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# Jealousy of Trade: Exclusionary Preferences and Economic Nationalism

*Alex Imas, Kristóf Madarász, and Heather Sarsons*

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**ABSTRACT**

This paper presents a new framework for understanding economic nationalism based on an empirically-validated desire for dominance, which generates a preference for exclusionary policies. We incorporate such preferences into a model of international trade. The model predicts that exclusionary preferences lead people to favor tariffs and protectionist policies that harm both their trading partner's and their own consumption. This implies that higher prices caused by exclusionary policies like tariffs will be more acceptable than those caused by non-exclusionary policies. We provide support for these predictions through two survey experiments, which also account for the role of cognitive biases and misinformation.

Alex Imas  
University of Chicago  
Booth School of Business  
and NBER  
alex.imas@chicagobooth.edu

Heather Sarsons  
University of Chicago  
Booth School of Business  
and NBER  
heather.sarsons@chicagobooth.edu

Kristóf Madarász  
London School of Economics and  
Political Science (LSE)  
kristof.madarasz@gmail.com

*Nothing is more usual, among states which have made some advances in commerce, than to look on the progress of their neighbours with a suspicious eye, to consider all trading states as their rivals, and to suppose that it is impossible for any of them to flourish, but at their expense.*

David Hume – Of the Jealousy of Trade

## 1 Introduction

Support for protectionism and nationalist economic policies often have significant support. This is true even in settings where these trade policies materially hurt people. Indeed, evidence suggests that import tariffs on foreign goods raise prices and spur retaliatory tariffs that have negative impacts on employment (Amiti et al., 2019; Fajgelbaum et al., 2020; Autor et al., 2024). Yet such policies appear to be a political success exactly among those who are materially hurt by them. For example, Autor et al. (2024) find that in the US, “residents of regions more exposed to import tariffs became [...] more likely to vote to reelect Donald Trump in 2020, and more likely to elect Republicans to Congress. Foreign retaliatory tariffs only modestly weakened that support.”

This paper offers an explanation for why voters favor nationalist policies even when they impose personal economic costs. We argue that support for nationalist policies stems at least in part from a basic desire for dominance, which corresponds to the utility boost from others’ *unmet demand*—people derive value from consuming or possessing goods that others want but do not have.<sup>1</sup> Imas and Madarász (2024) document such preferences in a plurality of the population. They then theoretically and empirically show that the desire for dominance leads people to value the exclusion of others in basic exchange; in particular, people’s utility from the exchange increases if others are excluded from the opportunity to participate in it. Building on their framework, we show theoretically that in the context of international trade, exclusionary preferences reduce the value of trade and generate support for restrictive and protectionist policies. We test this

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<sup>1</sup>We discuss the origin of such preferences in Section 2.

mechanism empirically, showing that the desire for dominance explain significant variation in the support of tariffs and other nationalist policies.

In the tradition of the Heckscher–Ohlin general equilibrium model, trade benefits arise when trading nations have different endowments or tastes. We introduce the desire for dominance into a canonical pure exchange economy. In our setting, countries differ in initial endowments and tastes. Such differences across countries generate the standard gains from trade. We extend the model by introducing a dominance term: the utility consumers gain from their the trading partner's *unmet excess demand*; that is, the satisfaction from their own nation's representative consumer holding goods that the representative consumer of the foreign country wants but does not have. This modification implies that the very source of gains from trade also creates utility losses from trade, leading some citizens to favor restrictive and exclusionary policies that undermine free exchange.

In the absence of exclusionary preferences, individually-rational trade increases consumption utility relative to autarky. In the presence of such preferences, although consumption utility must still rise in both nations following trade, the utility boost from dominance associated with national consumption falls under trade. There are thus two opposing forces: increased utility from consumption and decreased utility from lowering the trading partner's unmet excess demand for the home country's goods. This diminishes the value of any trade and leads to a failure of the first welfare theorem. We show that equilibrium and individually rational trade outcomes can lower welfare relative to no trade, and restricting trade or enforcing autarky can be preferred to free trade by those with exclusionary preferences.

As a testable implication, the model predicts that support for restrictive trade policies that hurt both one's own consumption and the foreign country's consumption—such as tariffs—will have higher support as the desire for dominance increases. However, there should be no such relationship in case of a policy that does *not* affect the foreign country's consumption. This logic also implies that attitudes to inflation, via generating less affordable prices and lower consumption to some, will depend on its source. People will be more accepting of inflation caused by exclusionary policies such as tariffs than the same price increases caused by non-

exclusionary means, e.g., stimulus.

We test the model’s implications with two original surveys. In both, we measure a respondent’s preferences for exclusion by adapting the experimental methods in [Imas and Madarász \(2024\)](#). The incentivized method identifies individuals whose revealed willingness to pay for an object increases with the chance that others are excluded from the opportunity to obtain it. We reproduce their findings and classify individuals whose willingness to pay increases with exclusion as having a ‘preference for exclusion’.

In the first survey, respondents are randomized into two conditions. In the baseline (“harm”) treatment, respondents are presented with a scenario in which the government is considering a 15% tariff that will raise prices at home and asked for the extent to which they support the policy. In the second (“no harm”) treatment, they are additionally informed that while the tariff increases domestic production, it does *not* reduce consumption in the targeted foreign country, as the foreign country is able to find another trading partner. In this condition, there is no dominance boost associated with a tariff as the trading partner’s consumption is not changed by the trade policy. The model predicts that there will be no difference in tariff support between those with and without exclusionary preferences in the “no harm” treatment, but that those with preferences for exclusion will have higher support in the baseline (“harm”) treatment.<sup>2</sup> Additionally, respondents in both conditions are asked for their support of a stimulus policy that would result in the same price increase as the tariff conditions. We can thus also compare responses to exclusionary tariff policies with responses to stimulus policies that lack similar exclusionary aspects.

The second survey further probes whether preferences for exclusion drive support for exclusionary trade policies that materially harm U.S. consumers. In addition to asking about support for tariffs, we ask respondents whether they agree that the U.S. government should adopt trade policies that ensure that living standards in the U.S. remain above those in China, even if the policies increase the price of goods in the U.S. Our model predicts that support for such policies will again be higher among respondents with exclusionary preferences. We also ex-

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<sup>2</sup>Importantly, the model does not make a prediction about level differences between treatments.

amine support for a broader set of nationalist economic policies, allowing us to assess the consistency of exclusionary preferences across domains.

In line with the model, we find that respondents with preferences for exclusion are significantly more likely to support tariffs. This difference is driven by the “harm” treatment, in which those with exclusionary preferences are 12.3 percentage points more likely to support tariffs than respondents without exclusionary motives. This result holds across different foreign trading partners (China, Mexico, and Canada) and is robust to controlling for other factors that correlate with policy preferences, such as political views and zero sum thinking (Chinoy et al., 2023). Importantly, respondents with exclusionary preferences are also significantly more likely to support tariffs in the “harm” treatment than stimulus policies that would result in the same price increases. Looking at the second survey, we also find that those with exclusionary preferences are more likely to endorse policies aimed at preserving a consumption gap between the U.S. and China, even when such policies raise prices for Americans. Finally, respondents with exclusionary preferences more broadly support exclusionary trade policies, even if it is made explicit that the policies will harm voters. Taken together, our results provide a framework for understanding why voters often support protectionist and exclusionary policies that hurt them economically.

This paper relates to a literature seeking to understand the determinants of policy preferences, particularly as they relate to U.S. trade and foreign policy. In terms of trade policy, a large literature posits that support for free trade will, in the case where workers can move between sectors, depend on one’s skills or on industry characteristics (Rodrik, 1995; Blonigen, 2011). As such, a body of research has focused on the correlation between individual characteristics, such as skills and education, sector of work, economic status, and support for trade (Mayda and Rodrik, 2005; Beaulieu and Napier, 2008). More recently, researchers have begun to explore how beliefs about the impacts of various trade policies correlate with support for them (Stantcheva and Tham, 2025). This paper provides a framework for understanding these policy preferences that does not depend on the distribution of skill or industry characteristics, cognitive biases, or (mis)information. As a methodological contribution, our classification of exclusionary preferences relies

on a behavioral measure that is both incentivized and can be employed at scale.

A smaller literature, and more closely related to our paper, brings identity concerns into trade theory and policy preferences (Shayo, 2009; Grossman and Helpman, 2021). For example, Grossman and Helpman (2021) explain preferences for restrictive trade policies by incorporating social identity into a model of trade. In this model, trade generates inequality, and so high income voters who identify with the nation may favor tariffs as it reduces the psychological cost of identifying with low income voters. In the same way, if low income voters identify with their social class rather than with the nation, and if the upper class constitutes a minority of society, support for higher tariff rates will also increase. Our paper provides a complementary explanation for tariff support that does not require heterogeneous identities within the country. Americans, regardless of the social class, may support tariffs when they identify with the United States and gain utility from other countries being excluded from U.S. consumption by virtue of not being able to obtain what U.S. consumers can. Indeed we find that political preferences slightly attenuate but do not eliminate our main result. Our paper is also in line with survey findings that, in deciding whether to support free trade, Americans consider the U.S. economy as a whole rather than their individual material interests (Mansfield and Mutz, 2009).

The remainder of the paper proceeds as follows. We incorporate preferences for exclusion into a model of trade in Section 2. Section 3 discusses the experiment used to measure preferences for exclusion and our survey design. Section 4 presents the results and Section 5 concludes.

## 2 Exclusionary Preferences and Trade

We incorporate the desire for dominance into a frictionless competitive model of international trade. The presence of such exclusionary preferences imply that consumers are willing to sacrifice their own gain in consumption utility from trade to limit the similar gain from trade of the foreign nation's representative consumer. Since in our framework individual trading decisions have a negligible impact on the consumption of the foreign nation's representative consumer, this creates a

demand for protectionist policies that limit how much the foreign nation gains from trade. We show that such preferences reduce the value of any individually rational trade and that outcomes of free trade may well be worse for one of the countries (and potentially for both) than autarky.

## 2.1 Model

Consider a pure exchange economy.<sup>3</sup> There are two countries indexed by  $k \in \{A, B\}$ , each with a large but finite set of consumers  $I_k$  representing also the cardinality of this set, with  $I = I_k + I_{-k}$  being the set of all consumers. There are  $L$  goods and each consumer  $i \in I$  has a strictly positive and bounded initial endowment vector  $e_i \in \mathbb{R}_{++}^L$ . The overall initial endowment is  $(e_i)_{i \in I} = e$ . We abstract away from production and take these endowments as given. Thus, as standard, trade corresponds to trading these endowments. We call a distribution of goods among consumers an allocation  $x \in \mathbb{R}_+^{L \times I}$  if it is feasible; that is, if the total amount of each good distributed does not exceed the total initial endowment of this good. The partitioning of any allocation  $x$  into the sub-allocations across countries is denoted by  $x = (x_k, x_{-k})$ , e.g.,  $x_k$  is the allocation in the U.S. and  $x_{-k}$  is the allocation in China.

For simplicity, we assume that all consumers within a country have identical tastes and endowments, but these can differ across countries.<sup>4</sup> Accordingly, the consumption utility of person  $i \in I_k$  consuming bundle  $x_i$ , is given by  $u_k(x_i) : \mathbb{R}_+^L \rightarrow \mathbb{R}_+$  which is a continuous, strictly increasing, and strictly quasi-concave function. One can then think of the initial endowment  $e = (e_k, e_{-k})$  as the allocation which results if trade occurs only within each country—that is, as the *autarky* outcome. Differences in endowments and/or tastes drive the standard benefits from international trade.

In addition to consumption utility, each consumer derives a utility boost from their fellow citizens consuming goods that citizens of the other nation want but do not have. This utility boost is *mimetic* in the sense that it is a function of the desires of others; it involves dominance because the boost in utility is derived from

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<sup>3</sup>For a standard reference see, [Mas-Colell et al. \(1995\)](#).

<sup>4</sup>This assumption is only for expositional simplicity.

*unmet excess desire* vis-a-vis the home nation's goods.<sup>5</sup> As [Imas and Madarász \(2024\)](#) show both theoretically and empirically, this characterization of mimetic dominance generates a preference for exclusion; we refer to preferences that incorporate such a desire for mimetic dominance as *exclusionary preferences* for the remainder of the text.<sup>6</sup> While [Imas and Madarász \(2024\)](#) focus on basic bilateral exchange and competitive auctions, the present paper explores the implications of exclusionary preferences for international political economy via how they influence support for different policies.

To start, we introduce the representative consumer of nation  $k$ . Their consumption utility is defined as the utilitarian average of the citizens' consumption utilities  $\hat{u}_k(x_k) = \sum_{i \in I_k} u_k(x_i) / I_k$ .<sup>7</sup> For each  $k$ , let  $\omega_k$  be a fixed allocation where consumers of nation  $k$  receive *all* goods across both countries—i.e., the entire endowment vector is given to one country  $k$ . There are potentially many such allocations, depending on how these goods are distributed within nation  $k$ , and the analysis holds for any given such allocation  $\omega_k$ . The overall utility of consumer  $i$  of nation  $k$  is then given by  $U_{k,i}(x) : \mathbb{R}^{L \times I} \rightarrow \mathbb{R}_+$ , defined as:

$$U_{k,i}(x) = \overset{\text{Consumption Utility}}{u_k(x_i)} + \overset{\text{Mimetic Dominance}}{\alpha_i \{ \hat{u}_{-k}(\omega_{-k}) - \hat{u}_{-k}(x_{-k}) - u_k(x_i) \}^+}, \quad (1)$$

where  $\alpha_i \in [0, 1)$  is the degree of consumer  $i$ 's desire for dominance and  $\{\}^+$  represents the positive part of the expression inside the curly brackets. We collect the individual  $\alpha_i$ 's into vector  $\alpha$ .

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<sup>5</sup>Such preferences draw on a rich literature in cultural and political philosophy. [Rousseau \(1755\)](#) drew a distinction between appetites, which correspond to consumption utility in the standard framework, and desires, which mirror the tastes of others and introduce the potential of jealousy and rivalry ([Hont, 2015](#)). The literary scholar [Girard \(1965, 2004\)](#) drew a similar distinction between appetites and *mimetic* desires. In his framework, people's desires are not inherent but rather reflective of the desire of others, which leads to imitation and conflict.

<sup>6</sup>Note that the desire for mimetic dominance is distinct from the desire for power, which is defined as an individual's desire to be able to sanction and affect the actions of another to further one's own interests, without the reverse being true ([Bowles and Gintis, 1992](#)). As highlighted below, mimetic dominance does not necessarily involve the ability to personally affect the other party.

<sup>7</sup>No result we present depends on this specific formulation. All that is required is that the consumption utility of nation  $k$ 's representative consumer is increasing in the consumption utility of each member of nation  $k$ .

The mimetic dominance term for person  $i$  represents the other nation's *unmet excess desire*. Specifically,  $\hat{u}_{-k}(\omega_{-k})$  corresponds to the other nation  $-k$ 's representative consumer's utility if  $-k$  had the entire endowment  $e$ , and  $\hat{u}_{-k}(x_{-k})$  corresponds to the  $-k$ 's utility from the allocation  $x_{-k}$ . The difference between these terms corresponds to the net gain that  $-k$ 's representative consumer would realize if she had the home nation's goods in addition to her utility from the allocation  $x_{-k}$ . This difference represents unmet desire. Subtracting  $i$ 's utility  $u_k(x_i)$  from this difference captures the *excess* desire of  $-k$ 's consumer relative to one's own. Dominance thus represents the utility boost from consuming goods that the other party wants even more than oneself, but cannot have.

The specific details of the above formulation can be generalized without affecting our main predictions. Our key predictions also hold when defining dominance simply as unmet desire, i.e.,  $\hat{u}_{-k}(\omega_{-k}) - \hat{u}_{-k}(x_{-k})$ . Key for our analysis is that as the foreign nation's unmet desire for the home nation's goods decreases, the dominance boost of a home consumer also decreases.

For simplicity, we also assume that individual consumers are small enough that their own trading decisions have a negligible impact on the consumption of the foreign nation's representative consumer. Therefore, when making their individual choices, they take the dominance boost as given. We now briefly present three standard definitions:

1. Allocation  $x$  is individually rational iff  $u_k(x_i) \geq u_k(e_i)$  for all  $i \in I_k$  and all  $k$ ; similarly for the strict relation.  $(\bar{R}_e) R_e$  is the set of (strictly) individually rational trade allocations. We assume that  $\bar{R}_e$  is non-empty.
2.  $D_e$  is the set of individually rational allocations that also Pareto dominate  $e$  given preferences expressed in Eq (1).
3.  $WE_e$  is the set of allocations that can be attained in a Walrasian equilibrium.

Below, we consider both the broader set of individually rational trade allocations and the more restrictive set of Walrasian (competitive) equilibrium outcomes.<sup>8</sup> In the absence of a preference for exclusion, classic results show that individually rational trade always leads to a Pareto improvement and a Walrasian

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<sup>8</sup>The existence of a Walrasian equilibrium allocation in our model follows from standard arguments, see, e.g., [Mas-Colell et al. \(1995\)](#).

equilibrium exists and is always efficient—the first welfare theorem holds. In the presence of exclusionary preferences, the set of individually rational or equilibrium trade allocations remain the same, but the *value* of trade is always decreased and the classic welfare relations may all be *violated*.

**Proposition 1**

1. **Benchmark:** If  $\alpha = 0$ , then  $WE_e \subseteq D_e = R_e$ .
2. **Trading behavior is unchanged:**  $R_e, \bar{R}_e$ , and  $WE_e$  are independent of  $\alpha$ . In turn,  $WE_e \subseteq R_e$  still holds.
3. **The value of trade is decreased:** For any  $i$  and  $x \in R_e$ ,  $U_i(x) - U_i(e)$  decreases in  $\alpha_i$ . Furthermore,  $D_e$  is set decreasing in  $\alpha$ .
4. **Trade can always be harmful:** There exists  $x \in R_e$  and  $k$  such that  $U_i(x) < U_i(e)$  for any  $i \in I_k$  such that  $\alpha_i > 0$ .
5. **Equilibrium need no longer Pareto dominate autarky.**  $WE_e \not\subseteq D_e$  iff  $\alpha > 0$ .

Point 1 restates the well-known fact that in the absence exclusionary preferences, individually rational trade outcomes and also the more restrictive set of equilibrium trade outcomes always Pareto dominate autarky. Point 2 states that the set of individual rational trade allocations and the set of equilibrium allocations are independent of exclusionary preferences. Point 3 shows that the value of *any* individually rational trade is diminished by exclusionary preferences. Hence, the set of such rational trade allocations that Pareto dominate autarky is reduced. Point 4 establishes that there are always individually rational trade outcomes that are worse than autarky for any consumer  $i$  of a given nation who exhibits any positive degree of exclusionary preference (i.e.,  $\alpha_i > 0$ ). Finally, Point 5 implies that the first welfare theorem also fails and a Walrasian equilibrium outcome can even be *worse* for some consumers than autarky. In fact, in the Appendix we provide a natural class of examples where the equilibrium outcome under trade is worse than autarky for all consumers of both nations with a sufficiently high  $\alpha_i$ .

Exclusionary preferences introduce a direct tension between individual utility maximization and individual preferences for overall trade outcomes. A consequence of this tension is that autarky may then lead to higher welfare than free

trade because the loss in dominance can be significantly greater than the gain in consumption utility from trade. This then creates room for the support of protectionist policies even in a frictionless competitive economy with homogeneous consumers within a country.

The next corollary formulates our main empirical prediction. Consider *any* two allocations  $x$  and  $x'$ . For example,  $x$  could be the status quo and  $x'$  the allocation that results under a proposed trade policy. We make no restrictions on what  $x$  and  $x'$  may be, e.g., allocation  $x$  may lead to higher consumption utility for some and lower consumption utility for others compared to  $x'$ , even within a nation. In the absence of exclusionary preferences,  $\alpha_i = \mathbf{0}$ , each consumer  $i$  shall prefer the allocation which gives her the higher consumption utility.

The corollary below then states the *necessary* condition for person  $i$ 's preference between two allocations to depend on  $\alpha_i$ . Equivalently, it states the necessary condition for  $i$  to prefer the allocation which delivers her the *lower* consumption utility. If this condition is not met, person  $i$ 's ranking of the two options is independent of  $\alpha_i$  and she prefers the allocation which gives her the higher consumption utility.

**Corollary 1.** Without loss assume that  $u_k(x_i) > u_k(x'_i)$ . Person  $i$ 's preference can depend on  $\alpha_i$  only if  $\hat{u}_{-k}(x) > \hat{u}_{-k}(x')$ , in which case her preference for  $x'$  (at least weakly) increases in  $\alpha_i$ .

The above corollary has the following implications. If a trade policy does not change foreign consumption, then a person's support for it is independent of her degree of exclusionary preference. In other words, if  $\hat{u}_{-k}(x) = \hat{u}_{-k}(x')$ , then a person's preference between  $x$  and  $x'$  is independent of  $\alpha_i$ . The same is true if the foreign nation's consumption utility is lower under  $x$  than under  $x'$ , i.e.,  $\hat{u}_{-k}(x) < \hat{u}_{-k}(x')$ .<sup>9</sup>

Instead, if a proposed trade policy harms the foreign nation's consumption, then support for it will be (at least weakly) increasing in  $\alpha_i$  but *only if*  $i$ 's con-

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<sup>9</sup>Indeed our identifying assumption for tariff support in the "no harm" treatment to be independent of  $\alpha_i$  is that the proposed policy does not change the foreign nation's consumption utility. But, as Corollary 1 implies, this prediction of independence holds under a broader set of conditions.

sumption is also harmed by the trade policy, otherwise it is again independent of  $\alpha_i$ . The fact that the prediction is only if, but not if, means that finding evidence for such differential support across policies is a strong test of the model.

Finally, this corollary naturally implies that people will have a different reaction to price increases (in the case where they correspond to lower consumption) depending on their source: those with exclusionary preferences will be more accepting of price increases generated by protectionist policies that hurt others.

### 3 Empirical Studies

Our surveys are designed to test whether exclusionary preferences explain support for protectionist policies. Our model predicts that when trade policies hurt one's own and the trading partner's consumption, support for the policy will be increasing in the degree of exclusionary preferences. However, if a trade policy does not hurt the trading partner, there will be no correlation between exclusionary preferences and policy support irrespective of whether it hurts one's own consumption or enhances it. This is because, given Corollary 1, a person's ranking of options is independent of her preference for exclusion in the case where the foreign nation's consumption is unchanged.

#### 3.1 Measuring Preferences for Exclusion

We measure preferences for exclusion by adapting the paradigm from [Imas and Madarász \(2024\)](#), which yields an incentivized measure of exclusionary preferences at the individual level.

Participants are recruited for the study and informed that they will be asked to make a series of decisions.<sup>10</sup> Participants are then shown a unique good specifically created for the study and told that they will have the chance to purchase this good. These (focal) participants are also told that they will be paired with three other (non-focal) participants who may also have the opportunity to purchase the good. We first ask, on a scale from one to ten, how much the (focal) participant

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<sup>10</sup>Each is also told that there is a 10% chance that their decisions will actually be implemented.

would like to purchase the good. Then, each is asked to enter their bid for the good. After the study, a computer will randomly draw a price between 0 and 10. If the participant’s bid is above the drawn number, they will automatically purchase the good for the drawn price; otherwise they will not purchase it.<sup>11</sup> This constitutes an incentive-compatible BDM method of eliciting valuations.

Before entering their bid, (focal) participants are told that they will potentially purchase the unique good in one of three scenarios. Each scenario corresponds to a different degree of exclusion. In the first scenario only one of the three (non-focal) participants will be potentially excluded from purchasing the good, in the second, two of the three will potentially be excluded, and in the third, all three of the (non-focal) participants will potentially be barred from acquiring the good.<sup>12</sup>

(Focal) participants submit bids for the good in each of the three scenarios, and are told truthfully that one of the scenarios will be randomly chosen to be implemented. We follow [Imas and Madarász \(2024\)](#) in classifying (focal) participants as having a *exclusionary preferences* if the amount that they are willing to pay for the good is increasing in the level of exclusion; specifically, if their bids in the scenario where all three (non-focal) participants are potentially excluded than in the scenario where only one is potentially excluded.

## 3.2 Experimental Design

The first study includes two between-subjects experimental conditions: the main “harm” treatment and the “no harm” treatment. In both treatments, participants are presented the following scenario:

The government intends to impose a 15% tariff on [country]. Tariffs are a tax on imported goods from other countries. For example, if you spent \$200 on imported objects such as groceries or a phone before the policy, these will cost you \$230 after the policy is implemented.

In the main treatment, respondents are asked whether they support the above proposed tariff policy. In the “no harm” treatment, participants are given addi-

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<sup>11</sup>Prices are in experimental units, where 1 experimental unit is equivalent to \$1.

<sup>12</sup>See the Online Appendix for the exact protocol of how this was implemented.

tional information stating that the tariff will encourage domestic production but will not harm the targeted foreign country, which finds another partner to sell to.<sup>13</sup> In both conditions, respondents indicate their level of support using a five-point scale: *strongly in favor*, *in favor*, *neither in favor nor against*, *against*, or *strongly against*. The targeted country (China, Mexico, or Canada) is randomized across respondents.

As a benchmark, we also presented all respondents a second policy that raises prices but does not have the exclusionary element. Specifically, we tell respondents the following and ask for their support:

The government intends to pass a stimulus bill that will lower interest rates. This will likely lead to a 15% increase in prices. For example, if you spent \$200 on objects such as groceries or a phone before the policy, these will cost you \$230 after the policy is implemented. Would you support this policy?

Following the policy questions, we ask respondents about their political preferences as well as their agreement with questions related to zero sum thinking, drawn from [Chinoy et al. \(2023\)](#). These statements are listed in Appendix B and are combined into an index by taking the average over an individual's response to all statements.

In the first survey, we expect that those with exclusionary preferences will have higher support for tariffs in the main treatment (*harm*) than in the *no harm* treatment. The second survey tests for this mechanism across a broader set of policies.<sup>14</sup>

### 3.3 Variable Definitions and Sample Selection

We define variables per our pre-registration. We identify someone as having preferences for exclusion if their willingness to pay for the good described in Section 3.1 is increasing in the number of others that will potentially be excluded. Tariff support is, in the survey, measured on a scale of one to five where one means the

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<sup>13</sup>See Question 2 in Appendix B.1 for the exact wording.

<sup>14</sup>See Appendix B.1 for the exact question.

respondent strongly opposes the policy, three means the respondent is neutral, and five means the respondent strongly support the policy. For our main specification, we create an indicator that takes the value one if the respondent supports or strongly supports a tariff policy. We do the same for support for the stimulus policy. We collected respondents only from U.S. participants across both surveys.

## 4 Results

### 4.1 Preferences for Exclusion and Tariff Support

We begin by examining how tariff support varies with preferences for exclusion. Column 1 of Table 1 reports the results from regressing tariff support on an indicator that participant  $i$  has exclusionary preferences. Respondents with exclusionary preferences are 7.2 percentage points more likely to support tariffs—a 30% increase relative to the mean support among individuals without such preferences (23.8%).

To test whether this difference in support operates through a desire for dominance over consumers from the foreign country, we compare support across the *harm* and *no harm* treatments. Column 2 presents estimates from the following specification:

$$Support_i = \beta_1 Exclusion_i + \beta_2 NH_i + \beta_3 (NH_i \times Exclusion_i) + \epsilon_i \quad (2)$$

where  $Exclusion_i$  is an indicator that respondent  $i$  has exclusionary preferences and  $NH_i$  is an indicator for being in the *no harm* treatment.

In line with our framework, tariff support in the main treatment is 12 percentage points higher among those with exclusionary preferences than among those without. Tariff support among those *without* exclusionary preferences is then significantly higher in the *no harm* treatment than the main treatment. In fact, as predicted by Corollary 1, there is no statistically significant difference between those with and without exclusionary preferences in the *no harm* treatment.

Note that our model makes no prediction about the level differences in support across treatments. Such differences could be driven by the fact that we mention

that the tariff policy spurs U.S. growth in the no harm treatment. However, as outlined in Section 2, the test for our model corresponds to the difference in support across the two treatments.

Columns 3-5 restrict the sample to participants in the main treatment and add controls for other attitudes that could confound the relationship between exclusionary preferences and tariff support. We control for political preferences in column 3, noting that this could be a “bad control” due to its potential endogeneity, and an index for zero-sum thinking in column 4.<sup>15</sup> While political ideology partially mediates the relationship (e.g., Democrats are less likely to hold exclusionary preferences), the core association between exclusionary preferences and tariff support remains strong and statistically significant.

It is also worth noting that for any omitted variable to explain the result, it would need to be correlated with both tariff support and exclusionary preferences, in addition to explaining the difference in support in the *harm* and *no harm* treatments. For example, those with exclusionary preferences are more likely to be Republican. However, for the results to be driven by political preferences rather than exclusionary preferences, it would need to be the case that Republicans are more likely to support tariffs (for reasons other than their exclusionary preferences) only when tariffs could harm the other country’s consumption.

In Column 5, we examine whether the target country moderates treatment effects, using Canada as the omitted baseline category. We find no significant differences in tariff support based on the targeted country, suggesting that the observed effects are not driven by hostility toward any specific trading partner.

Appendix Table A.1 shows that the results are robust to using a continuous measure of support as opposed to the pre-specified binary measure.

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<sup>15</sup>Zero-sum thinking is a bias or way of viewing the world in which one believes that the gains to some come at an expense to others, and has been shown to correlate with a range of political preferences and policy attitudes (Chinoy et al., 2023). Note that our model also predicts a form of zero sum thinking but not as a cognitive mistake but as a form of preference.

## 4.2 Support for Other Exclusionary Foreign Policies

Corollary 1 implies those with exclusionary preferences may be willing to hurt their own consumption as long as doing so excludes the foreign nation's consumers from the opportunity to obtain the home nation's goods; that is, in cases where the foreign nation consumer's unmet desire is increasing. Such preferences can therefore explain the seemingly paradoxical support for policies that make the voters materially worse off.

We have so far provided evidence that exclusionary preferences predict tariff support. We now turn to testing whether exclusionary preferences explain support for other protectionist policies that harm American consumers. In the second survey, we asked five questions related to protectionist foreign policies. Four were drawn from [Baughn and Yaprak \(1996\)](#). These questions (question 4 in Appendix B.1) relate to the purpose of trade, restriction of foreign investments, the taxation of foreign products, and which products should be purchased abroad. Each of these policies has the potential to harm American consumers as well as the foreign trading partner. The fifth question asked participants the degree to which they support policies that maintain the difference in living standards between U.S. and China. It assesses policy support when varying information about living standards; this was meant to test whether the boost from unmet desire was driven by beliefs about living standards or a broader notion of consumption.

Table 2 presents results these results. The first column looks at the same question as in our first survey ("harm" treatment), which replicates the strong positive association between support for tariffs and exclusionary preferences. The second column takes the average agreement across all five remaining policy questions and combines them into an index. We see higher levels of support among those with exclusionary preferences for protectionist policies as captured by this index. Columns 3-7 break this relationship up by question. The positive association is documented across all questions except for taxing foreign goods. The question exploring the role of living standards also has a positive relationship with exclusionary preferences, with the coefficient matching the one in the first study ("harm" treatment), though the correlation is not significant.

Overall, these results show that exclusionary preferences can help explain sup-

port for policies that may harm the very people who vote for them.

### 4.3 Attitudes to Higher Prices without Exclusion

We have shown that exclusionary preferences predict support for tariffs even when they raise prices and may thus materially hurt those who support them. One implication of the logic of Corollary 1 is that consumers may be more tolerant of higher prices and lower consumption that result from nationalist policies as opposed to other government policies that lack an exclusionary component. To test this, we asked respondents in the first survey whether they support a policy that would generate the *same* increase in price (inflation) but is not restrictive: economic stimulus.<sup>16</sup>

Table 3 compares support for the main tariff policy treatment and for the stimulus policy. To construct the table, we stack the data such that an observation is an individual-question response. The outcome is then whether the respondent supports a policy (either the tariff policy or the stimulus policy). We create an indicator that takes the value one if the respondent is providing an answer to the “harm” tariff question (*Harm Treatment*) and takes the value zero if they are providing an answer to the stimulus question. This allows us to do a within-respondent comparison of preferences. The outcome is an indicator for whether the respondent supports the proposed policy (again, either tariffs or stimulus).

Column 1 shows that exclusionary preferences predict policy support on average: Having exclusionary preferences are associated with a 7.2 percentage point increase in support for the government policies. However, column 2 shows that this is driven by support for the exclusionary tariff policy. In Column 2 we regress policy support on indicators for having exclusionary preferences, an indicator for the “harm” tariff treatment, and the interaction of the two. Here we see that the coefficient on exclusionary preferences is more than twice as large when people are asked for support of restrictive policies (tariffs) than less restrictive policies (stimulus), despite both policies generating the same inflationary price increase. These results remain robust to the inclusion of political preferences (column 3),

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<sup>16</sup>Recall that in this scenario, respondents are told that, similar to the tariffs, the stimulus policy will raise prices by 15%.

zero-sum thinking (column 4), and to controlling for the trading partner (column 5).

Taken together, our findings suggest that people may respond differently to similar price increases depending on their cause. Those with exclusionary preferences will be more supportive of price increases that are driven by tariffs than the same price increases driven by non-exclusionary policies such as stimulus. This pattern helps explain why inflation caused by tariffs may not generate the same political costs for leaders as inflation arising from other sources.

## 5 Conclusion

Tariffs have been shown to largely harm the U.S. economy by raising prices and having negligible direct impacts on employment, and negative indirect impacts [Amiti et al. \(2019\)](#); [Autor et al. \(2024\)](#). Yet they remain popular among a significant subset of U.S. voters. This paper shows that exclusionary preferences may help explain this phenomenon. By extending the theory of exclusionary preferences to trade, we show that individuals may support tariffs not despite their costs but because they diminish foreign consumption. Using two empirical studies, we provide evidence that those with exclusionary preferences disproportionately back tariffs and other protectionist policies when they disadvantage trading partners, but not when they leave foreign consumption unaffected.

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## Tables

TABLE 1: EXCLUSIONARY PREFERENCES AND TARIFF SUPPORT

Sample:	Supports Tariff Policy				
	(1)	(2)	(3)	(4)	(5)
				Main Treatment	
Exclusion	0.072*** (0.025)	0.123*** (0.032)	0.076** (0.031)	0.116*** (0.038)	0.144*** (0.055)
No Harm Treatment		0.152*** (0.025)			
Exclusion $\times$ No Harm		-0.104** (0.049)			
Democrat			-0.288*** (0.028)		
Zero Sum Index				0.001 (0.054)	
China					0.014 (0.036)
Mexico					0.046 (0.037)
China $\times$ Exclusion					0.016 (0.080)
Mexico $\times$ Exclusion					-0.080 (0.078)
Observations	1500	1500	764	564	764

*Note:* This table shows the relationship between an indicator for a respondent having exclusionary preferences and an indicator for tariff support. *Exclusionary* is an indicator that a respondent's willingness to pay for the print was higher when they were able to roll three die than one die, as specified in Section 3.1. *No Harm Treatment* is an indicator that the respondent was randomized into the treatment in which we specify that the trading partner is unharmed by the tariffs. Columns 1-2 include the full sample and columns 3-5 restrict to respondents in the main ("harm") treatment. In columns 3 and 4 we control for the respondent being a Democrat and for their degree of zero sum preferences respectively. In column 5 we control for the trading partner country. Robust standard errors are in parentheses.

TABLE 2: SUPPORT FOR NATIONALIST POLICIES

	Supports Tariff		Index		Supports Policy:								
	Policy	(1)	(2)	(3)	Living Standards	U.S. on top	Restrict FDI	Tax Foreign	Restrict Buying	(4)	(5)	(6)	(7)
Exclusion	0.156** (0.065)	0.113** (0.049)	0.113 (0.076)	0.147** (0.073)	-0.013 (0.077)	0.123* (0.068)	0.196*** (0.075)						
Observations	201	201	201	201	201	201	201	201	201	201	201	201	201

*Note:* This table shows the relationship between exclusionary preferences and support for various exclusionary policies. Column 1 replicates the finding from Survey 1, asking about support for tariffs on China. The statement in column (3) is “The US government should ensure via the appropriate trade policy that living standards in the U.S. stay well above living standards in China even if these trade policies mean that goods that you used to buy become more expensive”; in column (4) is “In our trade relations with other countries, it is important that the U.S. comes out on top”; in column (5) is “Foreign investment in the U.S. should be restricted”; in column (6) is “Foreign products should be taxed heavily to reduce their entry into the U.S.”; and in column (7) is “We should buy from foreign countries only those products that we cannot obtain within our own country”. The outcome in column (2) is an index showing the average agreement across the statements in columns (3)-(7). The outcomes in both columns are indicators for agreeing with the statements. Robust standard errors are in parentheses.

**TABLE 3: EXCLUSIONARY PREFERENCES AND STIMULUS SUPPORT**

	Supports Policy				
	(1)	(2)	(3)	(4)	(5)
Exclusion	0.074*** (0.018)	0.049*** (0.018)	0.028 (0.018)	0.033* (0.019)	0.049*** (0.018)
Harm Treatment		0.054*** (0.016)	0.057*** (0.015)	0.055*** (0.019)	0.054*** (0.016)
Harm × Exclusion		0.074** (0.033)	0.070** (0.033)	0.082** (0.039)	0.074** (0.033)
Democrat			-0.154*** (0.016)		
Zero Sum Index				0.021 (0.028)	
China					-0.020 (0.018)
Mexico					-0.001 (0.019)
Observations	2264	2264	2264	1864	2264

*Note:* This table shows the relationship between exclusionary preferences and an support for different government policies. The table is constructed by stacking the data such that an observation is a respondent-question answer. The outcome variable is an indicator for a respondent supporting government policy. We compare individuals' responses to the "Harm" tariff treatment (seen by half of respondents) and the "Stimulus" question (seen by all respondents). *Exclusion* is an indicator that the respondent has exclusionary preferences. *Harm Treatment* is an indicator that the respondent is answering whether they support the tariff policy. The excluded category is stimulus spending. In the fifth column we include indicators for the trading partner country. Robust standard errors clustered at the individual level are in parentheses.

## A Appendix

TABLE A.1: ROBUSTNESS: CONTINUOUS MEASURE OF SUPPORT

Sample:	Supports Tariff Policy (1-5)			
	(1)	(2)	(3)	(4)
			Main Treatment	
Exclusion	0.200*** (0.047)	0.281*** (0.067)	0.139** (0.060)	0.322*** (0.079)
No Harm Treatment		0.372*** (0.054)		
Exclusion × No Harm Treatment		-0.168* (0.093)		
Democrat			-0.878*** (0.057)	
Zero Sum Index				0.061 (0.121)
Observations	1500	1500	764	564

*Note:* This table shows the relationship between an indicator for a respondent having exclusionary preferences and a continuous measure of support for tariffs. Tariff support is measured on a scale of 1-5 (strongly against, against, neither in favor of against, in favor, and strongly in favor).

## B Survey Appendix

### B.1 Policy Questions

1. The government intends to impose a 15% tariff on [Canada/China/Mexico]. Tariffs are a tax on imported goods from other countries. For example, if you spent \$200 on imported objects such as groceries or a phone before the policy, these will cost you \$230 after the policy is implemented. Would you support this policy?
2. The government intends to impose a 15% tariff on [Canada/China/Mexico]. Tariffs are a tax on imported goods from other countries. For example, if you spent \$200 on imported objects such as groceries or a phone before the policy, these will cost you \$230 after the policy is implemented. When thinking about the policy, consider the case where the tariff has the intended effect domestically—it incentivizes companies to produce more goods in the US—but does not hurt the target country—the country finds another market to sell to. Would you support this policy?
3. Do you think that the US government should ensure via the appropriate trade policy that living standards in the US stay well above the living standards in China even if these trade policies mean that goods (such as computers, phones, and household goods) that you used to buy become more expensive?
4. Do you agree or disagree with the following:
  - In our trade relations with other countries, it is important that the U.S. comes out on top
  - Foreign investment in the U.S. should be restricted
  - Foreign products should be taxed heavily to reduce their entry into the U.S.
  - We should buy from foreign countries only those products that we cannot obtain within our own country
5. Consider the following scenario. The government intends to pass a stimulus bill that will lower interest rates. This will likely lead to a 15% increase in

prices. For example, if you spent \$200 on objects such as groceries or a phone before the policy, these will cost you \$230 after the policy is implemented. Would you support this policy?

## **B.2 Questions Measuring Zero Sum Thinking**

The possible responses to all statements are: strongly disagree, disagree, neither agree nor disagree, agree, strongly agree.

1. In the United States, there are many different ethnic groups (Blacks, Whites, Asians, Hispanics, etc). If one ethnic group becomes richer, this generally comes at the expense of other groups in the country. To what extent do you agree with this?
2. In the United States, there are those with American citizenship and those without. If those without American citizenship do better economically, this will generally come at the expense of American Citizens. To what extent do you agree with this?
3. In international trade, if one country makes more money, then it is generally the case that the other country makes less money. To what extent do you agree with this?
4. In the United States, there are different income classes. If one group becomes wealthier, it is usually the case that this comes at the expense of other groups. To what extent do you agree with this?

## C Theory Appendix

**Proof of Proposition.** The first two points are immediate. Notice that when the consumption utilities of people increase, the mimetic dominance boost of each consumer of each country must decrease. Since for a trade to be individually rational consumption utilities must rise, the third statement follows. Furthermore, it follows that if  $x \in R_e$  for some  $\alpha$ , then it must be that the mimetic dominance boost associated with  $x$  is smaller than the mimetic dominance boost associated with  $e$  (strictly so if  $x \in \bar{R}_e$ ). In turn, if  $\alpha' \geq \alpha$ , then from  $U_i(e) < U_i(x)$  given  $\alpha'$ , it follows that  $U_i(e) < U_i(x)$  for  $\alpha$ . For the fourth point, from the fact that  $\bar{R}(e)$  is not empty, it follows, given the assumptions on the consumption utilities and the allocations, that there exists  $x$  such that for each  $i \in I_k$ ,  $u_k(x_i) = u_k(e_i)$ , but for each  $i \in I_{-k}$ ,  $u_{-k}(x_i) > u_{-k}(e_i)$ . In turn, the overall utility of consumer  $i \in I_k$  is lower under  $x$  than under  $e$  iff  $\alpha_i > 0$ . For the fifth point,  $WE(e) \not\subseteq D_e$  consider the following class of examples.

**Example of equilibrium trade outcome Pareto dominated by autarky.** Let there be two goods  $(z, y)$ , an equal number of consumers in each country  $I_k = I_{-k}$  and identical consumption utility  $u_k(z_i, y_i) = z_i y_i$  for each  $i$ . Let  $e = (I_k, I_k)$  with each  $i \in I_k$ , having  $e_i = (\omega_z, \omega_y)$  and each  $i \in I_{-k}$ , having  $e_i = (1 - \omega_z, 1 - \omega_y)$ . The unique symmetric  $WE(e)$  is supported by the price ratio  $p_y/p_z = 1$  with each  $i_k$  consuming bundle  $(\frac{\omega_z + \omega_y}{2}, \frac{\omega_z + \omega_y}{2})$  and each  $i \in I_{-k}$  consuming bundle  $(\frac{2 - (\omega_z + \omega_y)}{2}, \frac{2 - (\omega_z + \omega_y)}{2})$ .

Straightforward calculations show that, given any  $(\omega_z, \omega_y)$ , if  $\alpha_i = 0$ , person  $i$  always prefers trade to autarky, and if  $\alpha_i \rightarrow 1$ , she always prefers autarky to trade. Since everything is continuous, the relationship holds well away from the limit for a wide range of initial endowments.<sup>17</sup> To illustrate further, suppose  $(\omega_z, \omega_y) = (0, 1)$ . Here autarky is better than free trade for person  $i$  as long as  $\alpha_i > 0.5$ . Since everything is again continuous, the logic extends to a wide range of initial endowments.

<sup>17</sup>The utility of a consumer from nation  $k$  in autarky is  $(1 - \alpha_i)\omega_z\omega_y + \alpha_i(\omega_z + \omega_y - \omega_z\omega_y)$ . With trade it is:  $(1 - \alpha_i)(\frac{\omega_z + \omega_y}{2})^2 + \alpha_i(\omega_z + \omega_y - (\frac{\omega_z + \omega_y}{2})^2)$ . Symmetrically for country  $-k$ .

**Proof of Corollary.** Note that if  $u_k(x_i) > u_k(x'_i)$ , then when  $\alpha_i = 0$ , person  $i$  prefers allocation  $x$ . If  $\alpha_i > 0$ , then person  $i$  prefers  $x'$  only if  $\hat{u}_{-k}(x_k) > \hat{u}_{-k}(x'_k)$  since overall utility is always increasing in own consumption utility given that  $\alpha_i < 1$ .