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ABSTRACT

Is the Price Right? The Role of Morals, Ideology, and Tradeoff Thinking in Explaining Reactions to Price Surges*

Price surges often generate social disapproval and requests for regulation and price controls, but these interventions may cause inefficiencies and shortages. To study how individuals perceive and reason about sudden price increases for different products under different policy regimes, we conduct a survey experiment with Canadian and U.S. residents. Econometric and textual analyses indicate that prices are not seen just as signals of scarcity; they cause widespread opposition and strong and polarized moral reactions. However, acceptance of unregulated prices is higher when potential economic tradeoffs between unregulated and controlled prices are salient and when higher production costs contribute to the price increases. The salience of tradeoffs also reduces the polarization of moral judgments between supporters and opponents of unregulated pricing. In part, the acceptance of free price adjustments is driven by people's overall attitudes about the function of markets and the government in society. These findings are corroborated by a donation experiment, and they suggest that awareness of the causes and potential consequences of price increases may induce less extreme views about the role of market institutions in governing the economy.

JEL Classification: C91, D63, D91, I11

Keywords: price surges, price controls, preferences, morality, tradeoffs

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If the one man derives a great advantage by becoming possessed of the other man's property, and the seller be not at a loss through being without that thing, the latter ought not to raise the price, because the advantage accruing to the buyer, is not due to the seller, but to a circumstance affecting the buyer (Thomas Aquinas, Summa Theologica, 1485).

Suppose a merchant of Danzig sends two ships laden with corn, whereof the one puts into Dunkirk, where there is almost a famine for want of corn, and there he sells his wheat for 20s a bushel, whilst the other ship sells his at Ostend just by for 5s. Here it will be demanded whether it be not oppression and injustice to make such an advantage of their necessity at Dunkirk [...]? I answer no, because he sells at the market rate at the place where he is, but sells there no dearer to Thomas than he would to Richard (John Locke, Venditio, 1695)

1. Introduction

On December 15, 2014, a gunman entered a coffee shop in Sydney, Australia, and held hostage its customers for several hours.¹ During the siege, city officers ordered a lockdown of the surrounding area, and circulation was disrupted. As news of the attack broke, prices for Uber rides increased fourfold on average. The company justified their choice as necessary to bring more drivers on the streets and serve customers who otherwise would not find a ride. Many people, however, described the choice as “shameful” and showing “no compassion.” Subsequently, Uber apologized and promised refunds and free rides to those affected by the attack.² There are many other instances where price adjustments resulting from changes in demand and supply receive social disapproval, for example, during significant weather events such as hurricanes or snowstorms.³ Historically, price increases of staple goods following wars, droughts, or famines have often caused widespread protests and even riots. More recently, the COVID-19 pandemic gave rise to disputes about the pricing of several products, from medicines to testing and protective equipment, and a diffused belief that spikes in the price of several goods were due to unfair tactics by companies and required public intervention.⁴

The ability of the price mechanism to achieve efficiency by signaling relative scarcity is a tenet of modern economics. For example, according to Adam Smith, impediments to price adjustments exacerbate rather than solve such problems as famines (Smith 1776). Stigler (1987) famously said that attributing scarcity to price movements is like blaming a thermometer for high temperature.

¹ <https://www.bbc.com/news/world-australia-30490664>

² See Apostolidis (2014), Piotrowski (2014), Stone (2014), and Suranovic (2015).

³ See, for example, <https://www.cbsnews.com/news/9-for-a-4-case-of-water-florida-hit-by-price-gouging-ahead-of-hurricane-dorian/>.

⁴ See, for example, “Price gouging complaints surge amid coronavirus pandemic” (*New York Times*, March 20, 2020: <https://www.nytimes.com/2020/03/27/us/coronavirus-price-gouging-hand-sanitizer-masks-wipes.html>) and “‘Stop price gouging,’ 33 attorneys general tell Amazon, Walmart, others” (*NPR*, March 25, 2020: <https://www.npr.org/sections/coronavirus-live-updates/2020/03/25/821513190/stop-price-gouging-33-attorneys-general-tell-amazon-walmart-others>).

Studies in sociology and psychology, on the other hand, contend that prices do not convey just dry information about supply and demand; they are also the outcomes of social relationships that reflect moral and cultural values and reveal the meaning that people on both sides of the market assign to certain transactions and their conformity with social norms.^{5,6} The perceived violation of these norms and values may induce sellers to not raise prices following demand increases, possibly creating or exacerbating shortages (Cabral and Xu 2021, Kahneman, Knetsch, and Thaler 1986).⁷

However, we lack a complete understanding of whether and how people factor in economic efficiency and moral acceptability when forming opinions and taking stances about the operating of the price mechanisms and, more generally, the role of market forces in society. Do people think “like economists” in perceiving price surges as signals of scarcity? Do they consider price increases as violations of moral norms or sacred values? Do they balance fairness and efficiency concerns? How diverse are these preferences in the population?

We address these questions by investigating how people respond to and reason about sudden price increases and how they choose between market-based, unregulated pricing and price controls. In particular, we assess the effect on these reactions of making salient the economic consequences of free price movements vs. price controls and the associated tradeoffs. We then explore the moral and ideological determinants and correlates of reactions to unfettered price changes. Moreover, we ask whether people’s attitudes and willingness to make tradeoffs differ between normal times and periods of emergency such as a pandemic.

We combine a vignette-based survey and a real-stakes choice task in a study conducted with 3,782 U.S. and 3,830 Canadian residents in May and December 2021. In the vignette study, we randomly assigned each respondent two versions of a particular market scenario where demand for a product suddenly increases. In the first version, a company raises the product’s price; in the second, a public authority prevents these increases by imposing a price cap. We varied (and cross-randomized) several features of the scenarios.

⁵ See, for example, Beckert (2020), Beckert and Aspers (2011), Ody-Brasier and Fernandez-Mateo (2017), Ranganathan (2018), Sorenson and Waguespack (2006), and Zelizer (1989).

⁶ Widespread inequity concerns may also lead to overt opposition to how a market operates and may result in demands for institutional change or even the unraveling of a market altogether (Roth, 2007).

⁷ Anderson and Simester (2010) and Holz et al. (2022) provide evidence of customer antagonism to price changes, and Rotenberg (2011) and Li and Jain (2016) elaborate theoretical models to explain these responses. Dworkzac et al. (2021) and Weitzman (1977) derive conditions under which price controls and rationing may be socially desirable, especially when inequality is high and the regulator places a high value on equity.

Our primary manipulation, and innovation over existing work, consisted in altering the salience of possible economic effects associated with unregulated pricing and price controls. In particular, we highlighted that higher prices might incentivize additional supply by new entrants (thus leading to lower prices in the future) or cause a reallocation of products across markets (thus attenuating the shortage), whereas price controls would preclude such mechanisms. By varying how explicit these tradeoffs are, we can assess whether economic reasoning alters people's perceptions of and attitudes toward price surges (Sunstein 2018). Some individuals may not be immediately aware of the possible incentive effects of higher prices, or they might acknowledge these consequences but still give more weight to other considerations such as fairness or equity. Furthermore, if people see prices just as signals of relative scarcity, no additional information would be necessary to infer the underlying economic causes and consequences (Hayek 1945). However, other considerations (and the special meaning and moral charge that the price of certain products may have) may still be more vivid and consequential than reflections about the underlying economics.

In addition, we varied the salience of production costs contributing to the higher prices, randomized whether the scenario occurred during a pandemic, and considered four different products: a pharmaceutical drug, treadmills for home use, hand sanitizer, and hand moisturizer. Some of these manipulations are similar to those in Kahneman et al.'s (1986) study of the perception of fairness of certain pricing choices. For example, price surges may be more acceptable if higher production costs contribute to causing the price increase (Rotenberg, 2011). In contrast, raising prices during exceptional circumstances such as a pandemic may induce greater moral repugnance. Finally, price increases may receive more vigorous opposition for necessary (e.g., health related) or more expensive products than discretionary or "low-ticket" goods.

After presenting each version of their assigned scenario, we asked respondents to rate how fair to consumers, fair to the company, and overall morally acceptable they found each version. Then, the participants chose their preferred pricing regime and motivated, in open-text form, the reasons for their responses. Our experimental survey design thus allows us to assess the effect of several relevant factors on respondents' preferred price regulation regime and their moral judgments. Additionally, we collected information on their views about the role of markets and the government in society.

We conducted a second survey in December with the same pool of respondents, with a return rate of 38%, to assess whether the effect of our main manipulation, i.e., the salience of tradeoffs,

would hold similarly in a between- and within-subject design. In this second wave, we assigned each participant the same scenario (i.e., the combination of product, context, and saliency of cost factors) as in the first wave. However, we gave all respondents the version with salient tradeoffs regardless of whether they had received a scenario with or without salient tradeoffs in the first survey wave. We also included a real-stakes choice experiment where respondents had the opportunity to gain one extra dollar if they allowed the researchers to donate \$1 to an organization that advocates explicitly for eliminating price controls and expanding free markets. The objective of this experiment was to assess the congruence between the preferences for hypothetical scenarios and real-stakes decisions on a similar topic and policy issue.

We find that a large majority of respondents oppose unimpeded price increases for the four products that we consider, especially for necessary health-related goods (i.e., the pharmaceutical drug and hand sanitizer). However, the acceptance of price surges is substantially greater if participants face scenarios that make economic tradeoffs salient. On average, 32.2% of participants choose the unregulated price option, and this proportion increases by 22.8 percentage points when tradeoffs are made salient. Also, the acceptance of unregulated price surges is 4.7 percentage points higher in conditions where cost factors contribute to the higher prices. The estimates of the between-subject tradeoff salience effect in the first survey wave are very similar to the within-subject, difference-in-differences estimates we obtain when we consider participants in both the May and December surveys.

We then show that these findings derive from a view of prices as not just scarcity signals. Opinions about the moral acceptability of the scenarios vary widely and correlate with the respondents' preferred policy choice. Furthermore, pre-existing views about the function of markets and the government in regulating the economy affect the preference for market-driven versus government-controlled pricing regimes. Most of the tradeoff salience effect is due to significantly different moral judgments of a given scenario when tradeoffs are salient than when they are not. The salience of tradeoffs also softens the differences in these moral reactions between supporters and opponents of unregulated price surges.

Similarly, the ideological differences about the role of markets and governments in society between those in favor of price controls and those who prefer to let prices increase freely are less stark in conditions where tradeoffs are salient. Textual analyses from open-ended responses lend further support to this interpretation of the data. The comments of those who support price controls

include certain keywords and focus on topics related to moral arguments such as fairness, access, and exploitation, whereas those who prefer letting prices increase freely bring motivations associated with the ability of markets to self-regulate and with the principle of free enterprise. Tradeoff salience, however, reduces the differences in the nature and focus of the comments.

The results from the donation experiment in the December survey are consistent with the participants' stated choices and opinions. About 40% of supporters of untamed price surges donate to the foundation that advocates against price controls, whereas 30% of opponents do. Put differently, those who state a preference for price controls are more likely to forgo the opportunity to earn a monetary bonus to avoid supporting the pro-free market foundation.

Overall, we show that moral concerns and general attitudes or beliefs about the positive role of markets in society strongly correlate with how people reason about prices and, in particular, about sudden price surges following demand increases. However, tradeoff thinking plays a significant role in shaping peoples' reactions. It also reduces the polarization of moral and ideological reactions between supporters of different types of market regulation. Thus, clarity about the causes and potential consequences of price changes may induce less extreme views about the role of the price mechanism in governing the economy.

This study advances our understanding of the determinants of social support for certain economic activities. Roth (2007) introduced the concept of "repugnant transactions" (i.e., trades that benefit the directly interested parties but third parties want to prohibit because of moral concerns) into the economic discourse. A few studies investigate how individuals balance moral beliefs and considerations of economic efficiency when expressing their support for certain transactions.⁸ In some cases, although societies may accept the existence of market-based exchanges, they may find certain outcomes morally unacceptable, for example, price surges (Kahneman et al. 1986). In our paper, we assess how the support for unregulated pricing in a market depends on different potential causes of prices increases, the nature of the good, and how considerations about the economic logic and possible consequences of a price increase change this support as well as the moral reactions to it.

To assess in more detail the tradeoffs that individuals strike between different moral values and social outcomes, we integrate standard statistical methods with text analysis algorithms. Alsan

⁸ See, for example, Ambuehl (2017), Bénabou et al. (2020), Elias et al. (2019), Roth and Wang (2020), and Sullivan (2020).

et al. (2021) and Elias et al. (2019) adopt a similar approach to investigate how concerns about health safety affect attitudes toward temporarily suppressing civil liberties and how social support for payments to kidney donors responds to different hypothesized effects on the number of transplants, respectively. Stantcheva (2021) studies how people understand tax policies and weigh different principles, such as efficiency and fairness. Further, Ferrario and Stantcheva (2022) stress the importance of including open-ended questions in social surveys to better gauge peoples' views through natural-language processing techniques. The revived interest in surveys represents promising progress for the economics discipline.⁹ These surveys broaden our knowledge of popular beliefs, opinions, and preferences about issues that are as important as they are hard to measure unless one directly asks. If properly designed to allow for causal identification, these investigations can be at the basis of policies that are both evidence based and “bottom-up” or participatory and, as such, likely more thorough and acceptable.

The rest of the paper proceeds as follows. In Section 2 we describe our research design and the data in the next. Section 3 reports and discusses our findings, and Section 4 concludes and outlines directions for further research.

2. Survey experiment and data

2.1 Recruitment

We relied on the market research company Respondi to recruit research participants¹⁰ and requested 4,000 U.S. residents and 4,000 Canadian residents. The company stratified the pool for each country based on gender, education, ethnicity, and income distribution of the adult population. Respondents in Canada could fill out the survey in either English or French.

2.2 Design

2.2.1 Survey flow

After obtaining participants' consent to complete the survey, we collected information on their socio-demographic characteristics. To increase the perceived consequentiality of the study, we then informed them that we planned to send a letter to U.S. members of Congress (or Canadian

⁹ In addition, see Benjamin et al. (2021), Benjamin et al. (2017), Benjamin et al. (2014), Fisman et al. (2020), Fisman and O'Neill (2009), Heffetz (2021), and Kuziemko et al. (2015) for additional recent survey-based work.

¹⁰ Several survey-based academic studies relied on this company. See, for example, Alesina et al. (2018), Roth and Wang (2020), and Stantcheva (2021).

members of Parliament) summarizing the results of the survey.¹¹ Next, participants read the vignettes that we describe in detail below. We then included questions on their views about the role of markets and government intervention in society, in general, and for specific industries. A final set of questions gauged their broad moral stances (utilitarian versus deontological) and their time preferences, altruism, and trust in others.

2.2.2 The vignettes

We presented each participant with a hypothetical scenario in which a company experienced a sudden increase in the demand for a product. They saw two versions of each scenario. In the first version, the company raised the price of the product; in the second version, it planned to increase the product's price (by the same amount as in the first version), but the government intervened by capping the price at the level that prevailed before the demand shock. We then cross-randomized the following features of the scenarios:

- (1) **Product.** Each scenario featured one of four products: a pharmaceutical drug, a treadmill for home use, hand sanitizer, and hand moisturizer. These products vary in a few ways. Two are health related (pharmaceutical drug and hand sanitizer), and the other two are not; two are relatively expensive (pharmaceutical drug and treadmill), whereas the other two are generally low priced. One of them (the pharmaceutical drug) is potentially life-saving.
- (2) **Context.** In half of the scenarios, we did not specify the reason for the demand surge. In the other half, we indicated that the demand increase resulted from the outbreak of a pandemic. Although we did not mention COVID-19 explicitly, we wanted to test if certain reactions to price increases (especially for the health-related products) were specific to the current (and vivid) events or if they were more general.
- (3) **Salience of cost factors.** We varied the salience of cost factors by including, in half of the scenarios, a sentence indicating that the company incurred higher costs to produce and distribute the additional units of its product.
- (4) **Salience of economic tradeoffs.** We manipulated the salience of the potential economic consequences of letting the price adjust freely versus imposing a cap. These consequences highlighted tradeoffs that one may expect to occur in either case. For the scenarios concerning the drug and the treadmill, we focused on intertemporal tradeoffs. Specifically, we described

¹¹ See also Elias et al. (2019).

a two-period situation in which a high price in the first period implies that only a small portion of the population can obtain the good; however, the high price induces entry and thus additional production, a lower market price, and a larger share of consumers being able to obtain the good in the second period. Conversely, price controls in the first period precluded these adjustments and dynamics: in each of the two periods, the price would be the same, there would be no entry, and the share of the population able to obtain the good would be in between the ones for the first and second period in the unregulated price version of the scenario. For the vignettes with the hand sanitizer and moisturizer, we instead emphasized possible tradeoffs involving the reallocation of products across markets. We described a situation where the demand for the product increased in a certain region; in the unregulated price version of the scenario, the company chooses to move its inventory to the high-demand area but does not do so in the version where the government imposes price controls. Thus, we highlighted a tradeoff between higher prices and greater product availability and lower price and a shortage of the good. We chose these tradeoffs not because the situations that we described were the only possible outcomes but because we were interested in testing whether highlighting possible tradeoffs would affect participants' preference for and moral judgment of the free market versus price control options.¹² Figure 1 reports the scripts of each version of the scenarios with salient tradeoffs.

¹² The situations that we illustrated are somewhat analogous to those that occurred during the COVID-19 pandemic . In March 2020, for example, the *New York Times* reported that two brothers had stockpiled hand sanitizer in Tennessee and were selling it on Amazon at a large premium (“He has 17,700 bottles of hand sanitizer and nowhere to sell them”: <https://www.nytimes.com/2020/03/14/technology/coronavirus-purell-wipes-amazon-sellers.html>). In May 2020, news that pharmaceutical drug Remdesivir might be effective against COVID-19 led to discussion and controversy about its pricing in the context of a pandemic (“Putting a price on COVID-19 treatment Remdesivir”: <https://www.npr.org/sections/health-shots/2020/05/08/851632704/putting-a-price-on-covid-19-treatment-remdesivir>).

Figure 1: Survey vignettes in the scenarios with salient tradeoffs

A. Pharmaceutical drug

Scenario 1	Scenario 2
<p>A pharmaceutical company developed a drug to treat a certain condition and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease.</p> <p>As a consequence, demand for the drug increases. The company raises the price of the drug to \$1,000 per treatment course. About 30% of patients in need manage to obtain the drug in the next 12 months. One year later, pharmaceutical companies introduce new drugs for the treatment of the disease. The increased supply and competition drive the price down to \$300 per treatment course, and about 80% of patients in need obtain one of the available treatment drugs.</p>	<p>A pharmaceutical company developed a drug to treat a certain condition and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. As a consequence, demand for the drug increases. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that and imposes a price cap at \$200 per treatment course. About 50% of patients in need manage to obtain the drug in the next 12 months. One year later, this drug is still the only available drug to treat the new disease, and again about 50% of patients in need will obtain the treatment drug.</p>

B. Treadmill

Scenario 1	Scenario 2
<p>A company that produces treadmills specific for home use has been selling them at \$200 each. More people start exercising at home. As a consequence, the demand for treadmills for home use increases. The company raises the price of its treadmills to \$1,000 each. About 30% of customers looking for such a treadmill manage to obtain one in the next 12 months. One year later, more physical exercise equipment producers decide to produce treadmills specific for home use. The increased supply and competition drive the price of treadmills down to \$300, and about 80% of customers looking for such a treadmill are able to buy one.</p>	<p>A company that produces treadmills for home use has been selling them at \$200 each. More people start exercising at home. As a consequence, the demand for treadmills for home use increases. The company plans to raise the price of its treadmills \$1,000 each. However, the government decides to prevent that and imposes a price cap at \$200 per treadmill. About 50% of customers looking for a treadmill manage to buy one in the next 12 months. One year later, no other companies have entered the market, and again 50% of customers looking for such a treadmill are able to buy one.</p>

C. Hand sanitizer

Scenario 1	Scenario 2
<p>The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and sells it at \$20 per bottle. About 80% of customers who wish to purchase hand sanitizer are able to do so, whereas 20% are not.</p>	<p>The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and plans to sell it at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand sanitizer are able to do so, whereas 50% are not.</p>

D. Hand moisturizer

Scenario 1	Scenario 2
<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand moisturizer from another region to the one with the shortage, and sells it at \$20 per tube. About 80% of customers who wish to purchase hand moisturizer are able to do so, whereas 20% are not.</p>	<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand moisturizer from another region to the one with the shortage, and plans to sell it at \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand moisturizer are able to do so, whereas 50% are not.</p>

Notes: The four panels report two versions of a scenario for each of the four products. Scenario 1 corresponds to the unregulated price version, whereas scenario 2 outlines the version with price controls. These scenarios correspond to the experimental conditions where we do not refer to a specific pandemic context, costs increases are not salient, and tradeoffs are salient.

(5) Additional “no-reason” scenarios. Economic theory interprets relative prices, and their changes, as signals that guide consumption, production, and investment decisions, without any need or concern for what caused the price movements. However, reactions to price changes may well be affected by context-specific information. In our survey, we included four scenarios where the product price increased without specifying anything about the context or reason for the increase. These scenarios offer a baseline that allows us to compare respondents’ choices (unregulated pricing versus price controls) and moral judgments for situations where the price of a given product changes by a certain amount (the same across scenarios) with and without a specified context.

Cross-randomizing features (1)–(4) above and the additional four no-reason scenarios from (5) resulted in 36 scenarios. After reading each version of their assigned scenario (i.e., unregulated pricing and price control), participants expressed their opinion, on a scale from –10 to +10, about the fairness of the scenario to the customers (or patients) and to the company. A third question, with the same scale, asked respondents how morally acceptable they considered the scenario to be. We then showed the two versions of the scenario again, side by side, and asked the respondents to select the regime that they would prefer to see in place in their own country and to express, in open-ended text form, the reason(s) for the answers they just gave.

The questions about fairness and moral acceptability are similar to those in Kahneman et al. (1986). In that study, the authors provide scenarios where the price of a product increased and the

respondents rate the overall fairness of each scenario. We introduce four additional features. First, we specified the subject to which the fairness assessment referred (the customers or the company) to gauge a more nuanced understanding of the respondents' moral reaction to each situation. For example, if a person perceived price controls as fair to customers but unfair to the company, a single overall assessment of fairness would not show these differences. Second, we proposed to participants two versions of each scenario that outline the same context but with different regulatory regimes, and we asked them which regime they would prefer. In addition to obtaining direct information on the participants preferred regime, this allows us to assess how moral judgments relate to preferences for unregulated pricing versus price controls. Third, we test whether moral judgments change when respondents are presented with the possible economic consequences and tradeoffs associated with choosing to implement price controls instead of letting companies change prices freely. Finally, our open-text question allows us to collect more unstructured information and to further investigate the motivations and mechanisms behind specific answers and choices (Alesina et al. 2018, Ferrario and Stantcheva 2022).

2.2.3 Follow-up survey

Seven months after the first intervention (in December 2021), we invited the original respondents to complete a follow-up survey (wave 2). We gave each participant the same scenario (combination of product, context, and saliency of unit cost increases) as in wave 1; however, we showed all respondents the version with salient tradeoffs regardless of whether they received a scenario with or without salient tradeoffs in wave 1. Our main objective was to test whether the effects of tradeoff salience that we measured in wave 1 in a between-subject design would also hold within subject.

Moreover, this second wave included a donation opportunity.¹³ Following Bursztyn et al. (2020) and Elias et al. (2019), we gave respondents the opportunity to earn \$1 (in addition to the payment for completing the survey) if they allowed the researchers to make a \$1 donation to an organization that promotes unfettered markets and believes that the market price is always the “just” price, the Future of Freedom Foundation (FFF).¹⁴ The purpose of this module was to check

¹³ In wave 2 we included only a subset of the questions on attitudes toward markets and government intervention and did not include the questions on time preferences, trust, and altruism.

¹⁴ This organization is a “tax-exempt, non-profit educational foundation whose mission is to present an uncompromising moral, philosophical, and economic case for the free society.” In the donation module, we reported the FFF’s position on the freedom that firms should enjoy when setting prices. The following sentences are from an article that appeared on the FFF’s webpage and that we reported in our survey: “a just price is the market price,” “a

whether the participants' responses to the hypothetical scenarios were consistent with a real-stakes choice. The module allows us to assess whether they are willing to incur a cost (i.e., give up \$1) to express opposition to an organization that promotes free markets, plausibly because they do not share the views that the organization promotes.

2.3 Data

We collected the data between April 29 and May 1, 2021, and then between December 10 and December 31, 2021. In wave 1 we recruited 7,612 participants, 3,830 in Canada and 3,782 in the United States (Table 1). In December, we collected answers from 1,335 of the original respondents in Canada and 1,203 in the United States, corresponding to 34.9% and 31.8% of wave 1 participants, respectively.¹⁵

Columns (1) and (3) of Table 2 report the socio-demographic characteristics of the wave 1 survey participants in Canada and the U.S., respectively, and columns (2) and (4) display official statistics for the adult population in the two countries. The survey firm provided samples that matched the composition of the adult population by gender, age, ethnicity, and education. Other features of the respondents (including marital status, employment, and income) are also fairly similar to those of the Canadian and the U.S. populations. The sample is also well balanced across our experimental conditions in terms of socioeconomic characteristics (gender, race, education, income, marital status, number of children), attitudes (political views, altruism, trust, intertemporal preferences), and whether a participant responded to both surveys in May and December.¹⁶

just price is any price based on supply and demand," "a just price includes any price that is raised in times of shortages and natural disasters," and "a just price is any price not constrained by some government regulation."

¹⁵ In December, we only contacted participants who in May received a scenario with a specified reason for the price increase. This implies that response rates in wave 2 were 39.1% in Canada (1,335/3,415) and 36% in the United States (1,203/3,345).

¹⁶ Appendix Figure B1 reports estimates of regressions of binary indicators for individual socioeconomic characteristics (gender, race, education, income, marital status, number of children), attitudes (political views, altruism, trust, intertemporal preferences), and whether a participant responded to both surveys in May and December, on binary indicators of the 32 experimental conditions. Of the 496 estimated coefficients, 14, or 2.8%, are statistically significant at the 5% level. All but one of the 16 p -values of the F-tests are greater than 0.05.

Table 1: Number of participants, overall and by round and country, and main experimental condition

	Wave 1		Wave 2	
	Canada	United States	Canada	United States
Overall N.	3,830	3,782	1,335	1,203
Product				
Drug	941	920	332	290
Treadmill	983	958	330	300
Sanitizer	934	944	329	282
Moisturizer	972	960	344	331
Reason for price increase				
Not specified	415	437		
Specified	3,415	3,345	1,335	1,203
Context				
Not specified	1,717	1,685	683	595
Pandemic	1,698	1,660	652	608
Salience of cost factors				
Cost factors not salient	1,750	1,630	695	598
Cost factors salient	1,665	1,715	640	605
Salience of tradeoffs				
Tradeoffs not salient	1,675	1,694		
Tradeoffs salient	1,740	1,651	1,335	1,203

Table 2: Respondent characteristics and comparison with population survey data by country

	Canada		United States	
	Respondi sample (Age 18+ N = 3,830)	Population (SC 2020)	Respondi sample (Age 18+ N = 3,782)	Population (ACS 2019)
Percent of:				
Women	49.9	50.4	50.0	50.8
Age 18-29	20.8	22.6	23.1	21.1
Age 30-39	17.8	16.6	17.1	17.3
Age 40-49	16.6	15.2	18.3	15.9
Age 50-59	17.6	16.2	17.5	16.4
Age 60+	27.2	29.4	24.1	29.4
Asian	13.4	14.7	6.3	6.8
Black	3.1	3.1	12.7	12.8
Hispanic	1.0	1.3	15.1	18.4
White (non-Hispanic)	78.9	78.7	62.5	60.0
Other race/ethnicity	3.5	2.1	3.5	5.5
French speaking (Canada)	6.8	22.8	NA	NA
HS diploma or less	9.2	8.0	35.3	38.3
Some college	35.3	32.0	29.2	28.6
College degree or higher	55.5	60.0	35.5	33.1
Married/Cohabiting	51.8	47.7	48.9	54.1
Employed (full or part time)	63.6	59.5	56.4	58.0
Out of labor force	28.1	35.4	30.5	38.4
Income 0-\$19,999	8.1	9.8	14.8	18.1
Income \$20,000-\$39,999	16.5	21.2	20.9	8.4
Income \$40,000-\$59,999	16.2	24.2	20.2	11.9
Income \$60,000-\$79,999	16.7	17.6	14.2	17.4
Income \$80,000-\$99,999	15.5	11.5	10.3	12.8
Income \$100,000+	27.1	15.7	19.6	31.4

Notes: The table shows summary statistics from the Canada and U.S. samples (columns (1) and (3), respectively) and corresponding statistics on the population of Canada and the U.S. (columns (2) and (4)). Data for Canada are from Statistics Canada. Income distribution statistics are for 2019. Race and ethnicity statistics are from 2017 and for population 15 years old and over. Employment and labor force participation refer to May 2021, and population is for population 16 and above. All other statistics refer to 2020. Education statistics are for the population 25 years old and over. For the United States, employment and labor force participation rates are from the Bureau of Labor Statistics for May 2021 and refer to individuals 16 years old and over. The other statistics are from the 2019 American Community Survey (ACS). Educational attainment is for the population 25 years old and above; the remaining ACS statistics are for the population 18 years and above.

3. Findings

3.1 Support for unregulated price surges

Figure 2 displays the fraction of respondents who choose the unregulated pricing option. Overall, 32.2% prefer the unregulated pricing option to price controls.¹⁷ As panel A shows, support for unregulated pricing is lowest for the pharmaceutical drug, highest for the treadmill, and intermediate for the hand sanitizer and moisturizer (22.5%, 41.1%, 30.3%, and 34.2%, respectively; chi-square test of differences in proportions: 140.2, $p < 0.001$).

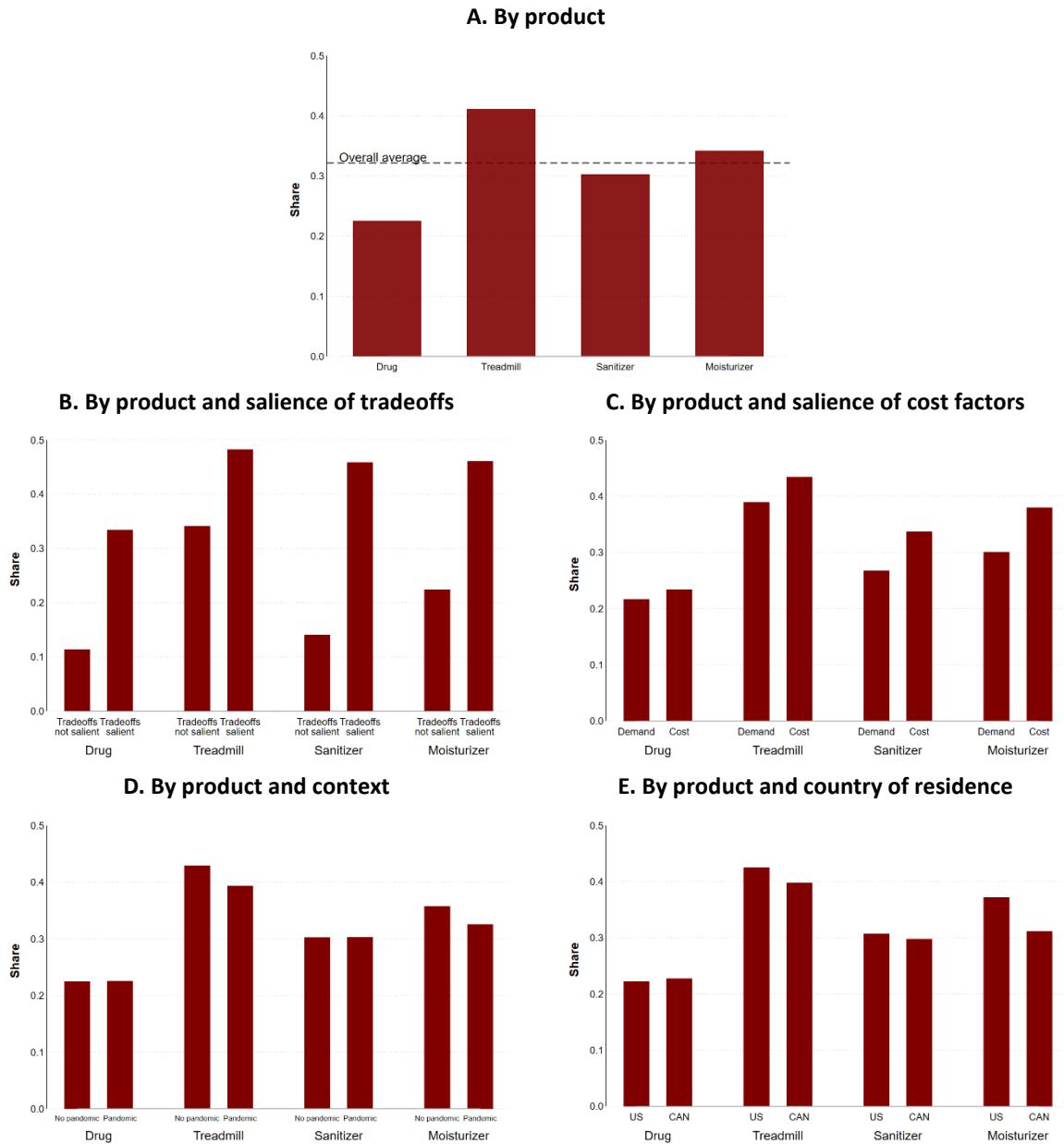
Panel B indicates that tradeoff salience has a large, positive effect on support for unregulated pricing. The fractions of respondents supporting unregulated pricing increases from 11.4% when tradeoffs are not salient to 33.4% when the tradeoffs are salient in the pharmaceutical drug scenario, from 34.1% to 48.3% for the treadmill, from 14.1% to 45.9% for the hand sanitizer, and from 22.4% to 46.1% for the hand moisturizer. The differences in these proportions are statistically significant ($p < 0.001$). Support for unregulated pricing is also higher when cost factors are salient, although the increases are smaller than those induced by the salience of tradeoffs (Figure 2C). In panels D and E, we observe no substantial differences comparing the pandemic and generic scenarios and comparing Canadian and U.S. residents. Note that there was no product or condition for which most respondents supported unregulated pricing.

Table 3 reports the point estimates and standard errors from regression analyses where the outcome variable is a binary indicator for the support to unregulated pricing. In column (1), the estimates show that, on average, support increases by 22.8 percentage points when tradeoffs are salient ($p < 0.001$) and by 4.7 percentage points when cost factors are salient ($p < 0.001$). These changes correspond to 73% and 15% of the overall mean. Columns (2)–(5) report the results from regressions specific to each of the four products. Tradeoff salience increases respondents' acceptance of unregulated prices for all products: the effects are largest for the hand sanitizer and the pharmaceutical drug. The effect of cost factor saliency holds for the hand sanitizer and the moisturizer but not for the drug and the treadmill. As Figure 2 shows, respondents' choices do not vary when the price increase is due to a pandemic outbreak. Finally, the estimates in column (6) are from a model that includes interaction terms for between the pandemic indicator and either the

¹⁷ Because most of our analyses concern the scenarios that expressed some reasons for the prices increases, the statistics reported in this section, except for Section 3.8, refer to the 6,760 participants, out of 7,612, who received scenarios with reasons included. Moreover, we consider only data from participants who fully completed the survey.

tradeoff salience or the cost salience indicator; the corresponding coefficient estimates are small and not statistically significant

Figure 2: Support for unregulated pricing scenarios



Notes: The figure reports the share of respondents who select the unregulated price scenario. In panel A, the support rates are by product. In the remaining panels, the support rates are by product and salience of tradeoffs (B), salience of cost factors (C), context (D), and respondents' country of residence.

Table 3: Scenario features and choice: Regression estimates

Outcome variable:	= 100 if chose Unregulated price, 0 if chose Price control						
	Sample:	Full Sample	Drug	Treadmill	Hand sanitizer	Hand moisturizer	Full Sample
	(1)	(2)	(3)	(4)	(5)	(6)	
Drug	-18.80*** (1.54)						-18.82*** (1.54)
Sanitizer	-11.27*** (1.58)						-11.29*** (1.58)
Moisturizer	-7.17*** (1.61)						-7.20*** (1.62)
Salient tradeoff	22.77*** (1.09)	22.02*** (1.98)	13.96*** (2.35)	31.71*** (2.10)	23.74*** (2.21)		21.88*** (1.54)
Salient cost side	4.74*** (1.09)	1.69 (1.99)	3.41 (2.36)	6.35*** (2.11)	7.67*** (2.21)		3.98** (1.55)
Pandemic	-1.59 (1.09)	-0.32 (1.99)	-3.42 (2.35)	0.34 (2.11)	-2.77 (2.21)		-3.24* (1.69)
Salient tradeoff x Pandemic							1.78 (2.18)
Salient cost side x Pandemic							1.52 (2.18)
Canadian resident	-2.58** (1.09)	-0.04 (1.99)	-2.57 (2.34)	-0.96 (2.11)	-6.54*** (2.21)		-1.63* (0.97)
Constant	29.63*** (1.59)	10.75*** (2.09)	35.54*** (2.60)	11.22*** (2.15)	23.02*** (2.42)		30.47*** (1.73)
Observations	6,760	1,648	1,731	1,666	1,715		6,760
R-squared	0.084	0.070	0.024	0.125	0.075		0.084
Mean of the outcome variable	32.15	22.51	41.13	30.25	34.17		32.15

Notes: The parameter estimates are from OLS regressions. Each observation corresponds to a different respondent. The right-hand-side variables listed in the first column are binary indicators for the product in the scenario (treadmill omitted), salience of tradeoffs and cost factors, context, and residence of the participant. In all columns, we multiply the outcome variable indicator by 100; therefore, the reported numbers correspond to estimated percentage point changes. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

3.2 Moral reactions to pricing scenarios

Table 4 shows estimates from regressions where the outcome variables are the respondents' moral reactions to the scenarios.¹⁸ At the bottom of the table, we report the average ratings of fairness to the customer (or patient), fairness to the company, and overall moral acceptability that respondents attributed to each version of their assigned scenario. Recall that each score ranged from -10 (most

¹⁸ Tables B1 and B2 in the Appendix report versions of the results presented in Tables 3 and 4 with p-values corrected for multiple hypothesis testing.

unfair/morally unacceptable) to +10 (most fair/morally acceptable). On average, across all vignettes, respondents find unregulated pricing scenarios more unfair to the customer (average score = -4.39) than price control scenarios (3.22); conversely, they consider unregulated pricing fairer to the company (1.76) than price controls (0.51). These differences replicate in the overall moral acceptability scores: -4.28 for unregulated pricing and 2.20 for price controls. Notably, these values are very similar, on average, to the ratings of fairness to customers.

The regression estimates show that some of our experimental manipulations strongly affect moral reactions. Tradeoff salience, in particular, increases the perceived fairness to customers of unregulated pricing (column (1)) and, especially, lowers the perceived fairness to customers of price controls (column (4)). It also increases the perceived fairness to the company of unregulated pricing (column (2)). The effect of tradeoff salience on the respondents' perceived moral acceptability of unregulated pricing (column (3)) and price controls (column (4)) is similar in sign and magnitude to its effect on fairness to customers. As already suggested by the overall average values of the morality scores, the effect of tradeoff salience on the moral acceptability rating is more similar to the rating of fairness to consumers than to the company. The impact of the salience of cost factors goes in the same direction as that of tradeoff salience but is smaller. Finally, unregulated pricing is considered more unfair and less morally acceptable for the drug, hand sanitizer, and hand moisturizer than for the treadmill.

We also construct measures of *relative* fairness and moral acceptability of the unregulated price version of the scenarios as the difference between the fairness/moral acceptability scores of the unregulated price scenario and the corresponding scores for the price control scenario. By computing the relative score, we account for different baselines or reference points that respondents might hold. Because the two scores range from -10 to +10, the relative index can take values between -20 and 20. The estimates in columns (7)–(9) of Table 4 suggest that the relative fairness and moral acceptability measures are a good summary of the respondents' moral judgment of the vignettes. In relative terms, participants' overall moral concerns especially align with the consumer side.

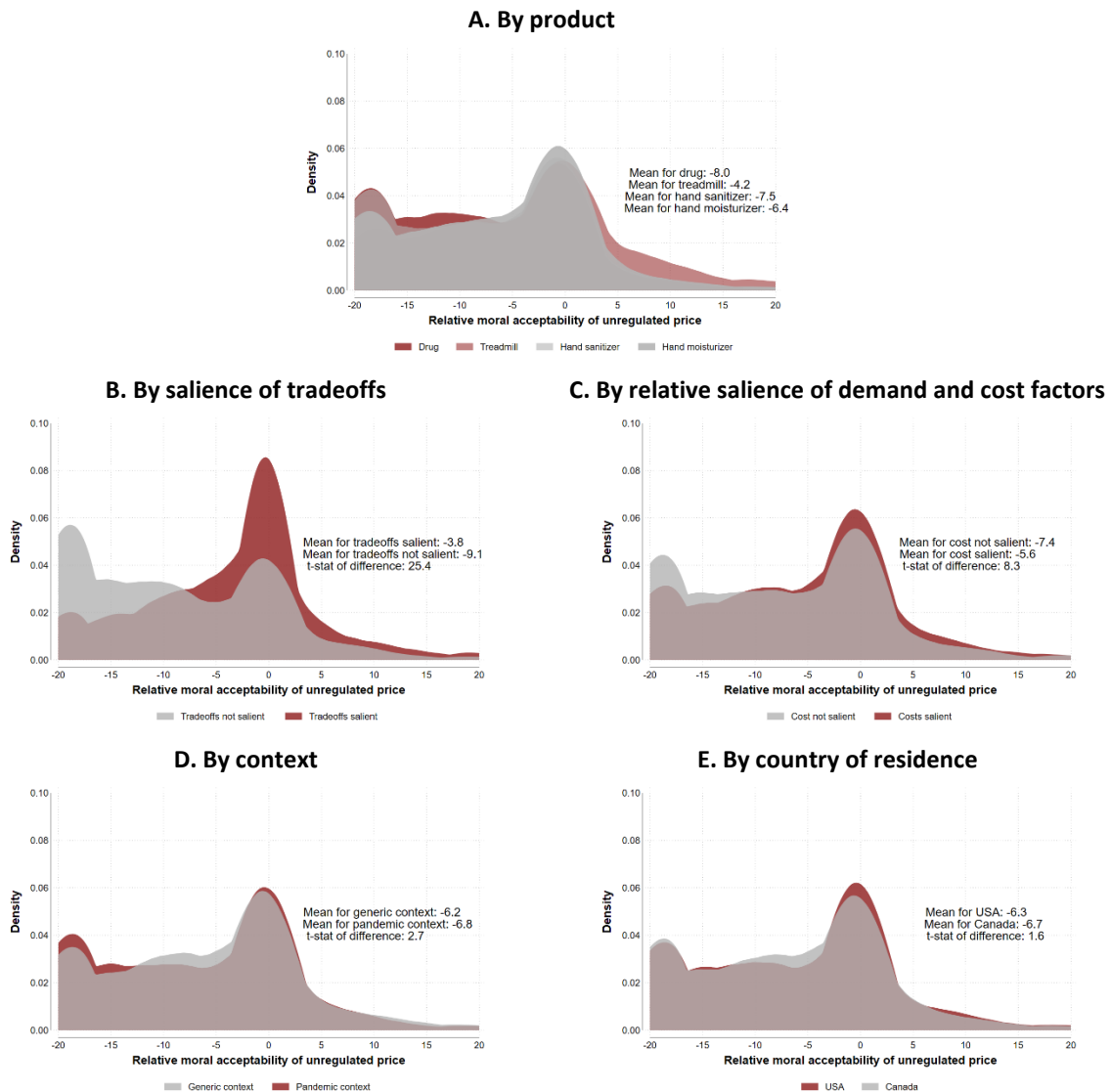
Table 4: Scenario features and moral judgments: Regression estimates

Outcome variable:	Unregulated pricing version			Price controls version			Relative morality judgments (unregulated pricing - price controls)		
	Fairness to customer	Fairness to Company	Moral acceptability	Fairness to customer	Fairness to Company	Moral acceptability	Relative fairness to customers	Relative fairness to company	Relative moral acceptability
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Drug	-2.34*** (0.19)	-0.54*** (0.17)	-2.46*** (0.20)	-0.83*** (0.19)	2.50*** (0.20)	1.45*** (0.20)	-1.51*** (0.28)	-3.04*** (0.27)	-3.91*** (0.30)
Sanitizer	-3.22*** (0.19)	-1.48*** (0.18)	-3.22*** (0.20)	-2.26*** (0.19)	2.01*** (0.20)	0.18 (0.21)	-0.96*** (0.27)	-3.49*** (0.28)	-3.39*** (0.30)
Moisturizer	-2.32*** (0.19)	-0.77*** (0.17)	-2.33*** (0.20)	-2.26*** (0.19)	1.53*** (0.20)	-0.06 (0.20)	-0.06 (0.27)	-2.30*** (0.28)	-2.28*** (0.30)
Salient tradeoffs	2.21*** (0.13)	1.06*** (0.13)	1.82*** (0.14)	-5.04*** (0.14)	0.10 (0.14)	-3.46*** (0.14)	7.25*** (0.19)	0.95*** (0.19)	5.28*** (0.20)
Salient cost factors	0.66*** (0.13)	0.05 (0.13)	0.90*** (0.14)	-0.21 (0.14)	-1.11*** (0.14)	-0.79*** (0.14)	0.87*** (0.19)	1.16*** (0.19)	1.69*** (0.20)
Pandemic	-0.45*** (0.13)	-0.45*** (0.13)	-0.65*** (0.14)	-0.12 (0.14)	0.39*** (0.14)	-0.12 (0.14)	-0.33* (0.19)	-0.84*** (0.19)	-0.54*** (0.20)
Canadian resident	-0.16 (0.13)	0.24* (0.13)	-0.10 (0.14)	0.36*** (0.14)	-0.23* (0.14)	0.28* (0.14)	-0.53*** (0.19)	0.47** (0.19)	-0.38* (0.20)
Mean of the outcome variable	-4.39	1.76	-4.28	3.22	0.51	2.20	-7.61	1.24	-6.48
Observations	6,760	6,760	6,760	6,760	6,760	6,760	6,760	6,760	6,760
R-squared	0.085	0.023	0.075	0.187	0.036	0.092	0.185	0.040	0.125

Notes: The parameter estimates are from OLS regressions. Each observation corresponds to a different respondent. The right-hand-side variables listed in the first column are binary indicators for the product in the scenario (treadmill omitted), salience of tradeoffs and cost factors, context, and residence of the participant. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Figure 3 shows the effect of our experimental manipulations on the distribution of moral reactions, specifically on the relative moral acceptability score. There is wide heterogeneity in moral judgments. Moreover, in panel B the entire distribution of morality judgments differs substantially between respondents assigned to scenarios with and without salient tradeoffs. We will return to these differences in Section 3.5 below.

Figure 3: Distribution of opinions on the relative moral acceptability of the unregulated price scenario

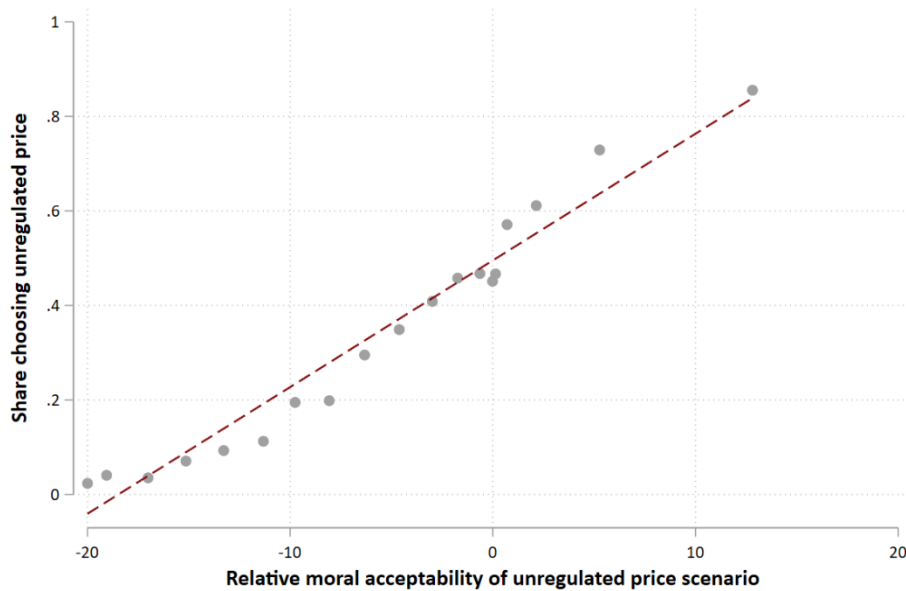


Notes: The figure reports the estimated density of the score representing the relative acceptability of the unregulated price scenario by product, salience of tradeoffs, salience of demand or cost factors, context, and participants' country of residence. The relative moral acceptability of unregulated price scenario is the difference between the score on the moral acceptability of the unregulated price scenario and the score on the moral acceptability of the price control scenario. Each of the two scores can take values between -10 and $+10$, in 0.1 increments. The overall average value of the relative score is -6.48 .

3.3 Moral judgments and scenario choice

Figure 4 shows a strong, positive correlation between opinions about the moral acceptability of the unregulated price scenario and the selection of that scenario's configuration. The best linear fit yields an estimated slope of 0.027 (s.e. = 0.0005), implying that a one standard deviation increase in the relative moral acceptability score (8.96) corresponds to a change in support rates for unregulated pricing of about 24 percentage points—a magnitude comparable to the tradeoff salience effect.

Figure 4: Support rates for unregulated price scenario and moral reactions to scenarios



Notes: The figure reports a binned scatterplot of the relationship between the share of respondents who select the unregulated price scenario and their opinions on the relative moral acceptability of the unregulated price scenario versus the price control option (Panel 2). The relative moral acceptability of the unregulated price scenario is the difference between the score on the moral acceptability of the unregulated price scenario and the score on the moral acceptability of the price control scenario. Each of the two scores can take values between -10 and $+10$, in 0.1 increments.

Of course, we cannot interpret this relationship as causal because both the moral judgments about each scenario and the choice of pricing regime depend on the scenarios' characteristics. However, this strong correlation suggests that the preference for a particular scenario has strong moral connotations. Column (2) of Table 5 provides further corroboration to this claim. The estimates are from a model analogous to the one in column (1) of Table 3 (these estimates are also in column (1) of Table 5, for ease of comparison), with the addition of the score of relative moral acceptability among the regressors. The coefficient estimate on the relative moral acceptability is

similar to the estimated slope of the line from Figure 4. Note, however, that including this variable on the right-hand side substantially alters the estimates on the indicators for the various scenario features. In particular, the estimated differences between products are much smaller, the estimated effect of tradeoff salience drops from 22 to 9 percentage points, and the estimated effect of cost factors saliency is close to and not statistically different from zero.

Table 5: Scenario features, moral judgments, pro-market attitudes, and choice: Regression estimates

Outcome variable:	= 100 if the respondent chose unregulated price, 0 if price controls			
	(1)	(2)	(3)	(4)
Drug	-18.80*** (1.54)	-9.16*** (1.35)	-17.27*** (1.47)	-9.12*** (1.33)
Sanitizer	-11.27*** (1.58)	-2.91** (1.40)	-10.14*** (1.52)	-2.99** (1.38)
Moisturizer	-7.17*** (1.61)	-1.56 (1.40)	-6.34*** (1.54)	-1.57 (1.38)
Salient tradeoffs	22.77*** (1.09)	9.75*** (1.04)	22.34*** (1.05)	10.64*** (1.03)
Salient cost factors	4.74*** (1.09)	0.58 (0.97)	4.74*** (1.05)	0.94 (0.96)
Pandemic	-1.59 (1.09)	-0.26 (0.97)	-1.27 (1.05)	-0.20 (0.95)
Canadian resident	-2.58** (1.09)	-1.63* (0.97)	-1.22 (1.05)	-0.93 (0.95)
Relative moral acceptability of unregulated pricing		2.46*** (0.05)		2.25*** (0.05)
Pro-market attitudes			2.80*** (0.12)	1.62*** (0.12)
Constant	29.63*** (1.59)	47.23*** (1.46)	25.20*** (1.50)	43.13*** (1.46)
Observations	6,760	6,760	6,760	6,760
R-squared	0.084	0.280	0.148	0.300

Notes: The parameter estimates are from OLS regressions. Each observation corresponds to a different respondent. The right-hand-side variables reported in the first column are binary indicators for the product in the scenario (treadmill omitted), salience of tradeoffs, salience of cost factors, context, residence of the participant, the score for relative moral acceptability of the unregulated price scenario with respect to the price control scenario, and the index for pro-market attitudes. We multiply the outcome variable indicator by 100; therefore, the reported figures correspond to estimated percentage point changes. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

3.4 Support for unregulated prices and attitudes toward the role of markets in society

Does the support for unregulated prices indicate an overall more positive view of the role that markets, in general, play in society? To answer this question, we compute a summary measure of attitudes toward markets as the average of the scores from three questions: (a) fairness or unfairness of the market system, (b) the extent to which the market system promotes or harms innovation and growth, and (c) the extent to which the government intervenes too much or too little in the economy (see part 5 of Appendix A). Each score can take values between -10 and $+10$, with higher values indicating a more positive view of the role of markets. The average of this measure does not vary significantly across experimental conditions (see Appendix Figure B1), indicating that general attitudes toward markets are pre-determined characteristics of the respondents and have no relationship with the treatments.

Column (3) of Table 5 reports estimates from our basic regression model with support for unregulated prices as the outcome variable, including the “pro-market” score among the covariates. The coefficient estimate on this variable is large and statistically significant.²⁰ The fact that adding this regressor does not meaningfully alter the estimates on the indicators for our treatments is consistent with the respondents’ views of the role of markets in society not being affected by these treatments.²¹ The estimates in column (4) are from a model that includes the score of pro-market views and the score of relative moral acceptability of unregulated prices on the right-hand side of the regression equation. The estimated coefficient on the relative moral acceptability index is very similar to the one in column (2), where pro-market attitudes are not included. The coefficient estimate on pro-market attitudes in the “full” specification is smaller than in column (3), but is still statistically significant and sizable, suggesting some correlation between underlying views about markets and moral reactions to the vignette scenarios.

3.5 Tradeoff salience and moral and ideological polarization and sorting

The main findings from our analyses so far are that, on the one hand, people see prices and price surges as more than just signals of relative scarcity. Respondents have strong and heterogeneous

²⁰ A linear fit is a proper approximation of the relationship between pro-market attitudes and support for unregulated prices.

²¹ When we add the score for pro-market attitudes to the regression, the coefficient estimate on the indicator of the respondents’ country of residence is close to zero and not statistically significant. Overall, the pro-market score for Canadian residents is lower than for those residents in the United States; the differences in support for the unregulated price options between Canadian and US resident can therefore largely be explained by these underlying differences in views about the role of markets in society.

moral reactions to different pricing regimes, and their preferences are strongly affected by their underlying “ideology” about the role of markets in society overall. On the other hand, when the potential economic consequences of unregulated or controlled prices are more explicit, people’s opposition to market-driven price adjustments significantly decreases. Therefore, economic considerations or tradeoff thinking play a considerable role in influencing the choice between unregulated prices and price controls. We also show that the impact of tradeoff salience likely occurs through changes in moral judgments about a particular scenario.

Panel B of Figure 3 above illustrates a further effect of tradeoff salience on moral judgments. Whereas the other experimental manipulations affect the mean relative moral acceptability score but do not alter the shape of the score distribution, tradeoff salience drastically changes the degree of the polarization of moral views. Specifically, when tradeoffs are not salient, the distribution of the relative moral acceptability scores has the largest mass toward the left, indicating that, overall, participants who received scenarios without salient tradeoffs expressed a much more negative moral judgment of the unregulated price scenario than the price control scenario.

Further, a second peak of the distribution is around zero, indicating the presence of a large group of respondents who instead had similar moral reactions to the regulated and unregulated pricing configurations. In contrast, with salient tradeoffs, the distribution of relative moral acceptability of the unregulated price version is centered on zero and much more symmetric around the (single) peak. Thus, whereas in the absence of considerations about economic tradeoffs, moral judgments are very polarized, making these tradeoffs explicit reduces polarization and leads to a broader consensus about the moral acceptability of different market configurations.

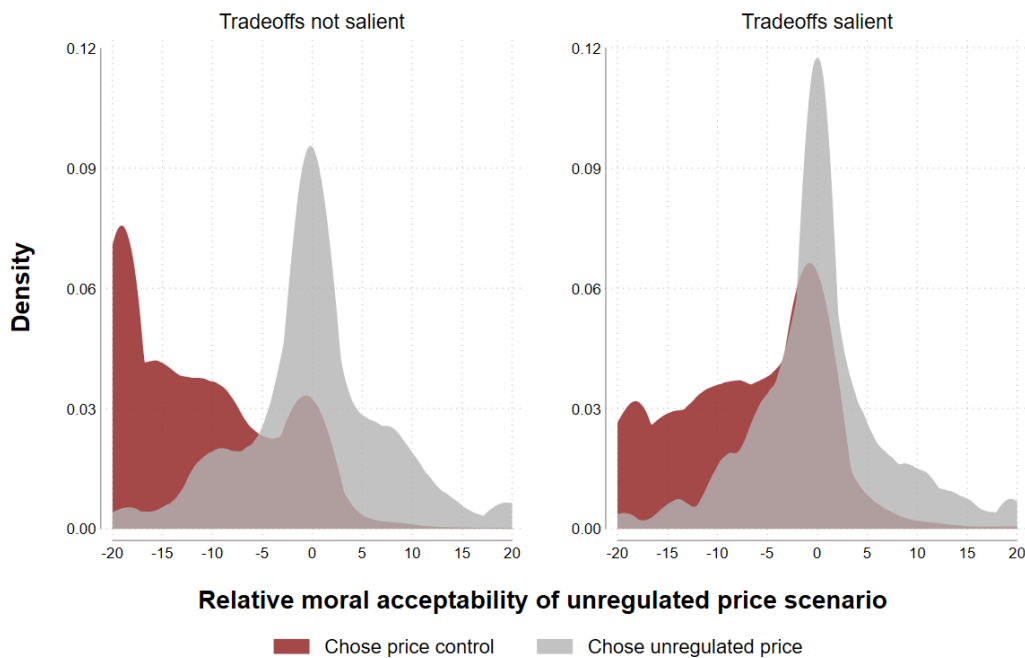
We explore these insights further by examining the distribution of relative moral acceptability scores by tradeoff salience and pricing regime choice. Figure 5 presents the results and shows that when tradeoffs are not salient, the moral judgments of those who select the unregulated price option and those who chose the price control option are much more different from one another than when tradeoffs are salient.²² Among those who select the unregulated price option, the relative

²² Appendix Figures B2–B4 report distributions analogous to those in Figure 5 but for the absolute values of the scores of fairness to customers, fairness to the company, and overall moral acceptability of each of the two scenario versions, by the version actually selected and the salience of tradeoffs. The distributions of the scores of fairness to customers and of moral acceptability show, again, much stronger polarization of moral reactions to the two versions of a scenario when tradeoffs are not salient. Judgement about fairness to the company is less responsive to tradeoff salience and vary less between those who select the unregulated price regime and those who prefer price controls.

moral judgment of that option (i.e., their preferred option) has a very similar distribution with and without salient tradeoffs.

Moreover, the two relevant distributions are single peaked and concentrated around zero; thus, most supporters of unregulated prices consider the unregulated price and price control scenarios as similar in terms of moral acceptability. Conversely, the moral valuation of unregulated prices is significantly more negative for those who select price control when evaluating scenarios without salient tradeoffs than for participants who prefer price controls in scenarios with salient tradeoffs. Therefore, the salience of tradeoffs mitigates extreme moral aversion to the market-based outcome and softens the differences in moral reactions between supporters and opponents of unregulated pricing.

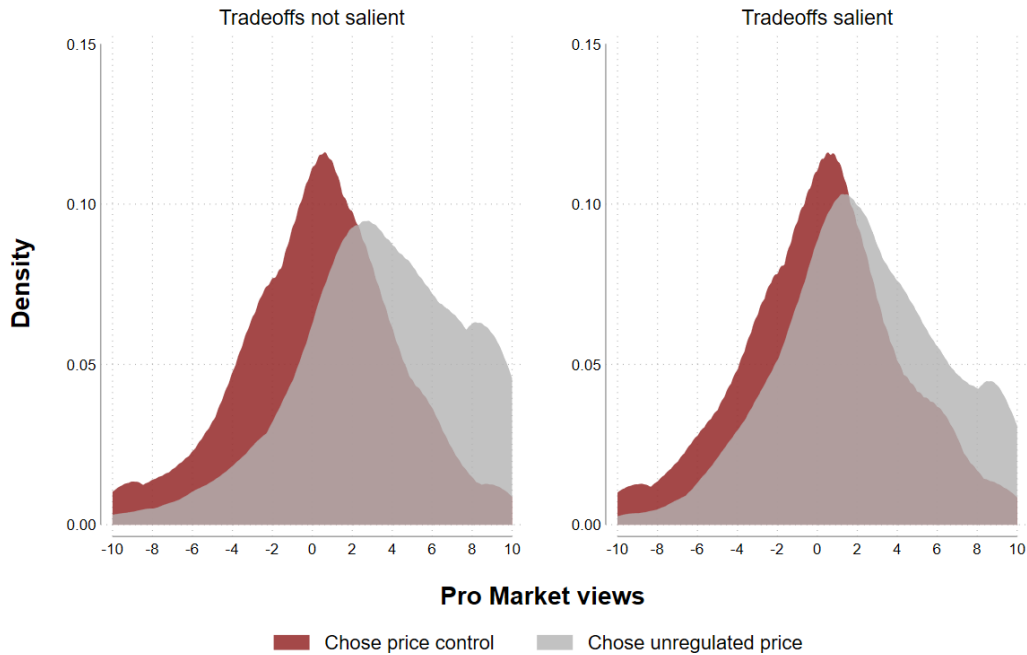
Figure 5: Distribution of relative moral acceptability of unregulated prices by scenario choice and salience of tradeoffs



Notes: The figure displays the kernel density estimations of the relative moral acceptability of the unregulated price option by the respondents' choice (unregulated price or price control) and whether the scenario has salient tradeoffs or not. The relative moral acceptability of the unregulated price scenario is the difference between the score on the moral acceptability of the unregulated price option and the score on the moral acceptability of the price control option. Each of the two scores can take values between -10 and $+10$, in 0.1 increments. The overall average value of the relative score is -6.48 .

Figure 6 shows a similar effect of tradeoff salience on the distribution of respondents' overall view about the role of markets in society according to their choice about price controls. On average, those who supported the unregulated price scenario expressed a more positive attitude toward markets in general than those who preferred price controls (2.67 versus 0.28, p -value of differences <0.001). Moreover, among participants who supported unregulated prices, those who did so when evaluating scenarios without salient tradeoffs were overall stronger supporters of a market economy in general.²³

Figure 6: Distribution of attitudes toward markets by scenario choice and salience of tradeoffs



Notes: The figure displays the kernel density estimations of the pro-market attitude score of respondents, by their scenario choice (unregulated price or price control), and whether the scenarios that they read have salient tradeoffs or not. The pro-market attitudes score is the average of three scores: agreement with the claim that markets are fair for society, agreement with the statement that markets promote innovation and growth, and agreement with the statement that the government is too active in the economy. Each of the three scores can take values from -10 to $+10$ in 0.1 increments.

²³ Appendix Figure B5 shows similar evidence when we consider the distribution of political views on economic issues. For scenarios without tradeoff salience, the political preferences on economic issues between supporters and opponents of unregulated prices are more different than for scenarios with salient tradeoffs. The differences in political views on social issues are much smaller.

3.6 Exploring the motivations for scenario choices: Text analysis

The analyses above suggest that moral considerations likely drive the effects of the various scenario features in the scenario choice and the respondents' choice depends on their broader attitudes toward and views about the role of markets in society. In particular, we observe that the strong effect of tradeoff salience on support for unregulated prices is accompanied by a reduction in extreme moral reactions against unregulated prices and a less extreme sorting of individuals supporting either policy regime.

To further explore this interpretation, we rely on the open, unstructured responses that respondents gave to the survey questions about their motivations for their scenario choice. We perform two forms of text analysis: keyword frequency and topic modeling. Figure 7 shows the frequency of 12 keywords in the open answers, separately by scenario configuration choice and salience of tradeoffs. The selected terms are “fair,” “unfair,” “moral,” “gouge,” “afford,” “access,” “market,” “free,” “economy,” “profit,” “supply,” and “demand.”²⁴ These are among the most frequent words the respondents used, after excluding stop words and common, “neutral” terms.

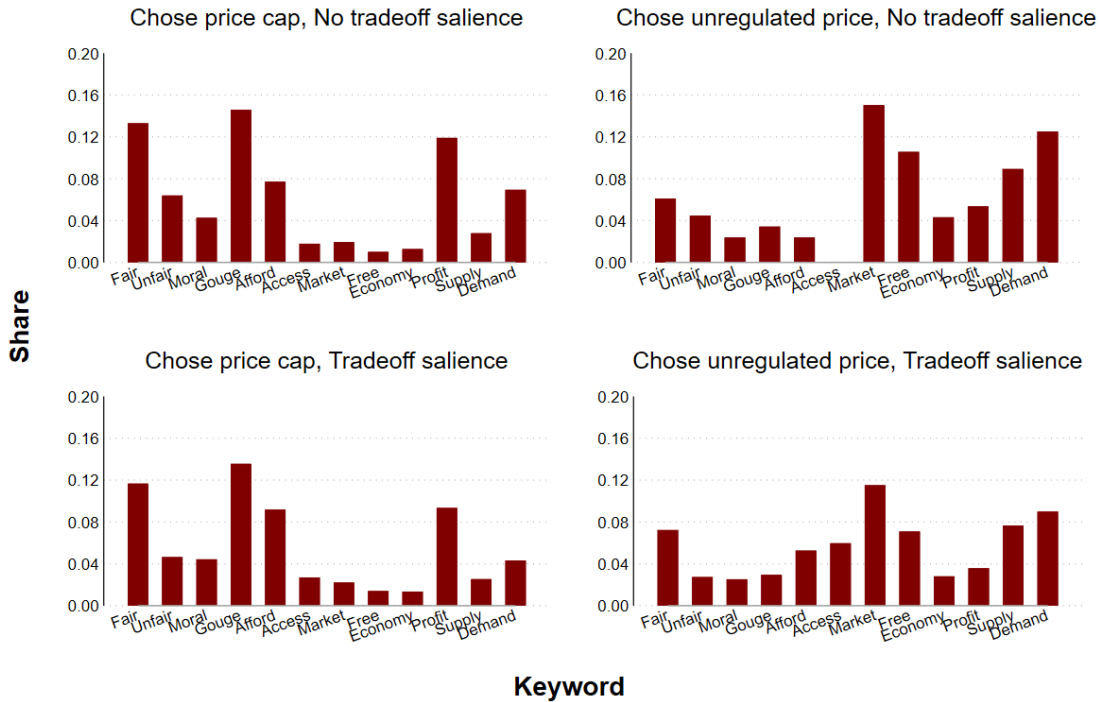
For scenarios where tradeoffs are not salient, we observe striking differences in the use of these words. Opponents to unregulated prices frequently rely on terms such as “(un)fair,” “moral,” and “afford” to explain their motivations. They also employ terms related to the functioning of the market that are likely to have a more negative connotation, such as “gouge” and “profit.” Supporters for unregulated prices in scenarios without salient tradeoffs use terms such as “market,” “free,” “supply,” and “demand” more frequently. For scenarios where tradeoffs are salient, there are generally smaller differences in the frequency of the use of these words between supporters and opponents of unregulated prices. The former, in particular, seem to rely less exclusively on arguments related to efficiency and on values such as freedom and mention terms like “access” and “afford” more frequently. Our topic analysis relies on the latent Dirichlet allocation, with four topics emerging as distinct.²⁵ Based on the words that we estimate to be more representative of

²⁴ More precisely, we “stem” words with the same root and group them in one of these 12 words. For example, “fair” groups together the words “fair,” “fairness,” “fairer,” etc.; “gouge” groups “gouge,” “gouging,” etc.; and so on.

²⁵ To rely on a larger sample and enhance the accuracy of the predicted topics, we conduct the analysis on all comments in the first and the second survey wave and use the `ldagibbs` command in Stata (Schwartz 2018). Before running this procedure, we stem several words and indicate various terms with the same root as the same word. For example (as also visible in the table above), terms such as “fair,” “fairer,” “fairness,” and “fairest” are all subsumed into “fairx”; “free” and “freedom” are lumped together in “freex”; and so on. We also exclude several common words and stop words, punctuation symbols, and any word with four letters or less (note that fairx or freex count, for example, as five-letter words and are therefore included).

each topic, we label the four topics as “access/affordability,” “fairness,” “exploitation,” and “market/freedom.”

Figure 7: Frequency of keywords in open comments in wave 1, by scenario choice and salience of tradeoffs

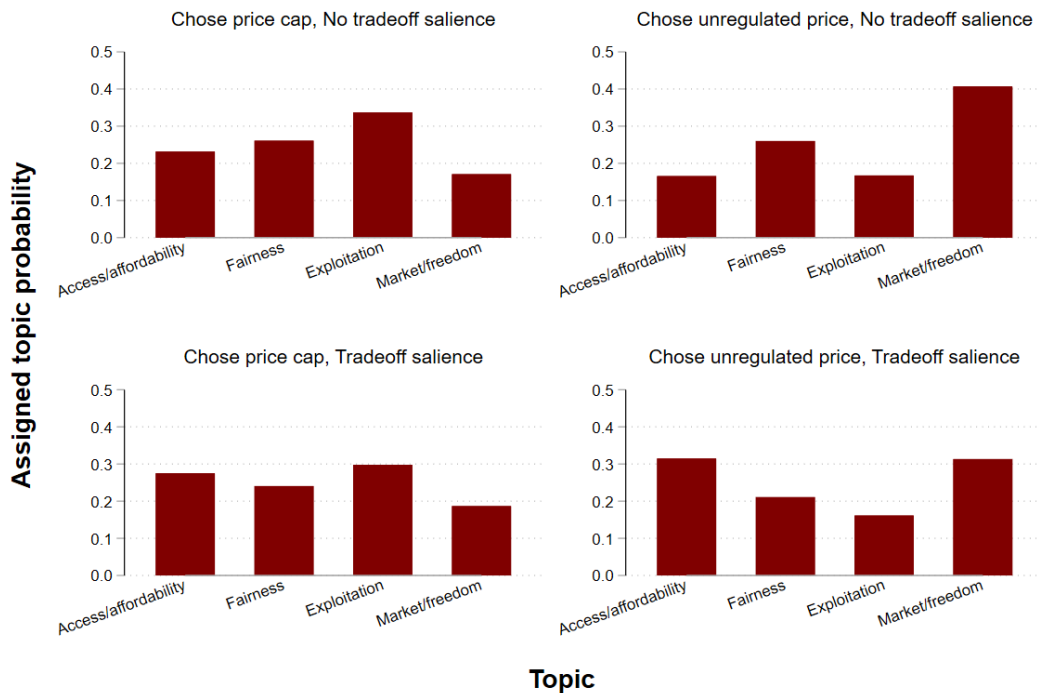


Notes: For each word on the x-axis, the graphs report the share of open comments by respondents in wave 1 that contained that word. The responses are grouped by the respondents’ scenario choice and whether they evaluated scenarios with or without tradeoff salience.

Figure 8 shows that our findings are consistent with those from the keyword analysis (in Figure 7) and with the evidence from Figures 5 and 6 about the distribution of the relative moral acceptability index and the overall pro-market orientation of the respondents. Again, when tradeoffs are not salient, supporters of price controls and unregulated prices differ substantially in the arguments that they raise to motivate their choices, with supporters of price controls being much more focused on arguments about exploitation, fairness, and affordability. In contrast, motivations based on the functioning of markets and on freedom dominate the open answers of those who support unregulated prices. The salience of tradeoffs significantly softens the differences in arguments between the two groups. Table 6 reports parameter estimates from the regression analyses. In columns (1)–(12), we report estimates from models where the outcome variable has a value of 100 if the specific keyword is present in a respondent’s open answer and

zero otherwise. The models whose estimates are in columns (13)–(16) have the estimated probability of a topic occurring in a given open comment, multiplied by 100, as the left-hand-side variable. The regressors are indicators for whether a respondent chooses the unregulated price scenario, whether tradeoffs are salient in the scenario examined by the respondent, and the product of the two variables. The results confirm the descriptive evidence from Figures 7 and 8 and its interpretation.²⁶

Figure 8: Estimated probability that a topic appears in an open comment, by scenario choice and salience of tradeoffs in wave 1



Notes: The graphs report the estimated probability that a topic appears in an open comment by respondents in wave 1. The responses are grouped by scenario choice of the respondents and whether the respondent reads scenarios with or without salience to tradeoffs. We applied Latent Dirichelet Allocation (LDA) to the text of all answers to the open-ended question in the survey that asked to motivate the fairness and morality judgments for each version of a scenario, and the choice of one of the versions. We used the `ldagibbs` command in Stata (Schwartz 2018). See Appendix Table B5 for more details.

²⁶ Appendix Figure B6 shows the distribution of the length of the open text comments, in terms of number of words, by tradeoff salience, and choice of the price regime. Longer comments may indicate that a respondent felt more strongly about their position. The group of respondents with longer comments, on average, are those who supported unregulated prices and received scenarios with non-salient tradeoffs. Figure 6 shows that this group is also the most characterized in terms of strong, positive attitudes toward the role of markets in society. Comments by participants who received scenarios with salient tradeoffs are overall slightly shorter than comments in conditions without tradeoff salience and with equal length regardless of the selected price regime. We interpret this additional evidence as again implying that the salience of economic consequences may soften underlying ideological differences between proponents and opponents of unregulated prices. The greater length of comments in conditions without salience to tradeoffs may also indicate a need for elaborating additional motivations for one’s choice.

Table 6: Word frequency and topic probability by scenario choice and salience of tradeoffs: Regression estimates

Keyword/topic:	Fair (1)	Unfair (2)	Moral (3)	Gouge (4)	Afford (5)	Access (6)	Market (7)	Free (8)
Chose Unregulated price	-7.20*** (1.14)	-1.93** (0.93)	-1.88*** (0.71)	-11.16*** (0.99)	-5.34*** (0.79)	-1.78*** (0.26)	13.09*** (1.41)	9.56*** (1.20)
Salient tradeoff	-1.63 (1.00)	-1.75** (0.69)	0.16 (0.62)	-1.02 (1.06)	1.47* (0.85)	0.92** (0.46)	0.28 (0.44)	0.40 (0.34)
Chose Unregulated price X Salient tradeoff	2.76* (1.53)	0.03 (1.14)	-0.02 (0.95)	0.55 (1.35)	1.42 (1.19)	5.05*** (0.78)	-3.79** (1.68)	-3.87*** (1.41)
Constant	13.30*** (0.67)	6.40*** (0.48)	4.27*** (0.40)	14.58*** (0.70)	7.72*** (0.53)	1.78*** (0.26)	1.94*** (0.27)	1.01*** (0.20)
Observations	6,526	6,526	6,526	6,526	6,526	6,526	6,526	6,526
R-squared	0.008	0.004	0.002	0.028	0.007	0.013	0.049	0.035

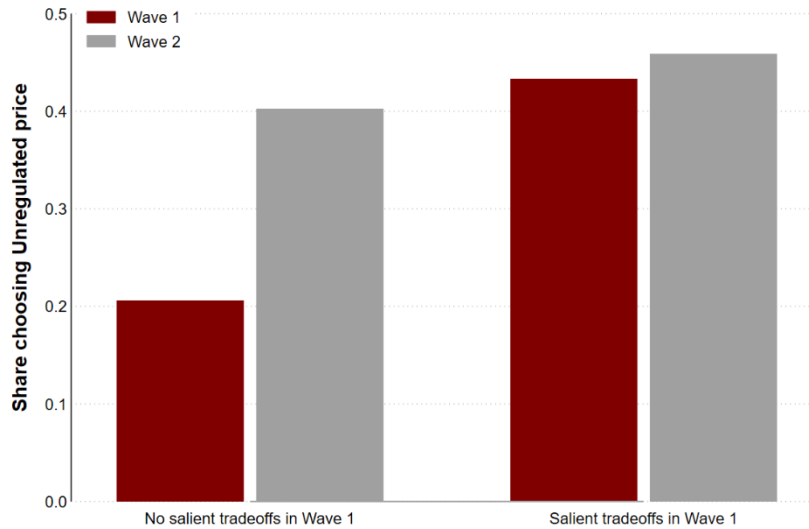
Keyword/topic:	Economy (9)	Profit (10)	Supply (11)	Demand (12)	Topic: Access/affordability (13)	Topic: Fairness (14)	Topic: Exploitation (15)	Topic: Market/freedom (16)
Chose Unregulated price	3.04*** (0.81)	-6.55*** (1.08)	6.14*** (1.15)	5.56*** (1.37)	0.043*** (0.007)	-0.020*** (0.006)	-0.039*** (0.007)	0.016*** (0.005)
Salient tradeoff	0.07 (0.35)	-2.56*** (0.93)	-0.25 (0.49)	-2.62*** (0.69)	-0.066*** (0.007)	-0.001 (0.010)	-0.169*** (0.007)	0.236*** (0.011)
Chose Unregulated price X Salient tradeoff	-1.58 (0.96)	0.78 (1.36)	-1.02 (1.40)	-0.89 (1.64)	0.106*** (0.011)	-0.029** (0.012)	0.033*** (0.010)	-0.110*** (0.013)
Constant	1.28*** (0.22)	11.90*** (0.64)	2.79*** (0.32)	6.94*** (0.50)	0.232*** (0.004)	0.261*** (0.004)	0.337*** (0.005)	0.171*** (0.003)
Observations	6,526	6,526	6,526	6,526	6,526	6,526	6,526	6,526
R-squared	0.005	0.014	0.015	0.009	0.038	0.009	0.113	0.145

Notes: The parameter estimates are from OLS regressions. Each observation corresponds to a different respondent. In the case of keywords, the outcome variables have a value of 100 if that particular word is present in a given open comment and is zero otherwise. For the topics, the outcome variable is the estimated probability of a topic occurring in a given open comment, multiplied by 100. The right-hand-side variables reported in the first column are binary indicators for the scenario choice and the salience of tradeoffs and the interaction between these two indicators. Because we multiply the outcome variables by 100, the reported figures correspond to estimated percentage point changes. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

3.7 The effect of tradeoff salience within subjects

Our primary analyses rely on between-subject variation, where we estimate a large positive effect of tradeoff salience on support for unregulated prices thanks to the random assignment of each respondent, in wave 1, to a scenario with or without tradeoff salience. We can use the evidence from wave 2 to compare the between- and within-individual effect. Recall that respondents in wave 2 of the survey received the same scenario they saw in wave 1 except that the tradeoffs were salient to every respondent in this second round. All other scenario features were the same in both waves; as such, our specific interest is in comparing the tradeoff salience effects in the between- and within-subject analyses. Figure 9 shows that support for unregulated pricing for respondents who saw a scenario without salient tradeoffs in wave 1 was about 20% in that wave and roughly 40% in wave 2. The support for unregulated pricing by the respondents assigned to scenarios with salient tradeoffs in both the first and second wave was around 40% in each wave.

Figure 9: Support for unregulated price scenario in waves 1 and 2 by tradeoff salience in wave 1



Notes: The sample includes participants who responded to both survey waves. In the second wave, all participants read scenarios with salient tradeoffs.

In the first column of Table 7 we report, for comparison, the parameter estimates from our main regression specification for wave 1 (the same as in column (1) of Table 3). The estimates in column (2) are from the same model, but the sample includes only respondents who participated in both waves. The estimates of the tradeoff salience effect are very similar in these two scenarios (22.77 and 23.17, respectively). Column (3) displays results from a regression with data from both

waves, again including only respondents who participated in both surveys. Because all respondents in wave 2 saw scenarios with salient tradeoffs, the variation in tradeoff salience from wave 1 identifies the coefficient of interest—a within-subject variation.²⁷ Again, the estimated effect of salient tradeoffs (23.06) is very similar to those in columns (1) and (2). In a model that includes individual fixed effects, the estimated within-subject effect of the salience of tradeoffs is 17.08 (column (4)). Therefore, overall, the effect of the salience of tradeoffs on the approval of unregulated pricing is similar between and within participants.

Table 7: Support for unregulated price scenario in waves 1 and 2: Regression estimates

Outcome:	100 if chose Unregulated price, 0 if chose Price control			
Sample:	All respondents in Wave 1	Respondents in Wave 1 who participated in Wave 2	Respondents to Waves 1 and 2	
	(1)	(2)	(3)	(4)
Drug	-18.80*** (1.54)	-19.01*** (2.52)	-16.81*** (2.12)	
Sanitizer	-11.27*** (1.58)	-10.31*** (2.61)	-6.66*** (2.23)	
Moisturizer	-7.17*** (1.61)	-6.28** (2.63)	-7.11*** (2.19)	
Salient tradeoff	22.77*** (1.09)	23.17*** (1.77)	23.06*** (1.77)	17.08*** (3.13)
Cost increase	4.74*** (1.09)	2.86 (1.78)	5.58*** (1.50)	
Pandemic	-1.59 (1.09)	-5.07*** (1.77)	-5.52*** (1.50)	
Canadian	-2.58** (1.09)	-2.81 (1.78)	-2.10 (1.51)	
Constant	29.63*** (1.59)	31.77*** (2.61)	29.15*** (2.31)	23.46*** (1.70)
Individual fixed effects				x
Observations	6,760	2,538	5,076	5,076
R-squared	0.084	0.086	0.063	0.669

Notes: In the second survey wave, all participants read scenarios with salient tradeoffs. The parameter estimates are from OLS regressions. Column (1) displays the same estimates as in column (2) of Table 2. Column (2) reports estimates from the same econometric specification as the estimates in column (1) but is limited to the responses, in wave 1, of the participants who took part in the survey in both waves. The estimates in columns (3) and (4) are from a regression that includes data from both waves, with two observations (one per wave) for each participant. Because we multiply the outcome variable indicator by 100, the reported figures correspond to estimated percentage point changes. Robust standard errors for the estimates in columns (1) and (2), and clustered by respondent for the estimates in column (3) and (4), are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

²⁷ Let $Y_{WT} = \alpha + \beta TO + \gamma W2$, where $TO = 1$ if the observed scenario includes salient tradeoffs, and zero otherwise, and $W2 = 1$ if the observation is in wave 2 and is zero if in wave 1. This implies that $Y_{W2=0, TO=0} = \alpha$; $Y_{W2=0, TO=1} = \alpha + \beta$; $Y_{W2=1, TO=1} = \alpha + \beta + \gamma$. Note that there are no observations with $W2 = 1$ and $TO = 0$. Therefore, the difference-in-differences of interest is $(Y_{W2=1, TO=1} - Y_{W2=0, TO=0}) - (Y_{W2=1, TO=1} - Y_{W2=0, TO=1}) = (\alpha + \beta + \gamma - \alpha) - (\alpha + \beta + \gamma - (\alpha + \beta)) = \beta$, that is, the coefficient on the salient tradeoff indicator TO .

3.8 The no-reason scenarios

In Appendix B, we report findings from the analysis of the responses to versions of the surveys where the market scenarios did not indicate any reason for the price increases. The objective of this additional condition was to investigate whether the respondents' choices and reasoning about price increases in the absence of any context differ from scenarios that included a reason for the price increase. On the one hand, in the absence of any explanations, individuals may presume that the higher prices are a response to demand changes, and as such, they end up penalizing consumers. If this is the prevailing conjecture, then their reaction to the no-reason scenarios should be similar to their reaction to the “no salient tradeoffs” conditions. On the other hand, if individuals view prices as indicators of relative scarcity that guide consumption, production, and investment decisions, we would expect them to include a broader set of economic considerations in their reasoning; in this case, their responses would be closer to the respondents assigned to the “salient tradeoffs” scenarios.

Table B3 and Figures B7–B10 show that the choices of these respondents, their moral reactions, and the arguments they brought to motivate them are much more similar to those of the respondents who received scenarios without salient tradeoffs than those who evaluated scenarios with salient tradeoffs. Supporters of unregulated pricing when no context is provided focus even more on ideological arguments than those who read scenarios that described reasons for the price increases but did not make tradeoffs salient. Those respondents stressed arguments about the positive role of markets in society and the value of freedom. Therefore, an “economics textbook” perception of prices is not immediate for most respondents regardless of what information on context and the reasons for prices changes is provided to them.

3.9 Income and time preferences

In addition to analyzing the impact of our experimental manipulations the preference for one or the other version of each market scenario, the moral reactions to each version, and the donation decision (see below), we are interested in assessing the relationship between the support of a price regime and respondents' overall attitudes toward the role of the market and the state in the economy.²⁸ As additional analyses, we consider here two other factors, among those that we

²⁸ The analyses that we listed here are those who we included in our pre-registration.

measured in the survey, that might plausibly correlate with the respondents' preferences for a given pricing regime.

One such factor is a participant's economic status. Individuals with a low income, for example, might perceive price increases as more problematic because they may be more affected by this change. Appendix Table B3 shows that this is the case in our data. The support for unregulated pricing increases for higher-income brackets; the difference is large and statistically significant between individuals with annual incomes above and below \$80,000 (on average, a 7 percentage-point difference). However, adding indicators for annual income brackets on the right-hand side of a regression model like the one whose parameter estimates are in Table 3 does not alter any of the parameter estimates on the other variables.

Furthermore, the effect of tradeoff salience is the same across the income spectrum, and moral reactions to the different scenarios do not differ systematically by income nor does their distribution and polarization according to tradeoff salience or the preferred market scenario (Figure B13). In regression models where we also add the pro-market attitude score, the coefficient estimates on the various income brackets decrease considerably and are generally not statistically different from zero. In fact, the pro-market attitude score is strongly correlated with income (as well as with political preferences, especially on economic issues). Overall, economic status is thus positively correlated with support for unregulated pricing, but this difference does not provide any additional insight beyond what our key variables explain.

Time preferences may also reasonably affect preferences for a pricing regime. In the scenarios concerning the pharmaceutical drug and the treadmill, when tradeoffs are salient, the economic consequences occur over time. In the short term, freely adjusting prices create more rationing than in a price control regime, whereas the opposite is true in the long term. As such, a more "patient" person may be more likely to support unregulated pricing.

To see how time preferences affect respondents' choices, we included a question from Falk et al. (2016) that produced a self-reported measure of patience. The regression estimates in Appendix Table B4 include, on the right-hand side, the time preference score and its interaction with the indicator for the salience of tradeoffs. We also ran separate analyses for each of the two products where tradeoffs emerged over time. This measure of patience does not have any explanatory power on the preference for a given pricing regime, nor does the effect of tradeoff salience interact with

time preferences for any of the products. Thus, differences in time preferences are not relevant to describe the attitudes toward unregulated prices or price controls.

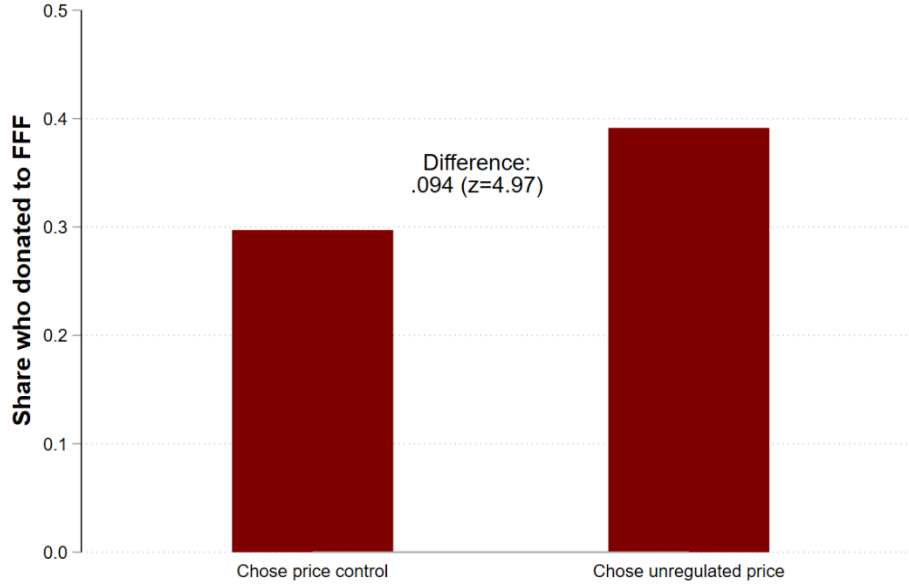
3.10 The donation experiment

In our incentivized donation module in the second round of the survey, respondents had the opportunity to earn an extra \$1 if they allowed the researchers to donate \$1 to the Future of Freedom Foundation (FFF). This organization supports free markets, believes that the market price is always “just,” and is against regulations such as price caps in emergency situations. Thus, respondents who did not allow the researchers to donate effectively paid a monetary cost to avoid supporting unregulated pricing.

Figure 10 shows the donation rates by scenario choice. The low overall donation rate is consistent with the aversion to unregulated prices that the majority of respondents expressed in the survey. Moreover, respondents who chose the unregulated price in our survey experiment were less likely to allow the researchers to donate to FFF than those who chose the price control option (30% versus 40%; p -value of the difference < 0.01). Figure 11 displays the donation rates of participants according to their sequence of scenario choice in waves 1 and 2. This more detailed breakdown shows that those who supported price controls in both survey rounds (about 46% of participants) signaled a significantly lower propensity to donate. Their strong, repeated (stated) opposition to letting prices adjust freely thus corresponds to a higher willingness to forgo the bonus payment to avoid providing financial support to a pro-market foundation.²⁹

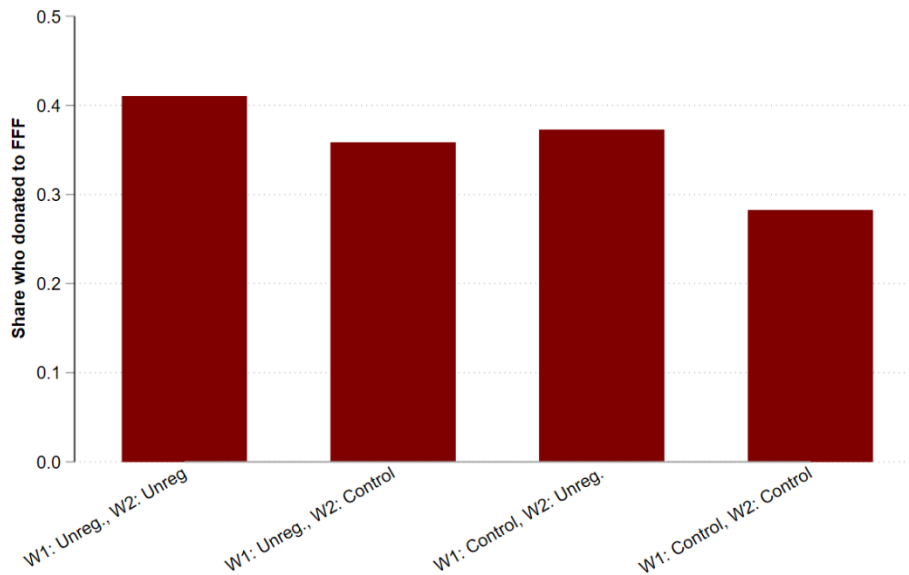
²⁹ Within each category of participants in terms of their scenario preferences in each wave, those who agreed to support the FFF also reported stronger pro-market attitudes than those who did not agree to the donation. There was no difference in donation frequency by income of the respondents.

Figure 10: Donation rates by scenario choice in wave 2



Notes: The figure shows the share of participants in the wave 2 survey who allowed the researchers to donate \$1 to the Future of Freedom Foundation (in exchange for a \$1 bonus), separately by those who selected the unregulated price scenario and those who chose the price control scenario. The z-score refers to a test of difference in proportions ($p < 0.01$).

Figure 11: Donation rates in waves 1 and 2, by scenario choice in each wave and salience of tradeoffs in wave 1



Notes: The figure shows the share of participants in the second survey wave who allowed the researchers to donate \$1 to the Future of Freedom Foundation (in exchange for a \$1 bonus), by sequence of scenario choice (unregulated price or price control) and separately by whether respondents received a scenario with or without salient tradeoffs in wave 1.

4. Conclusions

Our findings support the claim that people do not perceive prices as only signals of relative scarcity, but they attribute moral valence to them. Consistent with prior studies, price spikes in response to demand increases receive widespread opposition and generates moral aversion, mainly out of concerns for fairness toward and exploitation of consumers. Moreover, underlying ideological positions about the role of the market (and the government) in society significantly affect the perceptions and acceptance of price surges. However, when made explicit, economic or tradeoff considerations substantially increase the public's acceptance of price increases in response to demand surges. The reaction to these economic considerations also concerns moral judgments; tradeoff salience increases people's acceptance of price surges and changes their moral reactions to these increases. When individuals are prompted to consider the economic consequences of freely adjusting prices versus price controls, their moral judgments are less radical and less different from one another.

Greater awareness about the pricing decisions of companies, their causes, and their potential consequences may therefore induce less extreme views about the role of the price mechanism in governing the economy. Less ideological and moral polarization may, in turn, improve the political discourse. These findings and interpretations are consistent with Sunstein's (2018) claim that considerations about the costs and benefits of certain policies reduce the influence of ideology on preferences for different regimes. The softening of moral reactions may also derive from a greater reliance by individuals on their "system 2" thinking (Kahneman 2011), again reducing extreme moral reactions as well as the appeal to pre-existing beliefs.

Despite the large positive impact of explicit cost-benefit considerations on the acceptance of the free price mechanism to organize markets, most respondents, even when assigned to scenarios with salient tradeoffs, did not support a "laissez faire" solution to price surges. This suggests that this opposition is rooted in strong beliefs and norms whose violation could represent a cost to society. Policy choices and organizational practices that reduce the likelihood of price spikes may therefore be supported by the public. For example, the recent interest toward shaping a more "resilient" economy includes recommendations to build diversified supply chains and to allow for "redundancies" in manufacturing capacity or emergency stockpiles by companies and

governments, particularly for essential goods (for which we document the strongest opposition to unregulated pricing solutions).³⁰

Our work, more generally, contributes to our understanding of how the public perceives market mechanisms and the drivers of the demand for government intervention such as price controls. Price surges do not only occur during emergencies such as pandemics or natural disasters. From ride-sharing companies to airlines, many firms use algorithms that adjust prices up or down depending on demand and supply conditions. In fact, the growing reliance on algorithmic pricing will likely multiply the cases in which automatic adjustments do not align with other societal values.³¹

³⁰ See, for example, Iakovou and White (2020), Martin (2019), and White House (2021).

³¹ See, for example, Moriarty (2021), PricewaterhouseCoopers (2020), Seele et al. (2021), and Turilliazzi (2020).

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APPENDIX A: THE SURVEY

PART 1: CONSENT SCRIPT

This study on “**Understanding public opinions on markets**” is conducted by university-based researchers. The study was approved by the Homewood Institutional Review Board of Johns Hopkins University and the Office of Research Ethics of the University of Toronto. In the survey we will ask you to **express your opinions regarding the pricing of certain goods under different scenarios**, as well as other questions regarding your characteristics and preferences.

Note that all of the answers that you provide will remain **anonymous and treated with absolute confidentiality**. The researchers do not know your identity, and they will not be able to match your name with the answers that you provide.

It should take you about **10 minutes** to complete the survey diligently. Payment is conditional on diligently completing the entire survey; however, withdrawal is possible at any time if you so desire (any data collected will be destroyed). By completing this survey or questionnaire, you are consenting to be in this research study. **Your participation is voluntary and you can stop at any time.**

The investigators, Drs. Nicola Lacetera and Mario Macis can be contacted for questions. Contact information for Dr. Lacetera: nicola.lacetera@utoronto.ca. Contact information for Dr. Macis: mmacis@jhu.edu. If you have questions about your rights as a research participant, you may contact the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580, e-mail: hirb@jhu.edu, or the Office of Research Ethics at the University of Toronto at (416) 946-3273 or e-mail: ethics.review@utoronto.ca.

If you agree to participate in this study, please continue. If you do not wish to participate, please close this window and your session will end.

PART 2: INFORMING POLICYMAKERS

[Canada]

After completing the study, we will provide all Members of the Federal Parliament as well as the Minister of Justice and Attorney General a comprehensive report of the findings from this survey about pricing and regulation.

Recall that there is no deception in this study. The letters will actually be sent to the subjects indicated above.

Also recall that, just like any other answer to this survey, your expressions of preference will be completely anonymous. Nobody, not even the researchers, will be able to match your responses to your name or identity.

[US]

After completing the study, we will provide US Congress Representatives a comprehensive report of the findings from this survey about pricing and regulation. We will send the same letter to your State's Attorney General.

Recall that there is no deception in this study. The letters will actually be sent to US House Representatives, Senators, and to the State's Attorney General.

Also recall that, just like any other answer to this survey, your expressions of preference will be completely anonymous. Nobody, not even the researchers, will be able to match your responses to your name or identity.

PART 3: RESPONDENT CHARACTERISTICS

What is your age group as of your last birthday?

- Under 18 *[these respondents would be automatically excluded]*
- 18-29
- 30-39
- 40-49
- 50-59
- 60 or above

Are you

- Male
- Female
- Other (please specify)
- Prefer not to answer

With which racial or ethnic group(s) do you most identify?

- Asian
- Black/African American
- Hispanic/Latino
- White/Caucasian
- Indigenous/First Nation
- Other (please specify)

What is your state [province] of residence?

- [choose from menu]

What is your highest degree of education attained?

[Canada]

- High school degree or lower
- Post-high school, non-bachelor degree (e.g., apprenticeship, CEGEP, college)
- Bachelor's degree or higher

[US]

- High school degree/GED or lower
- Associates degree or some college
- Bachelor's degree or higher

What is your current relationship status?

- Single
- Unmarried but in a relationship
- Married/Domestic partnership
- Separated/Divorced
- Widow(er)
- Other (please specify)

What is your parental status?

- I have children
- I do not have children

Which of the following best describes your current labor market status?

- Employed full time
- Homemaker
- Employed part time
- Student
- Self-employed/Entrepreneur
- Retired
- Unemployed
- Other (please specify)

Approximately, what was your total household income, in **2019**?

- \$0-\$19,999
- \$20,000-\$39,999
- \$40,000-\$59,999
- \$60,000-\$79,999
- \$80,000-\$99,999
- \$100,000-\$119,999
- \$120,000 +

What are your religious beliefs?

- Atheist/Agnostic
- Christian
- Jewish
- Muslim
- Other (please specify)

Have your financial conditions changed because of COVID-19?

- Financial conditions have worsened

- Financial conditions have stayed roughly the same
- Financial conditions have improved

On social policy matters, do you think of yourself as:

- Liberal
- Moderate
- Conservative
- Other (please specify)

On economic policy matters, do you think of yourself as:

- Liberal
- Moderate
- Conservative
- Other (please specify)

[US]

For what presidential candidate did you vote in 2020?

- Donald Trump
- Joe Biden
- Other
- I did not vote
- Prefer not to answer

[Canada]

For which party did you vote in the 2019 Federal Elections?

- Liberal party
- Conservative party
- Bloc Québécois
- New Democratic Party
- Green party
- People's party
- I did not vote
- Prefer not to answer

PART 4: VIGNETTES

[Note: Each respondent received one vignette randomly chosen from the 36 vignettes below]

PHARMACEUTICAL DRUG

NO REASON

Unregulated pricing	Price cap
A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. The company raises the price of the drug to \$1,000 per treatment course.	A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course.

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. As a consequence, demand for the drug increases. The company raises the price of the drug to \$1,000 per treatment course.	A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. As a consequence, demand for the drug increases. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course.

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at reducing the severity of the new infectious disease. As a consequence, demand for the drug increases. The company raises the price of the drug to \$1,000 per treatment course.	An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at reducing the severity of the new infectious disease. As a consequence, demand for the drug increases. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent

	that, and imposes a price cap at \$200 per treatment course.
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DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company raises the price of the drug to \$1,000 per treatment course.</p>	<p>A pharmaceutical company developed a d to treat a certain condition, and was sellin the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course.</p>

DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at reducing the severity of the new infectious disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company raises the price of the drug to \$1,000 per treatment course.</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at reducing the severity of the new infectious disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course.</p>

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. As a</p>	<p>A pharmaceutical company developed a drug to treat a certain condition, and was sellin the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. As a</p>

<p>consequence, demand for the drug increases. The company raises the price of the drug to \$1,000 per treatment course. About 30% of patients in need manage to obtain the drug in the next 12 months. One year later, pharmaceutical companies introduce new drugs for the treatment of the disease. The increased supply and competition drive the price down to \$300 per treatment course, and about 80% of patients in need obtain one of the available treatment drugs.</p>	<p>consequence, demand for the drug increases. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course. About 50% of patients in need manage to obtain the drug in the next 12 months. One year later, this drug is still the only available drug to treat the disease, and again, about 50% of patients in need will obtain the treatment drug.</p>
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DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company raises the price of the drug to \$1,000 per treatment course. About 30% of patients in need manage to obtain the drug in the next 12 months. One year later, pharmaceutical companies introduce new drugs for the treatment of the disease. The increased supply and competition drive the price down to \$300 per treatment course, and about 80% of patients in need obtain one of the available treatment drugs.</p>	<p>A pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. New evidence shows that the drug is also effective at reducing the severity of another disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course. About 50% of patients in need manage to obtain the drug in the next 12 months. One year later, this drug is still the only available drug to treat the disease, and again, about 50% of patients in need will obtain the treatment drug.</p>

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at</p>

<p>reducing the severity of the new infectious disease. As a consequence, demand for the drug increases. The company raises the price of the drug to \$1,000 per treatment course. About 30% of patients in need manage to obtain the drug in the next 12 months. One year later, pharmaceutical companies introduce new drugs for the treatment of the new disease. The increased supply and competition drive the price down to \$300 per treatment course, and about 80% of patients in need obtain one of the available treatment drugs.</p>	<p>reducing the severity of the new infectious disease. As a consequence, demand for the drug increases. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course. About 50% of patients in need manage to obtain the drug in the next 12 months. One year later, this drug is still the only available drug to treat the new disease, and again, about 50% of patients in need will obtain the treatment drug.</p>
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DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at reducing the severity of the new infectious disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company raises the price of the drug to \$1,000 per treatment course. About 30% of patients in need manage to obtain the drug in the next 12 months. One year later, pharmaceutical companies introduce new drugs for the treatment of the new disease. The increased supply and competition drive the price down to \$300 per treatment course, and about 80% of patients in need obtain one of the available treatment drugs.</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a pharmaceutical company developed a drug to treat a certain condition, and was selling the drug for \$200 per treatment course. During the pandemic, new evidence shows that the drug is also effective at reducing the severity of the new infectious disease. The company incurs higher per-unit costs to produce and distribute additional doses of the drug. The company plans to raise the price of the drug to \$1,000 per treatment course. However, the government decides to prevent that, and imposes a price cap at \$200 per treatment course. About 50% of patients in need manage to obtain the drug in the next 12 months. One year later, this drug is still the only available drug to treat the new disease, and again, about 50% of patients in need will obtain the treatment drug.</p>

TREADMILL FOR HOME USE

NO REASON

Unregulated pricing	Price cap
<p>A company that produces treadmills specific for home use was selling them at \$200 each. The company raises the price of its treadmills to \$1,000 each.</p>	<p>A company that produces treadmills specific for home use was selling them at \$200 each. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill.</p>

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A company that produces treadmills specific for home use has been selling them at \$200 each. At some point, more people start exercising at home. As a consequence, the demand for treadmills for home use increases. The company raises the price of its treadmills to \$1,000 each.</p>	<p>A company that produces treadmills speci for home use has been selling them at \$200 each. At some point, more people start exercising at home. As a consequence, the demand for treadmills for home use increases. The company plans to raise the price of its treadmills \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill.</p>

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. As a consequence, the demand for treadmills for home use increases. The company raises the price of its treadmills to \$1,000 each.</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. As a consequence, the demand for treadmills for home use increases. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill.</p>

DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A company that produces treadmills specific for home use has been selling them at \$200 each. At some point, more people start exercising at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company raises the price of its treadmills to \$1,000 each.</p>	<p>A company that produces treadmills specific for home use has been selling them at \$200 each. At some point, more people start exercising at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill.</p>

DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company raises the price of its treadmills to \$1,000 each.</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill.</p>

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A company that produces treadmills specific for home use has been selling them at \$200 each. More people start exercising at home. As a consequence, the demand for treadmills for home use increases. The company raises the price of its treadmills to \$1,000 each. About 30% of customers looking for such a treadmill manage to obtain one in the next 12 months. One year later, more physical exercise equipment producers decide to produce treadmills specific for home use. The increased supply and competition drive the price of treadmills down to \$300, and about 80% of customers looking for such a treadmill are able to buy one.</p>	<p>A company that produces treadmills specific for home use has been selling them at \$200 each. More people start exercising at home. As a consequence, the demand for treadmills for home use increases. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill. About 50% of customers looking for a treadmill manage to buy one in the next 12 months. One year later, no other companies have entered the market, and again 50% of customers looking for such a treadmill are able to buy one.</p>

DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>A company that produces treadmills specific for home use has been selling them at \$200 each. At some point, more people start exercising at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company raises the price of its treadmills to \$1,000 each. About 30% of customers looking for such a treadmill manage to obtain one in the next 12 months. One year later, more physical exercise equipment producers decide to produce treadmills specific for home use. The increased supply and competition drive the price of treadmills down to \$300, and about 80% of customers looking for such a treadmill are able to buy one.</p>	<p>A company that produces treadmills specific for home use has been selling them at \$200 each. At some point, more people start exercising at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill. About 50% of customers looking for a treadmill manage to buy one in the next 12 months. One year later, no other companies have entered the market, and again 50% of customers looking for such a treadmill are able to buy one.</p>

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. As a consequence, the demand for treadmills for home use increases. The company raises the price of its treadmills to \$1,000 each. About 30% of customers looking for such a treadmill manage to obtain one in the next 12 months. One year later, more physical exercise equipment producers decide to produce treadmills specific for home use. The increased supply and competition drive the price of treadmills down to \$300, and about 80% of customers looking for such a treadmill are able to buy one.</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. As a consequence, the demand for treadmills for home use increases. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill. About 50% of customers looking for a treadmill manage to buy one in the next 12 months. One year later, no other companies have entered the market, and again 50% of customers looking for such a treadmill are able to buy one.</p>

DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
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<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company raises the price of its treadmills to \$1,000 each. About 30% of customers looking for such a treadmill manage to obtain one in the next 12 months. One year later, more physical exercise equipment producers decide to produce treadmills specific for home use. The increased supply and competition drive the price of treadmills down to \$300, and about 80% of customers looking for such a treadmill are able to buy one.</p>	<p>An infectious disease pandemic hits a country. Before the pandemic, a company that produces treadmills specific for home use was selling them at \$200 each. Because of the pandemic, more people exercise at home. The company incurs higher per-unit costs to produce and distribute additional treadmills. The company plans to raise the price of its treadmills to \$1,000 each. However, the government decides to prevent that, and imposes a price cap at \$200 per treadmill. About 50% of customers looking for a treadmill manage to buy one in the next 12 months. One year later, no other companies have entered the market, and again 50% of customers looking for such a treadmill are able to buy one.</p>
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HAND SANITIZER

NO REASON

Unregulated pricing	Price cap
<p>The typical price of hand sanitizer is \$4 per bottle. A company raises the price to \$20 per bottle.</p>	<p>The typical price of hand sanitizer is \$4 per bottle. A company plans to raise the price to \$20 per bottle. However, the government decides to prevent that, and imposes a price cap of \$4 per bottle.</p>

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and sells it at \$20 per bottle.</p>	<p>The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and plans to sell it at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle.</p>

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and sells it at \$20 per bottle.</p>	<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory to one of the regions where the disease is more widespread, and plans to sell it at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle.</p>

DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory to that region, incurring higher per-unit costs of distribution. The company now sells the hand sanitizer it brings to the region at \$20 per bottle.</p>	<p>The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory to that region, incurring higher per-unit costs of distribution. The company plans to sell the hand sanitizer it brings to the region at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle.</p>

DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of</p>	<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company plans to sell the hand sanitizer it brings to the</p>

distribution. The company now sells the hand sanitizer it brings to the region at \$20 per bottle.	region at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle.
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DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and sells it at \$20 per bottle. About 80% of customers who wish to purchase hand sanitizer are able to do so, whereas 20% are not.	The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and plans to sell it at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand sanitizer are able to do so, whereas 50% are not.

DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and sells it at \$20 per bottle. About 80% of customers who wish to purchase hand sanitizer are able to do so, whereas 20% are not.	The typical price of hand sanitizer in a certain region is \$4 per bottle. The demand for hand sanitizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and plans to sell it at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand sanitizer are able to do so, whereas 50% are not.

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory of hand sanitizer from another region to the one with the shortage, and sells it at \$20 per bottle. About 80% of customers who wish to purchase hand sanitizer are able to do so, whereas 20% are not.</p>	<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory to one of the regions where the disease is more widespread, and plans to sell it at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle. The company decides to no longer move its inventory to the region. About 50% of customers who wish to purchase hand sanitizer are able to do so, whereas 50% are not.</p>

DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company now sells the hand sanitizer it brings to the region at \$20 per bottle. About 80% of customers who wish to purchase hand sanitizer are able to do so, whereas 20% are not.</p>	<p>An infectious disease pandemic hits a country. Washing and sanitizing hands helps reducing infections. As a consequence of the outbreak and its uneven spread across regions, hand sanitizer becomes hard to find in stores in the more severely affected areas. The typical price of hand sanitizer is \$4 per bottle. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company plans to sell the hand sanitizer it brings to the region at \$20 per bottle. However, the local government decides to prevent that, and imposes a price cap of \$4 per bottle. The company decides to no longer move its inventory to the region. About 50% of customers who wish to purchase hand sanitizer are able to do so, whereas 50% are not.</p>

HAND MOISTURIZER

NO REASON

Unregulated pricing	Price cap
The typical price of hand moisturizer is \$4 per tube. A company raises the price to \$20 per tube.	The typical price of hand moisturizer is \$4 per tube. A company plans to raise the price to \$20 per tube. However, the government decides to prevent that, and imposes a price cap of \$4 per tube.

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand moisturizer from another region to the one with the shortage, and sells it at \$20 per tube.	The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand moisturizer from another region to the one with the shortage, and plans to sell it at \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube.

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, and sells it for \$20 per tube.	An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, and plans to sell it for \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube.

DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
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<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory to that region, incurring higher per-unit cost of distribution. The company now sells the hand moisturizer it brings to the region for \$20 per tube.</p>	<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory to that region, incurring higher per-unit cost of distribution. The company plans to sell the hand moisturizer it brings to the region for \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube.</p>
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DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, NO SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company now sells the hand moisturizer it brings to the region at \$20 per tube.</p>	<p>An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company plans to sell the hand moisturizer it brings to the region at \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube.</p>

DEMAND INCREASE, NO PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand moisturizer from another region to the one with the shortage, and sells it at \$20 per tube. About 80% of customers who wish to purchase</p>	<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory of hand moisturizer from another region to the one with the shortage, and plans to sell it at \$20 per tube. However, the local</p>

<p>hand moisturizer are able to do so, whereas 20% are not.</p>	<p>government decides to prevent that, and imposes a price cap of \$4 per tube. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand moisturizer are able to do so, whereas 50% are not.</p>
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DEMAND INCREASE, NO PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory to that region, incurring higher per-unit cost of distribution. The company now sells the hand moisturizer it brings to the region for \$20 per tube. About 80% of customers who wish to purchase hand moisturizer are able to do so, whereas 20% are not.</p>	<p>The typical price of hand moisturizer in a certain region is \$4 per tube. The demand for hand moisturizer in that region increases unexpectedly, and is currently higher than the local availability. A company decides to move some of its inventory to that region, incurring higher per-unit cost of distribution. The company plans to sell the hand moisturizer it brings to the region for \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand moisturizer are able to do so, whereas 50% are not.</p>

DEMAND INCREASE, PANDEMIC, NO SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, and sells it for \$20 per tube. About 80% of customers who wish to purchase hand moisturizer are able to do so, whereas 20% are not.</p>	<p>An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, and plans to sell it for \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube. The company decides to no longer move its inventory to the</p>

	region with the shortage. About 50% of customers who wish to purchase hand moisturizer are able to do so, whereas 50% are not.
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DEMAND INCREASE, PANDEMIC, SALIENT COST FACTORS, SALIENT TRADEOFFS

Unregulated pricing	Price cap
<p>An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company now sells the hand moisturizer it brings to the region at \$20 per tube. About 80% of customers who wish to purchase hand moisturizer are able to do so, whereas 20% are not.</p>	<p>An infectious disease pandemic hits a country. Because of the pandemic, more people spend time at home, which causes their skin to be dry. As a consequence of the outbreak and its uneven spread across regions, hand moisturizer becomes hard to find in stores in the more severely affected areas. The typical price of hand moisturizer is \$4 per tube. A company decides to move some of its inventory to one of the regions where the disease is more widespread, incurring higher per-unit costs of distribution. The company plans to sell the hand moisturizer it brings to the region at \$20 per tube. However, the local government decides to prevent that, and imposes a price cap of \$4 per tube. The company decides to no longer move its inventory to the region with the shortage. About 50% of customers who wish to purchase hand moisturizer are able to do so, whereas 50% are not.</p>

MORALITY JUDGMENTS AND CHOICE

Respondents saw each version of their assigned scenario sequentially – first the “unregulated pricing”, then the “price cap” version. For each version, they were asked the following three questions:

Using the slider below, please rate this scenario as:

Completely unfair to customers Completely fair to customers
-10 _____ 0 _____ +10

Completely unfair to the company Completely fair to the company
-10 _____ 0 _____ +10

Completely morally unacceptable Completely morally acceptable
-10 _____ 0 _____ +10

Next, respondents were shown the two versions of their assigned scenario side-by-side, and they were asked the following two questions:

We now ask you to select, among the two scenarios described above, the one that you would prefer to have in place in your country.

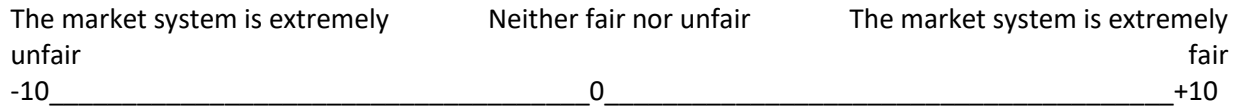
- [scenario 1]
- [scenario 2]

Please briefly describe in the space provided the main reason(s) for your answers and choice above
[open answer]

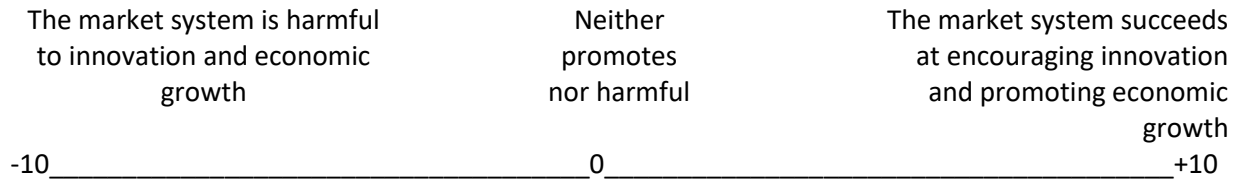
PART 5: ATTITUDES TOWARD MARKETS AND REGULATION

Please answer the following questions by placing the sliders in the position that best represents your view on each specific topic.

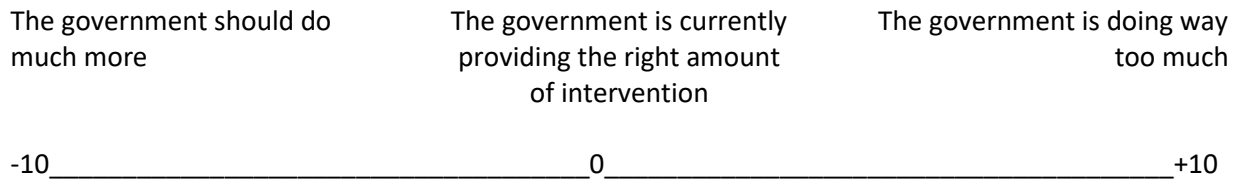
Some people think that the market system leads to an unfair distribution of income and other resources. Others think that the market system is fair in rewarding productivity and hard work. Which of these views is closer to your own view?



Some people think that the market system is essential to encourage innovation and promote economic growth. Others think that the market system is harmful to innovation and economic growth. Which of these views is closer to your own view?



Some people think the government should do more to solve people’s problems. Others think that the government does too many things that should be left to individuals and businesses (where “government” includes federal, state, and local). Which of these views is closer to your own view?



[NOT INCLUDED IN WAVE 2]

For each of the following products or services, please indicate whether you think there should be more government intervention (where “government” includes federal, state, and local) or whether the provision should be left to the market system.

Pharmaceutical drugs

The government should do much more to ensure access	There is currently the right balance of market-based provision and government support	Provision should be left entirely to the market system
-10 _____	0 _____	_____ +10

Health care services

The government should do much more to ensure access	There is currently the right balance of market-based provision and government support	Provision should be left entirely to the market system
-10 _____	0 _____	_____ +10

Home fitness equipment

The government should do much more to ensure access	There is currently the right balance of market-based provision and government support	Provision should be left entirely to the market system
-10 _____	0 _____	_____ +10

Personal hygiene and beauty products

The government should do much more to ensure access	There is currently the right balance of market-based provision and government support	Provision should be left entirely to the market system
-10 _____	0 _____	_____ +10

Hand sanitizer, face masks and other protective equipment

The government should do much more to ensure access

There is currently the right balance of market-based provision and government support

Provision should be left entirely to the market system

-10 _____ 0 _____ +10

Electronics

The government should do much more to ensure access

There is currently the right balance of market-based provision and government support

Provision should be left entirely to the market system

-10 _____ 0 _____ +10

Education

The government should do much more to ensure access

There is currently the right balance of market-based provision and government support

Provision should be left entirely to the market system

-10 _____ 0 _____ +10

PART 6: PERCEPTION OF IDEOLOGICAL OR POLITICAL BIAS

Did you feel this survey was politically biased?

- Yes, left-wing biased
- Yes, right-wing biased
- No, not politically biased

Did you feel this survey was ideologically biased?

- Yes, pro-market biased
- Yes, pro- government regulation BIASED
- No, not ideologically biased

PART 7: MORALITY, TIME PREFERENCES, TRUST, ALTRUISM
[NOT INCLUDED IN WAVE 2]

Now we want to ask you a different type of question that helps us better understand how people think about decisions involving life and death. Please consider the following hypothetical scenario:

Casey is a crewperson on a marine-research submarine traveling underneath a large iceberg. An onboard explosion has damaged the ship, killed and injured several crewmembers. Additionally, it has collapsed the only access corridor between the upper and lower parts of the ship. The upper section, where Casey and most of the others are located, does not have enough oxygen remaining for all of them to survive until the submarine has reached the surface. Only one remaining crewmember is located in the lower section, where there is enough oxygen. There is an emergency access hatch between the upper and lower sections of the ship. If released by an emergency switch, it will fall to the deck and allow oxygen to reach the area where Casey and the others are. However, the hatch will crush the crewmember below, who was knocked unconscious and is lying beneath it. Casey and the rest of the crew are almost out of air though, and they will all certainly die if Casey does not do this.

Is it appropriate for Casey to release the hatch and crush the crewmember below to save himself and the other crew members?

- Yes
- No

The next questions will help us to better understand your general attitudes and preferences.

In comparison to others, are you a person who is generally willing to give up something today in order to benefit from that in the future or are you not willing to do so?

Please use a scale from 0 to 10, where a 0 means you are “completely unwilling to give up something today” and a 10 means you are “very willing to give up something today”. You can also use the values in-between to indicate where you fall on the scale.

Completely unwilling to give up
something today

Very willing to give up
something today

0 _____ 10

How well does the following statement describe you as a person? As long as I am not convinced otherwise, I assume that people have only the best intentions.

Please use a scale from 0 to 10, where 0 means “does not describe me at all” and a 10 means “describes me perfectly”. You can also use the values in-between to indicate where you fall on the scale.

Does not describe me at all

Describes me perfectly

0 _____ 10

How do you assess your willingness to share with others without expecting anything in return when it comes to charity?

Please use a scale from 0 to 10, where 0 means you are “completely unwilling to share” and a 10 means you are “very willing to share”. You can also use the values in between to indicate where you fall on the scale.

Completely unwilling to share

Very willing to share

0 _____ 10

PART 8: INCENTIVIZED DONATION
[INCLUDED ONLY IN WAVE 2]

We will now give you the possibility to make a donation to the following organization:

“Future of Freedom Foundation”

The mission of the Future of Freedom Foundation is to advance freedom by providing an uncompromising moral and economic case for individual liberty, free markets, private property, and limited government. Here are some excerpts from a recent Future of Freedom Foundation article on “just prices”:

- *A just price is the market price.*
- *A just price is any price based on supply and demand.*
- *A just price includes any price that is raised in times of shortages and natural disasters.*
- *A just price is any price not constrained by some government regulation.*

If you decide to have \$1 donated to Future of Freedom Foundation, we (the researchers) will also transfer \$1 to you. So, if you decide to donate to Future of Freedom Foundation, you will receive an additional \$1. If instead you decide not to donate to Future of Freedom Foundation, you will not receive this additional payment.

Note: Just like any other answer to this survey, your donation decision will be anonymous. That is, the researchers will be unable to match your donation decision to your name.

So, would you like to have us donate \$1 on your behalf to the Future of Freedom Foundation?

- Yes
- No

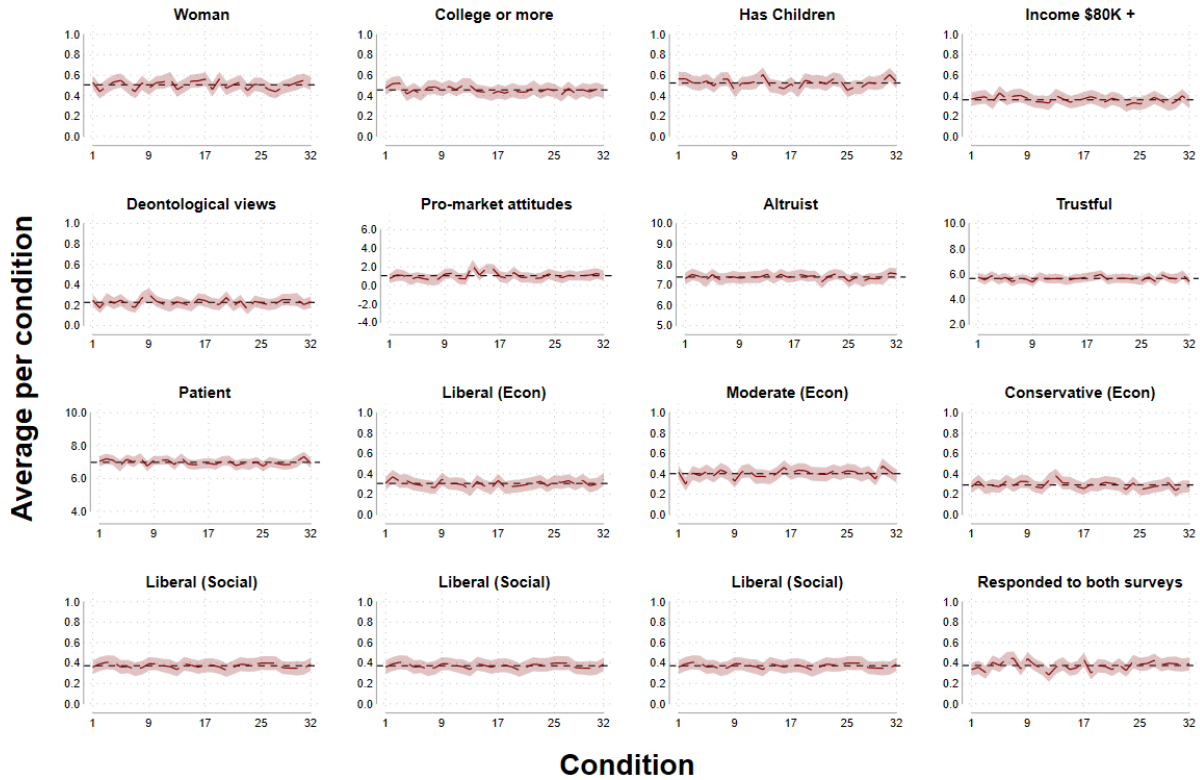
[SHOWED IN A SEPARATE PAGE AFTER THE RESPONDENTS HAD MADE THEIR DONATION DECISION]:

Please note: Funding for the donation is provided by a University of Toronto grant. The donation option was included purely for research purposes and it does not represent an endorsement of the organization by Johns Hopkins University or the University of Toronto, or by the authors of the study.

We thank you for your time spent taking this survey. Your response has been recorded.

APPENDIX B: ADDITIONAL ANALYSES

Figure B1: Balance analyses



Notes: In each chart, the horizontal axis indicates the thirty-two conditions that result from the cross-randomization of products, salience of costs, context and salience of tradeoffs. The horizontal dashed line indicates the overall average of the variable indicated in the title of the panel; the red line reports the average of that variable for each condition, and the shaded area represent the 95% confidence intervals around the means.

Figure B2: Distribution of *fairness to consumer* scores for each scenario version, by selected version and salience of tradeoffs



Notes: The charts display the kernel density estimations of the scores on fairness to the customers that participants reported for each of the two version of their assigned scenario, separately by the version they chose and whether the versions they read includes salient tradeoffs or not. . The score cores could take values between -10 and +10, in 0.1 increments, and its average value is -4.39 for the unregulated price version of a scenario, and 3.22 for the price control version.

Figure B3: Distribution of *fairness to the company* scores for each scenario version, by selected version and salience of tradeoffs



Notes: The charts display the kernel density estimations of the scores on fairness to the company that participants assigned to each of the two version of their assigned scenario, separately by the version they chose and whether the versions they read includes salient tradeoffs or not. The score cores could take values between -10 and +10, in 0.1 increments, and its average value is -1.76 for the unregulated price version of a scenario, and 0.51 for the price control version.

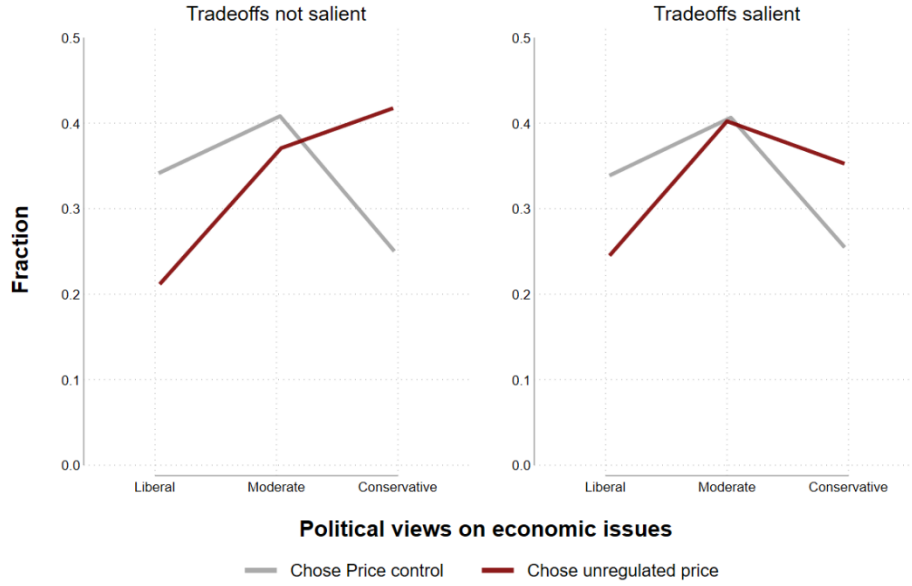
Figure B4: Distribution of *moral acceptability* scores for each scenario version, by selected version and salience of tradeoffs



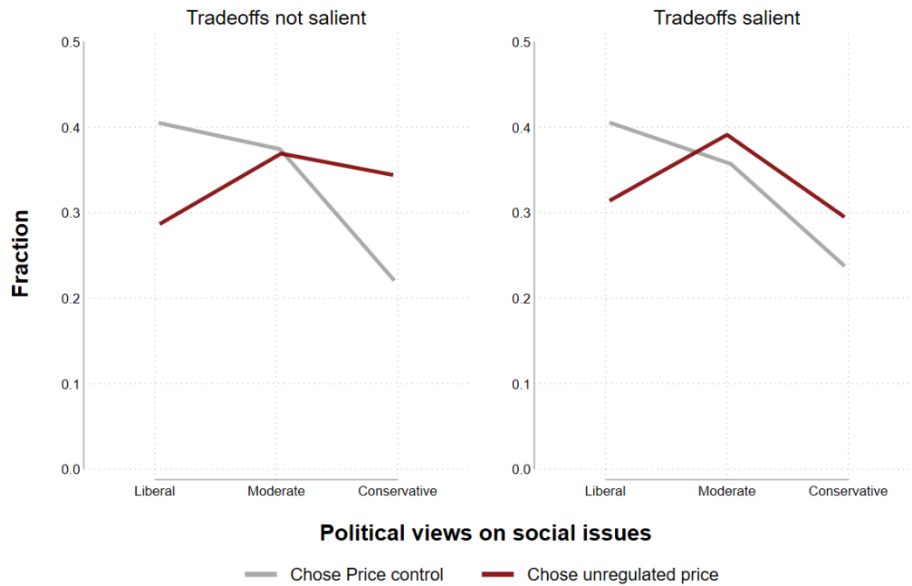
Notes: The charts display the kernel density estimations of the scores on moral acceptability that participants assigned to each of the two version of their assigned scenario, separately by the version they chose and whether the versions they read includes salient tradeoffs or not. The score cores could take values between -10 and +10, in 0.1 increments, and its average value is -4.28 for the unregulated price version of a scenario, and 2.20 for the price control version.

Figure B5: Distribution of political views on economic and social issues, by selected price regime and salience of tradeoffs

A: Views on economic issues

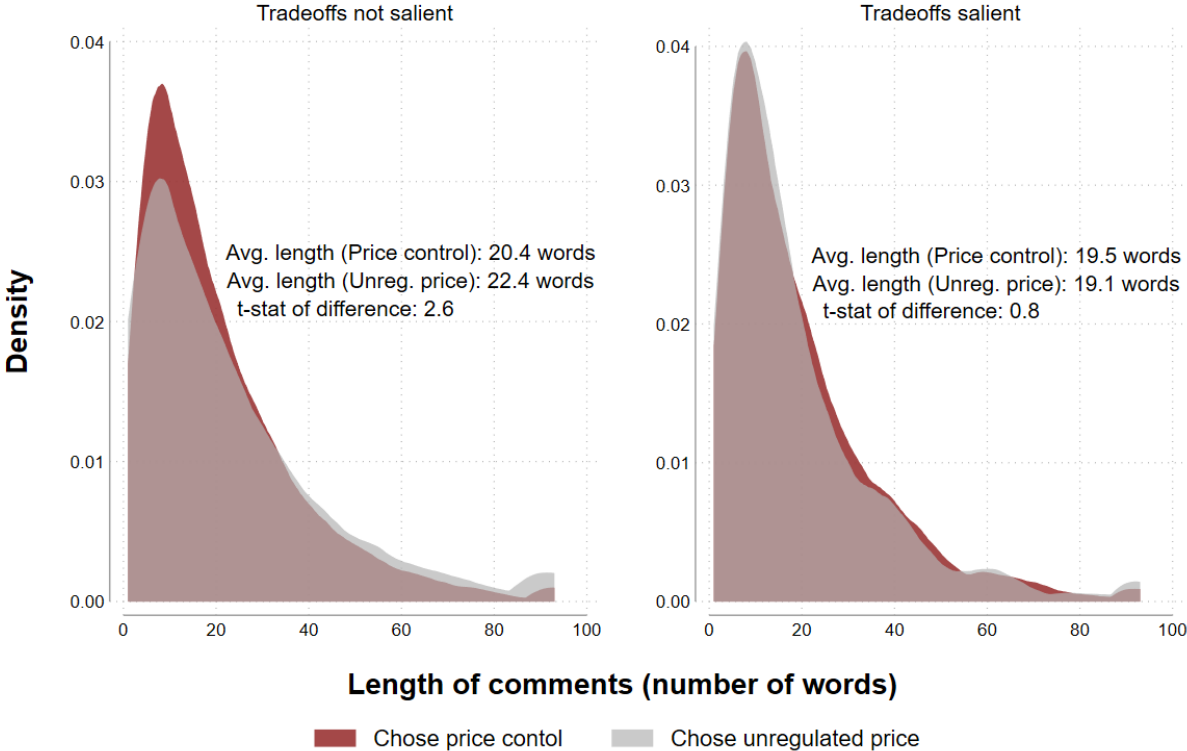


B: Views on social issues



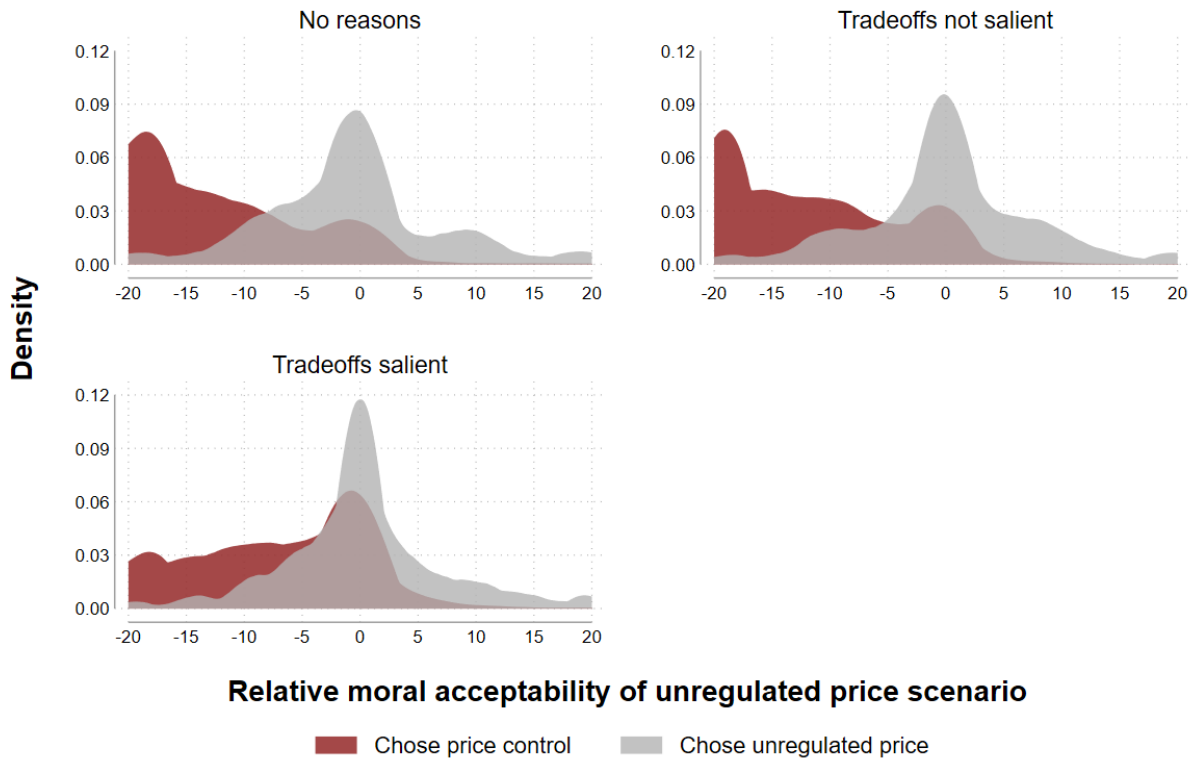
Notes: The graphs display the share of respondents who indicated that their views on economic (chart A) and social (chart B) issues were liberal, moderate or conservative, separately by chosen price regime and salience of tradeoffs in the scenarios that the participants read. The figures exclude the about 3% of respondents who selected the “Other” option in the questions about their views on economic and social issues.

Figure B6: Average length of open-text comments, by selected price regime and salience of tradeoffs



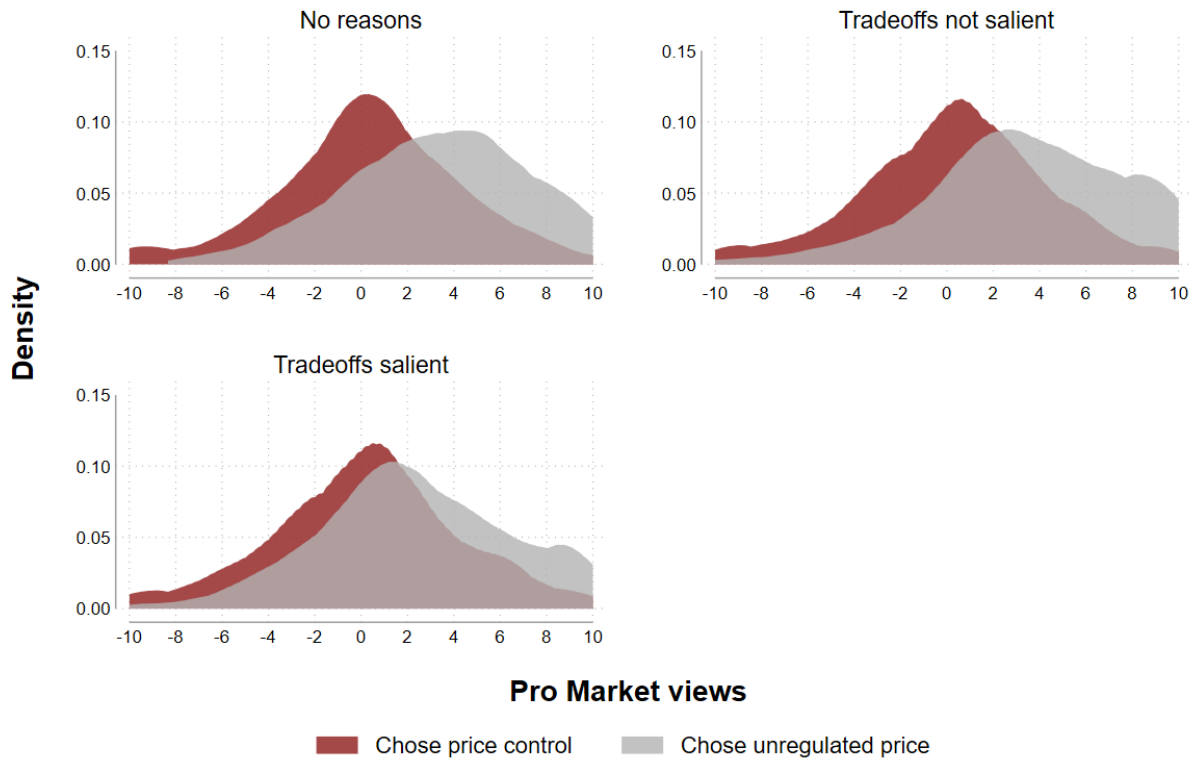
Notes: The graphs display the estimated kernel distribution of the number of words that respondents used in their open text comments, separately by chosen price regime and salience of tradeoffs. We winsorized the number of words at the 1st and 99th percentile.

Figure B7: Distribution of relative moral acceptability of unregulated prices by scenario choice and salience of tradeoffs, including scenarios with no reasons for price surges reported



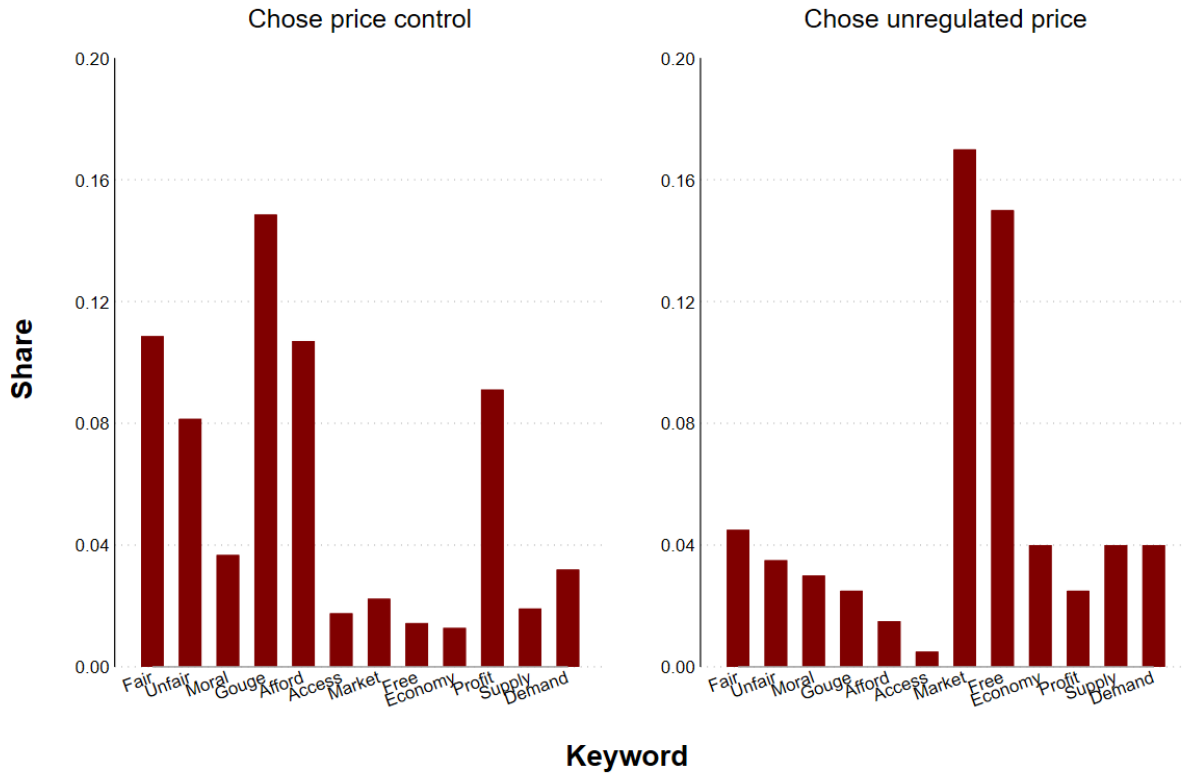
Notes: The graphs display the kernel density estimations of the relative moral acceptability of the unregulated price option by the respondents' choice (unregulated price or price control) and whether the scenario had salient tradeoffs, no salient tradeoffs, or did not indicate any reasons for the price surge. The relative moral acceptability of the unregulated price scenario is the difference between the score on the moral acceptability of the unregulated price option and the score on the moral acceptability of the price control option. Each of the two scores could take values between -10 and +10, in 0.1 increments. The overall average value of the relative score is -6.84.

Figure B8: Distribution of attitudes toward markets by scenario choice and salience of tradeoffs, including scenarios with no reasons for price surges reported



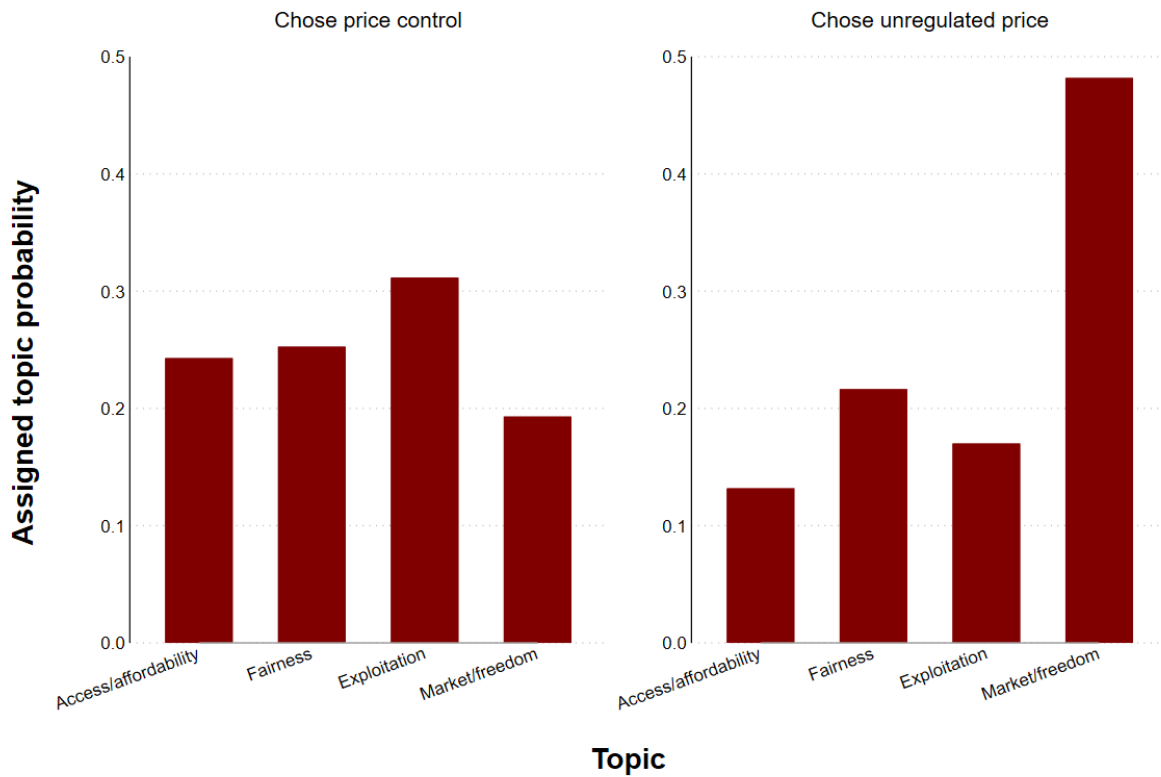
Notes: The charts display the kernel density estimations of the Pro-market attitude score of respondents, by their choice (unregulated price or price control) and whether the scenario had salient tradeoffs, no salient tradeoffs, or did not indicate any reasons for the price surge. The Pro-market attitudes score is the average of three scores: agreement with the claim that markets are fair for society, agreement with the statement that markets promote innovation and growth, and agreement with the statement that the government is too active in the economy. Each of the three scores could take values from -10 to +10 in 0.1 increments. The overall average value of the score is 1.05.

Figure B9: Frequency of key words in open comments in Wave 1 for scenarios with no reason for price increases reported, by scenario choice



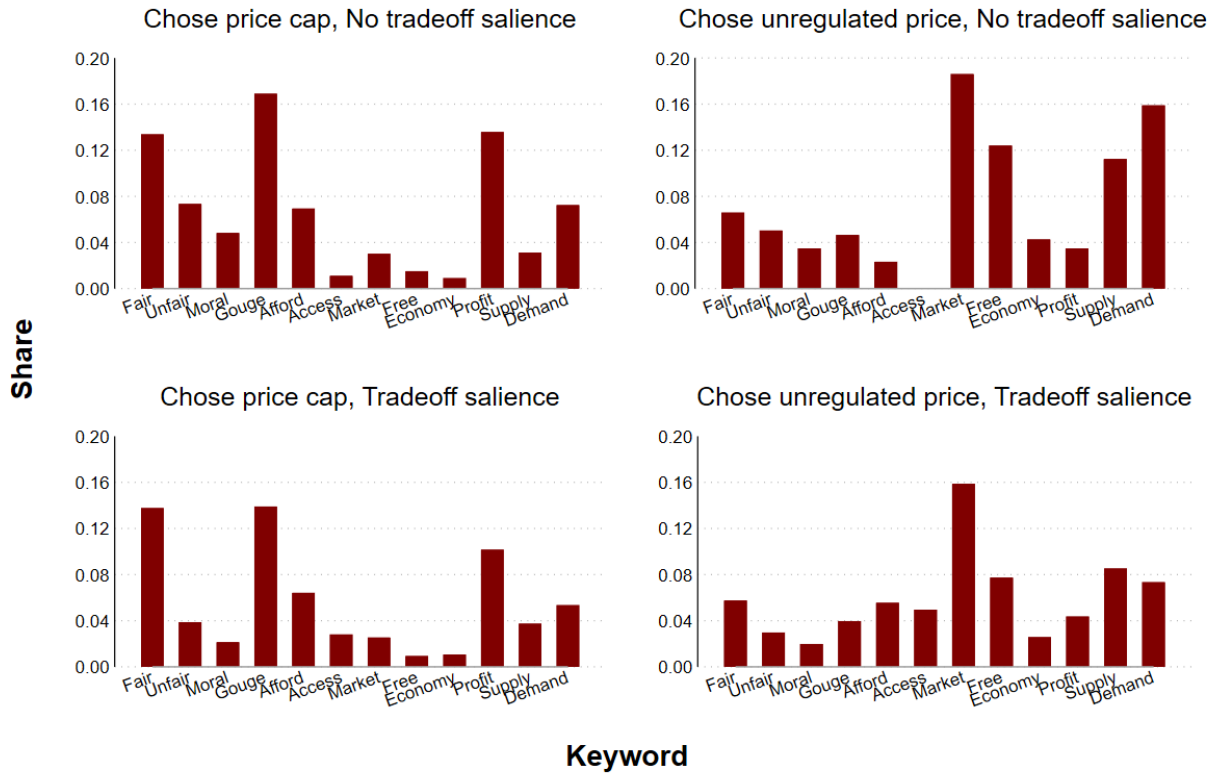
Notes: The graphs report, for each word on the horizontal axis, the share of open comments by respondents in Wave 1 that contained that word. The responses are grouped by the respondents' scenario choice and include only the four conditions with no reasons for price increases reported in the scenario descriptions.

Figure B10: Estimated probability that a topic appears in an open comment Wave 1 for scenarios with no reason for price increases reported, by scenario choice and salience of tradeoffs in Wave 1



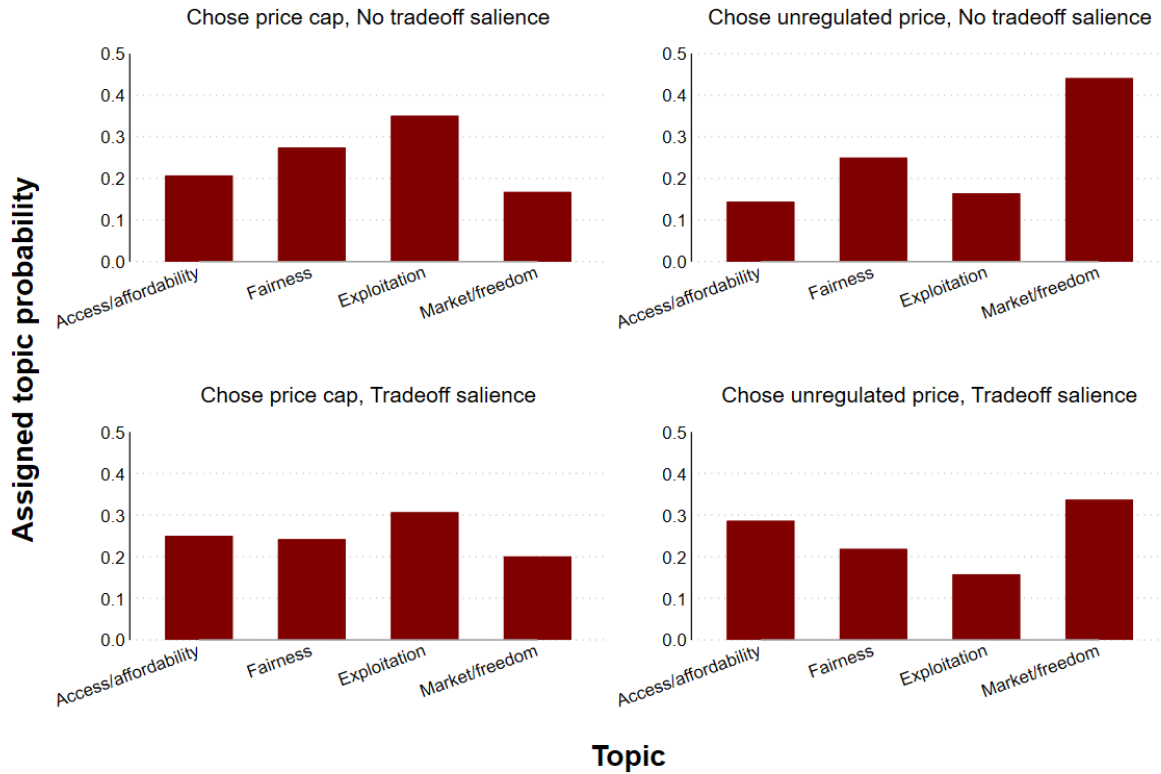
Notes: The graphs report the estimated probability that a topic appeared in an open comment by respondents in Wave 1. The responses are grouped by the respondents' scenario choice and include only the four conditions with no reasons for price increases reported in the scenario descriptions.

Figure B11: Frequency of key words in open comments in Waves 1 and 2, by salience of tradeoffs and scenario choice



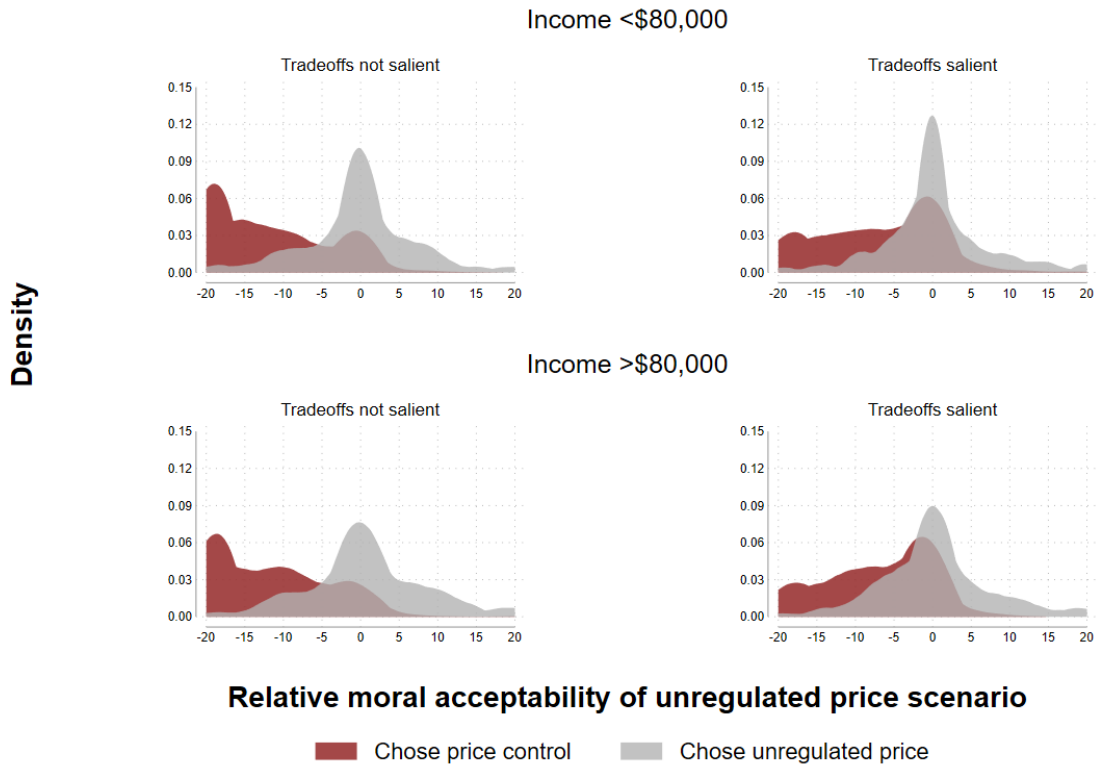
Notes: The graphs report, for each word on the horizontal axis, the share of open comments in Waves 1 and 2 by respondents who completed both surveys. The responses are grouped by the respondents' scenario choice in each wave and by salience of tradeoffs in the scenarios they read.

Figure B12: Estimated probability that a topic appears in an open comment in Waves 1 and 2, by scenario choice and salience of tradeoffs in Wave 1



Notes: The graphs report the estimated probability that a topic appeared in an open comment in Waves 1 and 2 by respondents who completed both surveys. The responses are grouped by the respondents' scenario choice in each wave and by salience of tradeoffs in the scenarios they read.

Figure B13: Distribution of relative moral acceptability of unregulated prices by scenario choice, salience of tradeoffs and income of the participants



Notes: The graphs show the kernel density estimations of the relative moral acceptability of the unregulated price option by the respondents' choice (unregulated price or price control), salience of tradeoffs in assigned scenarios, and whether respondents reported an annual income below or above \$80,000. The relative moral acceptability of the unregulated price scenario is the difference between the score on the moral acceptability of the unregulated price option and the score on the moral acceptability of the price control option. Each of the two scores could take values between -10 and +10, in 0.1 increments.

Table B1: Scenario features and choice: Regression estimates with multiple hypotheses testing corrections

Outcome variable:	= 100 if chose Unregulated price, 0 if chose Price control						
	Sample:	Full Sample	Drug	Treadmill	Hand sanitizer	Hand moisturizer	Full Sample
		(1)	(2)	(3)	(4)	(5)	(6)
Drug		-18.80***					-18.82***
		0.000					0.000
		0.031					0.030
Sanitizer		-11.27***					-11.29***
		0.000					0.000
		0.019					0.021
Moisturizer		-7.17***					-7.20***
		0.000					0.000
		0.016					0.023
Salient tradeoff		22.77***	22.02***	13.96***	31.71***	23.74***	21.88***
		0.000	0.000	0.000	0.000	0.000	0.000
		0.017	0.030	0.028	0.020	0.031	0.023
Salient cost side		4.74***	1.69	3.41	6.35***	7.67***	3.98**
		0.000	0.999	0.933	0.054	0.000	0.204
		0.015	1.000	1.000	0.074	0.024	0.272
Pandemic		-1.59	-0.32	-3.42	0.34	-2.77	-3.24*
		0.931	0.997	0.939	0.985	0.981	0.741
		1.000	1.000	1.000	1.000	1.000	1.000
Salient tradeoff x Pandemic							1.78
							0.997
							1.000
Salient cost side x Pandemic							1.52
							0.994
							1.000
Canadian resident		-2.58**	-0.04	-2.57	-0.96	-6.54***	-2.57**
		0.348	0.985	0.994	0.999	0.024	0.359
		0.500	0.985	1.000	1.000	0.039	0.503
Observations		6,760	1,648	1,731	1,666	1,715	6,760

Notes: For each variable, the first row reports the parameter estimates from Table 3 in the paper. The second row displays p-values adjusted based on List et al. (2019), which take into account the dependence between the hypotheses, and the third row shows p-values adjusted with the procedures by Bonferroni-Holm (Holm 1979) which treat the hypotheses as independent. We estimated these corrections with the Stata command *mhtreg* (Barsbai et al. 2020), which extends the procedure from List et al. (2019).

Table B2: Scenario features and moral judgments: - Regression estimates with multiple hypotheses testing corrections

Outcome variable:	Unregulated pricing version			Price controls version			Relative morality judgments (unregulated pricing - price controls)		
	Fairness to customer	Fairness to Company	Moral acceptability	Fairness to customer	Fairness to Company	Moral acceptability	Relative fairness to customers	Relative fairness to company	Relative moral acceptability
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Drug	-2.34*** 0.000 0.024	-0.54*** 0.025 0.040	-2.46*** 0.000 0.017	-0.83*** 0.000 0.028	2.50*** 0.000 0.015	1.45*** 0.000 0.025	-1.51*** 0.000 0.022	-3.04*** 0.000 0.030	-3.91*** 0.000 0.024
Sanitizer	-3.22*** 0.000 0.028	-1.48*** 0.000 0.014	-3.22*** 0.000 0.027	-2.26*** 0.000 0.032	2.01*** 0.000 0.029	0.18 0.999 1.000	-0.96*** 0.013 0.027	-3.49*** 0.000 0.023	-3.39*** 0.000 0.022
Moisturizer	-2.32*** 0.000 0.019	-0.77*** 0.000 0.018	-2.33*** 0.000 0.029	-2.26*** 0.000 0.018	1.53*** 0.000 0.016	-0.06 0.999 1.000	-0.06 0.998 1.000	-2.30*** 0.000 0.025	-2.28*** 0.000 0.026
Salient tradeoffs	2.21*** 0.000 0.019	1.06*** 0.000 0.020	1.82*** 0.000 0.015	-5.04*** 0.000 0.025	0.10 0.996 1.000	-3.46*** 0.000 0.026	7.25*** 0.000 0.022	0.95*** 0.000 0.014	5.28*** 0.000 0.026
Salient cost factors	0.66*** 0.000 0.018	0.05 1.000 1.000	0.90*** 0.000 0.027	-0.21 0.938 1.000	-1.11*** 0.000 0.031	-0.79*** 0.000 0.016	0.87*** 0.000 0.020	1.16*** 0.000 0.021	1.69*** 0.000 0.027
Pandemic	-0.45*** 0.034 0.051	-0.45*** 0.000 0.021	-0.65*** 0.000 0.017	-0.12 1.000 1.000	0.39*** 0.199 0.264	-0.12 0.999 1.000	-0.33* 0.826 1.000	-0.84*** 0.000 0.029	-0.54*** 0.194 0.256
Canadian resident	-0.16 0.985 1.000	0.24* 0.759 1.000	-0.10 0.997 1.000	0.36*** 0.210 0.280	-0.23* 0.879 1.000	0.28* 0.710 1.000	-0.53*** 0.130 0.168	0.47** 0.353 0.517	-0.38* 0.713 1.000
Observations	6,760	6,760	6,760	6,760	6,760	6,760	6,760	6,760	6,760

Notes: For each variable, the first row reports the parameter estimates from Table 4 in the paper. The second row displays p-values adjusted based on List et al. (2019), which take into account the dependence between the hypotheses, and the third row shows p-values adjusted with the procedures by Bonferroni-Holm (Holm 1979) which treat the hypotheses as independent. We estimated these corrections with the Stata command *mhtreg* (Barsbai et al. 2020), which extends the procedure from List et al. (2019).

Table B3: Scenario features, choice and moral judgments - Regression estimates, including “No reasons” scenarios

Outcome variable:	= 100 if chose unregulated price	Unregulated pricing version			Price controls version			Unregulated pricing version: relative judgements		
		Fairness to customer	Fairness to Company	Moral acceptability	Fairness to customer	Fairness to Company	Moral acceptability	Relative fairness to customers	Relative fairness to company	Relative moral acceptability
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Drug	-19.88*** (1.44)	-2.24*** (0.18)	-0.52*** (0.16)	-2.40*** (0.19)	-0.60*** (0.18)	2.50*** (0.19)	1.63*** (0.19)	-1.63*** (0.26)	-3.03*** (0.26)	-4.02*** (0.28)
Sanitizer	-12.25*** (1.49)	-3.08*** (0.18)	-1.47*** (0.17)	-3.15*** (0.18)	-1.84*** (0.18)	2.02*** (0.19)	0.49** (0.20)	-1.24*** (0.26)	-3.49*** (0.27)	-3.64*** (0.28)
Moisturizer	-7.27*** (1.52)	-2.15*** (0.18)	-0.77*** (0.17)	-2.22*** (0.19)	-1.94*** (0.18)	1.45*** (0.19)	0.06 (0.19)	-0.21 (0.26)	-2.22*** (0.27)	-2.28*** (0.28)
No reasons	3.39** (1.58)	-1.21*** (0.19)	-0.47** (0.22)	-0.81*** (0.20)	0.08 (0.19)	-0.48** (0.23)	-0.30 (0.22)	-1.30*** (0.31)	0.01 (0.35)	-0.51 (0.34)
Salient tradeoffs	22.88*** (1.09)	2.23*** (0.13)	1.06*** (0.13)	1.84*** (0.14)	-5.04*** (0.14)	0.08 (0.14)	-3.48*** (0.14)	7.27*** (0.19)	0.98*** (0.19)	5.32*** (0.21)
Canadian resident	-2.51** (1.02)	-0.11 (0.12)	0.30** (0.12)	-0.08 (0.13)	0.33*** (0.13)	-0.22* (0.13)	0.27** (0.14)	-0.45** (0.18)	0.52*** (0.19)	-0.34* (0.19)
Constant	31.64*** (1.34)	-3.59*** (0.16)	1.76*** (0.15)	-3.24*** (0.17)	6.68*** (0.16)	-0.89*** (0.17)	3.28*** (0.17)	-10.27*** (0.23)	2.65*** (0.24)	-6.52*** (0.26)
Mean of the outcome variable	31.23	-4.65	1.64	-4.48	3.52	0.46	2.37	-6.84	-8.17	1.19
Observations	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612
R-squared	0.082	0.090	0.023	0.071	0.184	0.027	0.086	0.192	0.031	0.119

Notes: The parameter estimates are from OLS regressions. Each observation corresponds to a different respondent. The right-hand side variable reported in the first column are binary indicators for the product in the scenario (treadmill omitted), salience of tradeoffs and of cost factors, context, and residence of the participant. In column 1, we multiplied the outcome variable indicator by 100; therefore, the reported numbers correspond to estimated percentage point changes. Robust standard errors are in parenthesis. * p<0.1, ** p<0.05, *** p<0.01.

Table B4: Scenario features, income, time preferences and choice and moral judgments - Regression estimates

Outcome variable:	= 100 if chose unregulated price				Relative fairness	Relative fairness	Relative moral
	Sample:	Full	Product: Drug	Product: Treadmill	to customers	to company	acceptability
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drug	-19.01*** (1.53)	-17.37*** (1.47)			-1.53*** (0.28)	-3.09*** (0.27)	-3.94*** (0.29)
Sanitizer	-11.22*** (1.57)	-10.18*** (1.52)			-0.97*** (0.27)	-3.45*** (0.28)	-3.40*** (0.30)
Moisturizer	-7.10*** (1.61)	-6.35*** (1.54)			-0.08 (0.27)	-2.27*** (0.27)	-2.29*** (0.30)
Salient tradeoffs	25.48*** (3.47)	25.82*** (3.40)	25.55*** (6.19)	21.30*** (7.41)	5.54*** (0.65)	1.28* (0.67)	3.99*** (0.69)
Salient cost factors	4.81*** (1.09)	4.74*** (1.05)	2.12 (1.93)	4.29* (2.20)	0.88*** (0.19)	1.18*** (0.19)	1.70*** (0.20)
Pandemic	-1.51 (1.08)	-1.29 (1.05)	-0.31 (1.93)	-2.73 (2.19)	-0.33* (0.19)	-0.81*** (0.19)	-0.54*** (0.20)
Canadian resident	-3.52*** (1.10)	-1.52 (1.06)	1.42 (1.97)	-1.56 (2.20)	-0.60*** (0.19)	0.21 (0.19)	-0.49** (0.21)
Annual income (\$): 20-39K	-1.12 (1.98)	-1.81 (1.94)	-4.25 (3.67)	-3.82 (4.07)	-0.72* (0.37)	0.45 (0.37)	-0.56 (0.38)
Annual income (\$): 40-59K	2.86 (2.00)	0.14 (1.96)	-4.12 (3.58)	4.08 (4.09)	-0.05 (0.37)	1.54*** (0.37)	0.49 (0.38)
Annual income (\$): 60-79K	1.15 (2.08)	-2.84 (2.04)	-3.46 (3.76)	-6.38 (4.17)	-0.23 (0.38)	1.26*** (0.39)	0.20 (0.40)
Annual income (\$): 80-99K	7.74*** (2.21)	3.19 (2.15)	-0.44 (4.00)	2.59 (4.49)	0.48 (0.39)	2.09*** (0.39)	0.87** (0.42)
Annual income (\$): 100-119K	8.62*** (2.48)	2.65 (2.44)	-7.93* (4.44)	3.25 (5.20)	0.28 (0.43)	2.56*** (0.45)	0.86* (0.45)
Annual income (\$): 120K+	9.34*** (2.16)	3.18 (2.11)	-3.25 (3.86)	5.19 (4.33)	0.67* (0.38)	3.17*** (0.39)	1.15*** (0.40)
Patience	0.12 (0.30)	-0.24 (0.29)	0.03 (0.47)	-0.53 (0.69)	-0.29*** (0.07)	0.07 (0.07)	-0.31*** (0.07)
Tradeoff salient X Patience	-0.39 (0.47)	-0.50 (0.46)	-0.43 (0.84)	-1.52 (1.00)	0.24*** (0.09)	-0.05 (0.09)	0.18* (0.10)
Pro-market attitudes		2.76*** (0.13)	2.38*** (0.24)	4.20*** (0.24)			
Constant	25.65*** (2.91)	26.77*** (2.83)	10.67** (4.22)	33.52*** (6.22)	-8.58*** (0.60)	0.68 (0.62)	-5.31*** (0.63)
Observations	6,760	6,760	1,648	1,731	6,760	6,760	6,760
R-squared	0.091	0.151	0.129	0.164	0.190	0.056	0.132

Notes: The parameter estimates are from OLS regressions. Each observation corresponds to a different respondent. The right-hand side variables reported in the first column are binary indicators for the product in the scenario (treadmill omitted), salience of tradeoffs and of cost factors, context, residence of the participant, and income brackets; and continuous variables measuring time preferences and attitudes toward the role of markets in society. In column 1, we multiplied the outcome variable indicator by 100; therefore, the reported numbers correspond to estimated percentage point changes. Robust standard errors are in parenthesis. * p<0.1, ** p<0.05, *** p<0.01.

Table B5: Ten most frequent words in each topic

Topic 1: Access/affordability	Topic 2: Fairness	Topic 3: Exploitation	Topic 4: Market/freedom
people	companx	companx	government
affordx	costx	gougx	market
patientx	profit	people	companx
fairx	fairx	advantage	demand
access	customerx	government	supply
treatment	demand	pandemic	freex
everyone	consumerx	customerx	business
costx	government	profit	consumerx
purchase	gougx	consumerx	control
money	money	fairx	right

Notes: We applied Latent Dirichelet Allocation (LDA) to the text of all answers to the open-ended question in the survey that asked to motivate the fairness and morality judgments for each version of a scenario, and the choice of one of the versions. To rely on a larger sample and enhance the accuracy of the predicted topics, we conducted the analysis on all comments in the first and the second wave of the survey. We used the *ldagibbs* command in Stata (Schwartz 2018). Before running this procedure, we “stemmed” several words and indicate various terms with the same root as the same word. For example (as also visible in the table above), terms such as fair, fairer, fairness, fairest are all subsumed into “fairx”; free and freedom are lumped together in freex; and so on. We also excluded several common words (believe, think, the name of the four products, myself, herself) and stop words, punctuation symbols, and any word with four letters or less (note that fairx or freex counted, for example, as five-letter words and were therefore included).

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