Self-interest versus sociotropic considerations: an information-based perspective to understanding individuals’ trade preferences

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\textbf{ABSTRACT}

Economic self-interest has been central to explaining individual trade preferences. Depending on the theoretical trade model different variables influence individuals’ attitude towards globalization and existing research has come to different conclusions as to whether individuals’ preferences are dependent on skill level, income or the sector of employment. Other studies depart from economic self-interest by arguing that it is not self-interest that motivates individuals to form their preference, but country-level economic factors (sociotropic considerations) instead. We argue that one needs to approach trade preference formation from an information-based perspective and we test experimentally how people react if they are aware that they personally or nationally will gain or lose from trade and which of the two aspects are more important. By using survey experiments embedded in a representative national survey in the U.S. we are able to differentiate whether a person was triggered by ego- or sociotropic benefits/costs of free trade.

\textbf{KEYWORDS}

Trade preferences; survey experiments; egocentric; sociotropic; economic self-interest; information

1. Introduction

Research exploring the origins of people’s policy preferences lies at the heart of political science. In political behavior research, the view that people vote sociotropically, i.e. that they use overall economic evaluations rather than those of their own pocketbooks, is theoretically and empirically well grounded (Kinder & Kiewiet, 1981; Lewis-Beck & Paldam, 2000; Nadeau, Lewis-Beck, & Bélanger, 2013). Thus, in this research field,\textsuperscript{1} material self-interest is seen to play a more subordinate role for preference formation.

However, in political economy research and especially in research explaining individual trade preferences, the theoretical propositions originating in
macroeconomic theories suggest that *material self-interest* should be dominant in preference formation. Although some controversy existed concerning whether this material self-interest is based on individual skill levels or types of employment, there was consensus on the egocentric foundations of these preferences (Mayda & Rodrik, 2005; Scheve & Slaughter, 2001).

In their seminal contribution, Mansfield and Mutz (2009) explored the question of sociotropic preference formation for international political economy issues such as individual trade preferences. Using insights gleaned from literature on sociotropic voting (Kinder & Kiewiet, 1981; Sears & Funk, 1990), they suggest that country-level economic factors rather than economic self-interest motivate individuals’ trade preference formation (Mansfield & Mutz, 2009).

With the recent surge in survey research as well as experimental methods, the question of whether individual (trade) preferences emanate from egocentric or sociotropic considerations has become ever more important. Understanding whether a person is in favor of a certain policy owing to *egocentric reasons* or whether she supports this policy because it maximizes the *nations’ collective welfare* has important theoretical and empirical explanations. Without being able to differentiate between the two it becomes increasingly hard (and/or potentially flawed) to predict a person’s policy preference from covariates that are derived from theoretical considerations stressing an individual’s economic rationality (pocketbook view) when, in fact, they emanate from considerations about the policy’s impact on, for example societal welfare (sociotropic view).

In accordance with Fordham and Kleinberg (2012, p. 325), we think that the conclusions drawn about the narrow role of self-interest from research on sociotropic preferences are premature and research should especially address the fundamental problem that most people understand little about how international trade affects their self-interest. Accordingly, our article adds to the literature in two important ways: First, we develop an argument and test experimentally how people react if they become aware that they – personally or nationally – will gain or lose from trade and we evaluate which of the two aspects (personal vs. national gains or losses) is more important. Second, we argue that sociotropic preference formation in the area of trade policy is under-theorized and inadequately studied in the scholarly literature, something this research seeks to address.

With regard to the first aspect mentioned above, we systematically evaluate the relative influence of sociotropic versus egocentric consequences of trade under experimental circumstances of clearly attributable information. In joining the debate about the importance of information or economic knowledge to correctly evaluate international trade’s consequences for the individual (Jamal & Milner, 2019; Rho & Tomz, 2017), this article serves to extend the existing literature by explicitly distinguishing between national- and individual-level information.

By thus striving to better understand which information individuals rely upon when forming their attitude toward economic globalization a number of questions are addressed: Do individuals focus primarily on egocentric or sociotropic costs and benefits of free trade? What individual-level characteristics affect this evaluation, that is what determines susceptibility to sociotropic versus egocentric framing? Supplying answers to these questions provide crucial insights into the ongoing academic debate about the importance of economic self-interest vis-à-vis national economic considerations and can also add to the literature on how different
national contexts influence these individual preferences (Compton & Lipsmeyer, 2019; Schaffer & Spilker, 2016).

Turning to the second contributory aspect, we argue that sociotropic preference formation connected to trade policy is under-theorized and inadequately studied in the scholarly literature. In our view, sociotropic preferences may emanate from either altruistic behavior (*true sociotropic preference*) or from what we call an *obfuscated self-interested preference*. With the latter, stated sociotropic preferences may arise because individuals either use country-level economic information as a heuristic in a low-information environment; or individuals may have self-interested preferences regarding their investment or consumption that are linked to the country’s welfare (Baker, 2005; Iversen & Soskice, 2001; Scheve & Slaughter, 2001).

The importance of differentiating between the two perspectives (*true sociotropic preference* vs. *obfuscated egocentric preference*) comes from the fact that the former means individuals are indeed sociotropic, whereas the latter indicates individuals simply appear sociotropic but in reality are essentially egocentric. Living in a period in which further globalization and international trade policy seems to be in deep crisis – as evidenced by the current trade war between the United States and China, President Trump’s moratorium on the Trans-Pacific Partnership (TPP) and the large protest challenging the Transatlantic Trade and Investment Partnership (TTIP) that took place in various European countries a few years ago – understanding the reason why individuals favor or oppose trade liberalization seems to be a fundamental need.2

Using existing survey data to empirically test how people process individual-versus country-level information when evaluating trade and globalization is impracticable. The perennial stumbling-block inherent to the sociotropic argument is the assumption that individuals can clearly discriminate between their own economic situation and that of the nation. The difficulty in distinguishing between pure sociotropic-based preferences and self-interested decision making lies in the fact that only situations in which we can detect a *clear deviation* of the individual’s economic situation from the collective situation provide an opportunity for us to differentiate between self-interest and sociotropic-based preferences. Hence, this study expands upon existing research in that it employs an experimental research design that randomly allocates individuals to informational scenarios that describe either purely egocentric or sociotropic motivations to support or oppose trade liberalization.3 This allows us to clearly evaluate which of the two aspects is more important for individuals’ preference formation.

In particular, our research draws on a survey experiment that provides different types of information to infer whether a person was motivated by egocentric or sociotropic benefits/costs of free trade. To our knowledge, this article is the first to explicitly and experimentally test whether people differ in their preferences toward international trade when provided with information about individual- or country-level gains and losses from trade.

Our findings have important implications for the scholarly literature on trade preferences and for the wider community studying open economy politics (OEP) (Lake, 2009; Owen & Walter, 2017). We add another piece toward a more informed and realistic theory of the importance of egocentric material benefits for preference formation within the OEP paradigm. Based on a nationally representative survey in the United States, we can demonstrate that providing individuals with information about trade’s impact on their own welfare, that is by providing
reinforcing information about their individual theoretically expected categorization as a winner or a loser within a sectoral approach, does indeed affect their trade preferences. However, in our study, we do not find much evidence for a sociotropic view of international trade preference formation. Sociotropic information amplifies only an existing egocentric effect but does not affect individuals’ preferences by itself. Additionally, individuals primarily react to negative information, which supports loss avoidance biases (Tversky & Kahneman, 1991), an effect most commonly seen when the negative information pertains to both the country and the individual level.

Despite these glimpses into preference formation, one can, however, argue that still very little is known about what drives these preferences. From the results presented here, it seems that sociotropic preferences cannot necessarily be conceived of as substitutes for individual-level information (i.e. as a matter of cue-taking owing to limited information about individual-level consequences) as even comparatively less knowledgeable and poorly informed individuals do not react to information provided about trade’s impact on their country, that is to the sociotropic treatment.

2. Self-interest versus sociotropic explanations of trade preference

Most theoretical accounts of individual trade preferences start by considering the redistributive effects of trade liberalization, how these effects impact an individuals’ economic situation and in turn how these effects eventually shape her attitude. Although this causal story is intuitively plausible and the (macro) theories well developed, existing workhorse models of individual economic self-interest rest on several assumptions that scholars have increasingly questioned and we want to explicitly address in this article. These assumptions pertain to (a) the informational critique on self-interested preferences and to (b) the (potential) existence of sociotropic preferences. The following paragraphs review existing literature on self-interest-based and sociotropic models of trade preferences before submitting that a theory on the role of available information for sociotropic or egocentric preferences is needed to adequately account for an individual’s trade preferences.

2.1. Self-interest-based models

In political economy studies, economic self-interest has been crucial in determining individual trade preferences, and as such, most theoretical accounts of individual trade preferences start by considering the redistributive effects of trade liberalization. To predict who should be for or against trade liberalization, existing research most commonly relies on the two workhorse models of international trade; the factor endowments model (or the Heckscher–Ohlin [HO] model) and the specific factors model. By assessing whether a person’s economic situation should improve or worsen with an increase in trade, these models make clear predictions about who will be the winners and losers in this process.

In the classical Stolper–Samuelson theorem (as an implication of the HO model), free trade brings the greatest benefits to individuals owning the relatively abundant factor, and, therefore, these individuals tend to favor trade liberalization, whereas unskilled and low-skilled labor (as the owners of disadvantaged factors)
see a decline in their real incomes (Franzese, 2019). In contrast to the HO model, the specific factors model, also known as the Ricardo–Viner (RV) framework, would predict that sectors serve as the lines of conflict concerning free trade preferences. Accordingly, individuals who work in comparatively advantaged sectors (sectors that will gain from trade liberalization) will be in favor of trade openness, whereas individuals who work in comparatively disadvantaged sectors will oppose it. Both theoretical accounts view trade’s distributional consequences on an individual’s material self-interest as the key driver of their specific trade preferences.

Existing research has come to different conclusions as to whether individuals’ trade preferences are dependent on their skills (i.e. their level of education), their income, or the sector in which they are employed (Kaltenthaler, Gelleny, & Ceccoli, 2004; Mayda & Rodrik, 2005; Scheve & Slaughter, 2001). However, primarily owing to a lack of reliable data on a person’s sectoral employment, most researchers either do not test the sectoral (RV) model’s predictions at all or use proxies that inadequately measure the underlying theoretical argument (Hays, Ehrlich, & Peinhardt, 2005; Schaffer & Spilker, 2016).

2.2. Information-based models

As intuitively plausible and theoretically sound the existing workhorse models pertaining to individual economic self-interest may be, they rest on several crucial assumptions. One implicit assumption in this kind of research is that individuals can and do assess whether they will be winners or losers of international trade based on their educational qualifications and/or the sector they work in. In our view, this is a strong assumption, given that it requires citizens to understand the economic consequences of trade liberalization for their economic well-being. To judge whether one belongs to the category of trade winners, a person needs to know, depending on the respective theoretical trade model, whether her skill level makes her likely to gain from trade or whether her job is in a sector unthreatened by globalization.

A second assumption is that people use economic information (e.g. with respect to their job) to form their trade preference. Recent scholarly research increasingly questions the validity of a separation into economic winners or losers of trade to predict trade preferences. Some studies argue about the importance of noneconomic explanations in the formation of trade preferences with empirical findings overwhelmingly supporting the idea that factors such as gender, nationalism, social capital, or perceived social, as well as cultural consequences are relevant (Bechtel, Bernauer, & Meyer, 2012; Kaltenthaler & Miller, 2013; Mansfield, Mutz, & Silver, 2015; Margalit, 2012; Mayda & Rodrik, 2005; Spilker, Schaffer, & Bernauer, 2012). Similarly, Hainmueller and Hiscox (2006) argue that education measures something beyond skill within a factor endowments framework and therefore should not be used to test these models. They question that education merely acts as a material self-interest variable determining individuals’ income and argue that it rather measures the theories and information that people receiving higher education are exposed to and who thus ‘learn to love globalization’. In short, they argue information (or ideas) about trade’s impact obtained during education determines their preferences (Hainmueller & Hiscox, 2006).
2.3. Sociotropic explanations

More recently, scholars have turned to country-level information as a basis for individual trade preferences (Fordham, 2008; Mansfield & Mutz, 2009) and argue that this results in sociotropic preferences that stem from two sources: informational cues and altruism (or other-regarding behavior).

Mansfield and Mutz (2009) concentrate on the former and reject self-interest as the sole force determining trade preferences, arguing that individuals base their opinions on national-level (collective) information. In their view, people make up their mind about trade based on informational cues, such as how the nation will fare by embracing international trade, rather than making an individual assessment of trade based on their self-interest. Hence, individuals use available information on trade’s impact on the country level to compensate for their lack of knowledge on how trade affects them personally.

Altruism or other-regarding behavior as another possible explanation for why people have sociotropic preferences, however, works differently (Bechtel, Hainmueller, & Margalit, 2014). As Lavine, Johnston, and Steenbergen (2012, p. 88) put it: “our preferences in politics should therefore reflect more than narrow-minded personal advantage; they should also flow from a consideration of which societal outcomes are to be desired and the means by which commonly desired ends can best be achieved.” Hence, instead of solely considering the self-interested (ego-centric) effects of trade (i.e. how a person’s economic situation changes with trade openness), individuals may also take trade’s effects on others or society as a whole into account. Here, one can imagine a scenario where owing to the geographical concentration of a certain industry in one region, individuals may fear the negative consequences trade openness would have on local conditions in the region rather than evaluating their trade preferences based solely on the (potentially positive) distributional consequences of trade for them personally.

Although existing studies have found evidence for sociotropic preference formation, the research on sociotropic preferences has thus far fallen short of explicitly addressing the mechanisms behind this result and thus the important question of whether people’s sociotropic preference formation is tied to informational shortcuts or altruism has not been sufficiently theorized within the literature and is clearly under-researched. This is problematic because of the implications following from these different motivations. If individuals are indeed altruistic when evaluating the impact of international trade this would mean that irrespective of trade’s impact on themselves, they build their preferences regarding international trade with a view to the overall impact on their country and society (true sociotropic preference). However, if individuals were unable to establish the impact international trade openness may have on themselves and their material self-interest, they may use available country-level information to fill the void (obfuscated egocentric preference) and form a preference (c.f. Rho and Tomz, 2017). This perspective proceeds from the assumption that trade is a complicated subject about which individuals are notoriously ill-informed (Hiscox, 2006). A third perspective may also be referred to as an obfuscated egocentric preference. Here, a stated sociotropic preference does not arise out of a lack of information, but from a discrepancy between evaluating trade from a job-related perspective (as the classical theories suggest), but instead from preferences related to an individual’s financial assets (Guisinger, 2009; Iversen...
Soskice, 2001; Scheve & Slaughter, 2001) or its consumption preferences (Baker, 2005). Thus, people may find it important that their country profits irrespective of their individual job situation if, for example, they have important assets (e.g. property) in a region that may be profiting from international trade or if they consume goods that are imported. Although this perspective may well be more relevant to a sociotropic regional or community perspective (c.f. Guisinger, 2017), it however may also explain individuals’ potentially deviating sociotropic perspective.

For our article, the general importance of differentiating the two perspectives (true sociotropic preference vs. obfuscated egocentric preference) comes from the fact that only under the first alternative individuals are indeed sociotropic, whereas under the second alternative individuals appear sociotropic while they are essentially egocentric.

3. How available information impacts on sociotropic and egocentric preferences

By investigating the importance of economic information for an individual’s self-interested trade preference (Hainmueller & Hiscox, 2006) and the importance of country-level information for sociotropic preference formation (Mansfield & Mutz, 2009), several existing studies have already highlighted differences in information as a central theme in trade preference formation (Jamal & Milner, 2019; Rho & Tomz, 2017). However, with respect to the sociotropic versus egocentric preference debate, research thus far has fallen short of testing the differentiated impact of available information on individual trade preferences.

To explicitly account for such pathways, theoretical arguments are developed here on the use of available information about trade’s impact on trade preference formation. Thus, within the following theoretical arguments, information is the crucial moderator to enable people to act on their self-interested preference. In accordance with Sears and Funk (1990), we submit that “weak political effects of self-interest may be caused by the fact that ordinary people do not often perceive government as offering them clear or substantial personal costs or benefits” and thus that “information is only critical when the issues are very complex” (Sears and Funk, 1990, p. 256ff). The argument presented here is that in a policy area where consequences for any given individual’s life are diffuse and hard to evaluate, available information on the policy’s effects potentially shapes or at least leads to an adjustment of preferences.

The theoretical section of this article submits that a stated sociotropic trade preference may not stem from true altruism or other-regarding behavior, but may be shaped by the low information available to act on the self-interested preference (i.e. as an informational shortcut). We thus want to add to the literature on sociotropic preferences by claiming that sociotropic preferences in low information environments may be nothing else than an obfuscated self-interest preference.

To theoretically discriminate between the impacts of different available information on trade preference formation, nine individual informational scenarios have been identified (Figure 1, third column). The usual setting in standard, nonexperimental surveys in which individuals obtain no additional information has been adopted here as the baseline scenario, that is our control group (Figure 1, bottom
box in column 3). Here, informational differences exist that can only be retrieved retrospectively from sources such as specific survey question on knowledge of trade theories, but that cannot be manipulated by the researcher.

In contrast, the remaining boxes show the study’s different manipulations of information. First, individuals can receive only information about the effects of international trade on the country level without obtaining information on the effect of trade openness on the individual level. Alternatively, they could also receive information only about whether they themselves win or lose from international trade without learning anything about the country-level effect of trade openness (Figure 1, white boxes in column 3).

Second, and most importantly for our substantive interest in this article, individuals can receive information on both levels: the individual and the country. If they receive information on trade’s impact on both levels, this information can be concordant (Figure 1, striped boxes in column 3) or conflicting (Figure 1, grey boxes in column 3). In the following sections, we arrive at clear predictions with respect to the effect of informational scenarios on individuals’ trade preference formation.

Figure 1. Overview of informational scenarios and predictions from the theoretical argument.
3.1. Information on either the country or the individual level

This section discusses what to expect when individuals receive information at the ego or socio level only in contrast to a scenario in which they are not made aware of the effects of trade openness, that is the usual survey scenario. This scenario helps to evaluate whether the mostly implicit assumption made in existing studies is sound, namely that individuals understand the consequences of trade liberalization for their economic well-being and are able to use this knowledge to form corresponding trade preferences (informational critique-scenario). If the informational critique is indeed untenable, one should not observe any differences between the usual survey scenario and the various alternate scenarios.

However, as previously discussed, in our view this is a questionable assumption as it requires average citizens to identify their place as a winner or loser of trade liberalization based on their sectoral employment. We thus expect the following effect of available information at either the ego- or the country level on an individuals’ evaluation of trade: Individuals’ exposure to information about trade’s impact either on the individual (sector) or the collective (country) level has a discernable impact on their trade preferences (H1).

According to this hypothesis, the informational critique receives support if individuals indeed react differently once they obtain information on the effect of trade liberalization. While in the case of egocentric information, the self-interest based motivation will be apparent, in the case of country-level information the motives are more ambiguous. Clearly, if we observe that available information on trade’s impact at the collective-level indeed makes people react differently than in the usual survey scenario, we have a first indication of a sociotropic effect. However, only in situations in which egocentric and sociotropic effects have divergent outcomes are we able to genuinely differentiate between self-interest and sociotropic-based preferences. Thus, only these cases can potentially provide evidence to observe whether informational cues on the country-level or altruistic behavior is the mechanism driving sociotropic preferences.7

3.2. Information on both country and on individual level

The next step is to theoretically distinguish and formulate expectations about which piece of information on trade’s impact is more important for preference formation and determine the reason why that is so. Here, this article explicitly departs from a theoretical notion of sociotropic preferences and argues that given (complete) information about trade’s impact on their country as well as on their own welfare, individuals will not react to sociotropic information as they are sufficiently informed to act upon their own economic self-interest. This rationale is based on information differentials that exist in the real world and go some way to explaining sociotropic preferences in the absence of clearly attributable information as to what constitutes self-interest on a comparatively low salient issue such as trade. Thus, echoing Kinder and Kiewiet (1981, p. 132), we believe that: “[…] differences between the pocketbook and sociotropic characterizations of citizen politics should be regarded not as one of motivation, but as one of information” (emphasis in original).
3.2.1. Conflictive information

Although both mechanisms (altruism and informational shortcuts) leading to sociotropic preference formation are discussed in the literature, unfortunately, little has changed from Kinder and Kiewiet’s (1981 p. 132, emphasis added) word of caution:

“The motives that underlie sociotropic voting, on the other hand, are not so transparent. Sociotropic voting may proceed out of altruistic concern for the well-being of all Americans. Alternatively, sociotropic voting may be totally self-interested. Prototypic sociotropic voters may construe the incumbent administration’s handling of the economy as a public good, and thus use information about the national economic condition as a superior indicator of the incumbent’s ability to promote (eventually) their own economic welfare – and only incidentally that of fellow citizens as well. What evidence is currently available cannot convincingly distinguish between these two possibilities’.

The informational scenarios on conflicting information and the following empirical setup allow explicit assessment of whether a potential effect of collective-level information is owing to (true) sociotropic motivations or to a lack of clearly attributable individual-level information (informational shortcut). The changes in trade preferences owing to information received about trade’s impact on the country or individual level should thus be most obvious in the context of conflicting information about the two levels. Concerning the case of conflicting information on the country/ego level, Mansfield and Mutz (2009, p. 432f) explicitly state, that “[i]n the case of trade preferences, if available information convinces a person that many in the United States are being adversely affected by free trade, even if he is not, it will be the former, sociotropic perception that shapes his trade policy preferences rather than how trade has influenced his personal economic well-being.”

In contrast, the claim made here is that the cues about the individual level will be more important for their trade preference than information about how the nation is faring. As such, one should expect self-interested considerations to be more readily ascertainable for individuals owing to their direct and personal impact. For example, imagine a trade loser (according to the RV model) learns that her job will be less secure when her sector is hit by increased trade competition. However, she simultaneously finds out that her country will profit in general and new jobs will be created, thus lowering overall unemployment. We expect that the personal-level information should affect this individual’s trade preferences more significantly than the collective information owing to the more immediately tangible implications for her personal situation. Consequently, she should be less likely to embrace international trade than someone who has not received any additional information on trade’s impact on himself. We thus anticipate that: If confronted with conflicting information about trade’s impact, individuals will react according to information regarding the impact upon them personally (H2).

3.2.2. Concordant information

In the event of concordant (i.e. both positive or both negative) information on trade’s impact on the country and the individual, information on the country level should be only slightly different from the direct, singular effect of self-interest information. This means that if a person who stands to lose from trade receives information that the country will also lose from trade, the change in preferences
should be reinforced by this information only minimally. This is because additional
country-level information provides no new insights to self-interest motivated indi-
viduals. It is thus proposed that: If confronted with similar information about trade’s
impact on the individual and national levels, the effect of the information on trade
preferences is similar to the singular effect of self-interest information (H3).

The associated prediction from our theoretical arguments for each of the informa-
tional scenarios is concisely shown in the fourth column of Figure 1. Overall, if
one finds that people – though equipped with perfect information regarding indi-
vidual and national trade implications – react more strongly to sociotropic than
egocentric information, then this can either be interpreted as a strong confirmation
of the presence of sociotropic preference formation as stipulated in Mansfield and
Mutz (2009)’s theory, or it may be an indication of the failure of the sectoral model
to correctly identify the individual winners and losers of trade liberalization.

3.3. Conditional effects: knowledge of trade

Our theoretical arguments above suggest that exposure to information on trade’s
impact should alter an individual’s opinion about trade. However, this relationship
might not exist for all individuals equally. Although trade is generally a low sali-
ence and very complex issue, some segments of the population may, however, be
highly informed about it. This greater knowledge stems from many sources, such
as being more highly educated in general, or from a greater interest in economic
matters and so on. We thus stipulate that more knowledgeable individuals are less
likely to be moved when prompted with additional information about trade’s
impact on their personal and national situation.

The rationale for the proposed effect does not necessarily follow a factor-endow-
ment logic but has to do with the ‘learning to love globalization’ reasoning extolled
by Hainmueller and Hiscox (2006). Ideational and informational components of
learning to embrace the advantages of economic exchange are more pronounced
for individuals who have generally been exposed to higher education. The informa-
tion critique perspective raised above should thus not hold for individuals who
have a high level of education as they may easily (i.e. without additional informa-
tion) assess whether they or their sector will win or lose from further trade liberal-
ization. If this assumption holds, one should see that for more knowledgeable
individuals there should be no difference between the control group and the groups
that were given additional information. In addition, as argued above, sociotropic
behavior should become manifest for people who cannot address egocentric con-
cerns owing to the lack of needed specific information about the direct impact on
them of trade and globalization. Thus, if this argument holds true, one would not
only expect the additional information to have a more pronounced impact on the
individuals with less knowledge about trade and globalization but also that this
impact will be even larger with respect to information evoking their egocentric
preference. It is thus proposed that the impact of available information on an indi-
vidual’s opinion should decrease with their levels of education; and that this impact
will be more visible concerning information on the individual (ego) level compared to
country level information (H4).
3.4. Information content: expected gains versus losses from trade

Up to this point, the fact that information on trade’s impact can be positive or negative has been given only cursory treatment. According to social psychology research, however, there could be stark differences in the way people react to expectations of gains versus losses from trade (Tversky & Kahneman, 1991). The basic intuition of loss aversion is that losses or disadvantages loom larger for preference formation than corresponding gains or advantages (Thaler, Tversky, Kahneman, & Schwartz, 1997; Tversky & Kahneman, 1991). It is thus put forward here that if individuals are confronted with both expectations of losses on the personal level and on the country level, one should see the largest effects, followed by the singular effect of expectations of losses on the personal level. Expected losses for individuals should matter more than country-level losses because they are easier for individuals to evaluate. People who are informed to expect losses from trade react more strongly than people informed to expect positive gains from trade (H5).

4. Research design

Understanding how citizens perceive and evaluate international trade and the crucial factors forming individual-level trade preferences requires large amounts of systematic data measuring how people think about trade and trade governance. Previously published research often relies on existing survey data, such as the American National Election Survey, the Eurobarometer or the World Values Survey (Hainmueller & Hiscox, 2006; Hays et al., 2005; Mayda & Rodrik, 2005; Schaffer & Spilker, 2016). However, this approach faces limitations in that very few surveys measuring trade preferences exist, and most of these are both outdated and cover wide-ranging topics with only a few general questions about trade preferences along with the independent variables of interest. Finally but most importantly in this regard, although standard surveys are useful for gauging public opinion in a descriptive and correlational manner, they present severe limitations in the ability to test causal relationships (Fordham & Kleinberg, 2012).

In recent years, survey-embedded experiments have emerged as methodologically superior to empirically test specific causal hypotheses (Morton & Williams, 2010; Mutz, 2011; Tingley, 2014). This study has embedded different information treatments (stimuli) in a survey questionnaire gathering information about the benefits of trade for the individual and/or for the country. Thus, respondents answered an identical questionnaire except for the different types of information on trade liberalization, which differed for the various treatment groups and the control group. The random assignment of respondents to the different treatment groups ensures that any difference between the treatment and the control groups in the response variable, namely their trade preference, is solely owing to the treatment and not to confounding variables. Thus, we can causally evaluate whether individuals assess international trade according to an egocentric or sociotropic logic and whether negative information indeed outweighs positive information in this regard.

We ran our experiment in the context of a nationally representative survey conducted by YouGov with 1500 respondents in July 2013. The following explains the experimental format: first, respondents were randomly allocated to one of the three groups (A, B and C). Individuals in groups A and B received information about
trade’s positive (group A) or negative (group B) consequences for the country (the United States in this case, Supplementary Material Figure A-1). Individuals in group C (the control group) received only the information that international trade has increased over the last decade.

Second, two-thirds of each group (A, B and C) received an additional individual-level information treatment, whereas the other third did not. More precisely, depending on their answers to the socio-economic questions posed at the beginning of the survey, the respondents who received an additional treatment were divided into two groups: international trade winners and losers. The expectations about who will be a winner or a loser of trade liberalization were theoretically based on the individual-level predictions of the sectoral (RV) model of trade. Thus, the allocation was based on the sector in which the respondent was employed.

More precisely, for the categorization concerning the sectors, we followed the approach by Margalit (2011) to determine which sectors in the United States are most vulnerable to international trade. Margalit (2011) collected data on the number of workers per industry who were eligible to receive compensation by the government because of trade-related competition. Based on this data, respondents working in those sectors with the highest share of trade-related compensation were allocated to the ego-negative treatment, whereas respondents working in sectors receiving no or little trade competition compensation were assigned to the ego-positive treatment. In particular, we aggregated the four-digit SIC industry classification used in the study of Margalit (2011) to two-digit level NACIS codes. This resulted in respondents working in the following sectors to be considered to receive the ego-negative treatment: agriculture, hunting, forestry and fishing; mining, quarrying and oil and gas extraction; construction; manufacturing; and professional, scientific and technical services.

Consequently, based on whether someone can be perceived as a trade winner or a loser, they received a reinforcing informational treatment, meaning the winners received information potentially reinforcing their belief that they personally profit from free trade, whereas the losers from trade received a discouraging informational treatment potentially reinforcing their negative view of trade. The remaining third in each group (A3, B3 and C3) received no personal information treatment, meaning that C3 serves as the ultimate control group as respondents in this group did not receive any priming at all.

It is important to note that although at the second stage we randomly allocate participants to either a treatment or a control group, the type of information that each person in the treatment group receives is not random. We chose this approach for two reasons. First, we believe it is not very meaningful to tell individuals who, in reality, should gain from trade that they are a trade loser and vice versa. Especially for those somewhat knowledgeable on trade, it becomes impossible to determine whether any resultant null effect of the treatments is indeed a null effect or simply owing to an implausible treatment allocation. Second, making someone believe they are a winner of international trade when in reality they are not would in effect be deception and as such, and following standard practice common in political economy research, we decided to avoid deceiving respondents (Morton & Williams, 2010).
Further to this, although adhering to a randomization process in allocating people to either the control or the treatment groups in the second stage of the experiment, a challenge to the current results could be made if individuals in the two treatment groups differed in their perception of the treatments. More precisely, this research’s approach could suffer from selection bias if individuals who received the ego-positive treatment differed in a systematic way from individuals who received the ego-negative treatment and if this difference affected the way they process the supplied information. In addition to dealing with this challenge in the robustness section below, we also present the distribution of important characteristics explaining trade preferences, such as education, age, gender and so forth, across the various treatment groups (Supplementary Material Table A-4).

The different groups received the following information: the sociotropic-positive treatment states that as a whole the country profits from free trade leading to economic growth and potentially lower unemployment, whereas the sociotropic-negative treatment specifies that the country loses from trade by becoming more susceptible to trade partners’ economic problems which could have spill-over effects on the domestic economy. The control group simply receives information that international trade has increased over the last years. With regard to the ego-centric treatments, respondents in the positive group are told that the specific sector (in which the individual works) profits from free trade, with the consequence that jobs are not offshored and more revenue is created. In contrast, the negative treatment states that the specific sector loses from free trade with the consequence that jobs are offshored and less revenue is created. Once again and by way of reminder, the control group did not receive any additional information. Table 1 summarizes the different treatments.

Before launching the survey experiments, we ensured that respondents understood the information treatments in various pretests that were conducted via the crowd-sourcing platform, Amazon Mechanical Turk. In particular, the pretests showed that the vast majority of respondents perceived the positive treatments indeed as positive and the negative informational treatments as negative.

Following the different informational treatments about international trade and its consequences for the national and sectoral level, respondents were asked whether they tend to agree or rather disagree with the following two statements:

1. Overall, international trade is a good thing for the United States and
2. Overall, international trade is a good thing for me personally.

We adapted this question from a similar question posed in the Eurobarometer survey as in our opinion

<table>
<thead>
<tr>
<th>Sociotropic treatments</th>
<th>Positive</th>
<th>Country profits from free trade due to economic growth and potentially due to less unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
<td>Country loses from trade because it becomes more susceptible to the economic problems of other countries that could have spill-over effects on own country</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>International trade has increased over the last years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Egocentric treatments</th>
<th>Positive</th>
<th>The specific sector (in which the individual works) profits from free trade, consequences are: jobs not offshored and more revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
<td>The specific sector loses from free trade, consequences are: jobs being offshored and less revenue</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>No additional information</td>
</tr>
</tbody>
</table>

Table 1. Overview of treatments.
this question directly asks individuals about their perception of international trade, which lies at the heart of this research. In addition, we considered it important to pose a question that provided insight into the (potential) different attitudes on trade at the national and personal level to allow more comprehensive testing of ego- versus sociotropic trade attitudes. For all the analyses below, we use these two questions as the two dependent variables, where individuals who answered that they agree that international trade is a good thing for either the United States or them personally were coded with 1, and those who disagreed with 0.16

5. Results

Table 2 summarizes the first overview of how individuals react to the different informational treatments regarding trade’s impact on the nation and themselves. It displays for each treatment the percentage of individuals who answered that they believe trade to be good or bad for themselves and for the country.17

Several findings in Table 2 seem noteworthy. First, if one considers the control group, that is those individuals who did not receive any priming, we observe that a vast majority considers international trade to be something positive both for them and the United States. If we consider the country-level question, a staggering 80% of the respondents think trade is positive for the United States. These numbers are very close to the reported 77% of respondents, thinking that the growing trade and business ties between the United States and other countries were a very good or a good thing asked in the 2013 Pew General Public Survey (Pew Research, 2013) and represented a 10-year high respect to this question. Coming back to our survey, although the support for trade changes depends on the treatment information, one pattern becomes evident across the different treatments: in general, the share of individuals who consider trade to be positive for the country is always higher than the share who consider trade to be positive for themselves. A second pattern apparent from Table 2 is that the treatments seem to result in some discernable reactions. Those treatment groups who received at least some negative information, either on the country or on the individual level, seem to have lower trade approval ratings than those treatment groups with no negative information.

To evaluate whether these differences, however, are indeed meaningful and whether sociotropic information can trump the self-interested perspective or vice versa we move to a difference in means analysis between our eight treatment groups and the control group. Figure 2 shows the results for all respondents who answered the trade preference questions and shows the mean difference between the respective treatment group and the control group (which did not receive any

<table>
<thead>
<tr>
<th>Table 2. Overview of response pattern by treatment.</th>
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<tr>
<td></td>
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<tr>
<td>----------------</td>
</tr>
<tr>
<td>Trade individual Good</td>
</tr>
<tr>
<td>Trade individual Bad</td>
</tr>
<tr>
<td>Trade country Good</td>
</tr>
<tr>
<td>Trade country Bad</td>
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</tbody>
</table>
kind of information) for all treatments, as well as the 95% confidence interval. Negative differences imply that the group’s mean has a more negative evaluation of trade openness than the control group. The darker bars in Figure 2 show the results of the question as to whether the respondent considers trade to be beneficial for them and the lighter bars show the results based on the question of whether the respondent considers trade to be beneficial for the United States.

The results clearly show that individuals do not seem to be motivated by socio-tropic benefits/costs of free trade (i.e. they do not react to country-level information by itself). However, they react significantly to information conveying them how their personal economic situation will change if trade increases. H1 and the informational critique receive partial support: although information on the personal-level motivates individuals to update their preferences, making individuals aware of the country-level implications of international trade does not prompt them to adjust their assessment of whether international trade is good/bad for themselves or their country.

More precisely, this effect of egocentric information exists only if the information provided is negative. As stipulated in H5, the respondents exhibit loss aversion (Tversky & Kahneman, 1991). Concerning trade attitudes, individuals seem to weigh losses from international trade more heavily than benefits, a finding also reported by Hiscox (2006). Hence, persons projected to lose from international trade, if reinforced in the belief that they indeed do not profit from trade openness, are significantly more likely to state that trade is not good for them or their country.

This finding is also noticeable in the treatments combining both country- and individual-level information: If respondents receive concordant information (ego-negative/socio-negative group), they are more likely to see international trade as something negative. For the country question in Figure 2, this negative effect remains even if the country-level information is contradictory, that is if they receive positive information for the country level. These findings on concordant and conflictive information enable an assessment of H2 and H3. Indeed, when asked for their country-level assessment of international trade, the egocentric
information supplied to individuals prevails and the positive sociotropic information does not compensate for this negative effect. However, H2 stating that egocentric information should trump sociotropic information receives only partial support as it does not hold true for positive cueing. Providing concordant negative information always prompts individuals to assess international trade more negatively than they would have if they had not received any information. However, giving additional country-level information does not induce any further changes in respondents’ assessments. Hence, the additional effect of negative country-level information is indiscernible from the effect of negative individual-level information, precisely as predicted by H3.

With the exception of the treatment group receiving negative egocentric and positive sociotropic information, the effects are more pronounced when considering the question asking people to evaluate trade for themselves (Figure 2, darker bars) instead of for the United States (Figure 2, lighter bars). This finding is in line with the interpretation that people seem to find it easier to mentally digest the provided information pertaining to their personal situation than that pertaining to their country.

Table 3 summarizes the current research’s main findings and illustrates that little evidence exists for a sociotropic view of international trade within the survey portion of the population. Given sociotropic preferences for trade are found by previous scholars, this begs the question as to why this research failed to return a similar result. One reason for this may be the lack of accounting for the fact that some of the respondents may have sophisticated knowledge on the effects of international trade on their country as stipulated in H4. If some of the respondents already know that trade should profit their country, their assessment of economic globalization could already be based on this type of knowledge (Hainmueller & Hiscox, 2006). Consequently, providing them with information that they already know would not change their assessment of international trade. Figure 3 shows the results if we split the sample according to whether or not someone has received a college education.20 As it can be from the dark bars in Figure 3, those individuals without college education display the same answering pattern as we have seen for the complete sample above. In line with our theoretical arguments and H4, however, we observe that respondents who already have knowledge on the subject matter hardly react to any information.

Hence, existing knowledge serves as an important conditional factor shaping whether someone reacts to information about the consequences of international trade and, interestingly, no effect of the sociotropic informational treatments can

<table>
<thead>
<tr>
<th>H1: Information has an effect on support for trade</th>
<th>Ego</th>
<th>Socio</th>
</tr>
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<tbody>
<tr>
<td>Partly supported: negative priming lowers support for international trade</td>
<td>Not supported</td>
<td></td>
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<tr>
<th>H2: Conflicting information leads to ego trumping socio information</th>
<th>Ego</th>
<th>Socio</th>
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</thead>
<tbody>
<tr>
<td>Partly supported: negative ego-information overrides a positive socio-information. No significant difference for positive ego and negative socio information</td>
<td></td>
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<tr>
<th>H3: Concordant information is indistinguishable from ego-only treatment</th>
<th>Ego</th>
<th>Socio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partly supported: negative priming lowers support. Additional country-level information in the same direction as ego-only treatment amplifies the negative effect, but not significantly</td>
<td></td>
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</table>
be observed. In the theoretical part, we have first argued that individuals do not possess sufficient knowledge to correctly form a self-interested preference (as also found by Rho & Tomz (2017)) and second, the sociotropic preference can be observed because (relatively better available) information on the country-level consequences of trade serves as an important cue in a low information/low salience environment (a mechanism also mentioned by Mansfield & Mutz (2009)). As shown in Figure 3, however, our results do not seem to support this assumption about sociotropic preference formation. Even if individuals do not possess pre-existing knowledge, they do not react to information about how their country should fare with increased trade openness, that is to the sociotropic treatment.

On the basis of this evidence, the conclusion that sociotropic preferences drive individual trade attitudes is difficult to justify. Although we do not reject the argument that individuals form trade preferences by considering larger issues than those directly related to their own self-interest, one must concede that still very little is known about what is the adequate level of sociotropic preference formation (e.g. community, state or country) and the mechanisms that might spur sociotropic thinking. From the current results, first, it does not appear to be a matter of sociotropic feelings toward the country level, and second, with respect to the mechanism, these results indicate that it may not be a matter of cue-taking owing to a lack of information about individual-level consequences that leads individuals to adapt their preferences.

6. Robustness checks

As outlined above, this experiment is structured in such a way that in the second (egocentric) stage the receipt of the treatment is random, but who receives which treatment is nonrandom. This could be problematic if sectoral employment correlates with an individual’s understanding of the treatment text. Given that all of the main treatment findings are on the egocentric level, it is important to show that respondents in the losing versus winning sectors do not differ systematically in their evaluation of international trade. To this end, the response patterns for
individuals who did not receive any egocentric information treatment were evaluated. These are the only individuals in our sample who were not primed to think about their sectoral employment and can thus serve as a robustness check. More precisely, we compared the answers to the two questions on international trade (individual and country level) for those individuals working in the winning and losing sectors who received sociotropic positive, sociotropic negative or no information at all.

Figure 4 shows the mean differences between the two sectoral groups.22 Most importantly, one can see that when split along sectoral lines the control group does not differ at all in its response patterns to the two trade questions. Hence, whether they work in a sector that should profit from international trade or not, individuals without any informational priming do not differ in their assessment of trade. In addition, there is no significant difference between the two groups of respondents who received a negative sociotropic treatment. The only exception is the group with the positive sociotropic treatment where respondents working in sectors that should gain from international trade react more positively to their priming than respondents working in losing sectors. This implies that if one primes winners from international trade (those working in sectors profiting) with additional information that their country is also gaining from globalization, they are more positive in their assessment of trade openness than losers (those working in the losing sectors) if primed by the same information.

What does this imply for the robustness of the current results? The results in Figure 4 indicate that respondents working in the losing sectors are less likely to react to positive information, but do not differ when prompted with no or negative information. As the main effects observed for this group are negative reactions to egocentric-negative information, the results reinforce that the experimental design employed here has not confounded any of these treatment effects.

A qualifier could be applied to the above in that it may be that this experiment has underestimated the sociotropic positive effect by mixing individuals working in both losing and winning sectors. Supplementary Material Figure A-2, therefore, shows the results solely for those individuals working in sectors that should gain from international trade. In line with the primary results presented above, however,
when compared with the control group that went without information priming, individuals do not translate positive country-level information into greater approval of trade openness.

In a similar way, we may underestimate the effect of the sociotropic priming if individuals rather think of their community as the relevant sociotropic entity and not of the country as a whole. Although we do not prime individuals in this direction and thus cannot directly test for the mechanism, we, however, have some empirical leverage to rule out that this aspect is biasing our results. In particular, we asked our respondents a follow-up question on why they thought international trade was a good or a bad thing for themselves (depending on whether they had answered that they like or dislike trade) and gave them different potential reasons to choose from. Among these reasons was the statement ‘The economic situation in my community has improved because of trade’ for those who had said it was a good thing and ‘The economic situation in my community has worsened because of trade’ for those who stated it was a rather bad thing for themselves. As one might consider those who think only about their community and not about themselves when evaluating trade as sociotropic in their preference formation, we exclude them from the analysis (69 in case of negative assessment and 62 in case of positive assessment) to see whether this changes our results. Our results as shown in Supplementary Material Figures A-10 to A-13, however, stay the same.

Another possible explanation for why one only finds a self-interested effect could be the wording of the treatment used. If individuals did not receive the message that international trade is positive or negative for the United States, the sociotropic priming would not work and therefore no treatment effects would be manifest. However, as previously outlined, several rounds of pretests were conducted to ensure that respondents perceived the socio-positive treatment as implying that international trade would benefit the United States and that they did indeed perceive the socio-negative treatment as implying that it would hurt the United States. As such, the actual survey commenced only once the vast majority of respondents understood the informational treatments in the intended way (for more details, see Supplementary Material Table A-2).²³

Finally, the theoretical argument presented here suggests that individuals should react more strongly to egocentric treatments because this kind of information pertains directly to the individual level, ‘pocketbook’ consequences of free trade. The people to whom this should not matter as much are those no longer in the workforce. In line with Hainmueller and Hiscox (2006), retired individuals should no longer be so concerned with the egocentric consequences of trade openness owing to them receiving a guaranteed income in the form of pensions, meaning retirees may focus more on the sociotropic consequences. Supplementary Material Figure A-3 shows the results of comparing individuals no longer a part of the workforce with individuals who are still employed. Interestingly, and in line with earlier results, retirees also do not react significantly to any kind of sociotropic information in isolation; however, they do differ in their response pattern in one important way: although they do not react to egocentric negative information in isolation, they only assess trade openness more negatively when prompted with both egocentric- and sociotropic-negative information. As retirees no longer depend on their sectoral employment for their income, it makes sense that only the combination of
egocentric and sociotropic-negative information is strong enough to move these respondents in their trade assessment.

In summary, although this research has been able to observe a strong and significant negative egocentric effect, an independent sociotropic information effect could not be found. Overall, the present results, therefore, cannot support the conclusion that individuals are sociotropic in their trade preference formation, but rather show that models regarding individual preference formation to be based on egocentric benefits and (especially) costs may provide a more accurate picture of real-world processes.

7. Conclusion

Knowing whether people form preferences based on self-interest or sociotropic concerns is highly relevant for policy-makers and the scientific community alike. Recent real-world examples in the area of international trade or international migration include debates over the potential costs and benefits of trade agreements, such as the TPP and the TTIP for which currently negotiation have been stalled, as well as the Brexit referendum to end the UK’s EU membership. These examples lead to the conclusion that politicians increasingly (or in times of crisis) seem unable to persuasively communicate the benefits of international policies in the area of international trade or globalization, in general. It thus becomes ever more pressing to understand how individuals actually form their preferences, whether individual-level benefits of free trade outweigh sociotropic concerns or vice versa.

This article has set out to test which information is important for people when forming or reassessing their trade preferences, given that trade’s consequences are difficult to evaluate for individuals on both the personal and the national level. To better understand which type of information individuals rely upon when forming their attitude toward international trade this research has sought to answer two key questions: Do individuals focus primarily on egocentric or sociotropic costs and benefits of free trade? Which individual-level characteristics affect this evaluation, that is what determines susceptibility to sociotropic versus egocentric framing?

To our knowledge, this article is the first to explicitly and experimentally test whether people differ in their judgment of trade when provided with information about individual- or country-level gains and losses from trade. The results demonstrate that priming about personal economic conditions (within a sectoral approach) does indeed affect trade preferences. From the conducted survey, however, little evidence emerged for a sociotropic view of trade openness as individuals never react to country-level information in isolation, which strongly contrasted to their reactions to ego-centric information (i.e. trade’s impact on their employment sector). A further notable result from our population-based survey is that sociotropic preferences should not necessarily be perceived as substitutes for individual-level information (i.e. as a matter of cue-taking owing to low information about individual-level consequences in line with the informational critique). According to our survey results, even comparatively less knowledgeable individuals do not react to information provided on trade’s impact on their country, that is to a sociotropic treatment. In light of our results, a general claim that people form their trade preferences based on sociotropic factors seems exaggerated. As sociotropic preferences are empirically found in other studies, further research should focus in greater detail on exploring the
mechanisms that potentially shape sociotropic preference formation, given that very little is still known about what drives these preferences. Furthermore, such additional research needs to address which level is the most significant one to consider in sociotropic preference formation (e.g. country, state and community).

Another significant point of note arising from this research has been that individuals never seem to reward positive country-level information with higher approval rates for trade (which has been suggested by previous contributions to the literature), they only tend to react to negative country-level information with lower trade approval rates. This loss avoidance bias (Tversky & Kahneman, 1991) is most obvious when people are administered an ego-negative treatment, giving them information on their own sector and thus raising the specter of losing their own job. These results are bad news for those attempting to explain pro-globalization policies as their ability to increase individuals’ support for things such as trade liberalization by extolling the national benefits seems rather limited. In addition, studies on US media reporting (Groeling & Baum, 2008; Harrington, 1989) have found that, first, negativity is pervasive in modern news coverage (Groeling & Baum, 2008, p. 1068) and that second there is a strong domination of negative media coverage on globalization and trade policy issues (Heinz & Swinnen, 2015; Swinnen & Francken, 2006). In light of the present results, constant media negativity bias on trade may further add to the deteriorating approval rate of international trade.

Implications for research on trade preferences may be to take the role of information differentials on the issue of trade more seriously when asking individuals about their preferences. Future studies need to account for the difficulty individuals face when evaluating whether they personally will gain or lose from the web of multitudinous issues and impacts presented by international trade (c.f. Rho & Tomz, 2017).

Although the results presented here are interesting in their own right, they also allow for important conclusions to be drawn about trade governance more generally, and for policy advice about how governments should (or should not) sell trade liberalization to their citizenry. In this respect, our results clearly show that telling citizens that further trade liberalization will benefit their country – for example, increasing employment rates – will likely meet with limited success when it comes to generating broadly positive views about the issue. Rather, governments will find it necessary to develop effective strategies and safety-nets to compensate or protect those who would otherwise stand to lose from trade openness and to give these mechanisms a high public profile.

Notes

1. Sociotropic preferences have been studied and found to matter in related fieldstoo. For example, Klašnja, Tucker, and Deegan-Krause (2016) have recently shown that to correctly estimate the effect of corruption on voting behavior, it is important to consider sociotropic as well as pocketbook corruption voting separately. Also, research on democratic support finds that people are sociotropic with respect to inequality, meaning that all classes show significantly lower support for democracy if inequality is high (Krieckhaus, Son, Bellinger, & Wells, 2014).

2. The importance of understanding the driving forces of anti-globalization sentiments is further reinforced by studies evaluating the link between globalization and voting
behavior with respect to populist parties (Franzese, 2019; Rodrik, 2018) or Brexit (Colantone & Stanig, 2018).

3. We thus employ a research design that circumvents the problem of regressing attitudes on attitudes hinted to by Fordham and Kleinberg (2012) and the corresponding problem with causality.

4. Margalit (2013, p. 81) describes the importance of self-interest vis-à-vis political ideology in the formation of preference: "whereas political ideology is an important factor accounting for voters’ baseline policy stance, self-interested considerations arising from changing material circumstances do often outweigh individuals’ prior ideological dispositions and bring about a sizable, even if temporary, shift in preferences."

5. In the United States, these are capital owners or highly skilled workers (Oatley, 201051).


7. This proceeds from the assumption that by providing information on trade’s impact at the collective level we will not be able to change an individual’s underlying normative behavior, that is turning someone into an altruistic person.

8. In Figure 1, we thus expect a similar sign for the conflicting information and the singular self-interest information.

9. YouGov relies on an online opt-in panel and uses a matching technique to produce a sample that corresponds to known marginals of the general population of the United States from the 2008 American Community Survey on gender, age, race, education, party identification, ideology and political interest (Rivers, 2006). In particular, YouGov interviewed 1653 respondents who were then pared down to a sample of 1500 to produce the final data set.

10. In this contribution, we decided to focus on testing the implication of the RV model as most researchers either do not test the sectoral (RV) model at all, or use proxies that do not adequately measure the underlying theoretical argument. This is mostly owing to a lack of reliable data on a person’s sectoral employment. We thus want to overcome this deficiency by explicitly testing the sectoral model and advance upon existing research to the extent that we are able to link an individual’s employment sector directly to the measures of whether this sector has been hit hard by international trade or not.

11. We also ran a similar survey on Amazon’s Mechanical Turk in which persons were categorized as winners or losers of international trade according to their skill level (education). Substantive results were the same and are available from the authors upon request.

12. For most of these variables, there is a clear pretreatment balance. The one exception is gender in that much more male respondents are part of the ego-negative treatment group. Yet, as the literature shows that males are more prone than females to support trade liberalization this implies that we might be less likely to find a strong negative effect of the ego-negative treatment. Hence, in this regard, our sample might be biased toward finding less of a negative effect of the ego-negative treatment than could be expected with a more balanced sample.

13. For the exact wording of the various informational treatments, see the Supplementary Material Appendix.

14. Using a treatment wording, which is not entirely symmetric, as it is the case for our sociotropic treatments, is not ideal. However, as we did not want to deceive our respondents we could not state that on the national level an increase in trade is responsible for aggregate job losses although this is neither supported by trade theory nor evidence. Hence, we decided for the somewhat weaker sociotropic-negative formulation as summarized in Table 1. As the positive sociotropic treatment is thus supposedly ‘stronger’ than the negative sociotropic treatment, it could be more likely to observe a stronger effect, something which, however, is not supported by our findings, see below.

15. In particular, we adapted the following question from Eurobarometer 2004 spring survey (ZA4056) ‘You may have heard of globalization, that is the general opening-up
of all economies, which leads to the creation of a world-wide market. For each of the following statements, could you please tell if you tend to agree or if you tend to disagree: (1) Overall, economic globalization is a good thing for the United States and (2) overall, economic globalization is a good thing for me personally.

16. In addition to these two questions, we asked the following question: ‘When the United States opens its economy to foreign countries and exposes its companies to more international competition, this will increase companies’ competitiveness as well as our welfare in the long-term’. For which respondents could answer on a scale from 1 (totally disagree) to 6 (totally agree). The main results using this question are shown in the Supplementary Material Figure A.9.

17. In addition, Supplementary Material Table A-1 summarizes the response patterns according to the different treatment groups and the two different dependent variables, that is the individual- and country-level questions on economic globalization.

18. If we rely for the ego-negative treatment group only on those individuals from the control group who also work in sectors that would have qualified for our ego-negative treatment, that is to ensure that the nonrandom assignment does not affect the results, we receive substantively the same results (Supplementary Material Table A.5). However, as the control group then actually shrinks to 16 respondents we refrain from using these results in the main article.

19. Figure 2 shows the mean difference to the control group (no information) and the 95% confidence interval for all treatment groups. Negative differences imply that the group’s mean is more negative in its evaluation of trade openness than the control group.

20. Figure 3 shows the mean difference to the control group (no information) and the 95% confidence interval for all treatment groups. Negative differences imply that the group’s mean is more negative in its evaluation of trade openness than the control group.

21. Although the literature has relied on college education as an indicator of someone’s knowledge of economic issues (Hainmueller & Hiscox, 2006), this indicator might be too broad. To address this, the above analysis was repeated using what should be a more precise indicator of whether someone has specific economic knowledge or not. To this end, a question in this research’s survey asked individuals whether they took any economics courses during their college education. The results (Supplementary Material Figure A.5), are identical to the findings in Figure 3. We refrain from showing Supplementary Material Figure A.5 in the main text because the number of observations for those groups of individuals who possess economic education but work in sectors negatively affected by international trade is extremely low. This implies that it is difficult to know whether the finding that respondents in these specific groups do not react to information is owing to individuals’ economic education or simply because we have too few observations to draw inference from.

22. Figure 4 shows the mean difference between individuals working in the losing and the winning sectors who received either sociotropic positive, negative or no information at as well as the 95% confidence interval. Negative differences imply that the mean response in the group working in the losing sectors is more negative than in the group working in the winning sectors.

23. The Supplementary Material, Appendix, also provides various additional findings. In particular, we show results split by gender (Guisinger, 2016), partisanship or income (Mayda & Rodrik, 2005).

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No potential conflict of interest was reported by the authors.

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