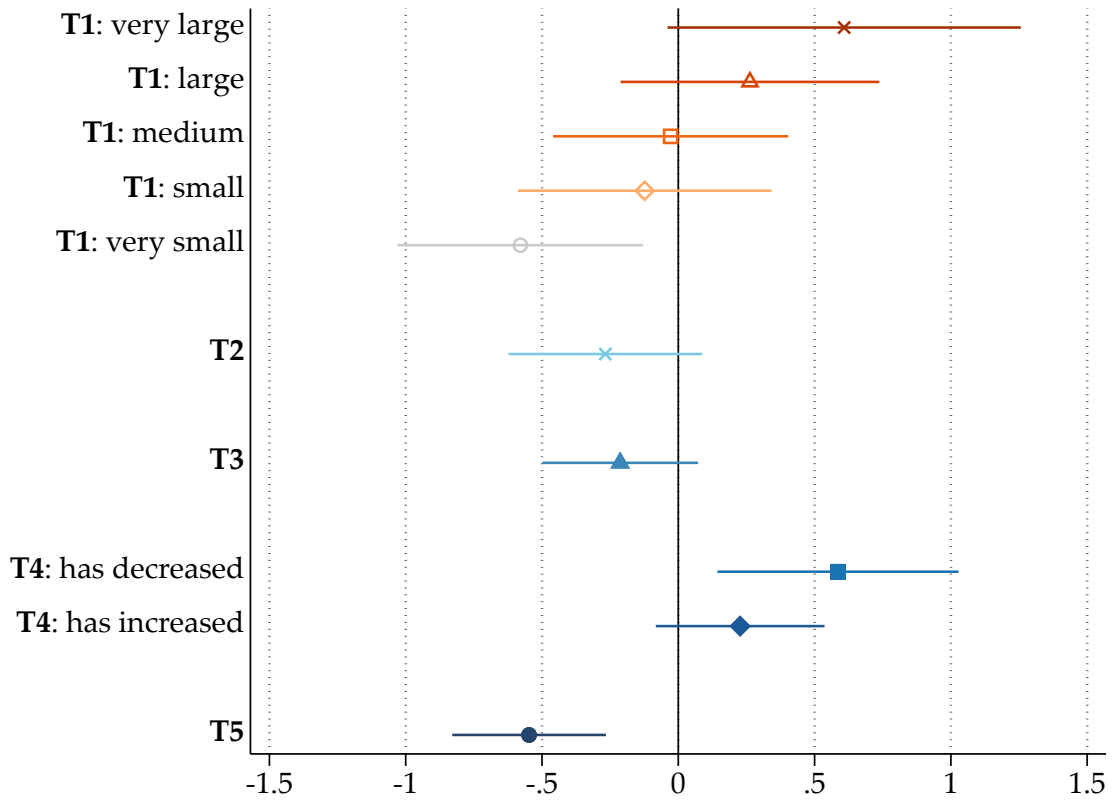
Finally, in the Displacement treatment, we asked respondents whether they think the rent cap can help prevent displacement of low-income renters. Respondents could choose between “yes” or “no”. If respondents answered correctly (“yes”), we code their misperceptions as ‘0’, otherwise as ‘1’.

We first analyze treatment effect heterogeneity with respect to misperceptions for the two treatments where we find significant average treatment effects, i.e. the Efficiency treatment (T1) and the Displacement treatment (T5).

Figure 3 and Table 1 show that there is significant treatment effect heterogeneity with respect to misperceptions for the Efficiency treatment. It has a strong negative effect for people with no misperceptions (which is even stronger for people with very small misperceptions), but this effect *diminishes* as respondents’ misperceptions increase. Split-sample regressions for each misperception category confirm this result (see Table A.8 in the Appendix). The effect size is highest for respondents with very small misperceptions (i.e. those who answered the questions in the beginning almost correctly) and smaller for respondents with more severe misperceptions. Finally, we compare the kernel density of agreement with the rent cap on the 0-10 Likert scale between respondents who received the Efficiency treatment and those in the control group. For respondents without misperceptions, Figure 4 demonstrates that the treatment shifts agreement with the rent cap to the left (see Panel A). Compared to the control group, the treatment shifts mass from the top end to the bottom of the agreement scale: less respondents agree highly with the rent cap in the treatment group compared to the control group. In contrast, the treatment has no significant effect on agreement for respondents with large misperceptions (see Panel B).

A similar picture emerges for the Displacement treatment. Figure 3 and Table 2 demonstrate that the treatment increased agreement with the rent cap for those respondents without misperceptions. However, the effect is reduced for those who did not think the rent cap could help prevent displacement. Split-sample regressions (see Table A.9) show that the Displacement treatment increases agreement with the rent cap only for the group of respondents without misperceptions ex-ante, and does not affect those with misperceptions. Again, looking at the kernel density of agreement with the rent cap and

Figure 3 – Interaction Misperception x Treatment



Notes: This figure plots the estimated coefficients from regression 2 (as well as 95% confidence intervals) for the interaction terms (misperception category x treatment dummy, i.e. coefficient β_3) for each treatment.

comparing the treatment effect for respondents with and without misperceptions confirms these findings. Figure 5 Panel (A) shows that for respondents without misperceptions, the Displacement treatment shifts agreement with the rent cap to the right, while this effect is not present for respondents with misperceptions (see Panel (B) in Figure 5).

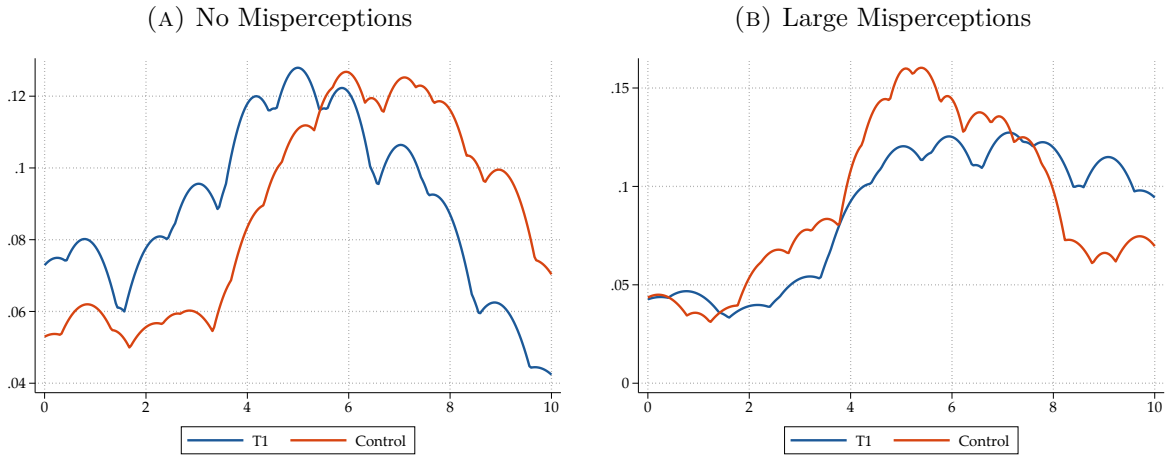
For the three treatments in which we do not find significant average treatment effects, the picture looks slightly different. As Figure 3 shows, there is no significant effect heterogeneity with respect to misperceptions for the Distribution treatment (T2) and the Landlords treatment (T3). While the average treatment effect is insignificant for the Affordable Housing treatment (T4) as well, Figure 3 and Table 3 show that respondents who believe that the income share spent on housing has decreased in the recent past react with increased approval of the rent cap compared to those respondents who (correctly) think the share has remained constant. As Table A.10 in the Appendix demonstrates, this implies that the treatment lowers approval with the rent cap for those respondents

Table 1 – Effect heterogeneity of the Efficiency treatment with respect to misperceptions

	(1)
T1 (Efficiency)	-1.186*** (0.125)
Misperception	0.0498 (0.0346)
T1 x Misperception	0.135*** (0.0471)
N	5680
R^2	0.034

Notes: This table reports results from regression (2), for the sample of respondents in the control group and the Efficiency treatment group. The severity of misperceptions is coded on a scale from 0-5 and treated as a continuous variable in this regression.

Figure 4 – Kernel Density for Agreement with the Rent Cap Efficiency Treatment (T1) vs. Control Group



Notes: This figure shows the kernel density estimates of the distribution of average support for the rent cap in the control group and the Efficiency treatment with respect to prior beliefs. Panel (A) displays the distribution for all respondents without misperceptions about the efficiency of the rent cap, whereas in Panel (B) we display the distribution of all respondents with large misperceptions, defined as having at least one of both questions completely wrong (opposite effect assumed) and the other one slightly wrong (no effect assumed).

without misperceptions, while there is no effect on respondents who believe the share has either increased or decreased.

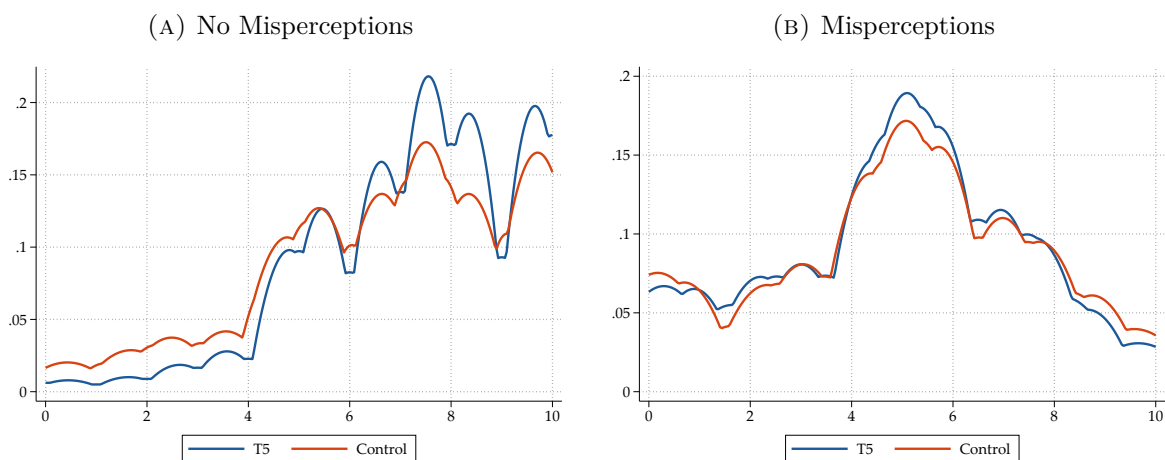
To conclude, an investigation into effect heterogeneity by misperception severity shows that the Efficiency and the Displacement treatment do not seem to change people’s opinion

Table 2 – Effect heterogeneity of the Displacement treatment with respect to misperceptions

	(1)
T5 (Displacement)	0.545*** (0.0724)
Misperception	-2.063*** (0.105)
T5 x Misperception	-0.548*** (0.144)
N	6072
R^2	0.169

Notes: This table reports results from regression (2) for the sample of respondents in the control group and the Displacement treatment group. Misperceptions are coded as a dummy variable (1 if the respondent has misperceptions, 0 if not).

Figure 5 – Kernel Density for Agreement with the Rent Cap Displacement Treatment (T5) vs. Control Group



Notes: This figure shows the kernel density estimates of the distribution of average support for the rent cap in the control group and the Displacement treatment with respect to prior beliefs. Panel (A) displays the distribution for all respondents without misperceptions, whereas in Panel (B) we display the distribution for those respondents who did not believe that the rent cap could help prevent displacement ex-ante.

about the rent cap by *correcting misperceptions*. On the contrary, these treatments affect mostly those respondents who are (at least to some extent) *already aware* of the rent cap’s effects on prices and supply and about its potential benefits in terms of preventing displacement, while people with (large) misperceptions about the rent cap’s effects are not significantly affected by those treatments. The two treatments thus appear to work

Table 3 – Effect heterogeneity of the Affordable Housing treatment with respect to respondents’ misperceptions

	(1)
T4 (Affordable Housing)	-0.324** (0.129)
Misperception==1	-0.110 (0.163)
Misperception==2	0.181 (0.111)
T4 x Misperception==1	0.586*** (0.226)
T4 x Misperception==2	0.227 (0.158)
<i>N</i>	6010
<i>R</i> ²	0.003

Notes: This table reports results from regression (2) for the sample of respondents in the control group and the Affordable Housing treatment group. Misperceptions take the values 0, 1 and 2 (0 = no misperceptions, 1 = respondents think share of income spent on housing has decreased, 2 = respondents think share of income spent on housing has increased)

mostly via *priming* channel, i.e. by putting the respective aspects front and center of people’s minds when thinking about the rent cap’s pros and cons.

We do not find an effect of the Distribution and Landlord treatments on average, and neither do we see that there is an effect conditional on correcting people’s misperceptions. This suggests that the respective aspects (income inequality between renters and landlords, and private-sector companies dominating the rental housing market in Berlin) do not matter (much) in people’s assessment of the rent cap. While the Affordable Housing treatment also does not have any effect on average, it lowers agreement with the rent cap for those respondents who were correct about the provided information ex-ante. Conversely, correcting misperceptions does not seem to have an effect in this treatment either.

To summarize, providing information per se does not change respondents’ views about the rent cap. In particular, and contrary to what we hypothesized in Section 2.3, our treatments affect mainly respondents with correct or almost correct prior beliefs, but do not have significant effects for respondents with (severe) misperceptions about the respective issues mentioned in the information provided. For the former group, our treatments seem to serve mostly as “reminders” of certain aspects that we bring front and centre in their minds when assessing rent control policies. The following subsection tries to find explanations for the lack of effect on the latter group.

3.3.1 Credibility, Ideological Bias and Political Orientation

Our post-experimental questions concerning the survey’s perceived ideological bias and the credibility attested to the provided information help shed further light on the mechanisms underlying the low responsiveness of respondents with (severe) misperceptions. Table 4 shows that there is generally a negative correlation between the severity of respondents’ misperceptions and their assessment of how credible the provided information was. For the Efficiency and the Displacement treatment, there is additionally a significant correlation (with the expected sign for each treatment, respectively) between misperception size and to what extent the survey was rated as being ideologically biased. Taken together, these observations can help explain the lack of treatment effect on respondents with (large) misperceptions. It seems that respondents who received information that differed (too much) from their prior beliefs discounted this information as having low credibility and being ideologically biased and thus did not feel inclined to change their views about rent control policies upon receiving it.⁸

3.4 Further Heterogeneities

Apart from analyzing heterogeneity with respect to respondents’ misperceptions, we study heterogeneity in treatment effects based on the background information on our respondents collected in the survey. Specifically, we test whether there are differences between (1) renters/owners (2) landlords/no landlords (3) East/West Germany (4) urban/suburban/rural (5) living in Berlin/not living in Berlin. Furthermore, we investigate if treatment effects differ by gender, age, income, education, political orientation, the consumption of news on economic affairs, and preferences regarding the role of the government in the economy.

⁸It is of course important to point out that respondents’ prior beliefs themselves are connected to their political orientation (and causation might in fact go both ways). Indeed, from the last line in Table 4 we see that being left-wing is positively correlated with having misperceptions about the (undesirable) price and quantity effects of rent caps, while right-wing individuals are more likely to misperceive the rent cap’s positive effect on preventing displacement, overestimate the incomes of renters compared to landlords and underestimate the market share of private-sector companies on the Berlin rental housing market. However, the treatments do not have different effects depending on political orientation per se (see Figure A.3), the effect heterogeneity appears indeed with respect to prior beliefs (as shown in this Section).

Table 4 – Correlation Misperceptions and Attitudes

	(1)	(2)	(3)	(4)	(6)
Misperceptions	T1	T2	T3	T4	T5
Credible	-0.0382*** (0.0136)	-0.0170 (0.0132)	-0.0230 (0.0154)	-0.0367*** (0.0131)	-0.105*** (0.0138)
Ideological	0.0647*** (0.0154)	0.0218 (0.0172)	-0.000907 (0.0191)	0.0118 (0.0157)	-0.0540*** (0.0175)
Left	0.0643*** (0.0195)	-0.0126 (0.0184)	-0.0756*** (0.0218)	0.0298 (0.0189)	-0.154*** (0.0199)
N	2042	2103	2049	2024	2036
R^2	0.034	0.091	0.009	0.098	0.070

Notes: This table reports the correlation between having misperceptions about the respective facts mentioned in each treatment (coded here for simplicity as 0 = no misperceptions and 1 = misperceptions for all treatments) and rating the provided information as credible (on a scale from 1 = very implausible to 4 = very credible) and ideologically biased (on a scale from 1 to 5, where 1 is “very left-leaning” and 5 is “very right-leaning”) as well as respondents’ political orientation (a dummy variable that is 1 if the respondent is “left-wing”, i.e. has voted for either *SPD*, *Bündnis90/Grüne* or *Die Linke*).

4 CONCLUSION

This paper employs a large-scale randomized survey experiment in Germany to examine the determinants of support for rent control. By comparing the effects of various information treatments making respondents aware of the effects of rent control policies and the structure of the Berlin housing market, we analyze which aspects affect their support for the Berlin rent cap.

We find that respondents who are told that rent caps lower the supply of rental flats and increase rents in the unregulated sector agree with the rent cap less on average compared to the control group, while approval rises for those who are informed that rent control policies can help prevent displacement of low-income renters. However, both treatments affect predominantly those respondents who already know about these effects, and do not change the opinion of those with (large) ex-ante misperceptions. We also find that the latter group tends to rate the information provided in the respective treatment as less credible than those whose prior beliefs were mostly correct. Information about the income distribution between landlords and renters, the share of private-sector companies on the Berlin rental market and the evolution of the income share spent on housing does not affect respondents’ opinion about the rent cap, irrespective of whether or not they were correct about these issues ex-ante.

To conclude, our paper demonstrates that it is possible to both increase and decrease approval with rent controls by pointing out certain positive and negative (side-) effects of

such policies. In particular, undesirable price and supply effects as well as displacement of low-income renters matter in people's considerations. However, our treatments are not successful in convincing those respondents who hold (severely) misspecified beliefs about these effects ex-ante. Instead, they predominantly affect respondents who already know about the aspects mentioned in the treatments. Our treatments thus seem to work mostly via the priming channel - i.e. by putting certain aspects front and centre in people's minds while they evaluate rent cap policies - rather than via the information provision channel.

References

- Autor, David H, Christopher J Palmer, and Parag A Pathak**, “Housing Market Spillovers: Evidence from the End of Rent Control in Cambridge, Massachusetts,” *Journal of Political Economy*, 2014, 122 (3), 661–717.
- Brandts, Jordi, Isabel Busom, Cristina Lopez-Mayan, and Judith Panadés**, “Dispelling misconceptions about economics,” *Journal of Economic Psychology*, 2022, 88, 102461.
- Diamond, Rebecca, Tim McQuade, and Franklin Qian**, “The Effects of Rent Control Expansion on Tenants, Landlords, and Inequality: Evidence from San Francisco,” *American Economic Review*, 2019, 109 (9), 3365–94.
- Dolls, M., C. Fuest, F. Neumeier, and D. Stoehlker**, “Ein Jahr Mietendeckel – Wie hat sich der Berliner Immobilienmarkt entwickelt?,” *ifo Schnelldienst*, 2021, 74, 26–29.
- Glaeser, Edward L and Erzo FP Luttmer**, “The Misallocation of Housing under Rent Control,” *American Economic Review*, 2003, 93 (4), 1027–1046.
- Gyourko, Joseph and Raven Molloy**, “Regulation and Housing Supply,” in “Handbook of Regional and Urban Economics,” Vol. 5, Elsevier, 2015, pp. 1289–1337.
- Hahn, A., K. Kholodilin, and S. Waltl**, “Forward to the Past: Short-term Effects of the Rent Freeze in Berlin,” *Vienna University of Economics and Business, Department of Economics Working Paper*, 2020, 308.
- Müller, Daniel and Elisabeth Gsottbauer**, “Why Do People Demand Rent Control?,” *Available at SSRN 3884125*, 2021.
- Stantcheva, Stefanie**, “Understanding tax policy: How do people reason?,” *The Quarterly Journal of Economics*, 2021, 136 (4), 2309–2369.

A ADDITIONAL TABLES AND FIGURES

A.1 Balance Table and Descriptive Statistics

Table A.1 – Descriptive Statistics

	Germany	Survey Sample		
	Mean	Mean	Median	SD
Age	45	44	42	16
Male	.49	.47	0	.50
East	.15	.14	0	.34
Berlin	.04	.10	0	.30
Owner	.47	.36	0	.48
Landlord	.13	.13	0	.33
Income	3490	3088	2831	1798
College	.19	.27	0	.45

Notes: This figure shows key descriptive statistics for our full sample of respondents as well as separately for each treatment. Data for Germany are obtained from the German Statistical Office for age, male, East and Berlin and the share of owners; and from the 2018 wave of the German Socio-economic Panel (SOEP) for the share of landlords and for monthly household income.

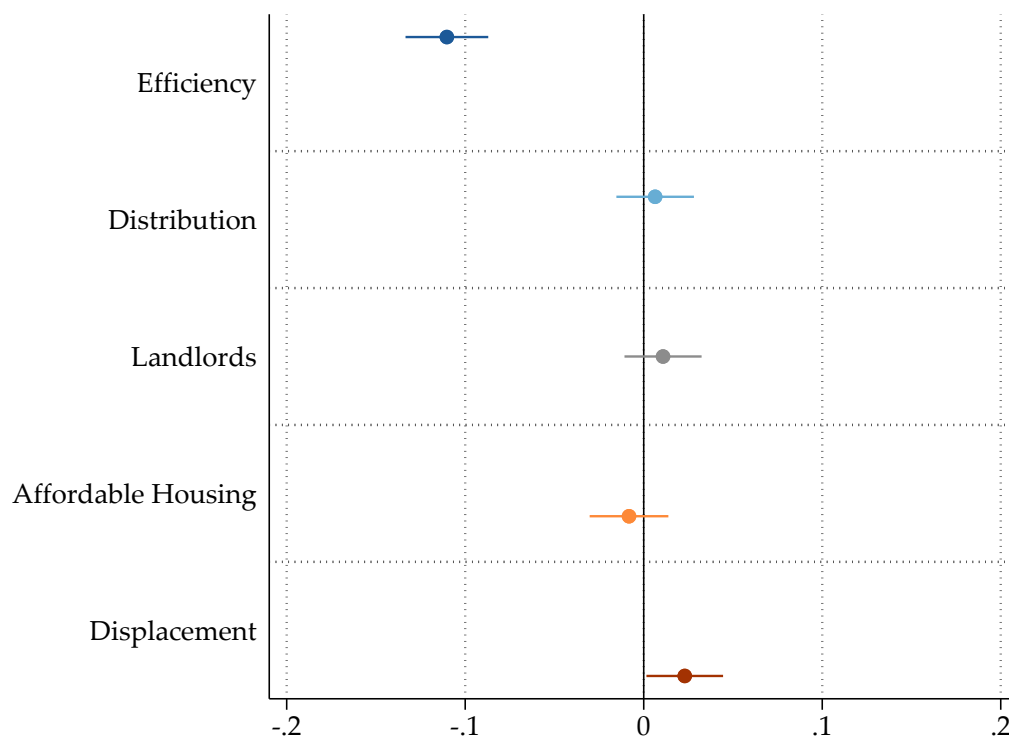
Table A.2 – Significant Differences in Means

	T1	T2	T3	T4	T5	Control
Age	44	43	43	44	44	44
Male	.47	.46	.48*	.47	.47	.45
East	.13	.13	.14	.15	.14	.13
Berlin	.09*	.10	.10	.10	.11	.11
Owner	.37	.36	.36	.37	.35	.37
Landlord	.13	.13	.13	.13	.12	.13
Income	3157	3102	3061	3005	3111	3089
College	.27	.28	.27	.28	.28	.27
N	2973	3042	3073	2982	3044	3028

Notes: Testing for statistically significant differences in means between each treatment and the control group at the 5% level. Significant differences are highlighted with a *.

A.2 Average treatment effects for additional outcome variables

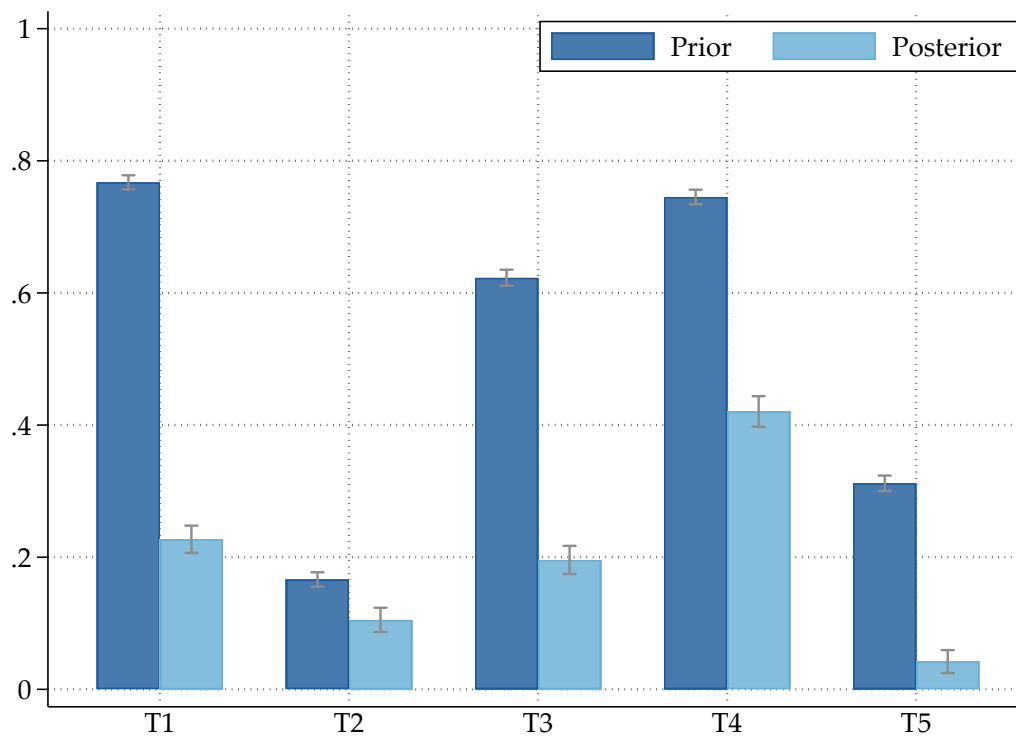
Figure A.1 – Average treatment effects: introduce rent cap in other cities



Notes: This figure plots the estimated coefficients from OLS regression (1) (as well as 95% confidence intervals) per treatment for our additional outcome variable (in favour of introducing a rent cap also in other cities).

A.3 Belief Updating

Figure A.2 – Belief Updating



Notes: This figure shows the share of participants with misperceptions by treatment group before and after the treatment. [As this was misspecified as an attention check, we do not overinterpret this]. The rcaps show the 95% confidence intervals.

Table A.3 – T1

	(1)	(2)	(3)	(4)	(5)
mis_t1_b	0.376*** (0.0381)	0.395*** (0.0385)	0.608*** (0.150)	0.383*** (0.0388)	0.533*** (0.0982)
credible		0.229*** (0.0402)	0.310*** (0.0638)		
c.mis_t1_bc.credible			-0.0765 (0.0517)		
sure_t1				0.0140 (0.0128)	0.0434** (0.0204)
c.mis_t1_bc.sure_t1					-0.0270* (0.0160)
<i>N</i>	2862	2862	2862	2862	2862
<i>R</i> ²	0.032	0.043	0.044	0.032	0.033

Table A.4 – T2

	(1)	(2)	(3)	(4)	(5)
mis_t2_a	0.671*** (0.0230)	0.689*** (0.0232)	0.673*** (0.0861)	0.673*** (0.0239)	0.763*** (0.0624)
credible		0.0832*** (0.0145)	0.0811*** (0.0152)		
c.mis_t2_ac.credible			0.00615 (0.0311)		
sure_t2				0.00201 (0.00409)	0.00768* (0.00418)
c.mis_t2_ac.sure_t2					-0.0157 (0.0103)
<i>N</i>	3042	3042	3042	3042	3042
<i>R</i> ²	0.393	0.402	0.402	0.393	0.394

Table A.5 – T3

	(1)	(2)	(3)	(4)	(5)
mis_t3_a	0.756*** (0.0171)	0.763*** (0.0170)	0.683*** (0.0718)	0.751*** (0.0170)	0.884*** (0.0350)
credible		0.0898*** (0.0122)	0.0724*** (0.0184)		
c.mis_t3_ac.credible			0.0287 (0.0246)		
sure_t3				-0.0196*** (0.00325)	-0.00320 (0.00461)
c.mis_t3_ac.sure_t3					-0.0277*** (0.00639)
<i>N</i>	3073	3073	3073	3073	3073
<i>R</i> ²	0.378	0.389	0.389	0.385	0.388

Table A.6 – T4

	(1)	(2)	(3)	(4)	(5)
mis_t4_a	1.037*** (0.0210)	1.038*** (0.0212)	1.367*** (0.0856)	1.023*** (0.0224)	0.844*** (0.0470)
credible		0.0106 (0.0128)	0.107*** (0.0275)		
c.mis_t4_ac.credible			-0.124*** (0.0311)		
sure_t4				0.00676** (0.00344)	-0.0200*** (0.00720)
c.mis_t4_ac.sure_t4					0.0348*** (0.00819)
<i>N</i>	2982	2982	2982	2982	2982
<i>R</i> ²	0.456	0.456	0.459	0.457	0.460

Table A.7 – T5

	(1)	(2)	(3)	(4)	(5)
<i>mis_t5_a</i>	0.611*** (0.0181)	0.632*** (0.0186)	0.654*** (0.0723)	0.613*** (0.0182)	0.814*** (0.0559)
<i>credible</i>		0.0771*** (0.0103)	0.0795*** (0.0110)		
<i>c.mis_t5_ac.credible</i>			-0.00820 (0.0259)		
<i>sure_t5</i>				0.00780** (0.00331)	0.0176*** (0.00355)
<i>c.mis_t5_ac.sure_t5</i>					-0.0298*** (0.00774)
<i>N</i>	3044	3044	3044	3044	3044
<i>R</i> ²	0.329	0.341	0.341	0.330	0.334

A.4 Treatment effect heterogeneity with respect to misperceptions

Table A.8 – Effect heterogeneity of the Efficiency treatment with respect to misperceptions - SPLIT SAMPLE

Misperception category:	0	1	2	3	4	5
Efficiency treatment	-0.852*** (0.161)	-1.438*** (0.164)	-0.974*** (0.174)	-0.872*** (0.150)	-0.583*** (0.181)	-0.228 (0.290)
<i>N</i>	1396	1011	853	1075	1009	336
<i>R</i> ²	0.020	0.071	0.035	0.030	0.010	0.002

Notes: This table reports results from split sample regression (1) for each category of misperceptions (from 0 = no misperceptions to 5 = severe misperceptions), for the group of respondents in the control group and the Efficiency treatment group.

Table A.9 – Effect heterogeneity of the Displacement treatment with respect to misperceptions: SPLIT SAMPLE

Misperception category:	0	1
Displacement treatment	0.545*** (0.0724)	-0.00294 (0.124)
N	4178	1894
R^2	0.013	0.000

Notes: This table reports results from split sample regression (1) for each category of misperceptions (0 = no misperceptions and 1 = misperceptions), for the group of respondents in the control group and the Displacement treatment group.

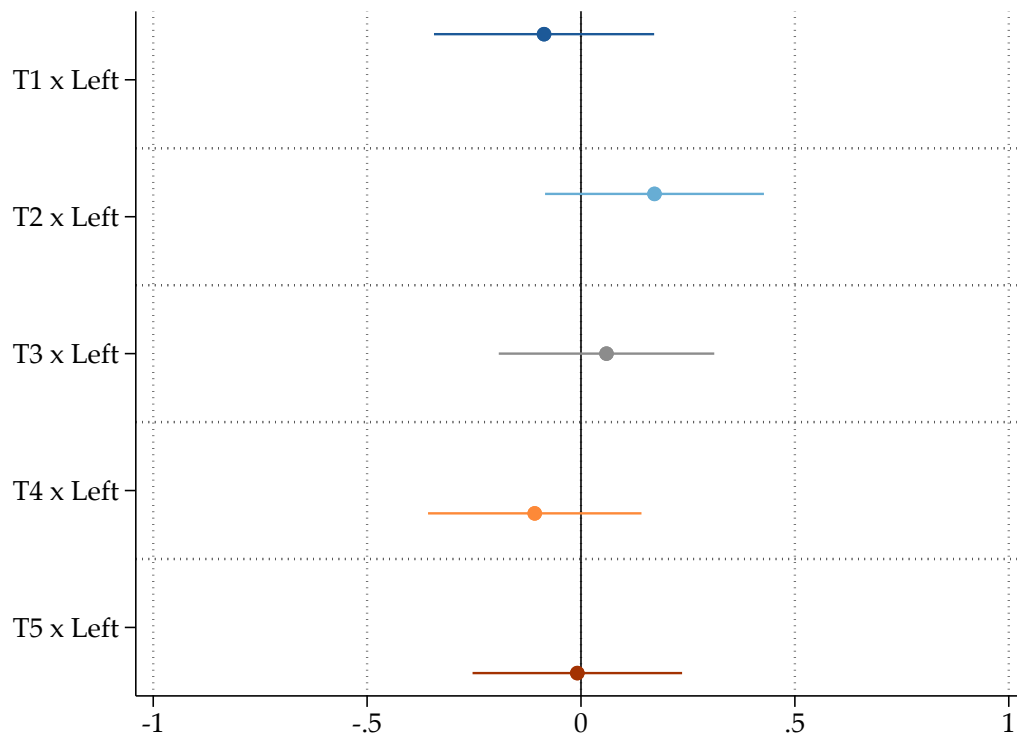
Table A.10 – Effect heterogeneity of the Affordable Housing treatment with respect to respondents' misperceptions - SPLIT SAMPLE

Misperception category:	0	1	2
Affordable Housing treatment	-0.324** (0.129)	0.262 (0.185)	-0.0970 (0.0916)
N	1531	700	3779
R^2	0.004	0.003	0.000

Notes: This table reports results from split sample regression (1) for each category of misperceptions (0 = no misperceptions, 1 = respondents think income share spent on housing has decreased, 2 = respondents think income share spent on housing has increased), for the group of respondents in the control group and the Affordable Housing treatment group.

A.5 Treatment effect heterogeneity with respect to political orientation

Figure A.3 – Interaction Political Orientation x Treatment



Notes: This figure shows the interaction effect across treatments with respect to political orientation. Left is an indicator indicating whether an individual has voted for either *SPD*, *die Linke* or *Bündnis90/Grüne*, the three main parties on the left of the political spectrum in Germany.

B INFORMATION TREATMENTS (ENGLISH TRANSLATION)

Introductory Statement (All Groups):

In the following, we would like to ask you some questions about the Berlin rent cap.

The Berlin rent cap was introduced by the Berlin Senate in February 2020 to put a ceiling on rents in the state of Berlin.

The law set rent caps for re-rented apartments and froze rents from existing leases at the June 18, 2019, level. If rents from existing leases were 20% above the rent cap, they had to be reduced to the rent cap.

With few exceptions, the Berlin rent cap affected all rental apartments in the Berlin metropolitan area. Only new apartments that were ready for first-time occupancy after January 1, 2014, were exempt from the Berlin rent cap.

On April 15, 2021, the Federal Constitutional Court declared the Berlin rent cap unconstitutional for formal reasons (lack of legislative authority on the part of the Berlin Senate) and thus suspended it.

T1 Efficiency Treatment:

How do you think the Berlin rent cap has affected the supply of rental housing in Berlin?
[Randomize response categories]

- 1 It has increased the supply of rental housing.
- 2 It has reduced the supply of rental housing.
- 3 It has not affected the supply of rental housing.

How confident are you in your answer? 0 (very uncertain)-10 (very certain)

As mentioned at the beginning, the unregulated segment comprised rental apartments that were ready for first-time occupancy since January 1, 2014. These apartments were not subject to the Berlin rent cap.

How do you think the Berlin rent cap has affected rents in the unregulated segment in Berlin? [Randomize response categories]

- 1 It has led to higher rents in the unregulated segment.
- 2 It has led to lower rents in the unregulated segment.
- 3 It has not affected rents in the unregulated segment.

How confident are you in your answer? 0 (very uncertain)-10 (very certain)

Next page: Studies have shown that rent regulations such as the Berlin rent cap reduce the supply of rental housing, partly because rental apartments are converted into condominiums. This leads to higher rents in the unregulated segment because apartment seekers have to switch to rental apartments that are not subject to rent regulation.

Initial study results indicate that the Berlin rent cap has led to similar effects. One year after the introduction of the rent cap, a decline in the supply of rental apartments in the regulated segment and an increase in rents in the unregulated segment could be observed.

T2 Distribution Treatment:

In your opinion, which group has a higher income on average, tenants or private landlords?

[Randomize response categories 1 and 2]

- 1 Tenants
- 2 Private landlords
- 3 Both about the same

How confident are you in your answer? 0 (very uncertain)-10 (very certain)

[FILTER: Answer = 1]

By how many percent do you think the income of tenants in Germany is on average higher than the income of private landlords? (field with input > 0%)

[FILTER: Answer = 2]

By how many percent do you think the income of private landlords in Germany is on average higher than the income of tenants? (field with input > 0%)

Next page: In 2018, private landlords had, on average, a 54% higher net income than tenants.

T3 Landlords Treatment:

In your opinion, which group of owners has the largest stock of rental apartments in Berlin? (Randomize response categories)

- 1 Private-sector companies
- 2 Private individuals
- 3 Housing cooperatives
- 4 Public authorities
- 5 Communities of apartment owners

How confident are you in your answer? 0 (very uncertain)-10 (very certain)

[FILTER: Answer = 1]

What percentage of Berlin's rental housing market do you think is owned by private-sector companies (in percent)? (slider with input from 0 – 100%)

[FILTER: Answer = 2]

What percentage of Berlin's rental housing market do you think is owned by private individuals (in percent)? (slider with input from 0 – 100%)

[FILTER: Answer = 3]

What percentage of Berlin's rental housing market do you think is owned by housing cooperatives (in percent)? (slider with input from 0 – 100%)

[FILTER: Answer = 4]

What percentage of Berlin's rental housing market do you think is owned by public authorities (in percent)? (slider with input from 0 – 100%)

[FILTER: Answer = 5]

What percentage of Berlin's rental housing market do you think is owned by communities of apartment owners (in percent)? (slider with input from 0 – 100%)

Next page: In Berlin, private-sector companies own the largest stock of rental apartments. Their share of the rental housing market in Berlin is 29%. Private-sector companies include privately owned housing companies such as Deutsche Wohnen or Vonovia and other private-sector companies, for example banks, insurance companies and funds.

T4 Affordable Housing Treatment:

How do you think the average share of income used for housing rent has changed for Berlin renters in the period 2006 to 2018? (Randomize response categories)

- 1 The share has increased.
- 2 The share has decreased.
- 3 The share has remained approximately the same.

How confident are you in your answer? 0 (very uncertain)-10 (very certain)

[FILTER: Answer = 1 or 2]

According to data from the Berlin-Brandenburg Statistics Office, the average share of income used by Berlin tenants for housing rent was 28 percent in 2006. In your opinion, what percentage of income did Berlin tenants spend on housing rent on average in 2018? (Field with input from 0 to 100)

Next page: According to data from the Berlin-Brandenburg Statistics Office, the average share of income used by Berlin tenants for housing rent was 28 percent in 2006 and 28.2 percent in 2018. This means that the share has remained roughly the same.

T5 Displacement Treatment:

Do you think that a rent regulation like the Berlin rent cap can protect lower-income households from being forced out of the city due to high rent costs? (Randomize response categories)

1 Yes

2 No

How confident are you in your answer? 0 (very uncertain)-10 (very certain)

Next page: Studies show that rent regulations such as the Berlin rent cap can help protect lower-income households from displacement. For example, a comparable rent regulation in San Francisco resulted in renters in price-regulated apartments being less likely to leave San Francisco than renters who did not live in price-regulated apartments. Rent regulation acts like insurance against unaffordable rents.