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UNDERSTANDING OF TRADE

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ABSTRACT

This paper sheds new light on two questions: How do people perceive and understand trade and trade policy, and which factors shape their support for different trade policies? Regarding the first question, an extensive body of research has documented the efficiency gains from trade and its distributional impacts on different groups of workers, firms, and consumers, but we lack evidence on how people perceive these various effects of trade. On the second question, trade involves many trade-offs, which people need to balance when forming their views on trade policy. They need to weigh the impacts on themselves as consumers and workers, their self-interest and broader impacts on others and society, and efficiency and equity concerns. Which of these considerations matters most to people? Using new large-scale surveys and experiments, I highlight three main findings. First, while earlier work has established that consumer gains from trade are diffuse and job losses are concentrated, I directly show the impact of these two considerations on people's views about trade. I find that perceived job risks matter more for policy views than perceived consumer gains. Second, beyond their own material self-interest, people care about the broader efficiency gains and adverse distributional consequences from trade. Support for free trade is best predicted by the belief that trade generates efficiency gains. Concerns about the adverse distributional consequences of trade do not necessarily reduce support for free trade: instead, they increase support for compensatory redistribution. These results also highlight the importance of compensatory redistribution as an indissociable part of trade policy in people's minds. Third, personal exposure to trade shapes policy views directly (through self-interest) and indirectly by changing people's perceptions of trade's broader efficiency and distributional impacts.

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

1 Introduction

Trade is an area in which there is widespread agreement among economists. Many economists tend to believe that, on balance, free trade is beneficial: even though some people win and others 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 US. 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 consequences and a resurgence of protectionist proposals.[2]

In this paper, I shed new light on two questions: How do people perceive and understand trade and trade policy, and which factors shape their support for different trade policies? Regarding the first question, the theoretical and empirical literature has documented the efficiency gains from trade and its distributional impacts on different groups of workers, firms, and consumers. But what do people know and perceive about these various impacts of trade? On the second question, trade involves many trade-offs, which people need to balance when forming their views on trade policy. They need to weigh the impacts on themselves as consumers and workers, their self-interest and broader impacts on others and society, efficiency and distributional outcomes. Which of these considerations matters most to people? To answer these questions, I design and run new large-scale surveys and experiments in the US.

Before describing the methods and results in more detail, a stylized, organizing framework helps 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). It is important to take this broader view of trade policy to include compensatory redistribution, which plays a key role, as we will see below. These two sides of trade policy can be shaped by self-interest (the left panel) or broader economic and social concerns (the right panel).

In turn, self-interest can arise from respondents' benefits as consumers (Box I) regarding the prices and variety of goods 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 of consumers are diffuse and widespread, while the losses of workers are large and concentrated (see, among others, Autor (2018), Autor et al. (2016) and Broda and Weinstein (2006)).

Focusing exclusively on self-interest concerns, two workhorse trade models predict 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 US, this has typically been taken to mean that trade would benefit higher-skilled workers and hurt 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 pure 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

[1] https://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.

from imports.[3]

However, people can also have broader social and economic concerns beyond their material self-interest, 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, highlighted by extensive theoretical and empirical work (Box III). They may also worry about the distributional consequences of trade as it impacts inequality and different groups, such as the middle class, the rich, or different types of firms (Box IV). Finally, other factors such as patriotism, partisanship, and geopolitical concerns may influence people's views on trade policy (Box V). The arrows in the diagram represent possible channels. In particular, while self-interest can directly shape views on trade policy (Arrow A), it can also indirectly influence respondents' perceptions of the overall perceived efficiency and distributional effects (Arrows B and C).

The first contribution of the paper is to measure these individual components in detail. The second contribution is to combine these elements and study which are most predictive of trade policy views. We currently lack comprehensive evidence on how people reason about these various impacts of trade on themselves and others, and how they balance them when forming their policy views.

To measure and disentangle the role of these factors in shaping trade policy views, I designed and ran two large-scale surveys that elicit respondents' perceptions of each of the elements in the diagram. The surveys start with open-ended questions that capture people's first-order concerns about trade without being primed by particular answer options. I investigate the answers to these questions using text analysis methods. The surveys then ask detailed questions that test respondents' understanding of trade, their views on the efficiency and distributional impacts of trade in the US, and their personal gains and losses. Respondents are further asked about their policy views on various possible interventions related to trade restrictions (e.g., overall trade barriers or support for the 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.

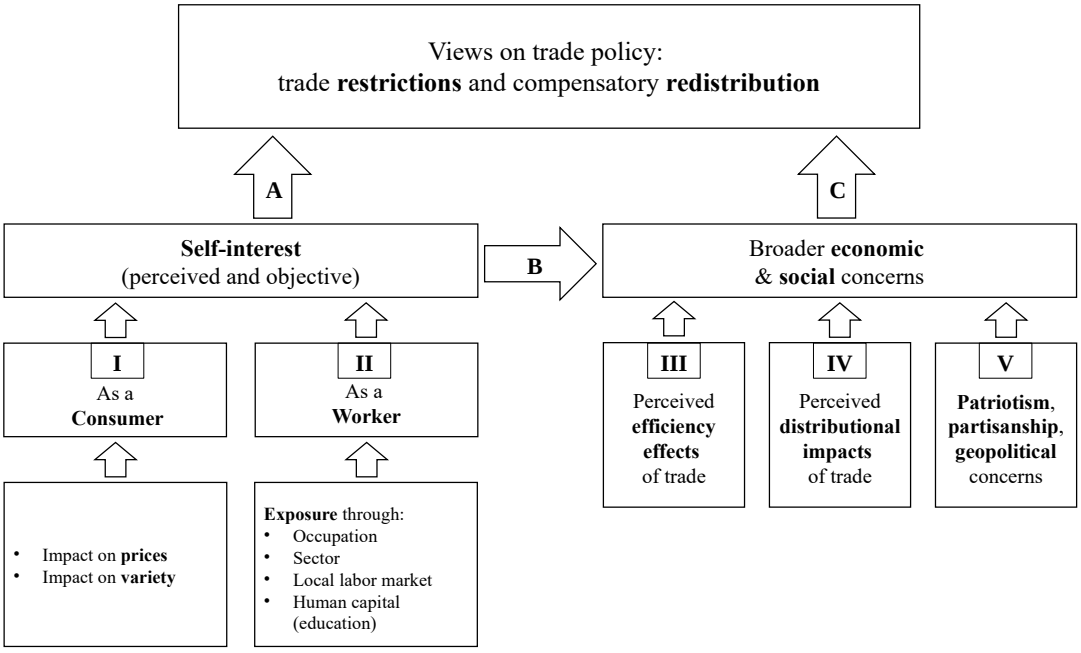
To establish causality regarding which factors drive people's views on trade policy, I designed two types of experiments embedded in the surveys. The first type consists of information treatments in the form of pedagogical videos that explain to respondents the impacts of trade policy on efficiency, 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 – as consumers or workers – through a series of questions.

Surveys are a key tool for getting into people's minds and studying otherwise invisible things such as perceptions, attitudes, reasonings, and views. Economists tend to be skeptical of surveys, and we often prefer a revealed preference approach. Nevertheless, our traditional approach faces many challenges when trying to uncover the reasoning underlying people's policy preferences. Surveys allow us to measure and analyze people's thinking more directly. One may worry that self-reported survey answers may not reflect people's true attitudes. However, a growing body of research shows that when possible to measure both, survey responses are correlated with real-world or real-stakes behaviors (see the review in Stantcheva (2022), as well as Fehr et al. (2020), Tannenbaum et al. (2020), Funk (2016), and Hainmueller et al. (2015)). Furthermore, to ensure that the data is of high quality and the survey results are credible and robust, I employ many techniques described briefly in Section 2 and Appendix A-5 and in-depth in Stantcheva (2022).[4]

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

[4]This paper is part of a broader agenda that uses social economics surveys to better understand the reasoning that shapes

Figure 1: The Factors Shaping Views on Trade Policy



The main findings are organized around three key results, each in one separate section of the paper.

The first set of results, in Section 4, relates to the importance of consumer gains versus job losses from trade. While research has highlighted the consumer gains and job losses from trade and found that the former are diffuse, whereas the latter are concentrated, I directly show the impact of these two considerations on people's views about trade. Respondents perceive consumer gains from trade (Box I) as vague and diffuse. They are divided on whether trade lowers prices or increases the variety of goods in the US or 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. Furthermore, when a randomly selected subsample of respondents is primed to consider the threats from trade for their job, they significantly reduce their support for open trade. My findings confirm that perceived job risks matter more for policy views than potential consumer gains.

The second set of results coalesces around how much people care about the broader efficiency gains and adverse distributional consequences from trade beyond their own material self-interest (in Section 5). I show that people's views on trade are strongly driven by these economic and social concerns. These findings lend empirical support to the recent theoretical model of voters' preferences over trade policy that reflects their concerns for members of those groups in society with whom they identify in Grossman and Helpman (2020). When asked about the effects of trade in the US, many respondents believe in positive efficiency gains in

people's policy views. The website understandingeconomics.org provides the data for several other policies (such as health insurance, the income tax, and the estate tax).

the form of higher competitiveness, innovation, and growth. Respondents also understand that trade can have adverse distributional consequences. Thus, there is substantial agreement on some of the winners from trade, namely large companies and high-income households. There is more pessimism and disagreement on how trade benefits workers, people with low incomes, and the middle class and how it shapes inequality and unemployment in the US.

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 (Box IV) can reduce support for free trade, but only if respondents believe that losers cannot be compensated with appropriate policies. 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 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 indissociable in people's minds. They point to the need to provide such redistribution and ensure citizens understand it if support for free trade is to be maintained.

The third set of results relates to the direct and indirect roles of exposure to trade (Section 6). Respondents' trade-related experiences, as captured by their subjective and objective exposures through their work (their sector, occupation, and local labor market), are significantly correlated with their support for trade restrictions. Furthermore, this personal exposure shapes not only respondents' assessment of how trade affects them but also their perceptions of the broader efficiency and distributional impacts of trade on others and the US. 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 US, that it fosters innovation or growth, or that it does not have adverse distributional impacts. This suggests that the path through Arrows B and C in Figure 1 is empirically relevant. A formal decomposition shows that this indirect exposure effect is essential for policy views.

Related literature. This paper contributes to the literature on attitudes toward trade by providing new and comprehensive measures of people's reasoning about trade and showing which factors matter for policy views.

The existing literature relates attitudes toward trade to various characteristics measuring exposure through the labor market, focusing on 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. O'Rourke et al. (2001) echoes these findings. 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) mostly find evidence in favor of the factor endowment model. Further evidence on the impacts of people's experience on trade attitudes comes from Mansfield et al. (2019): those who lost their jobs in import-competing sectors following the Great Recession became more anti-trade. I show that respondents' objective and subjective

exposures are positively correlated. Furthermore, personal experience shapes people's policy views directly in line with material self-interest and indirectly by changing their perceptions of the effects of trade on others and the US more generally.

By eliciting detailed perceptions about the many components that can inform policy views, I can also highlight the importance of broader concerns beyond material self-interest. A series of papers focuses on the factors in Box V in Figure 1, which I only cover briefly. Thus, Mansfield and Mutz (2009) find that out-group anxiety matters more than self-interest. Margalit (2012) also confirms that people care not only about the material consequences of trade but also its perceived social and cultural consequences. Likewise, Mayda and Rodrik (2005) find a more critical role for broader factors like relative income, degrees of neighborhood attachment, nationalism, and patriotism. Concerns about the labor market (which are a subset of the factors I consider in Box IV) as drivers of support for protectionism and a "globalization backlash" are highlighted in Scheve and Slaughter (2001), Walter (2021), and Lü et al. (2012). I show that efficiency and distributional concerns related to trade drive different aspects of trade policy views. Importantly, respondents concerned about adverse distributional consequences of trade support compensatory redistribution to help those affected but do not necessarily support more trade restrictions.

My work is also related to several papers providing experimental evidence on 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. These findings are replicated by Chatruc et al. (2021) for Latin American countries. Alfaro et al. (2022) show that telling respondents about research findings on the job losses or gains from trade or 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.

I take a different approach in the current paper: to design a treatment for each of the main factors in Figure 1 that can help tease out its causal impacts on trade policy views. Because I have questions related to the elements in each "box," I can identify which specific perceptions move in response to each treatment and better interpret the treatment effects. The information treatments shift people's perceptions of trade's efficiency and distributional impacts. The priming treatments instead ask people to think about the impacts on themselves – either as consumers or workers – without providing any information about these impacts on others. This allows me to directly test how people perceive trade through the lens of consumers versus workers (which is the effect of interest) rather than how they would react to new information about others. The priming treatment effects can be interpreted through the answers to various essential survey questions. Thus, respondents are generally not convinced that trade has lowered the prices of goods they buy, and many are not worried about the impacts of trade on their job.

The rest of the paper is organized as follows. Section 2 describes the survey, data collection, and sample. Section 3 provides descriptive statistics on respondents' knowledge about trade and trade policy views. The following three sections each focus on a key result about trade policy views: Section 4 considers the personal impacts from trade and shows that consumer gains do not appear to matter, whereas job threats are salient; Section 5 analyzes respondents' broader concerns about the efficiency and distributional implications of trade and highlights the importance of compensatory distribution; Section 6 emphasizes that exposure to trade shapes respondents' views directly and indirectly. Section 7 concludes and discusses some policy implications.

2 Surveys and Sample

This section briefly describes the survey, the data collection process, and the sample. Appendix A-5 provides additional information on important aspects of the survey and response quality, such as the various methods employed to ensure high data quality (e.g., financial incentives for accurate answers and attention check questions to flag careless respondents), a description of how survey companies recruit respondents and the pool of respondents available, and a check for survey fatigue. I provide an in-depth overview of large-scale online surveys and answers to common concerns, which cannot be covered here due to space constraints, in Stantcheva (2022).

2.1 Data collection and final sample

Data collection. I conducted two different surveys of US 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 *Bilendi & respondi* (`https://www.bilendi.co.uk/`) and its US-based partners and receive survey links via a dashboard and email. For more information on recruiting respondents, see Appendix A-5.

Final sample. Table 1 shows the characteristics of the samples relative to those of the US population in 2019.[5] Survey 1 is representative of the US population (column 1) along the dimensions that were specifically targeted– age, gender, and income– as well as along non-targeted dimensions such as marital and employment status. 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 are more likely to have completed high-school (and, in the case of Survey 1, to be college-educated) and to be unemployed than the general population (which likely reflects the fact that people have more time to take surveys during unemployment spells). African-American and Hispanic people are underrepresented. To address the small imbalances in the sample, I reweight the sample so that it is representative along the unemployment, education, and race dimensions as well. This does not change any of the results in significant ways. Therefore, I use the unweighted sample for all results in the paper.

2.2 The surveys' structure

The survey structure for Surveys 1 and 2 is illustrated in Figure 2 and the full questionnaires are available in Appendices A-3 and A-4, with links leading to the web interfaces. Below, text in italics and quotes represents the actual survey text as seen by respondents. The order of these question blocks was randomized in order to test for framing effects on policy views and survey fatigue, which I do in Appendix A-5. In practice, there was no effect of the order of blocks on policy views and no evidence for survey fatigue.

I now provide more details on some of these blocks.

[5] For details on how population characteristics are defined and constructed, see Appendix A-5.3.

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.

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 (Ferrario and Stantcheva, 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 US economy from trade restrictions are, and which groups gain or lose from changes in trade barriers. Due to space constraints, I only include the results from the text analysis in the Appendix A-2.

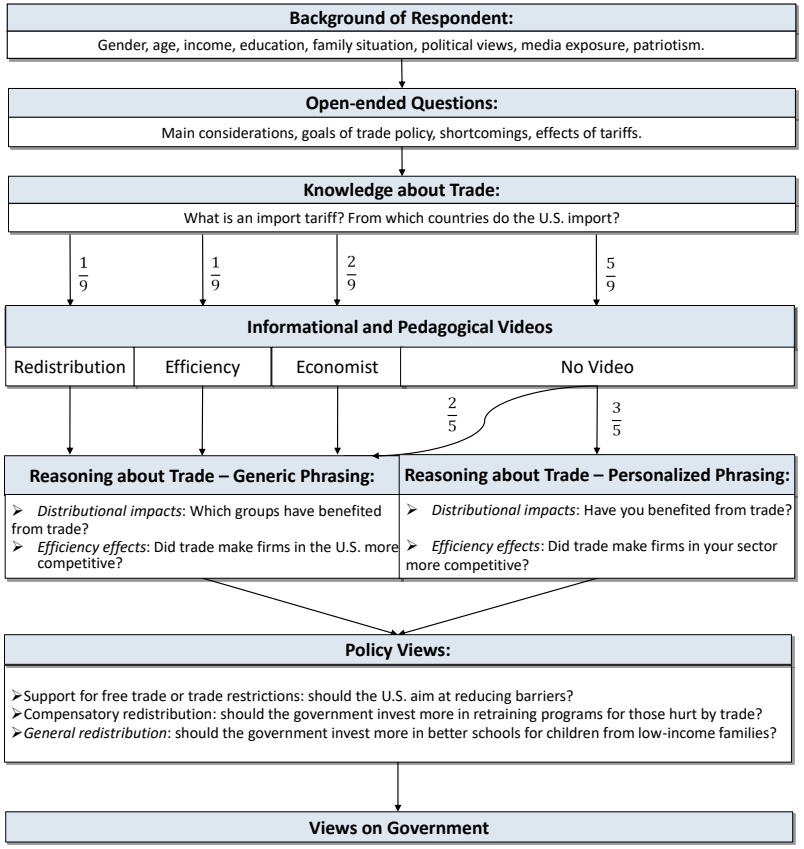
Experimental parts

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, whereas the control group does not see any video. Screenshots from these videos are in Figures 3-5. Each video can be watched by clicking the links below the screenshots.

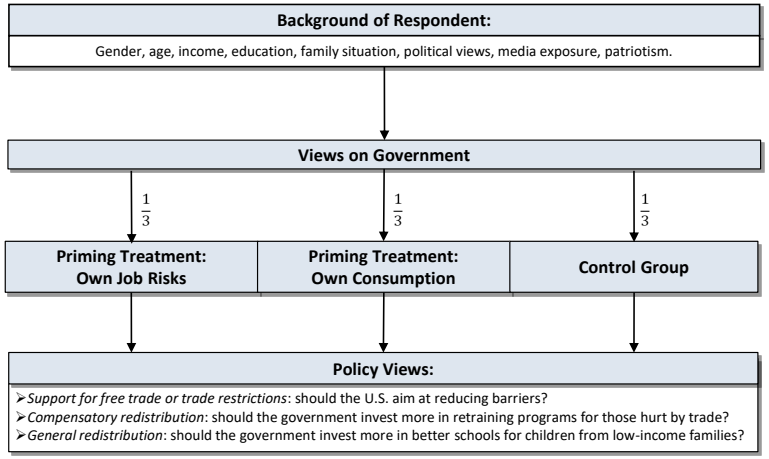
- The *Distributive effects* video emphasizes the distributional impacts of trade policy on both consumers and the labor market. More precisely, it states that openness to trade can increase the flow of goods and services, but that there may be winners and losers from trade. Starting from the labor market effects, the video shows that, in 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 effects* treatment shows trade's efficiency implications. It demonstrates 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. 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.

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.

- The *Economist* treatment brings together both the distributional and the efficiency considerations and highlights the trade-offs.[6]

The experimental part of Survey 2 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 respondents questions about the effects of trade on the prices and variety of goods they buy. For instance: *"Can you think of some goods only produced in foreign countries that you regularly buy and consume because of trade with foreign countries?"*
- The *Own job risks* treatment instead asks respondents about the threats to their own job. 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?"*

Reasoning about trade

In this block, I first ask some factual knowledge questions about trade (e.g., to which countries the US mainly exports and from which countries it imports). Respondents are then asked to think in more detail about how trade and trade policy work, and especially 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.

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 US 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 one measure 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.

[6]This treatment came in two versions that are pooled together because their effects are very similar. The first version is "generic," referring to the countries as A and B. The "US-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 particular reactions if the treatment was about the US specifically but this turned out not to be the case.

3 Descriptive Statistics: Knowledge and Policy Views

In this section, I briefly provide some descriptive statistics on trade-related knowledge and trade policy views.

3.1 Views on trade policy

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 of 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.

Most respondents (63%) are supportive of free trade (see Appendix Table A-6). Nevertheless, the idea that the US should protect infant industries, food imports for food security reasons, and several strategic industries is relatively widespread. 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).

To summarize views on trade policy, I create two outcome variables: *Support for free trade* captures whether the respondent thinks that the US 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), which consists of an equally weighted average of the z-scores of all redistribution-related variables and is further divided by its standard deviation.[7]

3.2 Knowledge about trade policy

Figure 6 reports some summary statistics related to respondents' factual knowledge about trade.[8] Panels A and B focus on the main US trading partners: 71% of respondents correctly answer that the country from which the US 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 US 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.

[7] 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.

[8] For the exact phrasing of the questions, see the questionnaire in Appendix A-3. Appendix Table A-1 provides more detailed summary statistics and correlations related to knowledge about trade.

Panel C shows that almost 80% of respondents know what an import tariff is, but just around half know what an import quota is. Two-thirds of respondents appear to understand the basic price effects of tariffs and export taxes, i.e., that an import tariff on imported goods will likely raise the price of that good and that an export tax will increase the price of the taxed good abroad. The final question in the figure considers a scenario in which the US can produce a good ("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. 68% of respondents agree that it could make sense. This suggests that respondents either understand the concept of comparative advantage or have in mind some model of love-for-variety or quality differential.

4 Diffuse Consumer Gains and Concentrated Job Losses

I next turn to the determinants of trade policy views, starting with the "self-interest" part of the framework in Figure 1, namely with respondents' perceived gains as consumers (Box I) and their perceived losses or gains as workers (Box II).

4.1 Perceived exposure to trade

Panel A of Figure 7 shows how respondents perceive the impacts of trade on themselves as consumers and workers.[9] When respondents think about their personal impacts of trade as consumers, they are divided on whether trade has decreased the prices of goods they buy. They are somewhat more convinced that trade has increased the variety of goods available. The effects of trade on overall prices may be hard to assess, given that the relative prices of different goods can move differently, and it is not easy to imagine the counterfactual prices without trade. It is probably easier to grasp the overall increase in the variety of goods.

Regarding their labor market experience, a minority of respondents think that trade is a serious threat to their sector or job (29%), that trade has negatively impacted their job (24%), or that their job is likely to be outsourced or off-shored (19%). 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.

4.2 The link between perceived and actual exposure to trade

I now show a significant positive correlation between respondents' perceived (subjective) exposure to trade and their actual (objective) exposure to trade, according to different measures used in the literature.

I consider six 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 both routine-intensive and easily offshorable from Owen and Johnston (2017);[10] 4) whether the respondent's occupation is in a position of comparative advantage from the point of view

[9] Appendix Table A-2 provides more details on perceived personal impacts from trade.

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

of international competition, following Owen and Johnston (2017); 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); and 6) whether the respondent is college-educated since educational achievement is often used as a measure of factor endowment. Using these measures, I build indicators for exposure and interactions between them.

Panel B of Figure 7 shows the correlation between respondents' perceived exposure to trade and these objective exposure measures, controlling for age and gender and clustering at the relevant level (occupation, sector, or commuting zone). In general, a respondent's (objective) negative exposure to trade through their sector, occupation, or local labor market is significantly positively correlated with a feeling that trade has 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 otherwise be. Furthermore, college-educated respondents are significantly less likely to feel negatively impacted in their role as consumers and workers.

There is, thus, a positive correlation between subjective and objective exposure, but it is not perfect. This lack of perfect correlation 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. 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.

4.3 Perceptions of consumer gains are not correlated with support for free trade

To what extent does respondents' own exposure matter for their policy views? I start with the role of consumer gains (Box I of Figure 1).

Before diving into these findings, I add a note on the exposition of the results. For clarity, in this section and the next one, I present results related to policy views in a condensed form in Figures 8 and 10. I extract the coefficients represented in the figures from the exhaustive Tables A-6 and A-7 and organize them by topic to highlight the key patterns. These regressions have as outcomes policy views, controlling for the full set of individual covariates (age, gender, education, number of children, income, employment status, race, political leaning), all treatment indicators, and all beliefs. All variables are defined in detail in Appendix A-6. Beliefs include whether the respondent believes that trade increases innovation, competitiveness, and GDP, trade decreases the prices of consumer goods, large companies gain more than small ones from trade, high-income households benefit more than low-income households, switching sector of work is easier for high-skilled workers than low-skilled ones, trade is major cause of the rise in inequality, trade is a major reason for unemployment and hurts US workers, it is possible to compensate losers from trade through appropriate policies. Also included but not depicted in the figures or tables are controls for how patriotically-minded a respondent is and how much they trust the government and generally support government intervention.[11]

[11] The specific variable names used in the figures and tables are: *Trade Increases Innovation, Competitiveness, and GDP*, *Trade decreases prices of consumer goods*, *Large Companies won more than small ones*, *High-income HHs benefit more than low-income HHs*, *Sector switch easier if high skill*, *Trade major reason for rise in inequality*, *Trade major reason for unempl. and hurts US workers*, *Possible to compensate losers through policies*. How patriotic a respondent is is captured by the index *Is patriotic*, with components *Proud to be American, Important to be born in the U.S., Own culture superior*. *Support for government intervention* is an index based on the variables *Trust government*, *Government purposes* and *Government*

There are two exceptions to this standard : The coefficients on exposure variables come from a simpler regression where exposure measures are included one at a time and that do not control for beliefs (which are endogenous to exposure) or socioeconomic characteristics beyond age or gender. Coefficients on treatment effects come from regressions that do not control for beliefs (which are endogenous to the treatment).

In Figure 8, the outcome variables are *Support for free trade* in Panel A and *Support for redistribution* in Panel B (both as defined in Section 2). The coefficients and confidence intervals on variables in each row are from regressions controlling for all individual covariates and beliefs, as just described, with detailed results in Tables A-6 and A-7).

Figure 8 shows that the belief that prices decrease from trade is not significantly related to either support for trade or redistribution. Consistent with this lack of correlation, the experiment priming people to think of their benefits as consumers (precisely, the prices and variety of goods they purchase) does not move their support for trade either. These results can be interpreted in light of the findings in Section 4.1, namely that respondents are divided in their beliefs about whether trade has decreased the prices of goods in the US or goods they buy although they are somewhat more convinced that trade has increased the variety of goods available. These patterns align with the view that, although many believe they gain as consumers – at least in the form of increased variety– these benefits are diffuse and not salient. They are thus not a major predictor of support for free trade.

4.4 Own job risks are significantly correlated with support for free trade

I next consider the second channel of personal exposure to trade, namely through the labor market (Box II of Figure 1).

Figure 8 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.[12] 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 4.1), 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.

5 Efficiency versus Equity Concerns and the Importance of Compensatory Redistribution

Respondents' broader economic and social concerns can also influence their policy views, as represented on the right side of Figure 1. In this section, I discuss the importance of the perceived efficiency gains (Box III) and the distributional impacts from trade (Box IV). These perceptions are summarized in Figure 9, which

involvement.

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

shows the shares of respondents who agree with the statements listed. In addition, Appendix Tables A-3 to A-5 contain more detailed information on each channel.

5.1 The role of perceived efficiency effects of trade

Perceptions. The first rows of Figure 9 focus on the perceived efficiency effects of trade. Respondents are generally optimistic about these effects. For instance, 61% of respondents think that international trade increases competition among firms in the US, 69% that it fosters innovation, and 62% that it generates more GDP growth. Two-thirds of respondents believe that both countries are better off when trading. Differences in perceived efficiency effects are not primarily along political lines (see Table A-3).

Effect on policy views. Figure 10 shows that beliefs in efficiency gains from trade are significantly associated with more support for free trade. This relation can be seen in the correlations and 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 is 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.

5.2 The role of perceived distributional impacts of trade

Perceptions. The second group of rows of Figure 9 consider beliefs about the distributional impacts of trade, split into impacts through the labor market and impacts on inequality. Overall, respondents know that trade can have adverse distributional consequences through the labor market. Just around half of all respondents believe that trade has, on balance, helped US workers. 79% of people think that trade is the reason for "*unemployment in some sectors and the decline of some industries in the U.S.*." More respondents (63%) believe that high-skilled workers could easily change their work sector if their jobs were destroyed by trade than that low-skilled workers could switch sectors (37%). Trade and automation are tied as the main perceived cause of the loss of manufacturing jobs, more so than immigration.[13]

Figure 9 also shows the share of respondents who believe that various groups 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. Only one-fifth of respondents think that small businesses have benefitted. Interestingly, these perceptions about the impacts of trade on large versus small firms align with the predictions of Melitz (2003). Respondents are three times less likely to say that middle-class and low-income earners have gained from trade than they are to say so about high-income earners. Consequently, around two-thirds of respondents think that trade is a major reason for the "*rise in inequality*" in the US. Notably, 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*

[13]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 arising from the consumption ("expenditure") and the labor market ("earnings") channels. 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 traded goods. 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 generates within-income rather than across-income deciles distributional effects. For Ecuador, Adão et al. (2022) find that earnings inequality is higher than in the absence of trade, with the largest gains from trade occurring at the top of the income distribution.

who lose from it through appropriate policies." Thus, respondents are, on balance, pessimistic about the benefits of trade for the middle class, low-income earners, and small businesses. Nevertheless, they generally agree that high-income earners or large corporations have gained from trade.

Effect on policy views and the importance of compensating losers. Figure 10 shows that 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 US 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 and redistributive policies that could remedy them. The correlations described above suggest that these two pieces of information should move respondents in opposite directions regarding support for trade (so that the sign of the net effect is theoretically ambiguous) yet push them toward more support for redistribution. This predicted pattern 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 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.

The picture that arises is thus that even if people understand that trade can have adverse distributional impacts, they will still support free trade as long as they believe that losers can be compensated. Respondents who hold this belief also support more redistribution policy to buffer some adverse consequences. Hence, people care both about efficiency and distributional effects. However, 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. 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 concerns 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 lesson 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.

6 The Direct and Indirect Roles of Exposure to Trade

In this section, I study the extent to which exposure to trade plays a role directly versus indirectly. Figure 8 shows that a higher (objective) exposure to trade through the labor market, sector, and occupation is correlated with significantly lower support for free trade. Similarly, those who (subjectively) think that they

are worse off from trade also support less free trade.[14] The framework in Figure 1 shows that self-interest can play a role through two channels. The direct channel is represented by Arrow A in the figure: respondents who are more negatively exposed to trade support less free trade because it is bad for them. The path represents the indirect channel through Arrows B and C: respondents who feel more negatively exposed to trade will also have more negative broader economic and social concerns about trade (e.g., its efficiency and distributional impacts) and therefore support less free trade. This conceptual discussion leads to the question: what is the relative importance of these two channels?

6.1 Exposure to trade shapes beliefs about broader impacts of trade

I start with the indirect effects of exposure, specifically the ones captured by Arrow B. The results confirm that this channel is relevant and that exposure to trade is significantly correlated with respondents' perceived efficiency and distributional effects of trade.

Perceived efficiency effects. Figure 11 shows that those who think they are made worse off are significantly less likely to say that trade has increased innovation, GDP growth or that both trade partners are made better off thanks to trade. Measures of objective exposure to trade are also correlated with perceived efficiency effects for the US, although the correlation is somewhat weaker than for perceived exposure (see Panel C in Table A-3). 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.

Perceived distributional impacts. Respondents who perceive that they 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 US workers overall, that small businesses have gained from trade, and that losers from trade can be appropriately compensated. They are more likely to believe that large corporations have gained from trade and that trade is a major reason for the rise in inequality.

Possible explanations for the link between personal experience and broader perceptions. Why do respondents who feel worse off from trade have more negative perceptions about the overall efficiency and distributional impacts of trade? One potential explanation is that the direction of causality is from broader perceptions to perceived personal impacts. Thus, respondents who believe that trade has been detrimental to efficiency and equity in the US infer that they must have been made worse off, too, regardless of whether that is the case. However, Section 4.2 showed that perceived personal impacts from trade are strongly correlated with objective exposure measures, suggesting that respondents ground their perceptions in the reality of their situation. Another explanation is that respondents extrapolate from their own experience to others. Respondents who feel worse off may infer that others have been made worse off too. These beliefs may be genuine extrapolations or, instead, self-serving. Self-serving beliefs could arise if respondents made worse off by trade feel better if they believe that everyone else and the economy is made worse off from trade too, and this may help them justify their opposition to free trade. It is challenging to design an experiment to disentangle self-interested beliefs from genuine extrapolation, especially since respondents may not be aware of why they hold certain beliefs. Furthermore, these two motives may coexist and matter to different

[14] However, neither objective nor perceived exposure affects support for redistribution.

extents for different respondents. Regardless of the exact reason, the finding remains that respondents' own experience is strongly correlated with their broader beliefs.

6.2 Direct and indirect effects from self-interest

Next, I turn to the direct effect of exposure. To assess its importance, 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" about efficiency and distributional effects from Figure 10 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 compare these magnitudes rigorously, an apparent result is that there is a significant role for the direct self-interest channel and 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 not are mainly explained by the key factors already highlighted above, namely whether they believe it is possible to compensate losers and believe in the efficiency effects of trade.

A note on the special role of education. College-educated respondents systematically perceive higher efficiency gains from trade (see Panel A in Table A-3) and less adverse distributional effects from trade (see Table A-5). They also support free trade and redistribution significantly more (see Figure 8). Higher support for trade among the college-educated is in line with the factor endowment model (and self-interest) if education is taken as a proxy for human capital. However, higher support for redistribution among the college-educated, even conditional on income, cannot easily be explained with narrow self-interest. Instead, it may be that education shapes views about the economy, as suggested by Hainmueller and Hiscox (2006). Note also that, conditional on education, income does not have a significant effect on perceived efficiency or distributional effects or support for free trade or redistribution.

7 Conclusion

The new survey evidence in this paper highlights three key results. First, respondents perceive gains from trade as consumers to be vague and unclear but perceive potential losses as workers to be concentrated and salient. Actual and perceived exposure to trade through the labor market is significantly associated with policy views. 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. In a nutshell, consumer gains matter less than job impacts for views on trade.

Second, people's policy views on trade do not only reflect self-interest. Respondents also care about trade's distributional and efficiency impacts on others and the US 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 it is possible to have compensatory transfers support more free trade, even if they believe that it has negative distributional consequences. 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.

Third, respondents' experience, as measured by their exposure to trade through their sector, occupation, and local labor market, shapes their policy views directly (through self-interest) and indirectly by influencing their understanding and reasoning about the broader efficiency and distributional impacts of trade. Respondents who 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. A Gelbach decomposition shows that both the direct and indirect channels matter substantially.

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. These findings highlight the importance of compensating transfers and ensuring 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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Table 1: Sample and US Population Characteristics

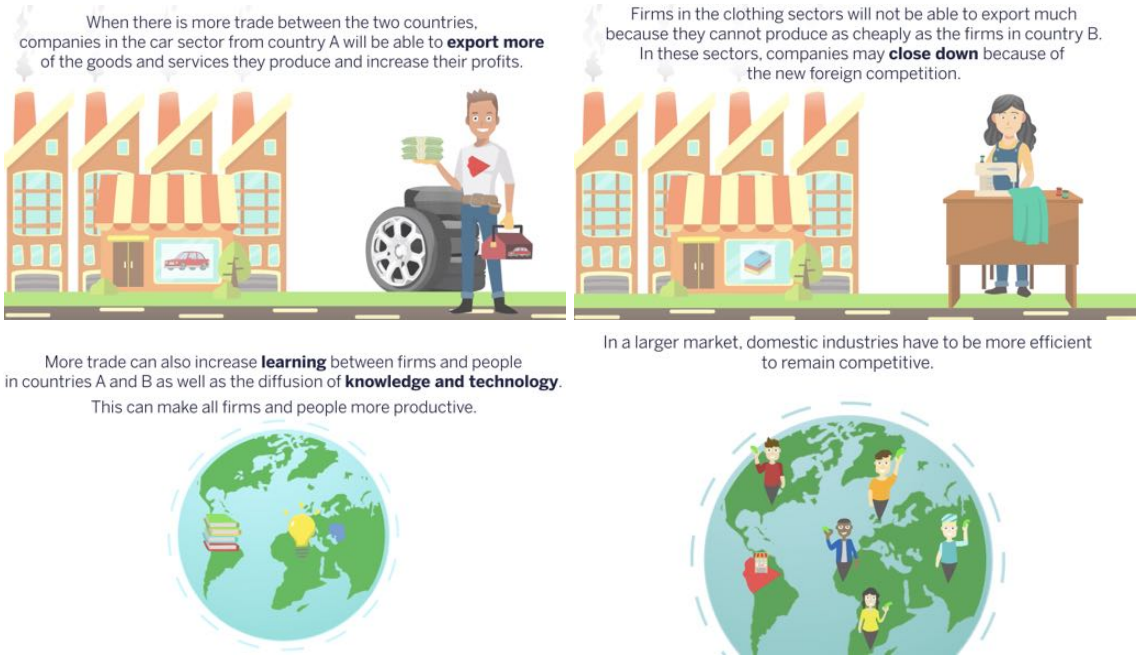
	US Population	Survey 1	US Population in the Labor Force	Survey 2
Male	.48	.5	.52	.49
18-29 years old	.22	.23	.21	.26
30-39 years old	.21	.21	.24	.22
40-49 years old	.2	.2	.23	.2
50-59 years old	.19	.18	.2	.21
60-69 years old	.18	.18	.12	.11
$0-$19,999	.12	.15	.07	.16
$20,000-$39,999	.15	.19	.14	.19
$40,000-$69,999	.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

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.

Figure 3: Distributive effects treatment

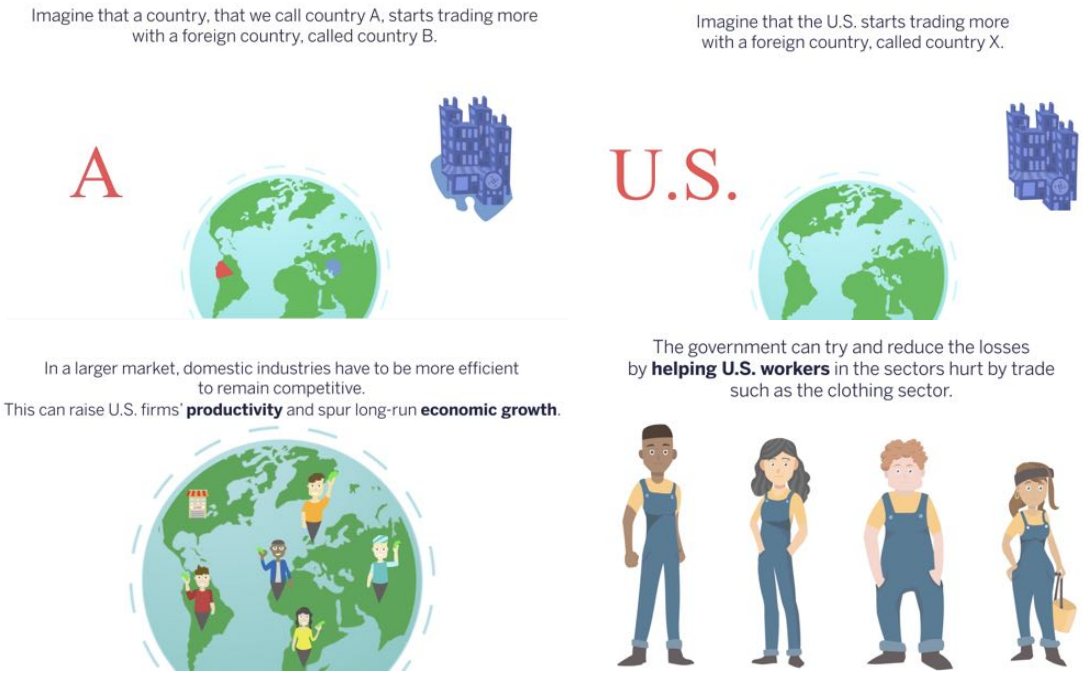
Notes. The figure shows screenshots from the information treatment on the distributive effects of trade. Link to the videos: https://socialeconomicslab.org/understanding-of-trade-videos.

Figure 4: Efficiency effects treatment



Notes. The figure shows screenshots from the information treatment on the efficiency effects of trade. Link to the videos: https://socialeconomicslab.org/understanding-of-trade-videos.

FIGURE 5: ECONOMIST (= EFFICIENCY + DISTRIBUTIVE EFFECTS) TREATMENT

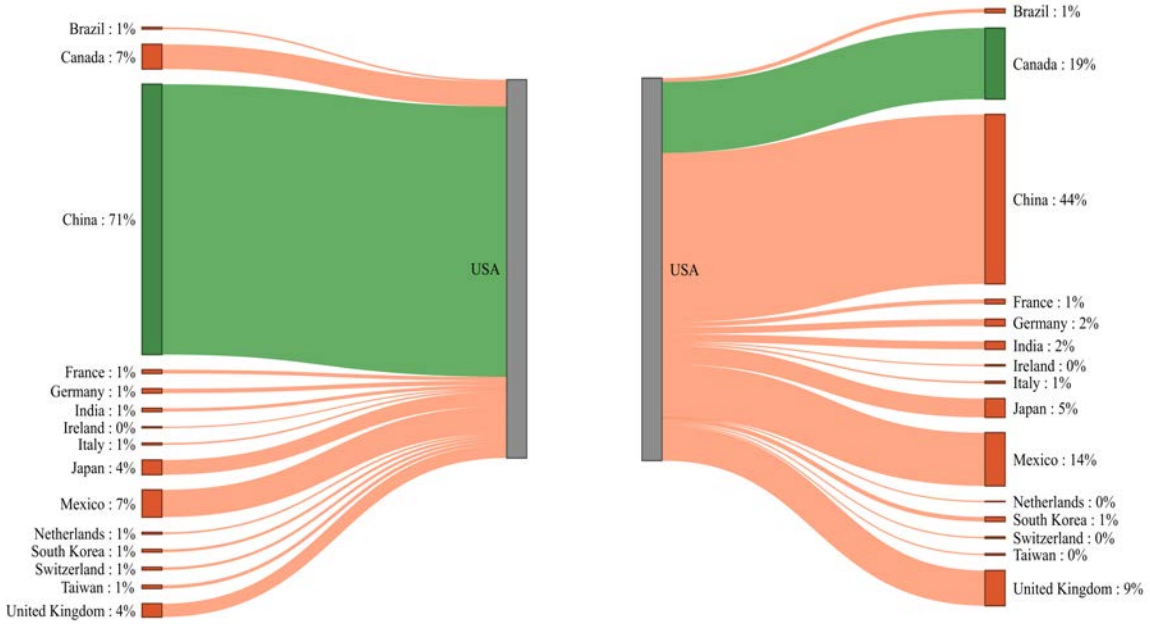


Notes. The figure shows screenshots from the information treatment on the distributive and efficiency effects of trade (the "Economist" treatment). Link to the videos: https://socialeconomicslab.org/understanding-of-trade-videos.

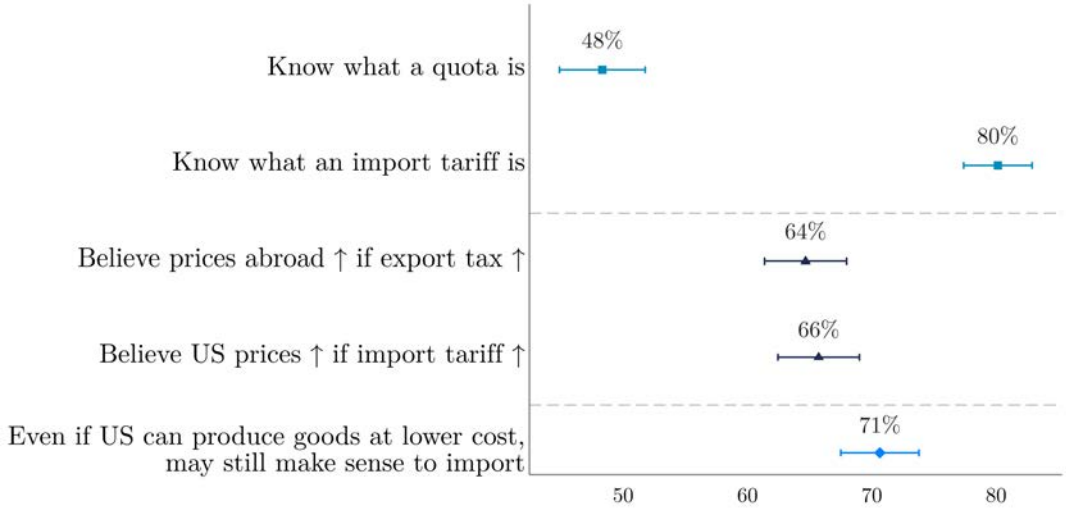
Figure 6: Knowledge about Trade Policy

(a) From Which Country Does the U.S. Import the Most?

(b) From Which Country Does the U.S. Export the Most?



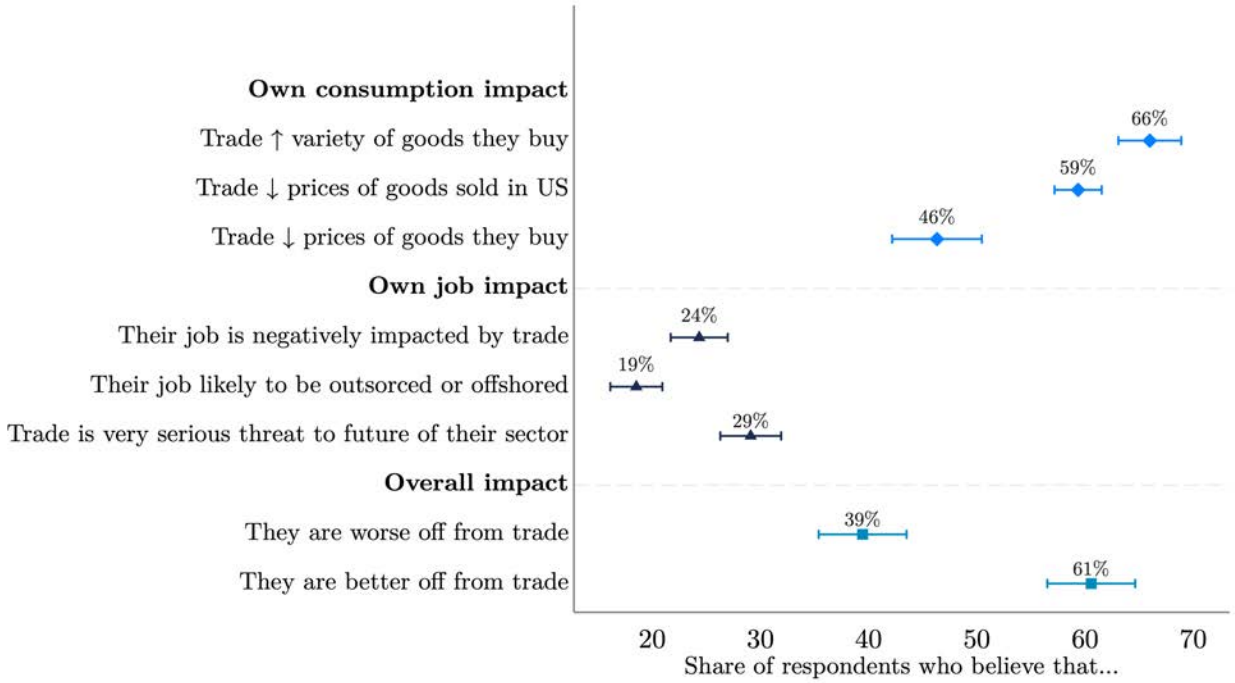
(c) Share of Correct Answers to Trade-Related Knowledge Questions



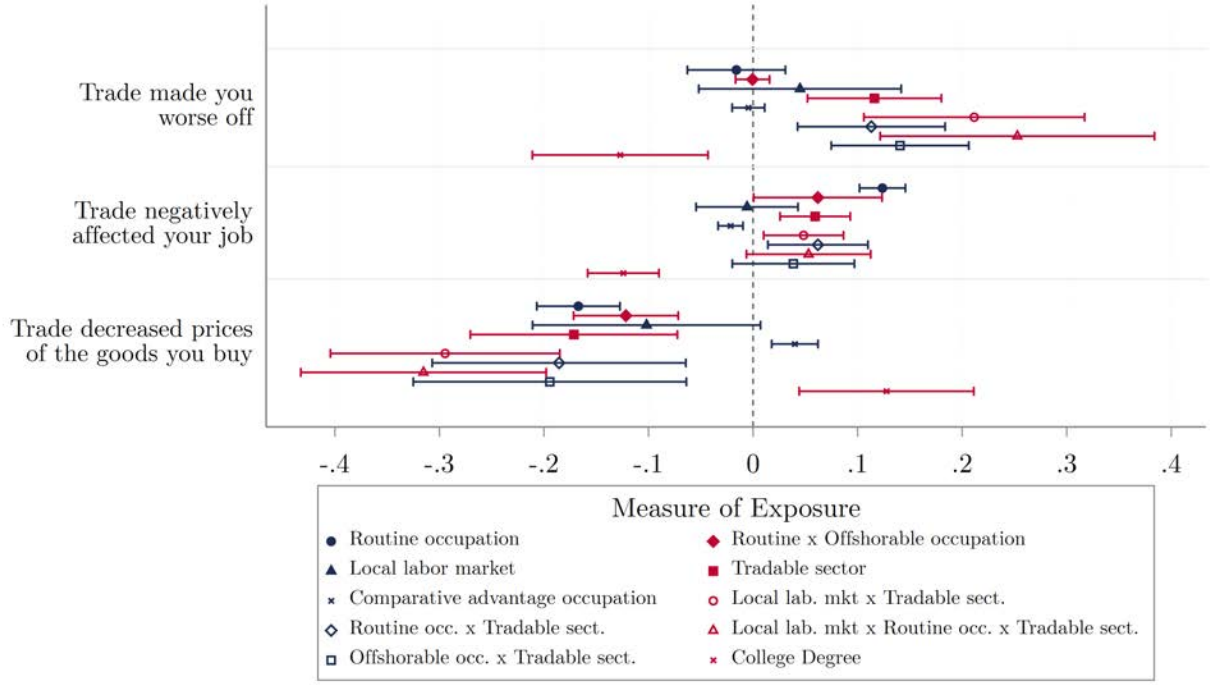
Notes. Panels A and B show, respectively, the distribution of responses to the question: *"From which country does the U.S. import the most?"* and *"To which country does the U.S. export the most?"* Correct answers are in green. Panel C displays the share of respondents who say they know what a quota and import tariff are (first two rows) and who answered correctly to trade knowledge questions (last three rows), with 90% confidence intervals.

Figure 7: Personal Exposure to International Trade

(a) Perceived Personal Impacts from Trade



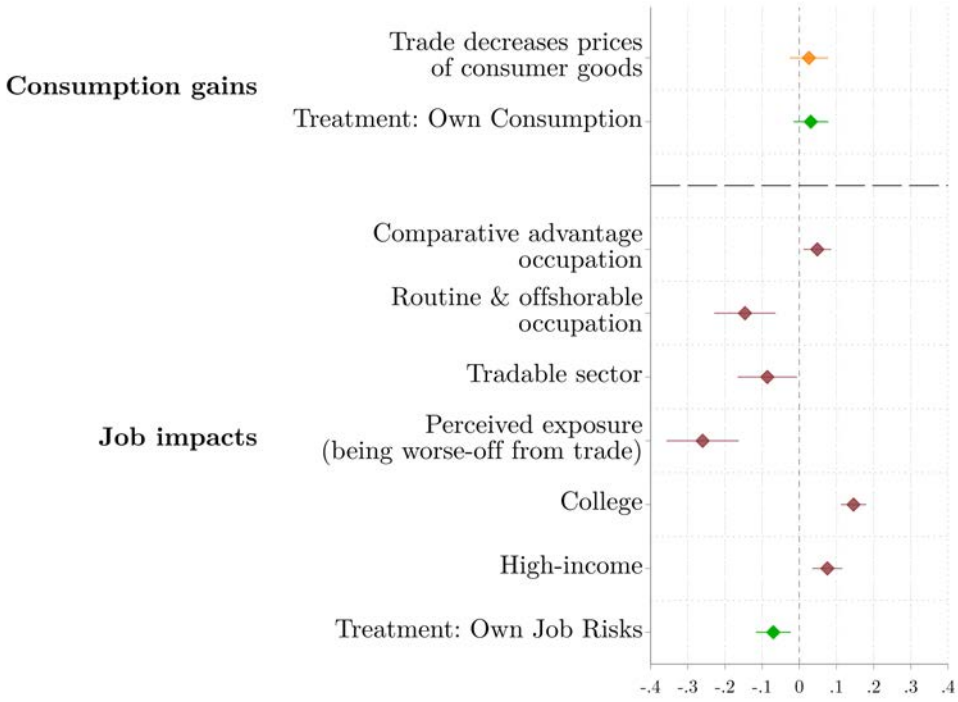
(b) Correlation between Perceived and Objective Exposure Measures



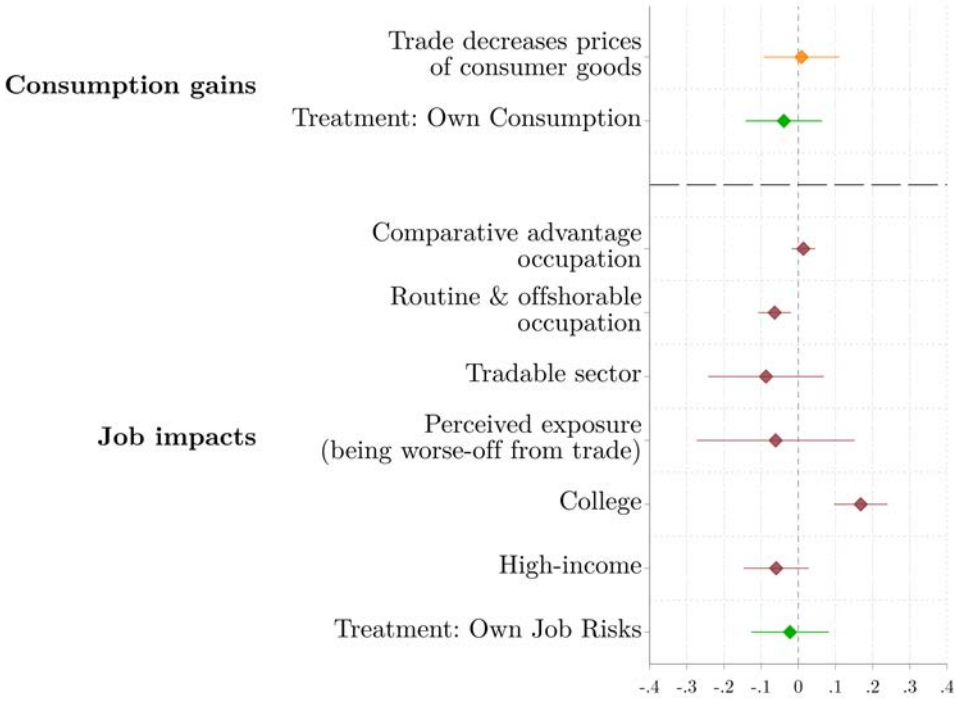
Notes. Panel A depicts the share of respondents who agree with each of the statements, together with 90% confidence intervals. Panel B shows the correlation between the objective measures of exposure and respondents' perceived exposure to international trade, controlling for gender and age, with 90% confidence intervals. All exposure variables are defined in Section 4 and Appendix A-6 (paragraph "Exposure to Trade").

Figure 8: Perceived Impacts as Consumers versus Workers

(a) Support for free trade

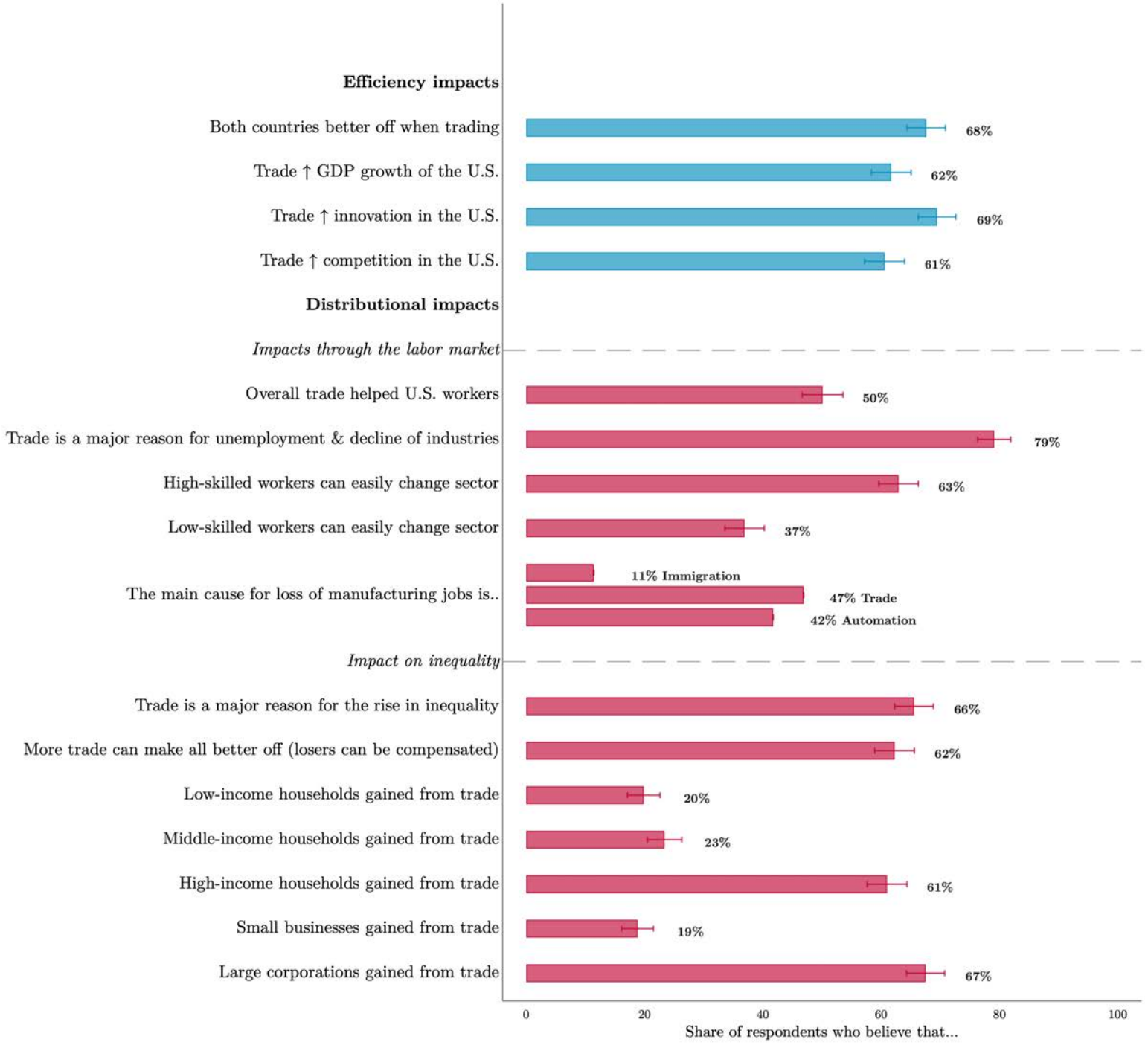


(b) Support for redistribution



Notes. The figure reports regression coefficients where the outcome variables are "Support for free trade" (in Panel A) and "Support for Redistribution" (in Panel B). The variables depicted are grouped by topic, related to either "Consumption gains" or "Job impacts." All variables are detailed in Appendix A-6. Dots of different colors refer to different regression specifications. Orange dots come from regressions which control for the full set of individual covariates (age, gender, education, number of children, income, employment status, race, political leaning), treatment indicators, and all beliefs about trade, as described in Section 4. Green dots show the effects of the priming treatments, controlling for the full set of individual covariates. Finally, brown dots show 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." 95% confidence intervals are depicted. Exhaustive results from these various regressions are in Tables A-6 and A-7.

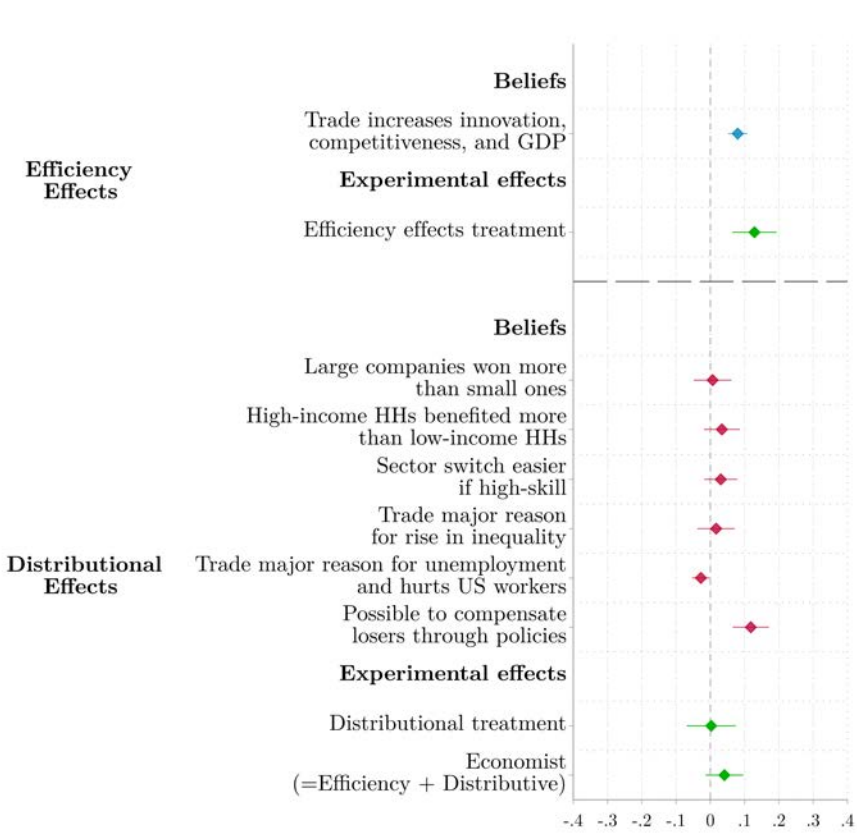
Figure 9: Perceived Efficiency and Distributional Effects of Trade and Trade Policy



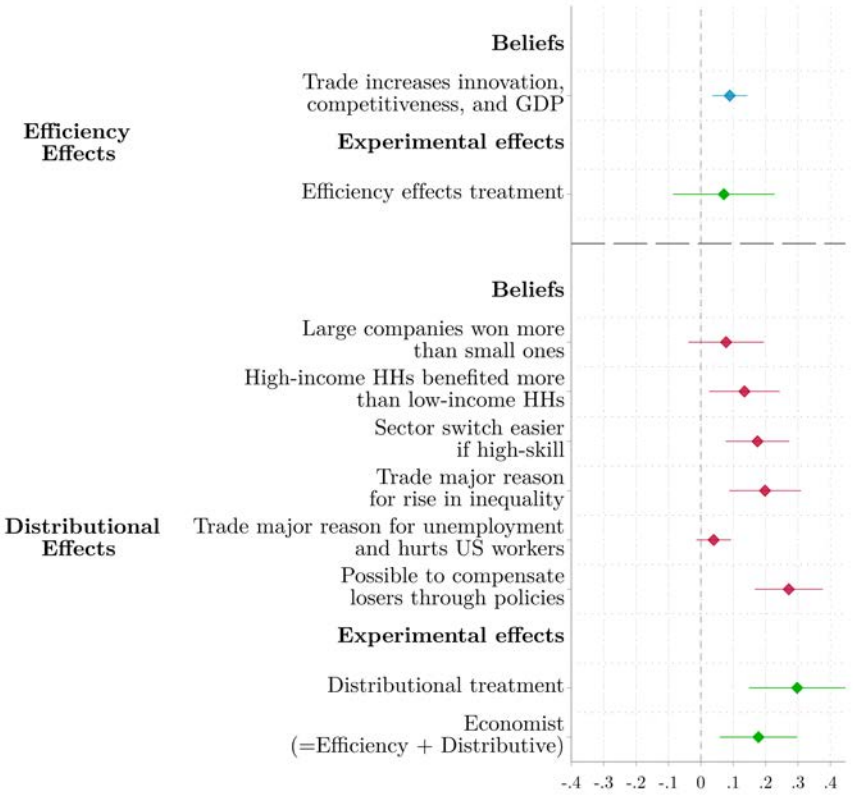
Notes. The bars show the share of respondents who agree with the statements listed and 90% confidence intervals.

Figure 10: Broader Efficiency and Distributional Concerns

(a) Support for free trade

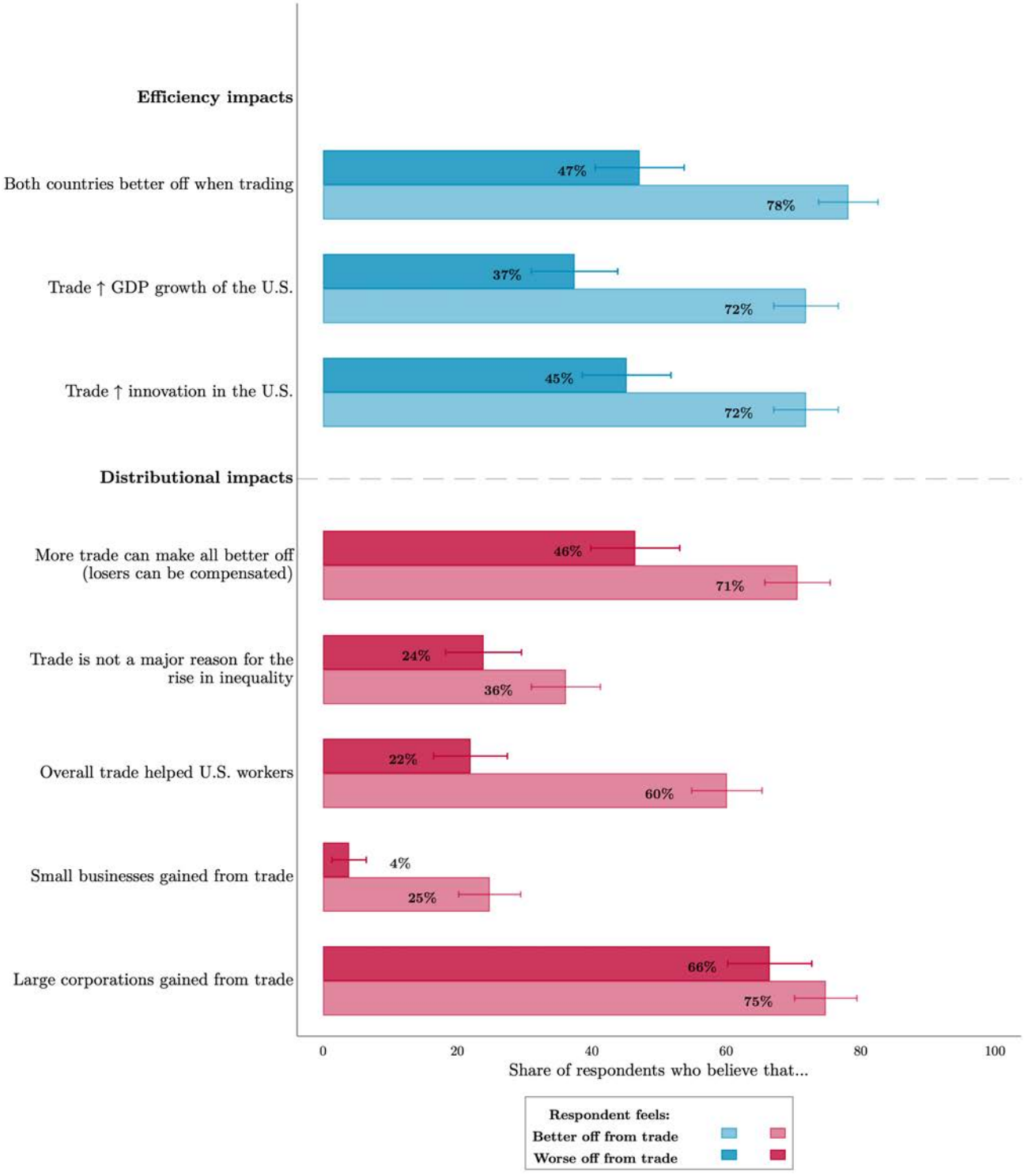


(b) Support for redistribution



Notes. The figure reports regression coefficients where the outcome variables are "Support for free trade" (in Panel A) and "Support for Redistribution" (in Panel B). All variables are detailed in Appendix A-6 and are grouped by topic. Dots of different colors refer to different regression specifications. The blue and red dots show the coefficients on variables that measures the perceived efficiency or distributional effects of trade, controlling for the full set of individual covariates (age, gender, education, number of children, income, employment status, race, political leaning), treatment indicators, and beliefs about trade, as described in Section 4. Green dots show the effects of the informational treatments, controlling for the full set of individual covariates. 95% confidence intervals are depicted. Exhaustive results are in Tables A-6 and A-7.

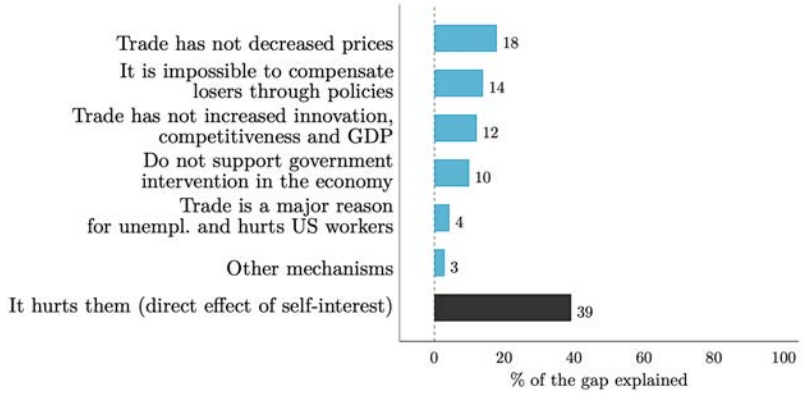
Figure 11: Exposure to Trade, Self-interest, and Beliefs about Trade



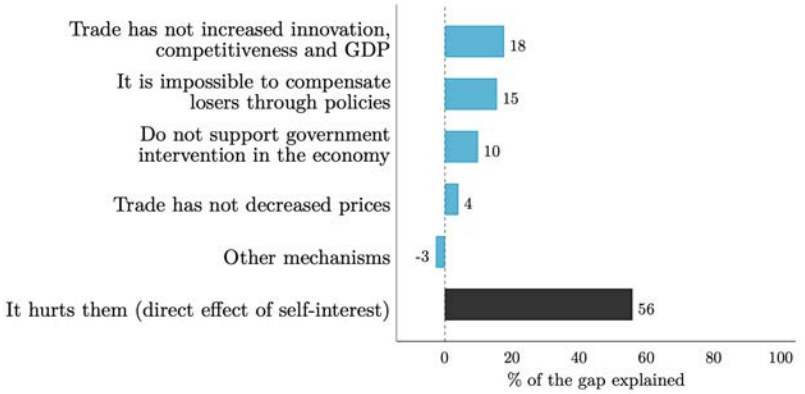
Notes. The figure shows the share of respondents who agree with the statements listed, along with 90% confidence intervals. Respondents are split into two groups, depending on whether they think they have been made worse-off by trade (darker colors) or better-off from trade (lighter colors).

Figure 12: Direct and Indirect Effects of Exposure on Support for Free Trade (Gelbach Decomposition)

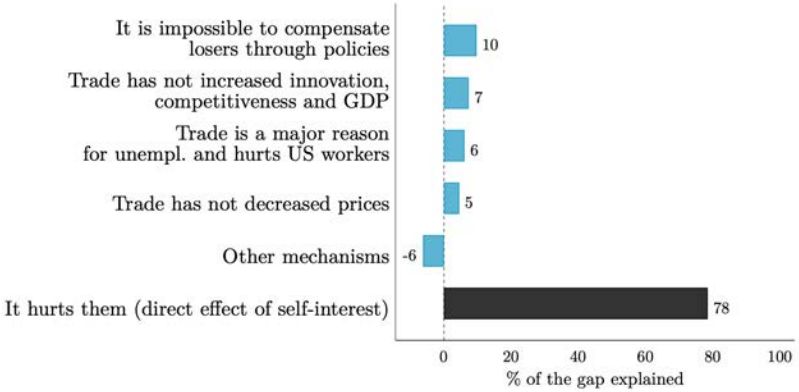
(a) Those who Perceive they are Worse off from Trade Support less Free Trade because they believe...



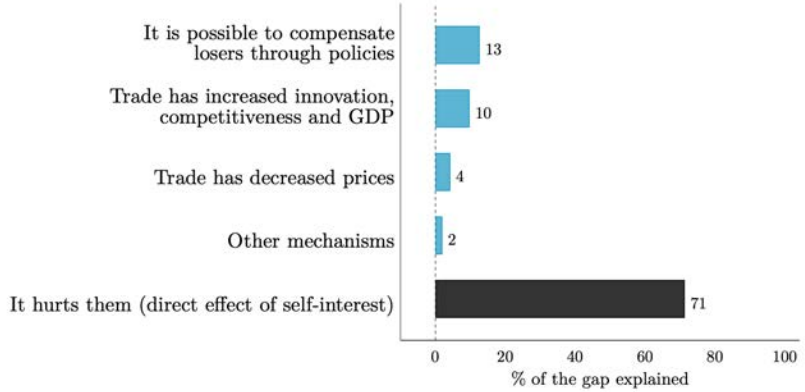
(b) Those who are in Routine & Offshorable Occupations Support less Free Trade because they believe...



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



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



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 differences in beliefs related to trade. Each panel considers a different measure of exposure. For more details on the methodology used for the decomposition, see Section 6 and Gelbach (2016). The black bars represent the unexplained variation in views between those negatively exposed to trade and those who are not. It can be interpreted as the direct effect of exposure, i.e., self-interest, that is not mediated through the beliefs.