NBER WORKING PAPER SERIES

UNDERSTANDING OF TRADE

Stefanie Stantcheva

Working Paper 30040 http://www.nber.org/papers/w30040

NATIONAL BUREAU OF ECONOMIC RESEARCH 1050 Massachusetts Avenue Cambridge, MA 02138 May 2022

The materials in this paper were originally part of the longer (not intended for publication) working paper "Understanding Economic Policies: What do People Know and Learn?" I thank Beatrice Ferrario, Clement Herman, Lionel Jeanrenaud, Julia Paul-Venturine, Yannic Rehm and especially Thomas Bezy and Francesco Nuzzi for exceptional research assistance. I thank seminar participants at Princeton, Paris School of Economics, and LMU Munich, for feedback and comments. I am indebted to Pol Antras, Dave Donaldson, Elhanan Helpmann, Gene Grossman, Marc Melitz, Steve Redding, Ken Rogoff, and Esteban Rossi-Hansberg for valuable inputs. The study received IRB Approval from Harvard under Protocol IRB18-1918 and was pre-registered as AEARCTR-0003991. The views expressed herein are those of the author and do not necessarily reflect the views of the National Bureau of Economic Research.

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Understanding of Trade Stefanie Stantcheva NBER Working Paper No. 30040 May 2022 JEL No. D72,D91,F1,F13

ABSTRACT

I study how people understand and reason about trade and which factors shape their views on trade policy. I design and run large-scale surveys and experiments in the U.S. to elicit respondents' knowledge and understanding of trade. I also ask about their perceived economic gains and distributional impacts from trade and their views on trade restrictions and compensatory redistribution for those hurt by trade. People's understanding of the price, wage, and welfare effects of trade is mixed. In general, respondents are optimistic about the efficiency gains from trade, but also understand that there may be adverse distributional consequences from it. Respondents' own exposure to trade through their sector, occupation, skill, and local labor market shapes their perceptions of the impacts of trade on themselves, others, and on the broader U.S. economy. I also find patterns consistent with the idea of "diffuse gains and concentrated losses": respondents' perceived benefits as consumers are nonsalient and unclear to them, while those in at-risk jobs starkly perceive the threats from trade. Beyond material self-interest, people have broader social and economic concerns that strongly influence their views on trade policy. The belief that is most predictive of support for open trade is that trade generates efficiency gains. Furthermore, people who believe that those hurt by trade can be helped using other tools (compensatory redistribution) do not oppose free trade, even if they think that it will entail adverse distributional consequences. The results highlight the importance of compensatory redistribution as an indissociable part of trade policy in people's minds.

Stefanie Stantcheva Department of Economics Littauer Center 232 Harvard University Cambridge, MA 02138 and NBER sstantcheva@fas.harvard.edu

An online appendix is available at http://www.nber.org/data-appendix/w30040

1 Introduction

Trade is one of the areas in which there is widespread agreement among economists. Many economists tend to believe that, on balance, free trade is beneficial: even though some people will win and others will lose, the overall gains from trade are large enough that "losers can be compensated."¹ Yet, there is no consensus on free international trade among people in the U.S. Historically, trade restrictions and barriers have been the norm rather than the exception. The last decade has seen intense debates about import competition and their far-ranging economic, social, and political consequences² and a resurgence of protectionist proposals.

In this paper, I try to answer two sets of questions. First, do people understand how trade and trade policy work? How do they reason about trade policy? For instance, do they understand the impacts of trade on prices or wages? Second, which factors shape citizens' support for different types of trade policies? Do they support free trade purely out of material self-interest, or do they have broader social and economic concerns? Do they perceive the efficiency and distributional impacts of trade differently? How do they think about trade restrictions versus compensatory transfers to help those who are negatively impacted by trade? Understanding which factors matter most to citizens when they think about trade policy, which groups tend to hold different views, and where (potentially correctible) misperceptions are is an important step toward explaining citizens' current stance on trade policy and predicting its future evolution.

To answer these questions, I design and run new large-scale surveys and experiments in the U.S. Surveys are a key tool for getting into people's minds and studying otherwise invisible things such as perceptions, attitudes, reasonings, and views, which present challenges for economists' traditional – and often preferred–revealed preference approach. Because surveys are such a flexible tool, there is always the possibility to collect additional data, to change the design of the current survey (including the experimental treatments), or to ask questions in a different way, leaving the opportunity to explore more ideas, test for robustness, or approach the question from different angles.

Before describing the survey and methods used, it is helpful to consider a stylized framework to think about the drivers of trade policy views, as illustrated in Figure 1. At the top of the figure, I first distinguish between two facets of trade policy: trade restrictions (e.g., tariffs and quotas) and compensatory redistribution to mitigate adverse distributional consequences from trade (e.g., direct assistance or retraining for those hurt by trade). These two sides of trade policy can both be shaped by either self-interest (the left panel) or by broader economic and social concerns (the right panel). Self-interest can arise from respondents' benefits as consumers (Box I) in terms of the prices and variety of goods that they can purchase. It can also stem from their role as workers and their exposure through their occupation, sector of work, local labor market, or human capital (Box II). It is often thought that the gains to consumers are diffuse and widespread, while the losses to workers are large and concentrated (see, among others, Autor (2018), Autor et al. (2016) and Broda and Weinstein (2006)).

Focusing on material self-interest as it relates to the labor market only, the two workhorse models of trade give clear predictions about which people should oppose open trade more. The factor endowment (Heckscher-Ohlin) model makes several assumptions, including that factors of production are mobile across sectors within a country. Stolper and Samuelson (1941) show that in this setting, free trade will benefit the owners of the factors of production that are abundant relative to the rest of the world and hurt others. In the U.S., this has typically been taken to mean that trade would benefit higher-skilled workers and hurt

¹https://www.igmchicago.org/surveys/free-trade/

 $^{^{2}}$ See, among others, Autor et al. (2013) and Mutz (2021) as well as the papers reviewed in more detail below.

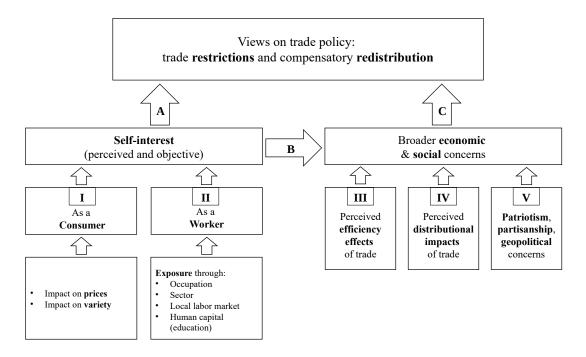


FIGURE 1: THE FACTORS SHAPING VIEWS ON TRADE POLICY

lower-skilled ones. The specific-factor model (or Ricardo-Viner) is based on the idea that some factors of production cannot move across sectors, at least in the short run. In this case, free trade will hurt those working in import-competing sectors and benefit those in export-oriented sectors. From the standpoint of purely material self-interest, the factor endowments model suggests that higher-skilled workers should be more supportive of free trade. The specific factor model implies that those employed in industries with comparative advantage and that export abroad should be more supportive of open trade than those working in sectors that are subject to international competition from imports.³

Beyond their own material self-interest, people can also have broader social and economic concerns, represented in the right part of Figure 1. They may care about the efficiency gains from trade in the form of higher competitiveness, innovation, and growth (Box III). They may also worry about distributional consequences of trade as it impacts inequality and different groups, e.g., the middle class or the poor versus the rich (Box IV). Finally, other factors such as patriotism, partisanship, and geopolitical concerns may also influence people's views on trade policy (Box V). The arrows on the diagram represent possible channels. In particular, while self-interest can shape views on trade policy directly (Arrow A), it can also act indirectly by influencing respondents' perceptions of the overall perceived efficiency and distributional effects (Arrows B and C).

To disentangle the role of these factors in shaping trade policy views, I design and run two large-scale surveys that elicit respondents' perceptions of each of the elements in the diagram. I start with open-ended questions that capture people's first-order concerns about trade without being primed by particular answer

³For a review of the effects of trade for distributional consequences, and, hence, individual attitudes, see Rodrik (1995).

options. The answers to these questions are investigated using text analysis methods. The surveys then contain detailed questions that test respondents' understanding of trade, including a "problem-set" style series of questions about the price, wage, and welfare effects of trade in different sectors and countries under hypothetical scenarios. I also elicit people's views on the actual (not hypothetical) efficiency impacts and distributional effects of trade in the U.S. Respondents are further asked about their policy views on a range of possible interventions related to trade restrictions (e.g., overall trade barriers or support for protection of specific sectors) and compensatory redistribution (e.g., direct assistance, retraining, or wage subsidies to low-income workers). In addition, I construct a series of objective measures of exposure to trade based on respondents' education level, sector of work, occupation, and local labor market. Thus, I have both objective and subjective measures of respondents' exposure to trade that can influence their material self-interest.

In order to test whether understanding of trade can be improved with information and to study which factors causally drive people's views on trade policy, I design two types of experimental treatments. The first type consists of information treatments in the form of pedagogical videos that explain to respondents the impacts of trade policy on efficiency, distribution, or both. The second type is priming treatments that do not provide any information, but rather prompt respondents to think about the impacts that trade has on them – either as consumers or as workers – through a series of questions.

The main findings are as follows. First, people's understanding of trade and trade policy is imperfect. Answers to questions about the price or wage effects of trade are only slightly more accurate than random answers. Respondents are better at predicting the impacts of tariffs or export taxes and seem to somewhat understand the concept of comparative advantage and the existence of gains from trade. When asked about the effects of trade in the U.S., many respondents believe in positive efficiency gains in the form of higher competitiveness, innovation, and growth. Respondents also understand that trade can have adverse distributional consequences. Thus, there is broad agreement on some of the winners from trade, namely large companies and high-income households. There is more pessimism and disagreement on the extent to which trade benefits workers, the poor, and the middle class, and on how it shapes inequality and unemployment in the U.S.

Second, respondents' own exposure (both actual and perceived) to trade through their work is significantly correlated with their support for trade restrictions. What is more surprising is that it not only shapes their assessment of how trade affects them, but also their broader perceptions of the efficiency and distributional impacts of trade on the U.S. as a whole (i.e., the path through Arrows B and C in Figure 1 is empirically important). For instance, respondents who perceive themselves as made worse off by trade and those who are objectively more exposed to trade are less likely to believe that trade decreases prices in the U.S., that it fosters innovation or growth, or that it does not have adverse distributional impacts.

Third, respondents seem to perceive gains from trade as consumers (Box I) as vague and diffuse. They are divided on whether trade lowers prices or increases the variety of goods in the U.S. or in their own consumption basket. Those that are experimentally prompted to think about their gains from trade as consumers do not change their views on trade. On the contrary, respondents who feel impacted as workers (Box II) perceive the threats and costs as salient. Although a minority of respondents feels directly threatened by trade via their job, this exposure is pivotal for their views on trade. Indeed, respondents who are primed to consider the threats from trade for their job significantly reduce their support for open trade. These findings lend support to the idea that losses from trade in the labor market are concentrated and large, while consumer gains are widespread and diffuse.

Fourth, people's views on trade are strongly driven by broader economic and social concerns beyond their own material self-interest. The belief that is most predictive of support for open trade is that trade generates a variety of efficiency gains (Box III). The belief that trade has adverse distributional consequences can reduce support for free trade, but only if respondents believe that losers cannot be compensated with appropriate policies (Box IV). People who believe that those hurt by trade can be helped using other tools (i.e., compensatory redistribution) do not oppose free trade, even if they are convinced that it will entail adverse distributional consequences. Instead, they support more redistribution. The information treatments confirm these findings. Respondents who see explanations about the efficiency implications of free trade increase their support for it. Those who are told about potentially adverse distributional consequences and possible interventions to compensate losers do not change their views on free trade, but increase their support for compensatory redistribution.

These findings highlight that the two facets of trade policy – trade barriers and compensatory transfers – are driven by different considerations and are both indissociable in people's minds. They point to the need of providing such redistribution and making sure that citizens understand it, if support for free trade is to be maintained.

This paper is part of a broader agenda that uses social economics surveys to better understand the reasoning that shapes people's policy views. The website understanding conomics.org provides the data for several other policies (such as health insurance, the income tax, and the estate tax).

Related Literature. In the political science and political economy literatures, attitudes toward trade have been related to various characteristics measuring self-interest and broader social attitudes. One focus has been on evaluating the relative explanatory powers of the factor endowment and the specific factor models. Using data from the International Social Survey Programme (ISSP) and the World Value Survey (WVS), Mayda and Rodrik (2005) proxy for human capital with educational attainment and occupational categories and find strong support for both models: individuals with higher levels of human capital exhibit higher support for trade only in countries where these skills are abundant; those in import-competing industries are more supportive of trade barriers than those in non-tradable sectors. These findings are echoed by O'Rourke et al. (2001). Beaulieu et al. (2011) build a model of intra-industry trade and show empirically that skilled workers are more supportive of such trade. Scheve and Slaughter (2001) instead mostly find evidence in favor of the factor endowment model. Owen and Johnston (2017) expand the definition of sectors threatened by trade by using the interaction of routine occupation and "offshorability." The fact that there is evidence for both models suggests that different people may have different mental models of trade, including different time horizons over which they envision its effect. In the current paper, I therefore directly elicit people's understanding and perceptions of the mechanisms of trade policy.

Further evidence on the impacts of people's own experience on trade attitudes comes from Mansfield et al. (2019): those that lost their jobs in import-competing sectors following the Great Recession became more anti-trade. The literature has also suggested that self-interested behavior has limited explanatory power overall (Mansfield and Mutz, 2009). I find that personal experience shapes people's policy views directly in line with material self-interest, but also indirectly by changing their perceptions of the effects of trade for the U.S. as a whole, as depicted in Figure 1.

Hainmueller and Hiscox (2006) emphasize the importance of education as a vehicle for new economic ideas and information that shape attitudes toward trade, not just as a proxy for factor endowment. This is aligned with Mansfield and Mutz (2009), who find that views about the effects of trade on the U.S. as a whole and out-group anxiety matter more than pure self-interest. Margalit (2012) also confirms that people care not only about the material consequences of trade, but also about its perceived social and cultural consequences. Likewise, Mayda and Rodrik (2005) find a more important role for broader factors like relative income, degrees of neighborhood attachment, and nationalism/patriotism. A theoretical model of voters' preferences over trade policy that reflects their concerns for members of those groups in society with whom they identify is developed in Grossman and Helpman (2020).

Policy preferences regarding international trade in the U.S. and in particular support for protectionism – the so-called "globalization backlash" – driven by concerns about impacts on labor markets have been analyzed in Scheve and Slaughter (2001) and Walter (2021). Lü et al. (2012) show that support for sector-specific trade protection depends on workers' earnings in the sector, suggesting a concern for inequality. Hanson et al. (2007) compare individual preferences for two different "globalization strategies," namely an import-based versus immigration-based one, depending on their impacts on public finances.

Like the current paper, other work also provides experimental evidence for factors that shape trade attitudes. Hiscox (2006) shows that giving respondents information about job losses due to trade decreases their support for free trade; telling them that trade reduces prices does not change their views. Alfaro et al. (2022) show that telling respondents about research findings on the job losses or gains from trade, or on price effects of trade or tariffs can change people's views on trade. Rodrik and Di Tella (2020) ask respondents to imagine different types of shocks that cause job loss and find that trade-related shocks, especially when in the form of outsourcing to a developing country, generate more demand for protectionism. These findings are consistent with the results of my priming treatments, where I ask people to think about the effects of trade on themselves either as consumers or as workers. However, the interpretation of these "reduced-form" results calls for a more in-depth analysis of the mental models of respondents and their understanding of trade, as I do in this paper. Thus, I disentangle how respondents reason about the mechanisms, costs, and benefits of trade, and determine which considerations are salient and matter to them (see the factors in Figure 1). For instance, respondents are divided on whether trade lowers the prices of goods they buy, and they have heterogeneous levels of worries about and exposures through their own job. Furthermore, they have much broader concerns than just their own self-interest.

The rest of the paper is organized as follows. Section 2 describes the survey, data collection, and sample. Section 3 applies text analysis methods to the open-ended questions to elicit people's first-order concerns on trade policy. Section 4 analyzes respondents' knowledge and understanding of how trade and trade policy work "technically," while Section 5 focuses on people's perceived personal, efficiency, and distributive impacts of trade and trade policy. Section 6 studies the factors that shape views on trade policy and leverages the experimental components of the survey. Section 7 concludes.

2 Survey, Data Collection, and Sample

In this section, I briefly describe the survey, data collection process, and the sample. Appendix A-5 provides more detailed information on these aspects, including on what precautions were taken to ensure a high response and data quality.⁴

 $^{^{4}}$ For an overview of how large-scale online surveys are run and for how to address common concerns about them, see also Stantcheva (2021).

2.1 Data Collection and Final Sample

Data collection. I conducted two different surveys of U.S. residents between 18 and 70 years of age. The first survey (1,771 respondents) took place between August and September 2019 and the second one (2,148 respondents) between November and December 2020. Both surveys were designed using the online platform *Qualtrics*. Participants were enrolled by the commercial survey company *Respondi* (https://www.respondi.com/EN/) and its U.S.-based partners and receive survey links via a dashboard and email.

Final sample. Table 1 shows the characteristics of the samples relative to those of the U.S. population in 2019 (see Appendix A-5.3). Survey 1 is representative of the US population (column 1) along the dimensions of age, gender, and income (which were targeted specifically), as well as along non-targeted dimensions such as marital status and employment. Survey 2 intentionally focuses on respondents in the labor force only and is broadly representative of that population (column 3) along the dimensions of gender, age, income, employment, marital status, and college education. In both surveys, respondents were more likely to have completed high-school (and, in the case of Survey 1, to be college-educated) and to be unemployed.⁵ African-American and Hispanic people are underrepresented. To address the small imbalances in the sample, I reweighted the sample so that it is representative along the unemployment, education, and race dimensions as well. This did not change any of the results in significant ways, so my benchmark results are on the unweighted sample. I only use Survey 2 in the experimental part (Section 6) and when describing personal impacts from trade in Section 5.

2.2 The Survey Structure

The survey structure is illustrated in Figure 2, with the full questionnaires for Surveys 1 and 2 are available in Appendices A-3 and A-4, with a link which leads to the web interface of each survey. Below, text in italics represents actual survey text. The order of these question blocks was randomized in order to test for framing effects on policy views and survey fatigue. In practice, there was no difference in policy views and no evidence for survey fatigue (see Appendix A-5). I now provide more details on some of these blocks.

Background socio-economic questions

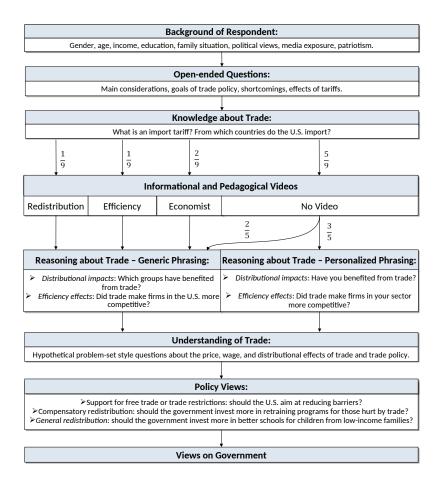
I collected information on respondents' gender, age, income, highest level of education achieved, sector of occupation, employment status, marital status, number of children, place of residence, and political leaning. I also asked them about their main sources of economic news, whether they try to stay informed of economic issues, their overall media and social media consumption, and their field of study in college.

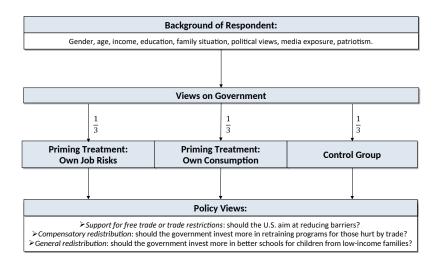
 $^{^{5}}$ This likely reflects the fact that people have more time to take surveys during periods of unemployment spells.

FIGURE 2: OUTLINE OF SURVEYS

(A) OUTLINE OF SURVEY 1

(B) OUTLINE OF SURVEY 2





Notes. The figure shows the blocks of each survey and different treatment branches. The numbers next to the arrows represent the shares of the sample in each branch. In Survey 1, the order of the questions related to Efficiency and Distributional impacts inside the *Reasoning about trade* block and the Policy views block was randomized.

Open-Ended Questions

Open-ended questions are important to elicit first-order, intrinsic concerns that people have before they are prompted to think of a particular aspect of trade with more directed survey questions (Stantcheva and Ferrario, 2022). I ask respondents about the "main considerations" that come to their mind when they think about trade policy, what the "goals" of trade policy should be, what its "shortcomings" are, what the effects on the U.S. economy from trade restrictions are, and which groups gain or lose from changes in trade barriers. The responses to these questions are studied using text analysis methods in Section 3.

Understanding of trade

In the *Knowledge about trade* part, respondents are asked about factual knowledge (e.g., to which countries the U.S. mainly exports and from which countries it imports). In addition, in the *Understanding of trade* block, I walk respondents through a "problem set" style case study to test their understanding of the price, wage, and distributional effects of trade and trade policy. To this end, I ask respondents to imagine various hypothetical scenarios "holding everything else constant."

Experimental parts

In the experimental part of Survey 1, respondents are randomly split into five groups. Four treatment groups are shown one of four videos that emphasize different aspects of trade and trade policy, while the control group does not see any video.

- The *Distributive effects* video emphasizes the distributional impacts of trade policy on both consumers and the labor market.
- The *Efficiency effects* treatment shows trade's efficiency implications.
- The *Economist* treatment brings together both the distributional and the efficiency considerations and highlights the trade-offs, much like a simple introductory and very concise economics course on the issue might do.
- The *Economist U.S.-specific* treatment is identical to the *Economist* treatment but specifically refers to the U.S. instead of generic countries A and B. Because these last two treatments had very similar effects, I pool them together in the analysis and in the survey flow figure.

The experimental part of Survey 2 instead consists of priming treatments that do not provide any information, but rather ask respondents to think about the effects of trade policy on themselves.

- The *Own consumption* treatment specifically asks them questions about the effects of trade on the prices and variety of goods they buy.
- The Own job risks treatment instead asks respondents about the threats to their own job.

The experimental treatments and results are covered in Section 6. Screenshots from these videos are in Figures 3-5. Each video can be seen by clicking the links below the screenshots.

Reasoning about trade

In this section, respondents are asked to think in more detail about how trade and trade policy work, particularly about its efficiency and distributional effects. What price effects and impacts on the broader economy will they trigger? What are the distributional consequences for different groups of people? These series of questions are critical because they explicitly elicit the chains of effects and mechanisms that respondents have in mind when they think about trade and trade policy. Contrary to the questions in the "Understanding of trade" block above, the questions here are not hypothetical. Instead respondents are asked about what they think actually happens in the US.

When asking about these mechanisms, respondents are randomized into one of two branches, which feature a different phrasing of some of these questions. The "generic" branch asks questions about the U.S. as a whole or about other people (e.g., "Overall, has international trade decreased the prices of goods sold in the U.S.?") with an impersonal formulation. Respondents in the second branch see a "personalized" phrasing for some questions only. For instance, "Overall, has international trade decreased the prices of goods that you buy regularly?" or "Overall, has international trade made the firms in your sector of work more competitive and improved their productivity?" Respondents in the personalized branch are also asked whether they feel that they have been made worse off or better off from trade, which will be used as a measured of their perceived exposure to trade.

Policy views

In the final part of the survey, I ask respondents about their views on trade policy, compensatory redistribution (targeted at those who lose from trade) and general redistribution policy (aimed at lower-income people more generally). I also ask them a range of questions about their views on government.

Survey 2

Survey 2 asks similar socio-economic background and policy views questions. It contains different experimental treatments, as described above. It also asks a range of other questions related to the labor market, economic insecurity, and on the household's impacts from Covid-19 (since it was run after the start of the pandemic), which are not used in the paper.

3 People's First-Order Concerns: Text Analysis of the Open-Ended Survey Questions

The answers to the open-ended questions can help shed light on people's first-order concerns without them being prompted to think about specific answer options (Stantcheva and Ferrario, 2022). This section provides the results from the topic analysis applied to the responses of several of the survey's open-ended questions (listed at the start of the paragraphs below). Appendix Figure A-1 shows word clouds to assess the frequency of different terms in the answers. More details on the text analysis methods and example answers for each topic described below are in Appendix A-1.

"When you think about trade policy and whether the U.S. should put some restrictions on trade with other countries, such as tariffs, what are the main considerations that come to **your mind?**" Panel A of Figure 6 shows the topic distribution that appears in the answers to this question, segmented by respondents' political leaning (Republican versus Democrat). The keywords for each topic are listed below the figure. Words are defined by their "stems:" i.e., words with the same root, such as "policy" and "policies" or "be" and "was," are treated identically.

There are six different topics that arise from the text analysis: The Price topic includes stem keywords such as price, inflation, afford, cost, expense. An example answer in this topic could be: "My main concern is prices going up." The Distributive topic includes keywords such as suffer, affect, hurt, hit, lose in combination with farmer, business, firm, poor, sector. An example answer is "I don't want anybody to have to suffer like the farmers or any others with paying extra taxes for food and goods." The Labor topic includes keywords such as labor, job, employ, wage, worker, as in "How it affects employment and current wages." The Fair Trade & International Relations topic includes keywords such as fair, retaliatory, imbalances, justice, reciprocity. For example: "I think trade policies need to be fair for all. Tariffs must be introduced only when there is a likelihood of unfair transactions between countries. Trades should be a mutually beneficial agreement." The Protectionism topic includes keywords as restrict, tariff in combination with words such as fine, good, need, reason, necessary. An example answer is "I believe that we need tariffs, especially with China because they have been taking advantage of this country for years." The Does not Know topic includes keywords such as unsure, don't know, don't understand.

Prices and Distributive concerns are more widespread among Democrats, while Protectionism and Fair Trade & International Relations concerns are more prevalent among Republicans. Worries about Efficiency and Labor (i.e., jobs and employment) are equally represented in both political groups, as are answers that express a lack of knowledge about the topic.

"What would be the effects on the U.S. economy if barriers to trade, such as tariffs, were increased?" is another open-ended question analyzed in Panel B of Figure 6. Responses can be classified based on the domain they mention (e.g., *Efficiency* or *Distributive* concerns, as described above) and the direction of the effect perceived (positive vs. negative). For instance, *Negative Price* effects refer to thinking prices will go up in response to trade restrictions. *Positive Reallocation* refers to respondents mentioning that trade restrictions will lead to a reallocation of production to the US. Democrat respondents are significantly more likely to mention negative effects of trade restrictions on prices and efficiency. Republican respondents are more likely to talk about *Positive reallocation* effects, with trade restrictions encouraging a shift back to domestic production and supporting the idea of 0"made in the USA."⁶

"Which groups of people do you think would gain if trade barriers such as tariffs were increased?" Panel C of Figure 6 plots the frequency with which various groups, people, or entities are mentioned in response to this open-ended question about those who would benefit from trade barriers. Democrats often tend to mention "the Rich," "Government and Politicians," "Big Companies," and "Nobody" (suggestive of the view that, ultimately, everyone loses from trade barriers). Among Republicans, mentions include "the U.S.," "everyone," "workers," "manufacturers," and "domestic businesses."

⁶Panel B of Appendix Figure A-2 shows that those who are more knowledgeable about trade (as measured by their correct answers to the questions described below in Section 4) are more likely to mention *Negative Price*, *Negative Efficiency*, and *Negative Distributive* effects from trade restrictions.

4 Understanding of Trade

In this section, I present the results on how people understand the mechanisms and the different effects of trade and trade policy. The questions asked for this purpose are stylized and hypothetical: respondents are asked to imagine various scenarios, in a controlled "problem set" style fashion, holding everything else constant. The goal here is to see whether respondents can reason about the effects of trade in consistent and accurate ways. Section 5 instead asks respondents about their perceived effects on the U.S. economy today (not hypothetically, and not holding anything constant). For the rest of the analysis, all variables are defined in more detail in Appendix A-6.

A short "problem set" style series of questions. Respondents were presented with the case of two industries: the car and the laptop industry. They were told that "the U.S. is a large net exporter of laptops (meaning that it sells more laptops abroad than it purchases from abroad and that U.S. laptops are a large share of all laptops sold in the world), and a large net importer of cars (meaning that it purchases more cars from abroad than it sells abroad and that cars purchased by customers in the U.S. are a large share of worldwide car purchases). The laptop sector employs many high-skilled, college-educated workers. The car sector employs many low-skilled workers. Cars are produced for cheaper abroad, while laptops are produced for cheaper in the U.S."

Respondents were then asked to imagine what happens in several scenarios, such as an increase in car imports to the U.S. and an increase in laptop exports from the U.S. The questions were phrased carefully so as to pin down the "model," i.e., respondents were asked to imagine what happens in each sector (the "short-run," specific factor model) and then what happens if workers can switch sectors (the "long-run," factor endowment model).

Figure 8 shows the share of respondents who agree with each of the statements listed on the vertical axis, split by level of education (Panel A) and by whether a respondent thinks they are made better or worse off by trade (Panel B). While there is no unambiguously correct answer under all possible assumptions and models, the answers are oriented such that agreeing with the statements listed is consistent with a benchmark textbook model (e.g., Krugman et al. (2017)), as well as with recent empirical evidence on the effects of trade protection (e.g., Amiti et al. (2019) and Fajgelbaum et al. (2019)). The gray line shows the expected share of respondents who would agree with the statements if they randomly guessed answers.

Welfare effects. Respondents are divided on the issue of whether consumers who purchase cars in the US benefit if car imports increase. In addition, 75% of college-educated respondents and 59% of non-college-educated ones believe that both trade partners are generally made better off by trade rather than one country gaining at the expense of the other one. The third question in the figure considers a scenario in which the U.S. can produce cars at a lower cost than the foreign country. Respondents are asked whether, under some circumstances, it would still make sense to import cars from abroad. 77% of college-educated respondents against 64% of non-college-educated ones agree it makes sense. This suggests that respondents either understand the concept of comparative advantage or have in mind some love-for-variety or quality differential.

Price and wage effects. Respondents have disparate views about the price and wage effects of exports and imports, suggesting that it is difficult for them to anticipate these equilibrium effects. In many answers under the headers of "effects on prices" and "effects on wages" respondents are almost evenly split between agreeing and disagreeing. For instance, if the U.S. started importing more cars and producing fewer cars

domestically, only around one quarter of respondents believe that the price of cars in the U.S. would decrease, and around half think that wages in the U.S. car sector would decrease. This may explain why only 55% of respondents think that households who purchase cars in the U.S. would be made better off by increases in car imports in the U.S. (and is consistent with the large disagreements on the effects of trade on overall prices in the U.S. in Section 5).

Effects of tariffs and export taxes. There is more widespread agreement about the effects of tariffs and export taxes. Around 70% of respondents agree that an export tax on U.S. laptops would increase prices abroad and that a car import tariff would increase prices of cars in the U.S.

Factual knowledge about trade. I also asked respondents a series of questions on the main imports, exports, and trading partners of the U.S. Figure 7 shows that 71% of respondents correctly answer that the country from which the U.S. imports the most is China. Smaller shares of respondents (between 4% and 7%) answer Mexico, Japan, Canada, or the U.K. When asked to which country the U.S. exports the most, 44% of respondents answer China again, and 19% chose the correct answer, Canada. Mexico is a close third with 14% of respondents choosing it. Almost 80% of respondents know what an import tariff is, but less than half know what an import quota is (not shown on the figure).

Heterogeneity in knowledge and willingness to pay for information about trade. To evaluate respondents' willingness to pay for information, I implement the following procedure: In the final part of the survey, respondents were informed that they were automatically enrolled in a lottery to win \$1000 and asked whether they were willing to forfeit a randomized amount of their lottery gain (between \$1, \$2, \$5, and \$10) in order to receive the accurate answers to all the knowledge questions. They had to commit to forfeiting that amount before they knew whether they had won the lottery or not. This allows me to study the willingness to pay for information. The share of respondents who agree to pay the randomized amount proposed in exchange for accurate truthful information is 38%.

Table 2 highlights some of the heterogeneity in knowledge across respondents. The outcome variables are the share of correct answers in the case study questions (column 1) and the willingness to pay for correct answers, controlling for the randomized price of information. Women, Black respondents, Hispanic respondents, younger respondents, those without a college degree, and Republican respondents tend to answer less accurately (see Table A-1 for heterogeneity in answers for each individual question). Those who feel that they have been made better off from trade answer more accurately, are more likely to believe in welfare gains from trade, and are more willing to pay for the information. More knowledgeable people are consistently more willing to pay for information, which could be one of the channels through which misinformation can persist (Alesina et al. (2018) and Alesina et al. (2022)).

Summary. In sum, respondents are divided about the effects of trade when asked hypothetical and precise questions about its mechanisms. There is little agreement on the effects of trade on prices or wages in different sectors. There is more alignment on the overall welfare effects of trade or the effects of trade-related taxes (import or export taxes). There are some differences by college education and own experience, but only small partian gaps in understanding. Those made worse off by trade anticipate more negative overall effects from open trade, even in these hypothetical scenarios.

5 Perceived Efficiency and Distributional Effects of Trade

I now turn to the perceived efficiency and distributional effects of trade and trade policy, as well as perceived personal impacts. While Section 4 asked hypothetical questions in a controlled problem-set type environment, this section describes respondents' perceived (non-hypothetical) impacts from trade in the U.S. These perceptions are summarized in Figures 9 and 10, which show the shares of respondents who agree with the statements listed. In addition, Appendix Tables A-2 to A-5 contain more detailed information on each of these channels.⁷

5.1 Perceived Personal Impacts from Trade

Across the two surveys, several questions were asked about the respondent's own experience (in Survey 1, this was only done for respondents in the personalized branch). Panel A of Figure 9 shows the shares of respondents who agree with the statements listed. For respondents in survey 1, we can further split into those who answer that they are *better off from trade* and those who think they are *worse off from trade*.

The results show that people are divided on whether trade has increased the prices of goods they buy and are somewhat more convinced that trade has increased the variety of goods available. Regarding their labor market experience, a minority of respondents thinks that trade is a major threat to their sector or job. They tend to rank trade on par with immigration as a potential negative influence on their job. On balance, when asked about their own experience, 61% of respondents think they have been made better off, and 39% think they have been made worse off. These views are consistent with the idea that losses from trade in the labor market are concentrated, while consumer gains are diffuse and widespread.

Subjective and objective exposure to trade. How does respondents' perceived exposure to trade align with their objective exposure to trade, according to different measures used in the literature? First of all, following the literature using educational achievement as a measure of factor endowment, we can see that college-educated respondents are significantly less likely to feel negatively impacted both in their role as consumers and workers (see Appendix Table A-5). Second, I consider five primary measures: 1) whether the sector of the respondent is a *tradable sector*, like in Mayda and Rodrik (2005); 2) the extent to which the respondent's occupation is routine-intensive as in Acemoglu and Autor (2011), Autor and Dorn (2013), and Goos et al. (2014); 3) the extent to which the respondent's occupation is in a position of comparative advantage from the point of view of international competition, following Owen and Johnston (2017); and 5) the exposure through the local labor market, as measured by the change in Chinese import exposure per worker in a region from Autor et al. (2013). Using these measures, I build indicators for exposure and interactions between them.

Panel B of Figure 9 shows the correlation between respondents' perceived exposure to trade and these objective exposure measures. In general, a respondent's (objective) negative exposure to trade through their sector, occupation, or local labor market is significantly positively correlated with feeling that trade has

⁷For instance, the case study explicitly asked questions conditional on workers moving across sectors versus not moving. Here, we are asking respondents to give their overall perceived impact, which will depend on the model they have in mind (e.g., a short run or longer-run model).

 $^{^{8}}$ According to Owen and Johnston (2017), routine is characterized by repetition or rule-following procedures, which in the U.S. will be subject to competitive pressure. Offshorability measures whether job tasks are location dependent and require face-to-face interaction. In countries like the U.S., they show that those in routine occupations are more anti-trade and this effect will be magnified by those in more offshorable occupations.

made them worse off and that it has negatively affected their job. People exposed to trade through their job also feel worse off as consumers and are less likely to believe that trade has reduced the prices of goods they buy, perhaps because they feel that their purchasing power is lower than it would be otherwise.

There is a positive correlation between subjective and objective exposure, although it is not perfect. This points to two possible interpretations, with implications for work using these objective exposure measures. First, sector, occupation, or local labor market measures may be too coarse to capture fine-grained individual experience. In that sense, individuals may have more accurate and precise assessments of the threats they face. Second, individuals' subjective perceptions may be exaggerated or understated. If this is the case, perceptions arguably matter more for policy views than objective exposure, as will be discussed in the rest of the analysis.

Summing up. In sum, respondents are divided in the perceived effects of trade on their consumption bundles and their jobs. Those who are in sectors, occupations, or labor markets more negatively exposed to trade or that have no college education believe they have been hurt more by trade both in their role as workers and as consumers. On balance, more respondents think they are made better off than worse off, consistent with the idea that consumer benefits are diffuse and that direct losses (through one's job) are concentrated.

5.2 Perceived efficiency effects of trade

Panel A of Figure 10 focuses on the efficiency implications of trade. These questions were asked with identical phrasing to both respondents in the generic and personalized branches. For the latter, we can distinguish between those who think they are better off from trade and those who think they are worse off.

Views on these topics are clearly divided, but generally optimistic. For instance, 61% of respondents think that international trade increases competition among firms in the U.S., 69% that it fosters innovation, and 62% that it generates more GDP growth. Divisions are not along political lines (see Table A-2).

Respondents' own experience is significantly correlated with their views about the effects of trade on the US overall (arrow B in Figure 1). Those who think they are made worse off are less likely to say that trade has increased innovation, GDP growth, or the value of the U.S. dollar and that both trade partners are made better off through trade.

Measures of objective exposure to trade are also correlated with perceived efficiency effects for the U.S. as a whole, although the correlation is somewhat weaker than for perceived exposure (see Panel C in Table A-2). Respondents in sectors, occupations, or labor markets threatened by trade are typically less likely to think that trade has led to efficiency gains. Those in comparative advantage occupations are significantly more likely to think so.

More educated respondents systematically perceive higher efficiency gains from trade (see Panel A in Table A-2). If we consider education primarily as a proxy measure for factor endowment, this result suggests that those more likely to gain from trade also perceive higher benefits of it for the U.S. as a whole. At the same time, some of the papers reviewed in the literature section suggested that education can change people's views beyond their self-interest. Indeed, conditional on education, income does not have a significant effect on perceived efficiency effects.

5.3 Perceived distributional impacts of trade

Panels B and C of Figure 10 consider beliefs about the distributional impacts of trade. It is worth noting that the empirical evidence on the distributional effects of trade is mixed. While the literature is too abundant for an exhaustive review, a few recent papers focus on estimating the overall distributional effects that arise through the consumption ("expenditure") channel and the labor market ("earnings") channel. Fajgelbaum and Khandelwal (2016) find that the gains from trade on the consumption side seem skewed toward poorer households, because a higher share of their consumption baskets is made of goods that are traded. On the contrary, Borusyak and Jaravel (2021) find that the expenditure channel of trade is close to distributively neutral for the US. The earnings channel yields overall small effects on income inequality because trade tends to generate within-income rather than across-income deciles distributional effects. For Ecuador, Adão et al. (2022) find that earnings inequality is higher than it would be in the absence of trade, with the largest gains from trade occurring at the top of the income distribution.

Perceived impacts on different groups. Panel B of Figure 10 shows the share of respondents who believe that the groups listed have gained from trade. Around 70% of respondents agree that large corporations have gained from trade and 61% think that high-income earners have gained from trade. Only one fifth of respondents think that small businesses have benefitted and those made worse off from trade almost never think so. Respondents are three times less likely to say that the middle-class and low-income earners have gained from trade than they are to say so about high-income-earners. Republicans are slightly more optimistic about the benefits of trade for the less well-off (see Appendix Table A-3).

Perceived impacts on the labor market and consumers. Overall, respondents are aware of the fact that trade can have adverse distributional consequences through the labor market. Panel C of Figure 10 shows that more respondents (63%) believe that high-skilled workers could easily change sector of work if their jobs were destroyed by trade than that low-skilled workers could switch sector (37%). 79% of people think that trade is the reason for "unemployment in some sectors and the decline of some industries in the U.S." Trade and automation are tied for the main perceived cause of the loss of manufacturing jobs, ahead of immigration.

Regarding the impacts of trade on consumers, 57% of respondents believe that international trade tends to decrease the prices of goods in the U.S. These divided views presumably reflect the tension that people feel between the different ways in which trade affects the relative prices of imports versus exports and the difficulty in knowing the counterfactual prices absent trade.

As a consequence of the perception that labor market costs are higher for lower-income workers and the lack of conviction about consumer gains, around two thirds of respondents think that trade is a major reason for the "rise in inequality" in the U.S. Importantly, despite being aware of the potential adverse distributional consequences of trade, a majority (62%) of respondents believe that, in principle, trade could make everyone better off because it is possible to "compensate those who lose from it through appropriate policies."

Heterogeneous perceptions by actual and perceived exposure to trade. Respondents who perceive to have been made worse-off by trade and those in sectors or occupations negatively affected by trade are significantly less likely to think that trade has helped U.S. workers overall, more likely to think that trade has adverse distributional consequences, and less likely to believe that losers from trade can be appropriately compensated. The opposite holds for college-educated respondents. **Summing up.** Overall, respondents are pessimistic about the benefits of trade for the middle class, lowincome earners, and small businesses. Yet, they generally agree that high-income earners or large corporations have gained from trade. Respondents' own exposure to trade (objective and subjective) is correlated with their assessment of the overall benefits of trade for others and those exposed to trade through their sector, occupation, or local labor market perceive worse overall distributional consequences of trade. The college-educated consistently hold more positive views of trade, and partian gaps are relatively modest (see Appendix Tables A-3 and A-4).

6 Views on Trade Policy

This section analyzes the factors that shape respondents' views on trade policy, as illustrated in Figure 1. Trade policy is multifaceted: in addition to trade restrictions that can take various forms (e.g., restrictions for specific items and for particular industries), there is redistribution policy. The latter can be in two forms: compensatory redistribution and general redistribution.

Compensatory redistribution involves policies targeted to those displaced by trade in the form of, e.g., direct assistance, retraining, or transfers. An example in the US is the Trade Adjustment Assistance (TAA) program. General redistribution consists of income-targeted policies such as transfers to the unemployed or the poor and wage subsidies. It is an indirect way to help those affected by trade because it can be viewed as social insurance against shocks to income, including trade shocks. None of these policies are akin to the textbook "lump-sum" transfers compensation. Instead, they are all, to some extent, distortionary and costly in efficiency terms. Thus, respondents are not asked about the ideal, theoretical, and costless compensation, but rather about these more realistic policies that are similar to existing ones.

Respondents' views on the design of trade policy are presented in more detail in Appendix Table A-6. Most respondents (63%) are supportive of free trade. Nevertheless, the idea that the U.S. should protect infant industries, food imports for food security reasons, and several strategic industries is relatively widespread.⁹ Respondents are also asked about their preferred policy to help workers in declining industries. 53% believe direct assistance and retraining are the best policies; 11% prefer production subsidies in affected sectors. Finally, 36% think import restrictions are the best solution. Furthermore, many respondents believe that the government should be responsible for regulating trade (61%) and ensuring the stability of the dollar (75%) (see Appendix Table A-8).

6.1 Experimental Design

I start by describing the experimental components of the paper, which then allows me to discuss how the factors highlighted in the framework of Figure 1 shape respondents' policy views, combining correlations and experimental evidence.

Information treatments. Survey 1 shows respondents one of three videos in a randomized manner. The control group sees no video. The *Distribution* and *Efficiency* treatment videos take the example of two countries, called A and B. A produces cars at a lower cost than B, while B produces clothing at a lower cost.

The *Distribution* video states that openness to trade can increase the flow of goods and services, but that there may be winners and losers from trade. Starting from the labor market effects, the video shows that, in

⁹These policy views can be compared to the results in Costinot et al. (2015) that optimal import tariffs should be uniform and optimal export subsidies should be weakly decreasing with respect to comparative advantage.

the exporting car sector, workers' earnings and the number of jobs could increase. However, in the sectors threatened by imports (clothing), the number of jobs and wages may decrease. Turning to the consumer side, the video describes that, when there is more trade, the imported goods in country A (clothing) become cheaper, and the variety of goods increases. Therefore, households who consume the imported goods benefit and consumers overall may also gain from the variety of goods available for purchase. The winners from trade are thus generally a large group. Those who lose are often a smaller group, but their losses can be acute. Finally, respondents are shown that the government can help workers in the sectors hurt by trade by providing more generous unemployment benefits and targeted training programs to help them acquire new skills and find new jobs.

The *Efficiency treatment* video shows that trade can impact the productivity and competitiveness of firms and workers. If A and B open up more to trade, then the car sector in country A will export more and generate higher profits. On the contrary, companies in the clothing sector in country A may shrink and even exit the market. Trade may also increase knowledge and technological diffusion and lead to productivity gains in both countries. The market sizes for both countries increase, which may force industries to be more efficient in order to remain competitive.

The *Economist* treatment simply appends the *Redistribution* and *Efficiency* treatments into a longer, more comprehensive video.¹⁰

Priming treatments. Survey 2 leverages a different type of treatment. Instead of showing respondents information, a randomly selected subsample is walked through questions priming them to think about how their own job ("Own Job Risks" treatment) or the price and variety of goods they purchase ("Own Consumption" treatment) may be affected by trade. For instance, they are asked "How likely do you think it is that, over the next 10 years, your job will be outsourced, off-shored, or automated because of competition with foreign countries?" or "Can you think of some goods only produced in foreign countries that you regularly buy and consume because of trade with foreign countries?"¹¹

6.2 Determinants of Policy Views on Trade

To summarize views on trade policy, I create two outcome variables: *Support for free trade* captures whether the respondent thinks that the U.S. should aim to reduce trade barriers. *Support for Redistribution* measures support for redistribution policy. It is constructed following the methodology of Kling et al. (2007). It consists of an equally weighted average of the z-scores of all redistribution-related variables and is further divided by its standard deviation.¹²

In Panel A of Figure 11, the outcome variable is *Support for free trade*. The various groups of rows, delimited with dashed lines, show coefficients from different regressions. "Individual covariates" displays coefficients on the full set of individual covariates. "Exposure to trade" shows coefficients on perceived and

 $^{^{10}}$ As explained in Section 2, this treatment came in two versions that are pooled together because their effects are broadly similar. The first version is "generic," referring to the countries as A and B. The "U.S.-specific" version explicitly refers to country A as the United States and to country B as a foreign country. The goal was to see whether there would be peculiar reactions if the treatment was about the U.S. specifically.

 $^{^{11}}$ The answers to these questions, which are interesting per se and not only in their role as treatments, were already summarized in Section 5.

 $^{^{12}}$ More precisely, the index is higher for respondents who agree that the best tools to help workers are more generous transfers and direct assistance to workers (rather than restricting imports or subsidizing production in their industry) and who want to increase spending on support and retraining programs for workers displaced by international competition and trade. It is also increasing in support for more general (non-trade specific) redistributive spending such as help for those out of work, better schools for children from low-income families, and wage subsidies.

objective exposure measures (included one at a time). "Beliefs" shows the coefficients on variables and indices that measure beliefs about trade, introduced in Section 5.2, included all at once and controlling for individual covariates. The final set of rows shows the effects of all the informational and priming treatments. Panel B performs the same analysis using as the outcome variable *Support for Redistribution*.

Consumer gains

I start with the "self-interest" part of the framework and with respondents' perceived gains as consumers (Box I in Figure 1). Section 3 showed that the topic of prices is salient and comes to people's minds frequently when thinking about trade. Section 5 also highlighted that people are divided in their beliefs about whether trade has overall decreased the prices of goods in the U.S. or of goods that they buy, although they are somewhat more convinced that trade increases the variety of goods available. It is understandable that the effects of trade on overall prices are hard to assess, given that the relative prices of different goods can move differently. It is thus difficult to imagine the counterfactual prices without trade, while it is likely easier to grasp the overall increase in the variety of goods.

Figure 11 shows that the belief that prices decrease from trade is not significantly related to either support for trade or support for redistribution. Consistent with this lack of correlation, the experiment of priming people to think of their benefits as consumers, specifically of the prices and variety of goods that they purchase, does not move their support for trade either. These patterns are in line with the view that although many people believe they gain as consumers from trade, these benefits are diffuse and people take them as given. They are thus not a major predictor of support for trade.

Own job risks

I next consider the second "self-interest" part of the framework, which relates to respondents' exposure to trade in the labor market (Box II of Figure 1).

Figure 11 highlights that respondents who feel worse off from trade and who are more negatively exposed to trade through their occupation or sector are significantly less likely to support free trade.¹³ The opposite holds for those in comparative advantage sectors. There are no differences in support for redistribution between these groups. The experimental evidence confirms these patterns: Respondents who are primed to think about possible negative impacts of trade on their job (in the *Own job risk* treatment) reduce their support for free trade significantly. These findings are consistent with the idea that trade creates a concentrated set of losers: Although a minority of respondents feel directly impacted in their job (as shown in Section 5), these potential losses are salient and loom large. Thus, to some extent, views on trade are shaped by self-interest when it comes to one's potential job risks, which are more salient than the diffuse consumption benefits.

Note also that college-educated respondents support both free trade and redistribution significantly more. While higher support for trade among the college-educated is in line with the factor endowment model, if education is taken as a proxy for skill, higher support for redistribution (even conditional on income) cannot easily be explained with narrow self-interest. Instead, it may point to the idea raised in the introduction that education may shape views about the economy.

¹³They are also more likely to support imposing trade restrictions to help workers (see Table A-6).

Belief in the efficiency gains from trade

Respondents' broader economic and social concerns also influence their policy views, as represented on the right side of Figure 1. Starting from the perceived efficiency gains from trade (Box III), recall from Section 5 that respondents' views on the efficiency impacts of trade are divided, but on average lean positive.

Panel A of Figure 11 shows that beliefs in efficiency gains from trade are significantly correlated with more support for free trade. This can be seen both in the correlations and in the experimental effects: the *Efficiency* treatment significantly improves support for free trade. Thus, the channel represented by Arrow C in the framework of Figure 1 seems pertinent. Views on compensatory redistribution are also correlated with views on efficiency gains from trade. Respondents who believe that trade can improve innovation, competitiveness, and GDP are more supportive of redistribution policy to help those who do not benefit from these efficiency gains.

Furthermore, Section 5 emphasized that respondents who feel that trade has impacted them negatively are less optimistic about efficiency gains. In conjunction with the effects of beliefs in efficiency highlighted here, this suggests that the indirect channel represented by Arrow B in Figure 1 may also be relevant. Below, I perform a decomposition analysis to see to what extent this is the case.

Perceived distributional impacts of trade and the importance of compensating losers

Next, I focus on the perceived distributional impacts of trade (Box IV in Figure 1). The strongest predictor of support for free trade is the belief that, in principle, losers can be compensated. Other perceptions of the distributional impacts of trade are only weakly correlated with views on trade. Those who believe that trade is a major reason for unemployment and hurts U.S. workers are somewhat less likely to support free trade. As long as respondents believe that adverse consequences from trade on some groups can be dampened by redistributive policy, they are likely to support more free trade, even if they believe that there are adverse distributional consequences. The perceived distributional impacts of trade also substantially matter for support for compensatory redistribution. Respondents who believe that trade hurts low-income and low-skilled workers and that it fosters inequality support redistribution much more.

These correlational findings are confirmed experimentally. The *Distributive effects* treatment tells respondents about possible adverse consequences, but also about redistributive policies that could remedy them. The correlations described above suggest that these two pieces of information should move respondents in opposite directions when it comes to support for trade (so that the sign of the net effect is theoretically ambiguous), yet push them toward more support for redistribution. This is consistent with the treatment effects of the *Distributive effects* video: It has no significant effect on support for trade and strongly increases support for redistribution policy. The *Economist* treatment also improves support for redistribution, as it similarly emphasizes the distributional consequences of trade and potential solutions for them, while in addition showcasing trade's efficiency benefits. Thus, the effect from perceived distributional impacts of trade to views on trade policy – represented by arrow C in Figure 1 – is important.

Furthermore, recall that those who are materially negatively affected by trade – whether subjectively or objectively through their sector, occupation, or labor market – perceive worse overall distributional effects of trade (Section 5). As just shown, these perceptions are correlated with lower support for free trade and higher support for compensatory transfers. Therefore, the effect of own exposure to trade on perceptions of its distributional impacts may provide an additional, indirect channel – represented by Arrow B in Figure 1) – through which exposure affects policy views.

The picture that arises is thus that, even if people understand that there could be adverse distributional impacts from trade, they will still support free trade as long as they believe that losers can be compensated. Respondents that hold this belief also support more redistribution policy to buffer some of the adverse consequences. Hence, people care both about efficiency and distributional effects, but these beliefs shape different aspects of their policy views, i.e., views on free trade itself versus views on redistribution to deal with the adverse consequences. Put simply, people believe that efficiency gains are more relevant for trade policy; distributional concerns can be "fixed" by other policies. However, absent the belief that losers can be helped, distributional worries decrease support for trade. An important lesson here is that policy has to convincingly take action to compensate those who lose in order to maintain support for free trade. This is also consistent with the discussion in Blanchard and Tirole (2021), Rodrik and Stantcheva (2021a), and Rodrik and Stantcheva (2021b), who emphasize that a backlash against openness and free trade can stem from the perception that the losers are left alone and that nothing is done to shelter them from the adverse distributional consequences.

Direct and indirect effects from self-interest

In line with the framework of Figure 1, the results described above show that respondents that are affected through their labor market are less likely to support free trade through two channels. First, there is the direct self-interest channel, represented by Arrow A in the figure. Second, their own experience influences their broader economic and social concerns about trade, which in turn affect their policy views (the path through Arrows B and C in the figure). This leads to the question: What is the relative importance of these two channels?

To answer this question, I perform a Gelbach decomposition of the effect of own exposure (Gelbach, 2016). In essence, this method compares the coefficient from a partial regression, in which support for free trade is regressed on a measure of personal exposure and other controls to the coefficient from a full regression, in which the controls for the "beliefs" from Figure 11 are added. The decomposition shows how much of the effect of personal exposure goes through these beliefs versus how much of the effect persists despite controlling for them, which is the unexplained part of the effect of exposure. The latter can be interpreted as the direct self-interest channel (arrow A). Figure 12 shows the results for several measures of exposure: perceived exposure, being in a routine and offshorable occupation, being in a comparative advantage occupation, and being in a tradable sector. The direct self-interest channel (i.e., the unexplained part of the gap) is around 30% for the perceived measure of exposure, around 50-70% for exposure based on occupation, and 84% for exposure based on sector. While it is difficult to rigorously compared these magnitudes, a clear result is that there is a significant role for the direct self-interest channel, as well as for the indirect channel whereby exposure shapes one's broader economic and social concerns. Furthermore, the decomposition shows that the differences in views between those negatively exposed to trade and those that are not, are mainly explained by the key factors already highlighted above, namely whether they believe it is possible to compensate losers and whether they believe in the efficiency effects of trade.

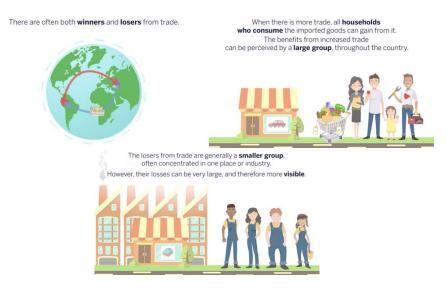
Scope of government, patriotism, and partisanship

Some of the other determinants of trade policy views (Box V) are shown in Appendix Tables A-6 to A-8. Trust and belief in a broad scope for government are also strong predictors of support for redistribution policies, in line with earlier results (Kuziemko et al. (2015) and Stantcheva (2021)). Those who worry about

geopolitical ramifications from trade restrictions, i.e., retaliatory responses, are more likely to support policies to compensate losers from trade rather than support outright trade restrictions. Patriotism is significantly correlated with support for trade restrictions in many industries and to protect U.S. workers, as well as with lower support for compensatory transfers.

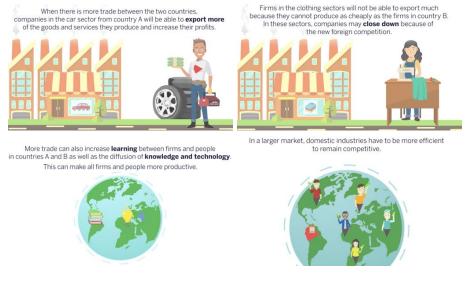
Partisanship also matters for views on free trade, but bigger differences arise in support for compensatory transfers and redistribution. Most respondents remain supportive of free trade overall: Only 28% of Democrats, as compared with 43% of Republicans, believe the U.S. should not aim for free trade. Restrictions of food imports to ensure food security (as opposed to providing subsidies for the food sector) are supported by 33% of Democrats and 45% of Republicans. The infant industry argument resonates across both sides of the political aisle with around 54% of all respondents. The lack of large partisan gaps on trade, which stands in contrast with that on many other policies (see Alesina et al. (2022), Alesina et al. (2018) and Stantcheva (2021) among others) is also seen in the fact that, historically, both Democrat and Republican U.S. presidents have introduced protectionist measures early in their first terms (Amiti et al. (2019)). There are, however, substantial partisan gaps that arise in support for compensatory and general redistribution. Between 38% and 46% of Democrats favor higher taxation to fund transfers to the unemployed, income support for workers displaced by international trade, and wage subsidies. The share of Republicans who support such measures is consistently between 14 and 18 percentage points lower.

FIGURE 3: DISTRIBUTIVE EFFECTS TREATMENT



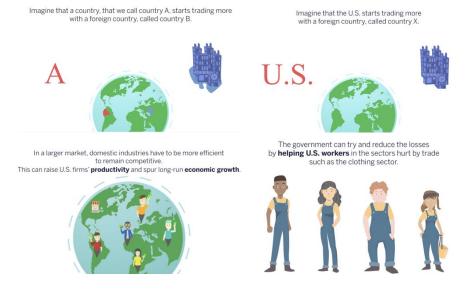
Link to the videos.

FIGURE 4: EFFICIENCY EFFECTS TREATMENT



Link to the videos.

Figure 5: Economist (= Efficiency + Distributive effects) treatment



Link to the videos.

7 Conclusion

The new survey evidence in this paper shows that people have varying degrees of understanding of how trade and trade policy work. Overall, many believe in positive efficiency gains from trade, but also understand that trade can have adverse distributional consequences. There is broad consensus that large companies and high-income households benefit from trade and that lower-income or middle-class households and small businesses do not benefit as much. Views are split on how trade influences inequality, unemployment, and the labor market in the U.S.

Respondents' own experience, as measured by their exposure to trade through their sector, occupation, and local labor market shapes their policy views both directly (through self-interest) and indirectly, by influencing their understanding and reasoning about the broader efficiency and distributional impacts from trade. Respondents that are or feel more negatively affected by trade appear to extrapolate from their experience and hold more negative beliefs about the effects of trade on other groups (e.g., the middle class or small businesses), inequality, prices, innovation, and competitiveness.

The evidence also confirms that the gains from trade to consumers may be diffuse, while the losses of affected workers are concentrated and salient. When respondents are experimentally prompted to think about their benefits from trade as consumers, there is no change in their support for free trade. On the contrary, respondents who are prompted to think about the impacts of trade on their job reduce their support for free trade.

Yet, people's policy views on trade do not only reflect self-interest. Respondents also care about the distributional and efficiency impacts of trade on others and on the U.S. economy. The belief that trade leads to efficiency gains is correlated with stronger support for free trade. The belief that trade has adverse distributional impacts is important too, but is modulated by the belief that losers can be compensated with appropriate policies. Respondents who think that it is possible to have compensatory transfers support more free trade, even if they believe that there are negative distributional consequences from it, and they also support more compensatory redistribution to help those who have been hurt. These links are confirmed experimentally by showing respondents' pedagogical videos on the efficiency or distributional impacts of trade which, respectively, increase support for free trade and redistribution.

Trade policy has two facets that go hand in hand: trade barriers (or lack thereof) and compensatory redistribution. The results reveal that people support more open trade because they believe there are efficiency gains from it and that appropriate policies can compensate losers. In particular, respondents who think trade has adverse distributional consequences do not necessarily support trade restrictions, but they support compensatory redistribution to help losers from trade. Conversely, respondents who think that losers from trade cannot be well-compensated support more trade barriers. This highlights the importance of providing compensatory transfers and making sure that people understand them. Absent such compensation and an understanding of it, the adverse distributional consequences of trade–which are, to some extent, unavoidable– can generate support for trade restrictions and a backlash against free trade.

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	US Population	Survey 1	US Population in the Labor Force	Survey
Male	.48	.5	.52	.49
18-29 years old	.22	.23	.21	.26
30-39 years old	.21	.21	.24	.22
40-49 years old	.2	.2	.23	.2
50-59 years old	.19	.18	.2	.21
60-69 years old	.18	.18	.12	.11
\$0-\$19,999	.12	.15	.07	.16
\$20,000-\$39,999	.15	.19	.14	.19
\$40,000-\$69,999	.21	.23	.21	.22
\$70,000-\$109,999	.21	.19	.23	.18
110,000+	.31	.25	.35	.25
Four-year college degree	.21	.28	.24	.23
High-school graduate or less	.39	.19	.34	.23
Employed	.71	.68	.96	.9
Unemployed	.02	.05	.03	.09
Married	.56	.56	.58	.56
White	.59	.78	.6	.69
Black/African-American	.11	.06	.11	.11
Hispanic/Latino	.2	.06	.2	.08
Asian/Asian-American	.07	.06	.06	.04
Democrat	.30	.33	.30	.45
Republican	.26	.34	.26	.29
Independent and other	.44	.32	.44	.26
Voted for Clinton at the 2016 presidential election	.48	.39	.48	.46
Voted for Trump at the 2016 presidential election	.46	.45	.46	.45
Sample size		1771		2148

TABLE 1: SAMPLE CHARACTERISTICS AS COMPARED TO THE US POPULATION

Notes. The table displays statistics for the overall U.S. population, as compared to the samples of respondents for Surveys 1 and 2. Survey 1 was aimed to be nationally representative. Survey 2 was targeted towards respondents in the labor force. The third column shows the statistics only for the population in the labor force, in order to be comparable with Survey 2. For this column, the statistics related to political affiliation and vote during the 2016 election are computed on the overall U.S. population, as this data is not available for the subsample of U.S. citizens in the labor force. See Online Appendix A-5.3 for details on how the summary statistics on the U.S. population are constructed using IPUMS-CPS-ASEC data for March 2019.

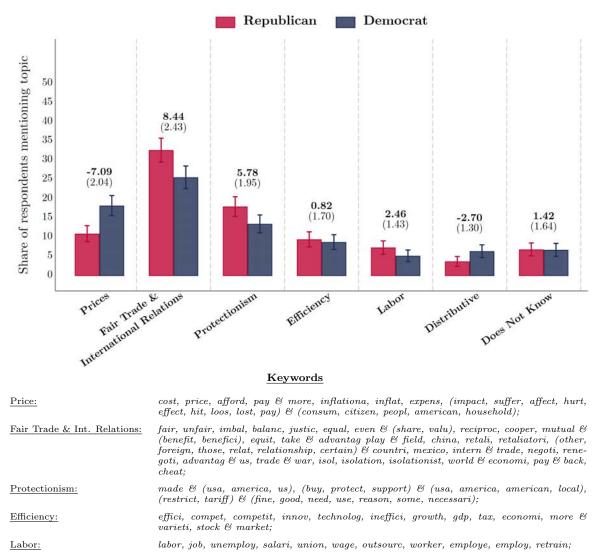
00	fice finswers to the case study	winnences to ray	winnightess to ra
	(1)	(2)	(3)
Panel A: Individual Characteristics			
Female	-0.04***	-0.11***	-0.09***
	(0.01)	(0.03)	(0.03)
Has children	0.02	0.09***	0.09***
	(0.01)	(0.03)	(0.03)
Black	-0.06***	0.00	0.03
	(0.02)	(0.05)	(0.05)
Hispanic	-0.06***	-0.02	0.01
	(0.02)	(0.05)	(0.05)
Other	-0.02	-0.07*	-0.06
	(0.02)	(0.04)	(0.04)
Age 30-49	-0.00	0.02	0.02
	(0.02)	(0.03)	(0.03)
Age 50-69	0.03**	0.05	0.03
	(0.02)	(0.04)	(0.04)
Middle-Income	0.01	-0.05	-0.05*
	(0.01)	(0.03)	(0.03)
High-Income	0.02	-0.03	-0.04
	(0.01)	(0.03)	(0.03)
College Degree	0.07***	0.05^{*}	0.02
	(0.01)	(0.03)	(0.03)
Republican	-0.04***	-0.03	-0.02
	(0.01)	(0.03)	(0.03)
Independent and others	-0.04***	-0.01	0.01
	(0.01)	(0.03)	(0.03)
Correct Answers to the Case Study			0.38^{***}
			(0.05)
Panel B: Effect of Trade			
Better off from Trade	0.09***	0.10*	0.06
better on nom trade	(0.02)	(0.05)	(0.05)
	(0.02)	(0.03)	(0.03)
Panel C: Summary Statistics			
Control mean	0.51	0.38	0.38
Democrat control mean	0.52	0.39	0.39
Observations	1771	1771	1771

TABLE 2:	UNDERSTANDING OF	TRADE AND	D WILLINGN	ESS TO PAY
	Correct Answer	s to the Case Study	Willingness to Pay	Willingness to Pay

Notes. The table is based on survey 1 respondents only (who were asked the knowledge questions). For column (1), the dependent variable is the share of correct answers in the case study ("problem-set style questions") of Survey 1. In columns (2) and (3), the outcome variable is an indicator equal to 1 if the respondent is willing to pay to obtain the correct answers to the case study, where the price of information was randomized between \$1, \$2, \$5, and \$10. Regressions include controls (not shown) for employment status, treatment branch, and price of information. Standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

FIGURE 6: TOPIC ANALYSIS OF OPEN ENDED QUESTIONS

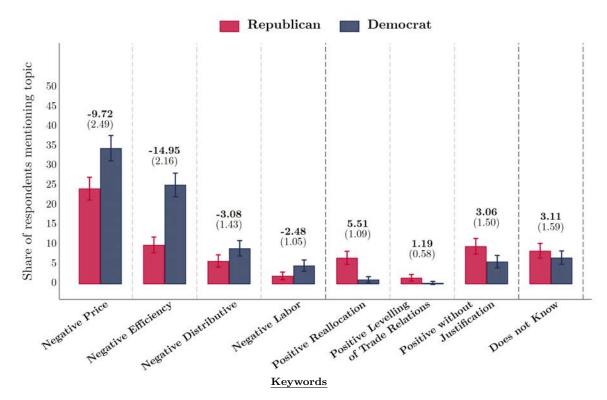
(A) When you Think about Trade Policy and whether the U.S. should put some Restrictions on Trade with other Countries, such as Tariffs, what are the Main Considerations that Come to your Mind?



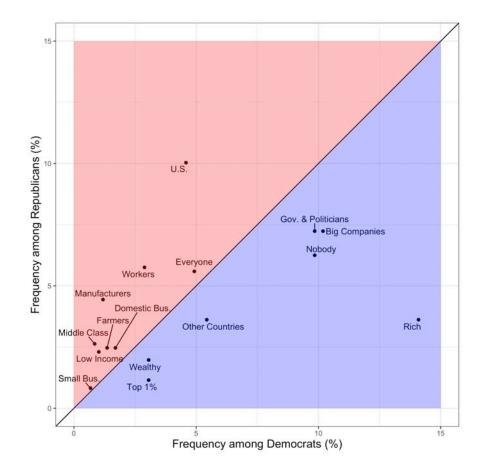
Distributive: (impact, suffer, affect, hurt, effect, hit, loos, lost, difficult, difficulti, problem, horribl) & (farmer, busi, busine, busin, firm, poor, poorer, middleclass, middl & class, industri, sector), winner, loos, corpor, workingclass, (expens, under) & (busi, busin, busine), lower & class, better & compani;

Does Not Know: idk, unsur, know, know & enough, (dont, do & not, not) & (care, know, understand, knowledg), na, (not) & (sure, knowledg, opinion), no & (opinion, idea, comment), noth & say.

(B) What do you Think would be the Effects on the U.S. Economy if Barriers to Trade, such as Tariffs, were Increased?



Negative Price:	(hit, destroy, bad, negat, suffer, disast, disastr, downfal, detriment, recess, depress, troubl, unhappi, hurt, harm, hit, loos, lost, damag, pay, worst, wors, fragil, pay, cost, impact) & (consumer, peopl, citizen, household, american, us), (increas, higher, high, up, rais, more, soar) & (price, cost), pay, inflationa, inflat, expens, hard & purchas, afford, less & cheap;
<u>Negative Efficiency:</u>	(destroy, bad, negat, suffer, disast, disastr, downfal, detriment, depress, troubl, unhappi, hurt, harm, kill, death, shrink, declin) & (effici, compet, competit, innov, technolog, growth, economi), (increas, higher, high, up, rais, more, soar) & tax, ineffici, recess, depress, loss, economi & (collaps, down, shrink, hurt, crash, wors, slowdown, hamper, slow, hinder, negat), (slow, reduc) & growth, decreas & gdp;
<u>Negative</u> Distributive:	(hit, destroy, bad, affect, negat, suffer, disast, disastr, downfal, detriment, recess, depress, troubl, unhappi, hurt, harm, hit, loos, lost, damag, pay, worst, wors, fragil, pay, cost, out & work) & (manufactur, farmer, busi, busine, busin, job, firm, poor, poorer, middleclass, middl & class, workingclass, compani, bottom, industri, lower & class, sector), layoff, bankrupt, bankruptci, poor & poorer;
<u>Negative Labor:</u>	(hit, destroy, bad, negat, suffer, disast, disastr, downfal, detriment, recess, depress, troubl, unhappi, hurt, harm, hit, loos, lost, damag, pay, worst, wors, loss) & (labor, job, unem- ploy, salari, union, wage, outsourc, worker, employe, employ, manufactur, manufact, manu- facur, manufactrur, manufactur), (increas, high) & unemploy, retrain, (decreas, low, lower) & (salari, wage, employ), (few, fewer, lessen) & job;
Positive:	Words included: good, posit, benefit, benefici, better, thrive, strengthen, improv, stronger, help, nice, great, bolster, improv, increas;
	Words excluded: catastroph, loss, lose, destroy, bad, negat, suffer, disast, disastr, downfal, detriment, depress, troubl, unhappi, hurt, harm, kill, death, shrink, declin, lost, price, cost, afford, expens, (pay & more), inflat;
Reallocation:	own, ourselv, domest, work, job, farmer, demand, local, (product, buy, protect, support, good, posit, benefic, better, thrive, strengthen, improv, stronger, help, nice, great, economy) \mathcal{E} (our, usa, america, american, us);
Levelling of Trade Relations:	fair, (other & countri), china, chines;
without Justification:	Answers in the <i>Positive</i> section that were neither in <i>Reallocation</i> nor in <i>Levelling of Trade Relations</i> .



(c) Which Groups of People do you Think would Gain if Trade Barriers such as Tariffs were Increased?

Notes. The figure shows selected results from the topic analysis of three open-ended policy questions, by political affiliation. The questions are verbatim in each panel's title. In Panels A and B, bars represent the share of respondents in each group using one or more of the keywords attributed to each topic, with associated 90% confidence intervals. The keywords for each topic are listed below the figure. Above each pair of bars, I also display the coefficient and standard error of an indicator variable for political affiliation in a regression that has as outcome a topic indicator (equal to 1 if the topic is mentioned), controlling also for the full set of individual covariates (gender, age, ethnicity, income, education, having children, political leaning) and length of the answer. Panel C reports the frequencies of the words mentioned by political affiliation. See Section A-1 for more information about the topics.

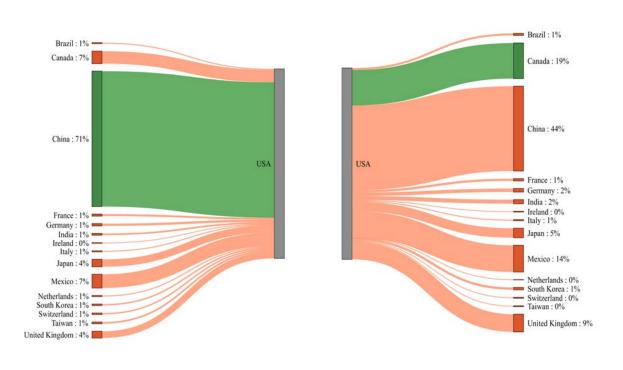


FIGURE 7: KNOWLEDGE ABOUT TRADE POLICY

(B) FROM WHICH COUNTRY DOES THE

U.S. EXPORT THE MOST?

(A) FROM WHICH COUNTRY DOES THE

U.S. Import the Most?

(c) Knowledge about Trade Barriers

Share of respondents that knows what is an import tariff 78% Share of respondents that knows what is a quota 48%

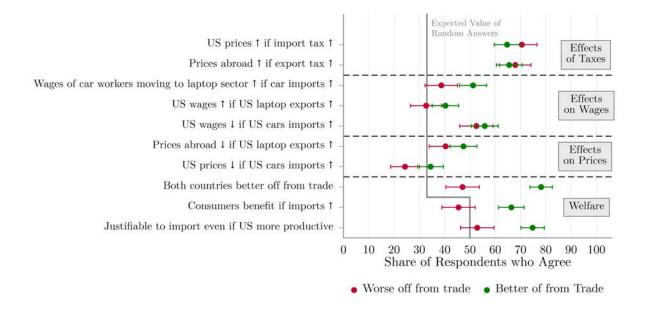
Notes. Panels A and B show, respectively, the distribution of responses to the question: "From which country does the U.S. import the most?" and "To which country does the U.S. export the most?" Correct answers are in green. Panel C displays the share of respondents that know what are import tariffs and quotas.

FIGURE 8: UNDERSTANDING OF TRADE AND TRADE POLICY: ANSWERS TO THE "PROBLEM-SET" STYLE QUESTIONS

(A) BY EDUCATION

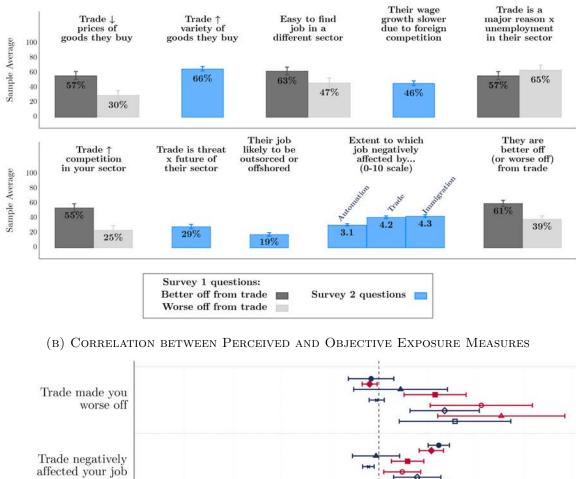
Expected Value of Random Answers US prices 1 if import tax 1 Effects of Taxes Prices abroad 1 if export tax 1 Wages of car workers moving to laptop sector 1 if car imports 1 Effects US wages ↑ if US laptop exports ↑ on Wages US wages 1 if US cars imports 1 Prices abroad ↓ if US laptop exports ↑ Effects on Prices US prices ↓ if US cars imports ↑ Both countries better off from trade Consumers benefit if imports **†** Welfare Justifiable to import even if US more productive 0 80 90 10 2030 40 5060 70 100 Share of Respondents who Agree o Non-College Educated o College Educated



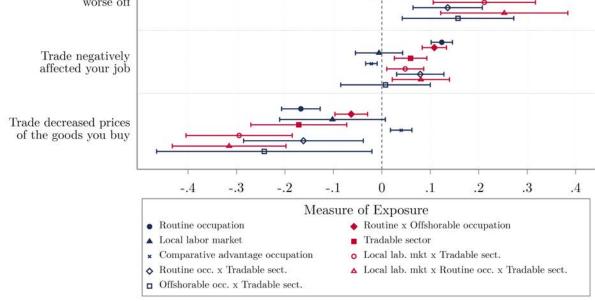


Notes. The figure reports the share of respondents who agree with each statement on the y-axis, with 90% confidence interval. The gray line represents the expected share of respondents who would agree to each statement if they were choosing answers randomly. In Panel A, the dots show the shares among respondents with a college degree (in orange) and without a college degree (in grey). In Panel B, shares are shown for respondents who think they are better off from trade (in green) and those who think they were made worse off (in red). For Panel A, the sample considered includes only respondents who did not see any of the videos and who are in the "generic phrasing" branch. For Panel B, the sample includes only respondents in the "personnalized branch".

(A) PERSONAL IMPACTS FROM TRADE



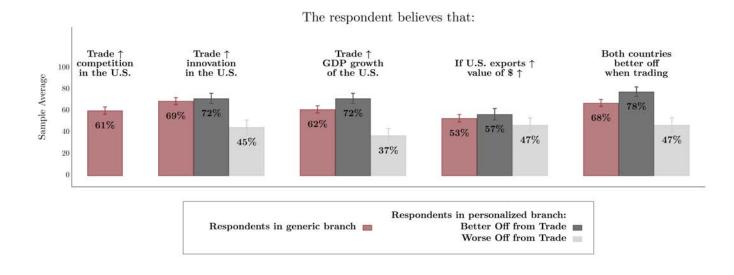
The Respondent Believes that:



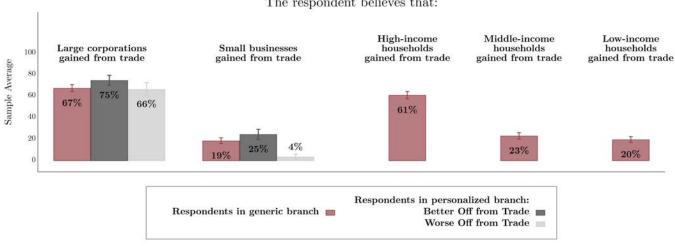
Notes. In Panel A, the bars show the share of respondents in each survey/group who agree with the statements, together with 90% confidence intervals. The questions from Survey 1 are asked in the "personalized phrasing" branch; the questions from Survey 2 were asked in the "Own job risks" or "Own consumption" branches (see Figure 2). Panel B shows the correlation between the objective measures of exposure and respondents' perceived exposure to international trade, controlling for gender and age, with 90% confidence intervals. All exposure variables are defined in Appendix A-6 (paragraph "Exposure to Trade").

FIGURE 10: PERCEIVED EFFICIENCY AND DISTRIBUTIONAL EFFECTS OF TRADE AND TRADE POLICY





(B) PERCEIVED DISTRIBUTIONAL IMPACTS: DO THESE GROUPS GAIN FROM TRADE?



The respondent believes that:

(C) PERCEIVED DISTRIBUTIONAL IMPACTS

It's easy to It's easy to Trade is a change sector x low-skilled Main cause x change sector x high-skilled major reason x unemployment & loss of manufacturing jobs (S2): 100 workers Sample Average workers decline of industries Antomation 80 Trade 79% 60 63% 40 47% 42% 37% 20In 11% 0 Trade \downarrow prices of More trade can make all better off Overall Trade is a goods sold in the U.S. (losers can be trade helped U.S. workers major reason x rise in inequality 100 Sample Average compensated) 80 60 76% 71% 66% 64% 60% 62% 57% 40 50% 46% 2022% 0 Respondents in personalized branch: Better Off from Trade Respondents in generic branch Worse Off from Trade

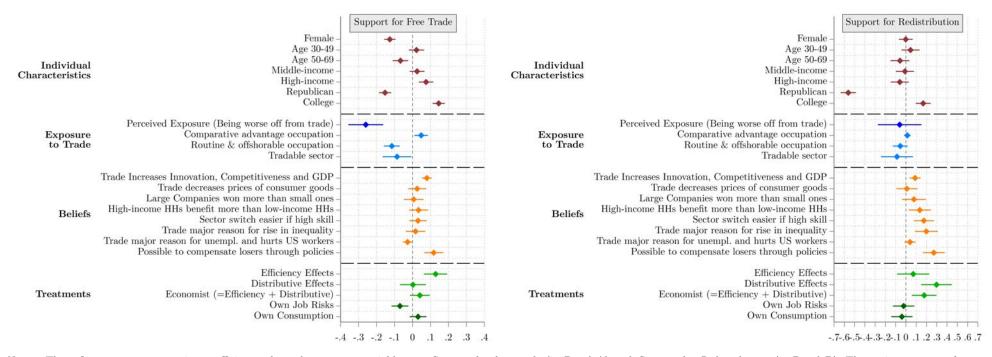
The Respondent Believes that:

Notes. The bars show the share of respondents in each survey/group who agree with the statements, together with 90% confidence intervals. Panel A focuses on questions concerning the efficiency mechanisms of trade policy, Panel B on distributional mechanisms, and Panel C on whether specific groups have gained from trade. All questions except one (marked with S2) were asked in Survey 1. Respondents all see the exact same phrasing of these questions. However, for respondents who were in the "personalized branch," we can further split by whether they believe they are made "Better Off" or "Worse Off" from trade.

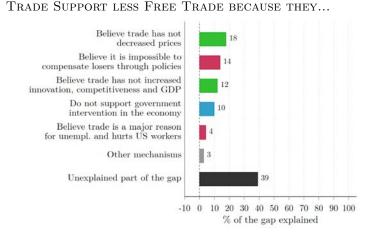
FIGURE 11: POLICY VIEWS

(B) SUPPORT FOR REDISTRIBUTION

(A) SUPPORT FOR FREE TRADE



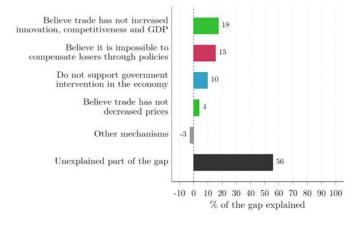
Notes. These figures report regression coefficients where the outcome variables are Support for free trade (in Panel A) and Support for Redistribution (in Panel B). The various groups of rows, delimited with dashed lines, show coefficients from different regressions. "Individual covariates" displays coefficients on the full set of individual covariates. "Exposure to trade" shows coefficients on perceived and objective exposure measures (included one at a time). For these regressions only, standard errors are clustered at the occupation level for the measures Comparative advantage occupation and Routine x Offshorable occupation and at the sector level for the measure Tradable sector. "Beliefs" shows the coefficients on variables and indices that measure beliefs about trade, introduced in Section 5.2 and included all at once. The final set of rows shows the effects of all the informational and priming treatments. Confidence intervals are at the 95% level. All variables are detailed in Appendix A-6.



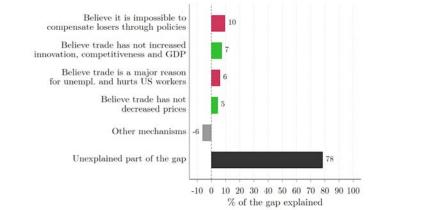
(A) THOSE WHO PERCEIVE THEY ARE WORSE OFF FROM

FIGURE 12: GELBACH DECOMPOSITION OF SUPPORT FOR FREE TRADE

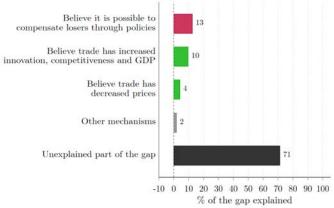
(B) THOSE WHO ARE IN ROUTINE & OFFSHORABLE OCCU-PATIONS SUPPORT LESS FREE TRADE BECAUSE THEY...



(c) Those who are in Tradable Sectors Support less Free Trade because they...



(d) Those who are in Comparative Advantage Occupations Support more Free Trade because they...



Notes. These figures show the results from a Gelbach decomposition. The bars represent how much of the gap in support for free trade between individuals that are negatively exposed to trade and those that are not can be explained by the "Beliefs" from Figure 11. A different measure of exposure is considered in each panel. Color codes are as follows: green corresponds to efficiency-related beliefs, red to beliefs about distributional mechanisms, and blue to trust in government; and gray to Other mechanisms. Only respondents in Survey 1 are included. For more details on the methodology used for the decomposition, see Gelbach (2016) and the main text, Section 6.