

Are Nationalist Countries More Protectionist?

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Abstract

We investigate the implications of consumer nationalism for multilateral trade cooperation. Perhaps surprisingly, we show that countries with relatively more nationalist consumers can sustain relatively more liberal trade policies in a repeated-game setting. Moreover, the most cooperative equilibrium tariff of a sufficiently impatient (patient) country is decreasing (increasing) in the level of its consumers' nationalism. Thus, asymmetric consumer nationalism across countries has a less pronounced anti-cooperation effect, if at all, on the incentives of countries with relatively more nationalist consumers, rather than vice versa. We take these predictions to an antidumping–nationalism dataset and find empirical evidence in their support.

Keywords: Consumer nationalism; consumer ethnocentrism; multilateral cooperation.

JEL classification: F12; F13; F14; F52.

1 Introduction

The world has experienced a revival of economic nationalism in recent years. Prominent manifestations of this trend were the election of Donald J. Trump as the 45th President of the United States on the platform of “Make America Great Again,” the outcome of the Brexit referendum, and the entry of Marine Le Pen (as leader of the National Front) into the second round of the French presidential election in 2017. This new wave of economic nationalism—intertwined with populism—poses a serious threat to the liberal international order that has dominated the world after World War II, key elements of which are economic openness and multilateral institutions (Ikenberry, 2018). One might think that a rise in economic nationalism is unambiguously detrimental to the world trading system, expecting nationalist countries to erect high trade barriers and to be overly protectionist relative to non-nationalist ones. However, in this paper, we demonstrate both theoretically and empirically that, in the case of *consumer* nationalism, a very different picture emerges. In particular, as consumer nationalism naturally provides a shield against imports, it enables nationalist countries to implement less protectionist trade policies than non-nationalist ones and, under certain conditions, even lower their trade barriers.

Consumer nationalism or consumer ethnocentrism—with the latter term being extensively used in the international business literature—refers to the existence of a consumer bias against foreign products and in favor of domestic ones. According to the seminal work by Shimp and Sharma (1987, page 280), for ethnocentric consumers, “purchasing imported products is wrong because, in their minds, it hurts the domestic economy, causes loss of jobs, and is plainly unpatriotic,”¹ whereas, for non-ethnocentric consumers, “foreign products are objects to be evaluated on their own merits without consideration for where they are made.” A large number of empirical studies have demonstrated that consumer ethnocentrism has a significant impact on consumers’ buying intentions and purchase behavior toward domestic and imported products (see, for example, Shimp and Sharma, 1987; Herche, 1992; Nielsen and Spence, 1997; Watson and Wright, 2000; Shoham and Makovec Brenčič, 2003; Nguyen et al., 2008). It is,

¹Similarly, Sharma et al. (1995, page 27) argue that, for highly ethnocentric consumers, “[n]ot buying foreign imports is good, appropriate, desirable, and patriotic; buying them is bad, inappropriate, undesirable, and irresponsible.”

therefore, natural to ask what the implications of consumer nationalism are for the world trading system and, in particular, for multilateral tariff cooperation. To the best of our knowledge, this question has not been addressed so far in the literature. This is the objective of this paper, which explores the ramifications of consumer nationalism for multilateral trade cooperation both theoretically and empirically.

We first develop a two-country, two-firm model in which the firms produce horizontally differentiated products and engage in Bertrand price competition. We model consumer nationalism as a demand shifter. More specifically, stronger nationalist consumer preferences translate in our framework into an outward shift of the demand for the domestic product along with an inward shift of the demand for the import product. Moreover, we assume that there is asymmetry in consumer nationalism between the two trade partners, which is in line with the empirical findings in the literature on cross-country differences in consumer ethnocentrism (see, for instance, Good and Huddleston, 1995; Pereira et al., 2002; Han, 2017; Han and Won, 2018). The governments and the firms interact in an infinitely repeated two-stage game as follows: in the first stage, the governments select their import tariffs; in the second stage, the firms choose their prices in both markets. We finally assume—as is standard in the literature on trade agreements—that countries are limited to self-enforcing multilateral agreements, i.e., agreements balancing for each country its short-term gains from defection from the agreed-upon trade policies against its long-term welfare losses due to the trade war its unilateral defection would ignite.²

Three main results emerge from our theoretical analysis. First, the non-cooperative Nash tariff of a given country is decreasing in the degree of domestic consumer nationalism. The dominant force driving this result is the fact that consumer nationalism reduces the demand for imports, thereby having a dampening effect on a country’s tariff-revenue gain from marginally raising its import tariff. Second, the country with the nationalist consumers is able to maintain more liberal trade policies than its trade partner in our repeated-game setting. Third, for a sufficiently low (high) discount factor, the most cooperative equilibrium tariff of the nationalist country is *decreasing* (increasing) in the level of its consumers’ nationalism; by contrast, as

²For an in-depth analysis of enforcement issues within the context of the General Agreement on Tariffs and Trade/World Trade Organization, see Bagwell and Staiger (2002).

far as the country with the non-nationalist consumers is concerned, its most cooperative equilibrium tariff is always increasing in the degree of nationalism characterizing its trade partner’s consumers. Intuitively, consumer nationalism in a given country has a negative impact on its potential one-time gains from deviation from the cooperative path as well as on both trade partners’ per-period benefit from cooperation. In other words, asymmetric consumer nationalism between the two trade partners produces an anti-cooperation effect on the incentives of the country with the non-nationalist consumers, whereas, in the case of the country with the nationalist ones, there are two offsetting forces at work. For a “low” discount factor, the pro-cooperation effect on the latter country’s incentives—i.e., the negative impact on the country’s one-time gains from cheating—unambiguously dominates, while the exact opposite is true if the countries are sufficiently patient. At a general level, these findings establish that, with respect to countries’ ability to multilaterally cooperate in setting their trade policies, asymmetric consumer nationalism across countries has *less* pronounced adverse effects, if any, on countries with relatively more nationalist consumers, rather than vice versa.

It is important to stress here that our results extend to the more general case in which there is a home bias in consumption or, equivalently for our purposes, there are border effects on trade flows (see, for example, McCallum, 1995; Trefler, 1995; Chen, 2004; Brühlhart and Trionfetti, 2009; Mika, 2017). Of course, a home bias in demand can arise for reasons very different from consumer ethnocentrism—for instance, due to the natural advantage of domestic industries vis-à-vis foreign producers in the provision of after-sales service (see page 5 in Blonigen and Wilson, 1999). However, all our results carry through in the case of the existence of an asymmetric consumption home bias across countries—independently of its source—provided that the bias in question entails an outward shift of the demand for domestically produced goods accompanied by an inward shift of the demand for imports.

In a nutshell, our theoretical model gives rise to two testable predictions. Our first hypothesis is that, within a given country pair, the country with relatively more nationalist consumers can sustain more liberal trade policies. Our second hypothesis states that, for a sufficiently low discount factor, a country’s level of trade protectionism decreases in its consumer nationalism. We construct an antidumping (AD)–nationalism matched panel dataset of eleven countries covering the period 1995–2015 to test these predictions. The choice of AD

as our trade protectionism measure is motivated by its flexibility (and volatility) in implementation in comparison with other trade protection tools, which has made AD the most heavily used WTO-consistent instrument of contingent protection. To construct our nationalism indicators, we use the National Identity module of the International Social Survey Programme (ISSP), which contains extensive information on citizens' attitudes toward their countries and the achievements thereof.

Consistent with our first prediction, we find that countries with relatively more nationalist consumers can sustain relatively more liberal trade policies. In addition, we show the robustness of this finding to the use of various consumer nationalism measures and the inclusion of a wide range of economic and political controls. Furthermore, to investigate the moderating role of the discount factor, we utilize a proxy for patience from Chen (2013)—a study that argues that languages that grammatically equate the future and the present induce more future-oriented behavior. In line with our theoretical findings, our results show that impatient countries use AD less intensely in response to a higher level of consumer nationalism. On the other hand, patient countries employ AD more intensely as their level of consumer nationalism increases.

Few papers in the economics and political science literature look at the interplay between nationalism/patriotism and international trade or trade policy. In a theoretical contribution, Eriksson (2011) focuses on agriculture, and explores the ramifications of patriotic consumer preferences for agricultural policy—in the form of an import tariff or a production subsidy—in the context of a small open economy and using the median-voter approach. In an empirical study instead, Michaels and Zhi (2010) examine the deterioration of relations between the United States and France during 2002–2003 over the use of military force against Iraq, and estimate the impact of this deterioration on their bilateral trade. (FOOTNOTE?) Overall, a closely related strand of—largely empirical—research investigates the implications of consumer boycotts triggered by international conflicts for international trade. For example, Pandya and Venkatesan (2016) look at the performance of French-sounding, U.S. supermarket brands in the aftermath of the U.S.–France political tension. Clerides et al. (2015) test the impact of the Iraq war on the U.S. sales in nine Arab countries. Heilmann (2016) examines the impact of four international conflicts on exports of boycotted countries.

Other papers look at the reverse question, i.e., how international trade affects countries' level of nationalism. For example, Lan and Li (2015) provide robust evidence that both at the regional level within China and at the country level across 15 different countries, the level of nationalism is decreasing in the degree of economic openness. On the other hand, in a recent paper, Colantone and Stanig (2018) focus on the surge in imports from China in 15 European countries over 1988–2007, and find that at the district level within the countries in question, a larger import shock leads to an increase in political support for nationalist and isolationist parties as well as for radical-right parties. Last, a number of papers investigate the determinants of individual attitudes toward trade, including the role played (or not) by nationalist views or feelings among individuals in shaping their trade preferences (see, for instance, Mayda and Rodrik, 2005; Mansfield and Mutz, 2009; Rho and Tomz, 2017).

The remainder of the paper is organized as follows. The next section sets out the basics of our model. Section 3 derives the non-cooperative Nash tariff equilibrium that would emerge in a one-shot interaction between countries. Section 4 analyzes the implications of asymmetric consumer nationalism across countries for multilateral tariff cooperation in the context of asymmetric multilateral trade agreements. Section 5 provides empirical evidence in support of our main theoretical predictions. Finally, Section 6 offers some concluding remarks.

2 The Model

We assume that the world consists of two countries, Home (H) and Foreign (F). There exists one firm in each country: firm h in Home and firm f in Foreign. The two firms produce horizontally differentiated products—i.e., consumers view their products as imperfect substitutes for each other. The two markets are segmented, and the firms compete in prices à la Bertrand in both countries.

The demand for product $i \in \{h, f\}$ in country $j \in \{H, F\}$, q_i^j , is given by

$$q_i^j(p_i^j, p_{-i}^j) = \alpha_i^j - \beta_i^j p_i^j + \gamma_i^j p_{-i}^j, \quad (1)$$

where p_i^j is the price charged by firm i in market j , and $-i \in \{h, f\} \setminus \{i\}$. Moreover, α_i^j , β_i^j , and γ_i^j are positive constants, and $\beta_i^j > \gamma_i^j$ (i.e., demand is more responsive to own-price

changes than cross-price ones).³ On the production side, the firms have constant marginal costs, c_h and c_f , and no fixed cost of production. We further assume that $\alpha_i^j > \beta_i^j c_i$.⁴

The governments and the firms engage in a two-stage game as follows:

Stage 1: The two governments simultaneously pick specific (non-prohibitive) tariffs so as to maximize national welfare.

Stage 2: The two firms simultaneously select their prices in both markets so as to maximize their aggregate profits.

3 One-Shot Game

We first characterize the tariff equilibrium that would emerge in a non-cooperative environment. In particular, let us assume that the governments and the firms engage in a one-shot interaction. We solve our two-stage game backwards in order to identify its subgame-perfect Nash equilibria in pure strategies.

3.1 Stage 2: Bertrand Competition

Let τ^j denote the import tariff imposed by country $j \in \{H, F\}$. The aggregate profits of firms h and f from sales in both markets respectively equal

$$\pi_h = (p_h^H - c_h) q_h^H(p_h^H, p_f^H) + (p_h^F - c_h - \tau^F) q_h^F(p_h^F, p_f^F) \quad \text{and} \quad (2)$$

$$\pi_f = (p_f^F - c_f) q_f^F(p_f^F, p_h^F) + (p_f^H - c_f - \tau^H) q_f^H(p_f^H, p_h^H) . \quad (3)$$

It is immediate to show that $(\partial^2 \pi_i / \partial p_i^j \partial p_{-i}^j) = \gamma_i^j > 0$, meaning that the firms' prices in a given market are strategic complements.

Each firm chooses two prices. Then, setting $(\partial \pi_i / \partial p_i^j) = 0$ for $j \in \{H, F\}$, we obtain firm i 's ($i \in \{h, f\}$) first-order conditions, yielding

$$p_h^H = \frac{\alpha_h^H + \beta_h^H c_h + \gamma_h^H p_f^H}{2\beta_h^H} , \quad (4)$$

³Note that $\gamma_i^j > 0$ reflects the fact that the goods are substitutes.

⁴In other words, firm i 's marginal cost is sufficiently low such that the firm in question is not priced out of either market.

$$p_h^F = \frac{\alpha_h^F + \beta_h^F (c_h + \tau^F) + \gamma_h^F p_f^F}{2\beta_h^F}, \quad (5)$$

$$p_f^F = \frac{\alpha_f^F + \beta_f^F c_f + \gamma_f^F p_h^F}{2\beta_f^F}, \text{ and} \quad (6)$$

$$p_f^H = \frac{\alpha_f^H + \beta_f^H (c_f + \tau^H) + \gamma_f^H p_h^H}{2\beta_f^H}. \quad (7)$$

Straightforward algebra provides us with the Bertrand–Nash equilibrium prices charged by the firms in the two markets:

$$p_{hNash}^H = \frac{2\beta_f^H (\alpha_h^H + \beta_h^H c_h) + \gamma_h^H [\alpha_f^H + \beta_f^H (c_f + \tau^H)]}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H}, \quad (8)$$

$$p_{hNash}^F = \frac{2\beta_f^F [\alpha_h^F + \beta_h^F (c_h + \tau^F)] + \gamma_h^F (\alpha_f^F + \beta_f^F c_f)}{4\beta_f^F \beta_h^F - \gamma_f^F \gamma_h^F}, \quad (9)$$

$$p_{fNash}^F = \frac{2\beta_h^F (\alpha_f^F + \beta_f^F c_f) + \gamma_f^F [\alpha_h^F + \beta_h^F (c_h + \tau^F)]}{4\beta_f^F \beta_h^F - \gamma_f^F \gamma_h^F}, \text{ and} \quad (10)$$

$$p_{fNash}^H = \frac{2\beta_h^H [\alpha_f^H + \beta_f^H (c_f + \tau^H)] + \gamma_f^H (\alpha_h^H + \beta_h^H c_h)}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H}. \quad (11)$$

The resulting equilibrium quantities, then, equal

$$q_{hNash}^H = \frac{\beta_h^H \{2\alpha_h^H \beta_f^H - c_h (2\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H) + \gamma_h^H [\alpha_f^H + \beta_f^H (c_f + \tau^H)]\}}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H}, \quad (12)$$

$$q_{hNash}^F = \frac{\beta_h^F [2\alpha_h^F \beta_f^F - (2\beta_f^F \beta_h^F - \gamma_f^F \gamma_h^F) (c_h + \tau^F) + \gamma_h^F (\alpha_f^F + \beta_f^F c_f)]}{4\beta_f^F \beta_h^F - \gamma_f^F \gamma_h^F}, \quad (13)$$

$$q_{fNash}^F = \frac{\beta_f^F \{2\alpha_f^F \beta_h^F - c_f (2\beta_f^F \beta_h^F - \gamma_f^F \gamma_h^F) + \gamma_f^F [\alpha_h^F + \beta_h^F (c_h + \tau^F)]\}}{4\beta_f^F \beta_h^F - \gamma_f^F \gamma_h^F}, \text{ and} \quad (14)$$

$$q_{fNash}^H = \frac{\beta_f^H [2\alpha_f^H \beta_h^H - (2\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H) (c_f + \tau^H) + \gamma_f^H (\alpha_h^H + \beta_h^H c_h)]}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H}. \quad (15)$$

It is important to note here that an increase in τ^H raises the equilibrium prices of both goods in Home, with the impact on p_{fNash}^H being relatively larger (in absolute terms).⁵ In addition, a higher τ^H results in a market-share gain for firm h in its domestic market at the expense of firm f —more specifically, $\frac{\partial q_{hNash}^H}{\partial \tau^H} = \frac{\beta_h^H \beta_f^H \gamma_h^H}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H} > 0$, while $\frac{\partial q_{fNash}^H}{\partial \tau^H} = -\frac{\beta_f^H (2\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H)}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H} < 0$.⁶ Analogous relationships hold for Foreign as far as changes in its tariff level are concerned.

⁵From Equations (8) and (11), we have that $\frac{\partial p_{hNash}^H}{\partial \tau^H} = \frac{\gamma_h^H \beta_f^H}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H} < \frac{\partial p_{fNash}^H}{\partial \tau^H} = \frac{2\beta_h^H \beta_f^H}{4\beta_h^H \beta_f^H - \gamma_h^H \gamma_f^H}$ since $\gamma_h^H < 2\beta_h^H$.

⁶The term “market share” here and throughout the paper refers to unit market share.

3.2 Stage 1: Tariff Equilibrium

We define the welfare of country $j \in \{H, F\}$, W^j , as the sum of consumer surplus (from consumption of both goods), the domestic firm's aggregate profit, and tariff revenue. More specifically:

$$W^H(\tau^H, \tau^F) = \int_{p_h^H}^{\frac{\alpha_h^H + \gamma_h^H p_f^H}{\beta_h^H}} q_h^H(p_h^H, p_f^H) dp_h^H + \int_{p_f^H}^{\frac{\alpha_f^H + \gamma_f^H p_h^H}{\beta_f^H}} q_f^H(p_f^H, p_h^H) dp_f^H + \pi_h + \tau^H q_f^H(p_f^H, p_h^H) \quad \text{and} \quad (16)$$

$$W^F(\tau^F, \tau^H) = \int_{p_f^F}^{\frac{\alpha_f^F + \gamma_f^F p_h^F}{\beta_f^F}} q_f^F(p_f^F, p_h^F) dp_f^F + \int_{p_h^F}^{\frac{\alpha_h^F + \gamma_h^F p_f^F}{\beta_h^F}} q_h^F(p_h^F, p_f^F) dp_h^F + \pi_f + \tau^F q_h^F(p_h^F, p_f^F) \quad . \quad (17)$$

With Equations (16)–(17) in place, we may now derive the best-response tariffs for Home and Foreign by setting $(\partial W^j(\tau^j, \tau^{-j}) / \partial \tau^j) = 0$, where $-j \in \{H, F\} \setminus \{j\}$. It turns out that both countries have a strictly dominant strategy, i.e., each country's best-response tariff does not depend on the tariff imposed by its trade partner. This arises because of the assumptions that the markets are segmented and that the firms face a constant marginal cost of production. The countries' best-response tariffs thereby constitute the Nash tariff equilibrium of our one-shot game, denoted by (τ_N^H, τ_N^F) .⁷

3.3 Nash Tariff Equilibrium under Consumer Nationalism

Throughout the paper, we maintain the assumption that stronger nationalist consumer preferences translate into a parallel outward shift of the demand for the domestic product accompanied by a parallel inward shift of the demand for the import product. In other words, stronger nationalist preferences in, for instance, Home would imply a higher α_h^H and a lower α_f^H .

⁷The closed-form solutions for τ_N^H and τ_N^F are cumbersome and are included in a technical appendix (available from the authors upon request). Note that in a perfectly symmetric world—i.e., a world in which $\alpha_i^j = \alpha$, $\beta_i^j = \beta$, $\gamma_i^j = \gamma$, and $c_i = c$ for $i \in \{h, f\}$ and $j \in \{H, F\}$ — $\tau_N^H = \tau_N^F = \frac{\beta(2\beta+\gamma)(2\beta+3\gamma)[\alpha+c(\gamma-\beta)]}{12\beta^4-11\beta^2\gamma^2+\gamma^4}$.

To get some first insights into the ramifications of consumer nationalism for the multilateral trading system, let us examine its impact on the Nash tariff equilibrium of our one-shot game. As we discussed in the introduction, in line with the empirical findings in the literature on cross-country differences in consumer ethnocentrism, we assume that there is asymmetry in consumer nationalism between Home and Foreign. In particular, let us now introduce nationalist consumer preferences only in Home and explore their implications for both τ_N^H and τ_N^F . To this end, suppose that $\alpha_h^H = \tilde{\alpha}_h^H + k$ and $\alpha_f^H = \tilde{\alpha}_f^H - k$, with $k > 0$ capturing the degree of nationalism characterizing the consumers in Home, and with $\tilde{\alpha}_h^H$ and $\tilde{\alpha}_f^H$ denoting the α demand parameters in Home in the absence of nationalist preferences among its consumers.

It can be readily shown that

$$\frac{\partial \tau_N^H}{\partial k} = \frac{\beta_h^H \left[2\beta_f^H (3\gamma_h^H + \gamma_f^H - 2\beta_h^H) - 3(\gamma_h^H)^2 \right]}{12(\beta_h^H)^2 (\beta_f^H)^2 + (\gamma_h^H)^2 (\gamma_f^H)^2 - \beta_h^H \beta_f^H \gamma_h^H (3\gamma_h^H + 8\gamma_f^H)}. \quad (18)$$

Thus, if β_i^H is “large” relative to γ_i^H and γ_{-i}^H —which is the reasonable assumption to make—then $(\partial \tau_N^H / \partial k) < 0$, meaning that the Nash tariff of Home is (strictly) decreasing in Home consumers’ nationalism (i.e., in k). Intuitively, when optimally choosing its import tariff, a country must consider the marginal cost and the marginal benefit of protection, which are determined by how consumer surplus, tariff revenue, and the profit of the domestic firm vary as the level of import protection rises. Here, the dominant force driving the result is the fact that an increase in k lowers, ceteris paribus, Home import demand (to the benefit of the domestic firm, firm h), thereby having a dampening effect on the tariff-revenue gain for Home from marginally raising τ^H . On the other hand, the Nash tariff of Foreign, τ_N^F , does not depend on the degree of Home consumers’ nationalism (i.e., $(\partial \tau_N^F / \partial k) = 0$), which is due to our assumptions of segmented markets and constant marginal costs.

Figure 1 illustrates these results by depicting the Nash tariff equilibrium that would emerge for different values of k in an otherwise symmetric world—i.e., a world in which, for $i \in \{h, f\}$ and $j \in \{H, F\}$, $\tilde{\alpha}_i^H = \alpha_i^F = \alpha$, $\beta_i^j = \beta$, $\gamma_i^j = \gamma$, $c_i = c$, and $\alpha_h^H = \alpha + k > \alpha_i^F = \alpha > \alpha_f^H = \alpha - k$ —and under the “large”- β assumption.⁸ As Figure 1 demonstrates, in such a case, $\tau_N^H < \tau_N^F$ for any $k > 0$.

⁸Note that if $\beta_i^j = \beta$ and $\gamma_i^j = \gamma$, then $\frac{\partial \tau_N^H}{\partial k} = \frac{\beta[4\beta(2\gamma-\beta)-3\gamma^2]}{12\beta^4+\gamma^4-11\beta^2\gamma^2}$. Thus, in this case, a sufficient condition for $(\partial \tau_N^H / \partial k) < 0$ is that $\beta > 2\gamma$.

4 Tariff Cooperation under Consumer Nationalism

In order to explore the implications of asymmetric consumer nationalism across countries for multilateral tariff cooperation, we now allow for infinitely repeated interaction between Home and Foreign. More specifically, we consider the infinite repetition of the two-stage game analyzed above while assuming that Home consumers exhibit nationalist preferences as modeled in Section 3.3 (more precisely, $\alpha_h^H = \tilde{\alpha}_h^H + k$ and $\alpha_f^H = \tilde{\alpha}_f^H - k$, where $k > 0$). In each period—comprising two stages—the governments choose import tariffs with perfect information with respect to all past tariff choices. Moreover, let $\delta \in (0, 1)$ denote the discount factor between periods.

As is standard in the literature on trade agreements, we assume that Home and Foreign are limited to cooperative agreements that are self-enforcing, i.e., agreements balancing for each country its one-time gains from defection from the agreed-upon trade policies against its discounted future welfare losses due to the trade war a unilateral defection would ignite. Furthermore, to focus on the main points of our paper (and for tractability), the firms are assumed to act as Bertrand competitors in every period of the repeated game—i.e., the possibility of firm collusion is excluded.

For this asymmetric game, we consider asymmetric cooperative subgame-perfect equilibria in which (i) in each period along the equilibrium path, Home and Foreign select the cooperative tariffs $\tau_C^H < \tau_N^H$ and $\tau_C^F < \tau_N^F$, respectively; and (ii) if at any point in the game a defection occurs, then both countries revert from the following period onwards to non-cooperative Nash play.⁹ In other words, the countries employ grim-trigger strategies in order to support multilateral cooperation. Of course, multiple such equilibria exist. Our focus lies on the most cooperative equilibrium tariffs, $(\hat{\tau}_C^H, \hat{\tau}_C^F)$, where $\hat{\tau}_C^H$ and $\hat{\tau}_C^F$ are the lowest non-negative tariffs that can be supported as an equilibrium outcome of our infinitely repeated two-stage game.

We begin our analysis by looking at the countries' potential gains from cheating. Clearly, a country opting to deviate from the cooperative path does best by selecting its best-response tariff. The one-time gains from cheating for country j , then, equal

$$\Omega^j (\tau_C^j, \tau_C^{-j}) \equiv W^j (\tau_N^j, \tau_C^{-j}) - W^j (\tau_C^j, \tau_C^{-j}) . \quad (19)$$

⁹In Appendix A, we repeat the analysis focusing on symmetric equilibria.

Ω^j simply equals the one-time welfare gains for country j from deviating to its best-response tariff, τ_N^j , while its trade partner, country $-j$, still cooperates with τ_C^{-j} .

However, violating multilateral cooperation comes at a cost, as it leads to an infinite reversion to non-cooperative Nash play. The discounted future welfare loss a defector faces is given by

$$\frac{\delta}{1-\delta} [W^j(\tau_C^j, \tau_C^{-j}) - W^j(\tau_N^j, \tau_N^{-j})] \equiv \frac{\delta}{1-\delta} \omega^j(\tau_C^j, \tau_C^{-j}), \quad (20)$$

where $\omega^j(\tau_C^j, \tau_C^{-j})$ is the per-period value of cooperation for country j , i.e., the per-period increase in its welfare under multilateral cooperation relative to the tariff-war scenario.

Using Equations (19) and (20), we can now formally state the no-defection conditions for Home and Foreign:

$$\textbf{(Home)} \quad \Omega^H(\tau_C^H, \tau_C^F) \leq \frac{\delta}{1-\delta} \omega^H(\tau_C^H, \tau_C^F) \quad \text{and} \quad (21)$$

$$\textbf{(Foreign)} \quad \Omega^F(\tau_C^F, \tau_C^H) \leq \frac{\delta}{1-\delta} \omega^F(\tau_C^F, \tau_C^H). \quad (22)$$

Any cooperative tariff pair that satisfies inequalities (21)–(22) can be supported as a subgame-perfect equilibrium outcome of the infinitely repeated two-stage game. To obtain the most cooperative equilibrium tariff pair, $(\hat{\tau}_C^H, \hat{\tau}_C^F)$, we simultaneously solve (21)–(22) for the smallest tariffs that give equalities.¹⁰

As the model is rather complicated, we need to resort to numerical analysis in order to gain some further insights into the implications of (asymmetric) consumer nationalism for multilateral trade cooperation.¹¹ Furthermore, to focus on the main points of our analysis, we henceforth assume that $\tilde{\alpha}_i^H = \alpha_i^F = \alpha$, $\beta_i^j = \beta$, $\gamma_i^j = \gamma$, and $c_i = c$ for $i \in \{h, f\}$ and $j \in \{H, F\}$, with β being “large” relative to γ .¹²

The main result that emerges from our numerical analysis is that, for reasonable parameter values, $\hat{\tau}_C^H < \hat{\tau}_C^F$ for all $k > 0$. In other words, the country with the nationalist consumers is able to maintain more liberal trade policies than its trade partner. The intuition underlying this finding is rather involved. We proceed by analyzing in detail the impact of consumer

¹⁰As is typical in the literature on trade agreements, we assume that the discount factor is sufficiently low such that neither country’s most cooperative equilibrium tariff equals to zero.

¹¹The numerical analysis was carried out using Mathematica (the code is available upon request).

¹²Recall, though, that $\alpha_h^H = \tilde{\alpha}_h^H + k$ and $\alpha_f^H = \tilde{\alpha}_f^H - k$, meaning that $\alpha_h^H > \alpha_i^F > \alpha_f^H$. Moreover, in our numerical analysis, we impose that $\beta > 2\gamma$ (see footnote 8).

nationalism in Home on both countries' one-time gains from cheating (Ω^j) and per-period benefit from cooperation (ω^j).

Let us start by examining the ramifications of nationalist preferences in Home for its per-period benefit from cooperation, ω^H . To this end, note that multilateral cooperation results in (i) lower prices in Home, especially for the import good, benefitting Home consumers; (ii) a gain in sales and market share for firm h in its export market accompanied by a loss in sales and market share in its domestic market; and (iii) a tariff-revenue loss for the Home government. Consumer nationalism in Home, then, affects ω^H —relative to the benchmark scenario of no nationalism—via three channels. First, it acts to raise the relative importance for firm h profitwise—in terms of both sales and markup over its marginal cost—of the Home market vis-à-vis the Foreign one, rendering the decrease in p_{hNash}^H and the loss in sales of the Home firm in its domestic market both more costly from the firm's perspective. Second, it lowers Home import demand, which has a dampening effect on the consumer-surplus gain for Home from multilateral trade liberalization. Third, it has a mitigating effect on the tariff-revenue loss for Home from the reduction in tariff barriers since it acts to lower both the imports of Home from Foreign and the non-cooperative equilibrium tariff of Home (τ_N^H). Our numerical analysis reveals that the first two forces (negatively affecting ω^H) dominate, meaning that consumer nationalism in Home has a negative effect overall on its per-period benefit from multilateral trade cooperation.

We next turn to the per-period benefit from cooperation for Foreign, ω^F . Home consumers' nationalism affects Foreign welfare only via its impact on the aggregate profit of firm f . Arguing as above, multilateral cooperation leads to a gain in sales and market share for the Foreign firm in its export market (i.e., in Home) along with a loss in sales and market share in its domestic market (i.e., in Foreign). At the same time, it results in a higher price net of tariff, $p_{fNash}^H - \tau^H$, received by firm f for its exports to Home—notwithstanding the fact that p_{fNash}^H does decrease. Consumer nationalism in Home acts to diminish the relative importance for firm f profitwise—in terms of sales and markup—of the Home market vis-à-vis the Foreign one, reducing the benefit to the Foreign firm from the gain in sales in Home and the rise in $(p_{fNash}^H - \tau^H)$. Therefore, Home consumers' nationalism also negatively affects the per-period value of cooperation for Foreign.

Finally, we explore the implications of nationalist preferences in Home for both countries' one-time gains from cheating. Let us start with Ω^H . Note here that a unilateral defection by Home would result in (i) higher prices in Home, particularly for the import good, hurting Home consumers; (ii) a gain in sales and market share for firm h in its domestic market; and (iii) a tariff-revenue gain for the Home government. Consumer nationalism in Home, then, has an impact on Ω^H via three channels. First, as we discussed above, it acts to heighten the relative importance for firm h profitwise of the Home market vis-à-vis the Foreign one, increasing the benefit to the Home firm from the gain in sales in its domestic market and the rise in $p_{h_{Nash}}^H$. However, it also acts to lower the best-response tariff for Home, τ_N^H , which renders ambiguous its overall effect on firm h 's profit gain in the case of a defection by the Home government.¹³ Second, it lowers the import demand of Home, which, along with the fact that τ_N^H is decreasing in k , has a mitigating effect on the consumer-surplus loss for Home associated with its unilateral deviation from the cooperative path. Third, it has a dampening effect on the tariff-revenue gain for Home from the increase in Home's tariff barriers, as it entails both fewer imports of Home from Foreign and a lower best-response tariff for Home. According to our numerical analysis, consumer nationalism in Home unambiguously has a negative effect on its one-time gains from defection, implying that the tariff-revenue force is the dominant one at play. On the other hand, Home consumers' nationalism has no effect on Ω^F , which is a direct consequence of our assumptions of segmented markets and constant marginal costs.

To sum up, consumer nationalism in Home negatively affects ω^H , ω^F , and Ω^H , whereas it has no implications for Ω^F . Our result that $\hat{\tau}_C^H < \hat{\tau}_C^F$ for all $k > 0$ thereby follows.¹⁴ At a more general level, our analysis demonstrates that the country with the nationalist consumers can sustain more liberal trade policies than its trade partner in our infinitely repeated two-stage game.

In fact, for a sufficiently low discount factor, δ , the most cooperative equilibrium tariff of

¹³It turns out that, for "high" cooperative tariffs, the profit gain for firm h associated with a unilateral defection by the Home government is *lower* under consumer nationalism in Home than in its absence, while the exact opposite holds for "low" cooperative tariffs.

¹⁴Note that $\hat{\tau}_C^H = \hat{\tau}_C^F$ if k were equal to zero, as Home and Foreign would be perfectly symmetric in such a case.

Home not only is lower than the one of Foreign but also is decreasing in the degree of Home consumers' nationalism (i.e., $(\partial \hat{\tau}_C^H / \partial k) < 0$ for "low" δ). The intuition underlying the latter result is straightforward. Recall that consumer nationalism in Home negatively affects its one-time gains from defection as well as its per-period benefit from cooperation. Note now that the discounted value of future cooperation that appears on the right-hand side of the no-defection conditions (Equations (21)–(22)) is a function of both the per-period value of cooperation and the discount factor. As a result, for a sufficiently low δ , the pro-cooperation effect of Home consumers' nationalism on the incentive constraint faced by the Home government (i.e., its negative impact on Ω^H) is the dominant force at work. Thus, in the "low"- δ case, the higher k is, the more liberal the trade policies are that Home can maintain in equilibrium—while the reverse holds in the case of a "high" δ . On the other hand, $\hat{\tau}_C^F$ is increasing in k independently of δ since Home consumers' nationalism (negatively) affects only the per-period value of cooperation for Foreign (and thereby the discounted cost for Foreign of a future trade war). Figures 2a and 2b illustrate these results by depicting the most cooperative equilibrium tariff pair, $(\hat{\tau}_C^H, \hat{\tau}_C^F)$, as a function of k under (i) the "low"- δ scenario (see Figure 2a); and (ii) the "high"- δ scenario (see Figure 2b). In brief, our results establish that, with regard to the countries' ability to multilaterally cooperate in setting their trade policies, asymmetric consumer nationalism between the two trade partners has *less* pronounced adverse effects, if any, on the country with the nationalist consumers, rather than vice versa.

5 Evidence

The goal of this section is to provide empirical tests of the following core hypotheses supplied by our theory:

Prediction 1: Within a given country pair, the country with relatively more nationalist consumers can sustain more liberal trade policies.

Prediction 2: For a sufficiently low discount factor, a country's level of trade protectionism decreases in its consumer nationalism.

This section proceeds as follows. We first describe the data utilized in the analysis. We then discuss our empirical strategies designed to test the two predictions. Finally, we present

our findings.

5.1 Data

5.1.1 Trade Protectionism

Ultimately, an empirical test of either of the predictions mentioned above entails linking the variation in protectionism to the variation in nationalism. Therefore, the measure of trade protectionism employed in our analysis should be sufficiently volatile within countries in order to be capable of reflecting changes in their respective levels of nationalism.

We adopt the number of new AD measures imposed by a country in a given year as our measure of trade protectionism. The policy in question satisfies the criterion mentioned above. As the literature shows, AD is a volatile policy. For example, as shown by Knetter and Prusa (2003) and Irwin (2005), the number of annual AD filings by a given country is responsive to short-run fluctuations in certain macroeconomic variables (e.g., exchange rate). On top of that, Bown and Crowley (2016) show that the policy instrument in question is used much more frequently in comparison with countervailing duties and safeguards—which are the other two WTO-consistent instruments of contingent protection. We extract the data on AD usage from the Global Antidumping Database (GAD henceforth; Bown, 2016), which covers 34 countries over the period 1980–2015.¹⁵

5.1.2 Consumer Nationalism

We construct our four baseline indicators of nationalism using the National Identity module of the ISSP. In its raw form, the module in question contains individual-level information on citizens' attitudes toward various socioeconomic issues for 24 to 33 countries (depending on the survey wave). Using all the available survey waves (1995, 2003, and 2013), we extract the individual-level responses to the questions that, we believe, are informative of country-level nationalism. In cleaning the raw survey data, we code the following responses as missing observations: “can't choose” and “no answer, refused.”

Our baseline analysis utilizes four indicators of nationalism. Three of them (out of four)

¹⁵The European Union (EU) is treated as one country in the GAD.

are constructed out of the following questions: How much do you agree or disagree with the following statements? (i) I would rather be a citizen of [my country] than of any other country in the world (*Rather be citizen of my country*); (ii) Generally speaking, [my country] is a better country than most other countries (*My country is better*); (iii) There are some things about [my country] today that make me feel ashamed of [my country] (*Feel ashamed of my country*). It is worth emphasizing that an increase in the *Feel ashamed of my country* indicator implies a *decrease* in nationalism. The respondents' responses are coded such that the five possible answers to the questions take values from 1 ("disagree strongly") to 5 ("agree strongly"). Lastly, our fourth baseline nationalism indicator is a combination of the first three using principal factor analysis (*Nationalism index*).

To assess the sensitivity of our findings to the use of alternative measures of nationalism, we additionally consider four more variables obtained also from the ISSP survey. The first variable is based on the survey question on the respondents' pride in the political influence of their own country in the world (*Influence pride*). The second variable is derived from respondents' self-reported pride in the economic achievements of their country (*Achievements pride*). Possible responses to both questions are coded such that the resulting values of these variables range from 1 ("Not proud at all") to 4 ("Very proud"). Our third nationalism variable is constructed out of the question that asks whether respondents agree that people should support their country even when it is wrong (*Support even if wrong*). Consistent with the construction of our baseline indicators of nationalism, the values of the variable in question range from 1 ("disagree strongly") to 5 ("agree strongly"). Finally, we use the ISSP question that asks respondents whether they feel close to their country (*Feel close to my country*). Possible responses are coded such that the value of 1 stands for "Not close at all" and 4 represents "Very close."

Having extracted the nationalism variables, we construct a panel of country–year averages of the indicators of nationalism with the use of sample weights.¹⁶ Also, we use linear extrapolation to fill the gaps between periods for each country.¹⁷

¹⁶Given the need to treat the EU as one country, we first calculate the country-level averages of the indicators of nationalism for every EU member included in the ISSP survey. We then compute their weighted average for the EU, where the weight of each member is given by its population size divided by the total EU population.

¹⁷In the robustness section, we try using only the actual values of nationalism (without linear extrapolation),

5.1.3 Measures of Impatience

An empirical test of the second prediction entails the use of a proxy for the discount factor, δ . We derive the proxy in question from Chen (2013), a study showing that languages that grammatically associate the future and the present induce more future-oriented behavior. As exemplified by Chen (2013), while the English language obliges its speakers to mark the future grammatically (e.g., “I *will/am going to/have to go* to a seminar”), in Mandarin, it is natural to omit any future-time marker and talk about plans and intentions in the present tense (e.g., “*Wǒ qù tīng jiǎngzuò*,” the direct translation of which is “I *go* listen seminar”). In his work, Chen (2013) provides robust evidence that speakers of such languages—i.e., those that grammatically associate the future and the present—save more, smoke less, remain more physically active, and are more likely to have better health in the long run.

Chen (2013) scrapes the weather forecasts in 39 languages with the aim to estimate the share of grammatically future-marked verbs (sentences) in the total number of future-referring verbs (sentences). Regardless of whether we use the verb ratio or sentence ratio as a proxy for impatience, a higher value of the indicator implies that speakers of a given language grammatically associate the future and the present *less*. This, according to Chen (2013), induces less future-oriented behavior among speakers of such a language. In other words, a more frequent use of future-marked verbs/sentences is indicative of a lower value of the discount factor. In our analysis, we make use of both the verb ratio and the sentence ratio to proxy for impatience.

5.1.4 Other Variables

Following Knetter and Prusa (2003), we collect data on GDP growth from the World Development Indicators and the real effective exchange rate (REER) from the Economic Research Service of the United States Department of Agriculture.¹⁸ Furthermore, following Tabakis and Zanardi (2019), we control for imports and their growth in our baseline specifications.

and our baseline findings hold.

¹⁸The only difference is that the REER employed by Knetter and Prusa (2003) is based on labor costs, whereas our work utilizes the one based on the Consumer Price Index. Our choice is driven by the larger availability of data for the latter variant of the index.

The aggregate flows of imports come from the IMF’s Direction of Trade Statistics.

Finally, in one robustness check, we need data on political ideology and capital–labor ratio for each country in our sample. The Penn World Table permits the construction of the capital stock per working-age person, while the Database of Political Institutions (Cruz et al., 2018) serves as the source of information on political ideology. Our ideology variable takes a value of 1, 2, or 3 depending on whether the government is right-wing, centrist, or left-wing, respectively.

5.2 Methodology

5.2.1 Prediction 1

Our first testable prediction is that, within a given country pair, the country with relatively more nationalist consumers can sustain more liberal trade policies. This prediction entails linking the difference in protectionism to the difference in nationalism within every pair of trading countries. We, therefore, construct our dyad–year panel dataset as follows. First, we pair all countries in the GAD dataset. Second, within a given dyad, the outcome variable is the difference in the total number of new AD measures imposed in a given year. Last, we construct the key explanatory variable as the difference in nationalism within the pair.

The GAD in its original form contains 34 countries. However, only 18 countries are at the intersection of the sets of countries contained in the GAD and the ISSP.¹⁹ On top of that, our empirical strategy utilizes the longitudinal feature of our data, which forces us to limit our attention to those country pairs observed at least twice. Hence, we end up with eleven countries paired with each other at different points in time between 1995 and 2015.²⁰ As a result, we have 55 country pairs observed between 1995 and 2015 at least twice. With the resulting dataset in hand, we estimate the following econometric specification:

$$\Delta \widetilde{AD}_{i-j,t} = \phi \Delta \widetilde{N}_{i-j,t} + \Delta X'_{i,t} \theta^i + \Delta X'_{j,t} \theta^j + \Delta \widetilde{\varepsilon}_{i-j,t}, \quad (23)$$

¹⁹These countries are: Australia, Canada, Chile, the EU, Indonesia, Israel, Japan, South Korea, Mexico, New Zealand, the Philippines, Russia, Turkey, Taiwan, Uruguay, the U.S., Venezuela, and South Africa.

²⁰These countries are: Australia, Canada, the EU, Israel, Japan, South Korea, New Zealand, the Philippines, Russia, Taiwan, and the U.S.

where the dependent variable is the difference in the total number of new AD measures imposed by countries i and j in year t , or $\widetilde{AD}_{i-j,t} = AD_{i,t} - AD_{j,t}$. A positive (negative) value of \widetilde{AD} implies that country i is more (less) protectionist as compared with country j . Similarly, $\widetilde{N}_{i-j,t} = N_{i,t} - N_{j,t}$ is the difference in nationalism between countries i and j in year t . Therefore, a positive value of $\widetilde{N}_{i-j,t}$ indicates that country i is more nationalist relative to country j (and vice versa).²¹

The operator Δ attached to every variable in Equation (23) indicates that our data is first-differenced. This data modification serves two purposes. First, it controls for time-invariant determinants of AD. Second, first-differencing detrends our variables in order to partly address spurious correlation concerns.

The terms $X'_{i,t}$ and $X'_{j,t}$ are row vectors of controls for country i and country j , respectively. As we discussed above, our choice of controls closely follows Knetter and Prusa (2003), who investigate the macroeconomic determinants of AD usage. Thus, for every country, our baseline specification includes a 1-year lag of its REER and the growth rates of domestic real GDP and the rest of the world's real GDP between $t - 3$ and t . Moreover, following Tabakis and Zanardi (2019), we control for the log of imports (with a one-year lag) and their growth rate (between $t - 1$ and t). Finally, $\Delta\widetilde{\epsilon}_{i-j,t}$ is the first-differenced error term, which we allow to be arbitrarily correlated within a country pair.

Assuming that $E(\Delta\widetilde{N}_{i-j,t} \cdot \Delta\widetilde{\epsilon}_{i-j,t}) = 0$, the OLS estimate of ϕ from Equation (23) captures the impact of the difference in nationalism on the difference in protectionism between two countries. With regard to the expected sign of the coefficient of interest, note that a positive value of $\widetilde{N}_{i-j,t}$ indicates that country i is more nationalist than country j . In this case, according to our theoretical model, country i should adopt more liberal trade policies and thereby impose fewer AD measures than country j . Therefore, if our theoretical prediction is correct, the estimated ϕ parameter should be negative.²²

Perhaps, the orthogonality of our key regressor and the error term is an overly optimistic assumption, and we, therefore, interpret our results with caution. Nevertheless, we carry out a battery of robustness checks and find support for a causal link between the two variables of

²¹In the case of the *Feel ashamed of my country* variable, the reverse is true.

²²In the case of the *Feel ashamed of my country* variable, the estimated ϕ should be positive.

interest. More precisely, as we show below, the likely bias works against our hypothesis. This implies that our proposed estimation is likely to capture the lower bound of the true impact in terms of its absolute magnitude.

5.2.2 Prediction 2

Our second prediction states that, for a sufficiently low discount factor, a country’s level of trade protectionism decreases in its consumer nationalism. We test this by estimating the following econometric specification:

$$AD_{i,t} = f(\lambda_i + \alpha_1 N_{i,t} + \alpha_2 Impatience_i \times N_{i,t} + X'_{i,t} \eta + \gamma t + u_{i,t}), \quad (24)$$

where i and t label country and year, respectively. We note that we have a count variable on our left-hand side and, thus, estimate the parameters of Equation (24) using the negative binomial regression model.

Our main regressors are $N_{i,t}$ and $Impatience_i$, which correspond to the country-level indicators of nationalism and impatience, respectively. $X'_{i,t}$ is a vector of controls that is identical to the one employed in the empirical test of our first prediction, t is the time trend, and $u_{i,t}$ is the error term.

The term λ_i is country i ’s fixed effect, which is included to control for time-invariant determinants of the outcome variable. Following Allison and Waterman (2002), we include dummy variables for countries in the model explicitly instead of fitting the conditional fixed-effects negative binomial model.²³ Given the presence of the fixed effects, we are forced to exclude countries that never implement AD, as those observations do not add any information to the analysis. After applying this restriction, at the intersection of the sets of the remaining countries included in the GAD, ISSP, and Chen (2013), we end up having seven countries observed between 1995 and 2015.²⁴

Given the non-linear nature of the employed specification, the interpretation of the estimated parameters is not straightforward. We, therefore, report a variant of incidence rate

²³As the work by Allison and Waterman shows, the conditional fixed-effects negative binomial model still permits the estimation of the parameters of time-invariant covariates and thus does not fully control for the unobserved stable idiosyncrasies across the units of observation.

²⁴These 7 countries are: Australia, Canada, the EU, New Zealand, Russia, South Korea, and the U.S.

ratios in our results section. In its plain form, the incidence rate ratio is the outcome predicted by the model when the target variable changes by one unit from its mean value (and all other covariates are at their mean) divided by the outcome predicted when all the right-hand side variables are at their mean. In our case, the impact of nationalism on AD usage depends upon the value of patience. Recall that a higher value of $Impatience_i$ is indicative of a lower value of δ . Thus, in our results section, we report the values of the incidence rate ratio induced by a one-standard-deviation change in nationalism at different levels of impatience.

In our analysis, we regard countries with values of impatience at one standard deviation below the median, at the median, and at one standard deviation above the median as patient, “neutral,” and impatient, respectively. Our theory predicts that, given an increase in (own) nationalism, countries in the first group (one standard deviation below the median, i.e., patient) will use AD more intensely (i.e., the estimated incidence rate ratio should be higher than one). Conversely, countries in the third group (one standard deviation above the median, i.e., impatient) should respond to an increase in nationalism by employing AD less intensely (i.e., the estimated incidence rate ratio should be below one). Table 1 shows descriptive statistics of the two measures of impatience employed in our analysis.

5.3 Findings

5.3.1 Does a Relatively More Nationalist Country Pursue Relatively More Liberal Trade Policies? (Prediction 1)

According to our first testable prediction, countries with relatively more nationalist consumers can sustain relatively more liberal trade policies. The results of the corresponding empirical test are reported in Table 2.²⁵ In columns (1)–(4), we experiment with different measures of nationalism. Panel A of Table 2 shows the results without controls. Panel B reports the coefficients obtained after including the baseline controls. When interpreting the results, we consider a one-standard-deviation increase in the key regressor—reported in the last row of Table 2—as a “typical” change in the (first-differenced) difference in nationalism between

²⁵In what follows, we report only the coefficients of our nationalism variables. Complete regression tables—with every estimated coefficient reported—can be found in Appendix B.

countries i and j .

We start the discussion of our results with Panel A (of Table 2). In column (1), we use *Rather be citizen of my country* to measure nationalism. We find that a one-standard-deviation increase in the nationalism difference between countries i and j results in a $\frac{0.029 \times 20.21}{8.010} \approx 0.07$ -standard-deviation decrease in the AD usage difference between the two countries, which lends support to our hypothesis that relatively more nationalist countries can sustain relatively more liberal trade policies. In columns (2)–(4), we employ alternative measures of nationalism and arrive at quantitatively and qualitatively similar results. More precisely, a one-standard-deviation increase in the nationalism difference between countries i and j as measured by *My country is better*, *Feel ashamed of my country*, or the *Nationalism index* leads to a 0.11-, 0.07-, or 0.1-standard-deviation decrease in their AD usage difference, respectively.²⁶ Last, it is important to note that all the coefficients in columns (1)–(4) of Panel A are statistically significant at least at the 5% level.

Panel B of Table 2 reports the results obtained after including the full set of controls.²⁷ Contrasting Panels A and B of the table, two patterns are evident. First, the estimated effects reported in Panel B are slightly farther away from zero as compared with those shown in the upper panel: a one-standard-deviation increase in the nationalism difference between countries i and j as measured by *Rather be citizen of my country*, *My country is better*, *Feel ashamed of my country*, or the *Nationalism index* results in a 0.09-, 0.12-, 0.07-, and 0.11-standard-deviation decrease in their AD employment difference, respectively. Second, the parameters of interest are estimated more precisely in Panel B—as manifested by the relatively larger coefficient-to-standard-error ratios.

The lesson learned from our baseline analysis can be summarized as follows: within a given country pair, the country with relatively more nationalist consumers can sustain more liberal trade policies. Thus, the empirical pattern documented so far aligns with our first theoretical prediction.

²⁶Recall that an increase in a given country’s nationalism level is captured by a *decrease* in the *Feel ashamed of my country* variable. Therefore, the regression coefficient of this variable should be positive, which is exactly what we find.

²⁷In Table B1, we report the estimated coefficients of all the control variables. The results are largely consistent with the past literature on AD.

Our identification would be threatened in the presence of time-varying confounding determinants of trade protectionism and nationalism that are not controlled for. We address this concern in two ways. First, inspired by event-study designs commonly adopted in the empirical literature, we test the response of the outcome variable to values of our key regressor observed at different points in time, including the future. To do so, we employ the following specification:

$$\Delta \widetilde{AD}_{i-j,t} = \sum_{k=-1}^1 \zeta_k \Delta \widetilde{N}_{i-j,t-k} + \Delta X'_{i,t} \psi^i + \Delta X'_{j,t} \psi^j + \Delta \tilde{v}_{i-j,t}, \quad (25)$$

where the term $\sum_{k=-1}^1 \zeta_k \Delta \widetilde{N}_{i-j,t-k}$ means that the one-year lagged, current, and one-year leading values of the nationalism regressor are included on the right-hand side. A threat to the identification would be posed if the estimated ζ_1 were negative and statistically significant.

Figure 3 presents the estimated ζ_k . We highlight two findings. First, the coefficients of the lagged and current values of our key regressor have the “right” sign in all panels, with their magnitudes comparable with the baseline estimates. In addition, the estimated effects are significant at the 5% level. Second, the coefficient of the leading value of the nationalism regressor has the “wrong” sign in all panels, which implies that, if anything, the possible endogeneity bias most likely does not work in our favor. From the latter observation, we conclude that, in terms of economic significance, our analysis is likely to capture its lower bound.

Furthermore, the work by Dutt and Mitra (2005) shows that left-wing governments in capital-abundant countries are more likely to adopt protectionist trade policies. If the state’s political ideology is systematically related to consumer nationalism, then an endogeneity bias concern emerges. To address this possibility, we control for political ideology. More precisely, following the original specification of Dutt and Mitra (2005), we include the log capital–labor ratio, a measure of the ideological orientation of the government, and their interaction term for both countries within a dyad. Table 3 reports the results. Unfortunately, the data on the state’s political ideology is not available for some country–year cells, and thus the resulting sample size is smaller than that utilized in the baseline analysis. Nevertheless, our baseline

results still hold, although the coefficient reported in column (3) is imprecisely estimated.²⁸

Next, we experiment with restricting our sample to heavy AD users. This restriction is motivated by the possibility that AD usage is a better proxy for trade protectionism in this group of countries. Thus, in Table 4, we report the results obtained after estimating our baseline specification—with and without controls—using the subsample of countries that, on average, introduce at least one new AD measure per year (based on the data from Tabakis and Zanardi, 2019). As the results show, our point estimates survive this sample restriction in terms of their economic and statistical significance. More precisely, according to Panel B, a one-standard-deviation increase in the nationalism difference between countries i and j as measured by *Rather be citizen of my country*, *My country is better*, *Feel ashamed of my country*, or the *Nationalism index* results in a 0.12-, 0.16-, 0.09-, or 0.15-standard-deviation decrease in their AD usage difference, respectively.

In our baseline analysis, we use linearly extrapolated values of nationalism for some observations in order to utilize a larger sample. To check whether the use of the extrapolated values poses a threat to our identification, we estimate our baseline specification using the subsample of country pairs for which the actual data on nationalism is available. Panel A of Table 5 shows the results without controls. In Panel B of the same table, we report the coefficients obtained after including the full set of covariates. As the results show, despite a steep drop in sample size, our findings are qualitatively comparable with the baseline ones. Therefore, we conclude that the use of the extrapolated values of nationalism does not pose a serious threat to the validity of our main results.

Our next goal is to assess the robustness of our findings to the use of the alternative measures of nationalism from the ISSP dataset. Table 6 reports the results with the full set of controls. With the exception of the *Support even if wrong* variable, all the nationalism regressors have an impact that is significant at least at the 5% level. Moreover, the estimated effects have all the expected sign and are in line with the baseline ones in terms of economic

²⁸As shown in Table B2, the coefficients of the *Ideology* \times $\ln(K/L)$ terms are mostly insignificant (and of the opposite sign in comparison with those reported by Dutt and Mitra, 2005). This is likely due to the minimal variation in our first-differenced political ideology variable. More precisely, for about 93.5% of our dyad-year observations, the variable in question equals to zero for at least one of the two countries.

significance.²⁹

5.3.2 Is Trade Protectionism Decreasing in Consumer Nationalism among Impatient Countries? (Prediction 2)

We conclude our empirical analysis by testing our second theoretical prediction that states that trade protectionism increases (decreases) in consumer nationalism for relatively patient (impatient) countries. In particular, we report the values of the incidence rate ratio induced by a one-standard-deviation increase in nationalism (i.e., a “typical” increase thereof) at different levels of impatience. We have four baseline measures of nationalism and two measures of impatience, resulting in eight sets of results.

Figure 4 visualizes the results with the verb ratio as a proxy for impatience. In line with our second theoretical prediction, patient countries employ AD more intensely in response to a higher level of consumer nationalism.³⁰ By contrast, impatient countries use AD less intensely as their level of consumer nationalism increases. Furthermore, as the figure shows, an increase in nationalism has no impact on AD usage for countries that are neither patient nor impatient (i.e., “neutral” countries). Finally, in Figure 5, we use the sentence ratio as a proxy for impatience and find qualitatively and quantitatively comparable results.

6 Conclusions

We have presented the first theoretical and empirical analysis of the implications of consumer nationalism for multilateral tariff cooperation. This is an important endeavor given that a large number of empirical studies have documented a significant impact of consumer ethnocentrism on consumers’ buying intentions and purchase behavior toward domestically produced goods and imports. We have developed a two-country, two-firm model in which the governments and the firms interact in an infinitely repeated two-stage game as follows: in the first stage,

²⁹An increase in a given country’s nationalism level is captured by a *decrease* in the *Support even if wrong* variable. Therefore, the regression coefficient of this variable should be positive, which is exactly what we find.

³⁰Recall that an increase in a given country’s nationalism level is captured by a *decrease* in the *Feel ashamed of my country* variable. Therefore, the estimated incidence rate ratio associated with this variable should be below one, which is exactly what we find.

the governments choose their import tariffs; in the second stage, the firms, which produce horizontally differentiated products, select their prices in both markets. We have assumed that there is asymmetry in consumer nationalism between the two trade partners and that nationalist consumer preferences simply act as a demand shifter—which allows our results to extend to the more general case of the existence of an asymmetric consumption home bias across countries.

We have demonstrated that the country with the nationalist consumers can sustain more liberal trade policies than its trade partner in our repeated-game setting. Furthermore, for a sufficiently low (high) discount factor, the most cooperative equilibrium tariff of the former country (i.e., the country with the nationalist consumers) is decreasing (increasing) in the level of its consumers' nationalism. On the other hand, the most cooperative equilibrium tariff of the country with the non-nationalist consumers is always increasing in the degree of nationalism characterizing its trade partner's consumers.

To validate our main predictions, we have utilized an AD–nationalism matched panel dataset and obtained results consistent with our theoretical findings. More precisely, we have shown that countries with relatively more nationalist consumers can maintain relatively more liberal trade policies. Moreover, our empirical analysis lends support to our hypothesis that impatient countries use AD less intensely as their level of consumer nationalism increases.

In conclusion, our analysis shows that, with respect to countries' ability to multilaterally cooperate in setting their trade policies, asymmetric consumer nationalism across countries has *less* pronounced adverse effects, if any, on countries with relatively more nationalist consumers, rather than vice versa. Moreover, our findings raise, at a broad level, the interesting possibility of an eruption of a multilateral trade war in the wake of a surge in consumer nationalism around the globe, with the war in question being primarily fueled by protectionist actions taken by countries with non-nationalist consumers. Of course, further research is required in order to obtain a more complete picture of the ramifications of consumer nationalism for the world trading system (e.g., in terms of its impact on firms' location choice). Still, our paper constitutes an important first step in this direction.

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Figure 1: Nash Tariff Equilibrium and Consumer Nationalism

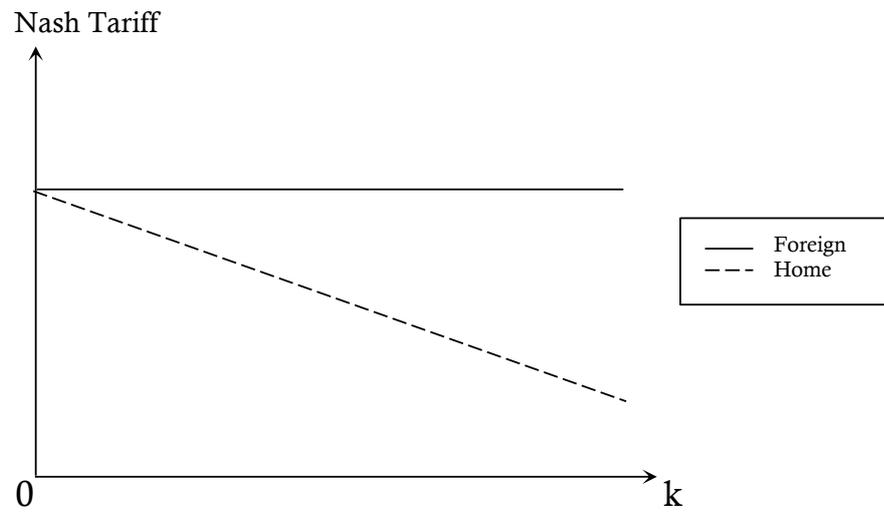
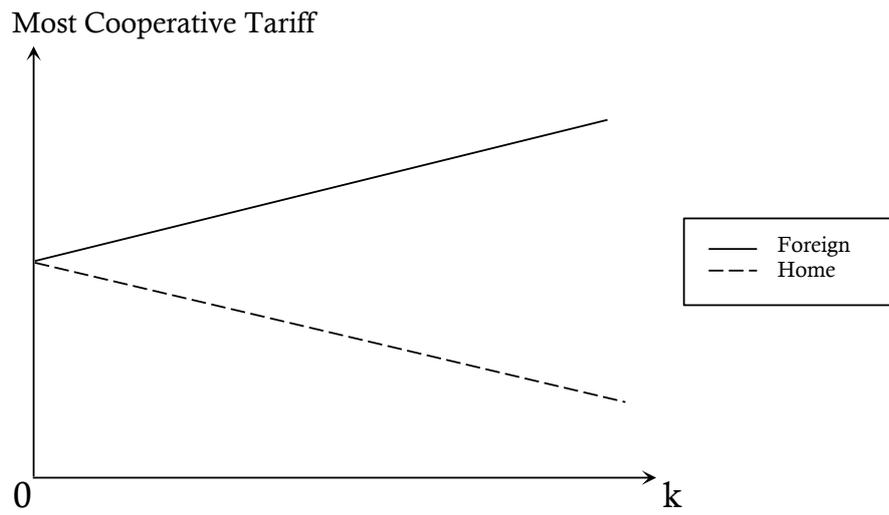


Figure 2: Asymmetric Most Cooperative Equilibrium and Consumer Nationalism

(a) Low Discount Factor



(b) High Discount Factor

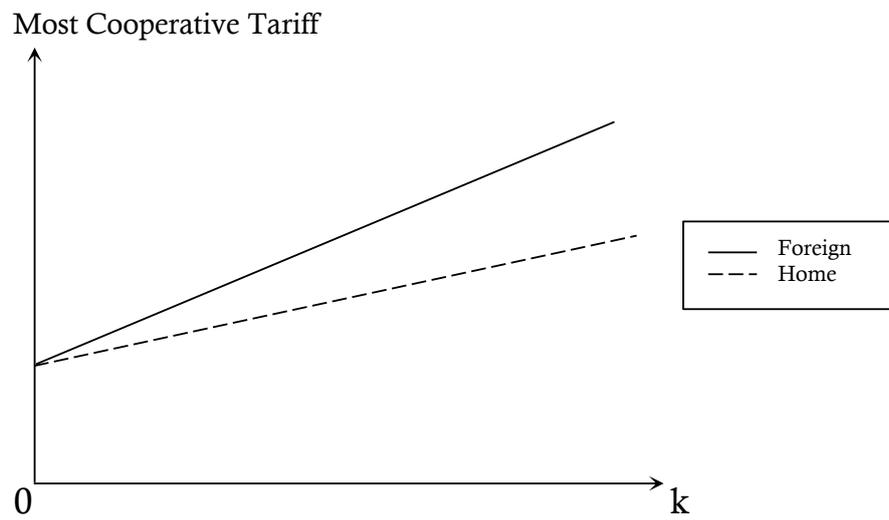
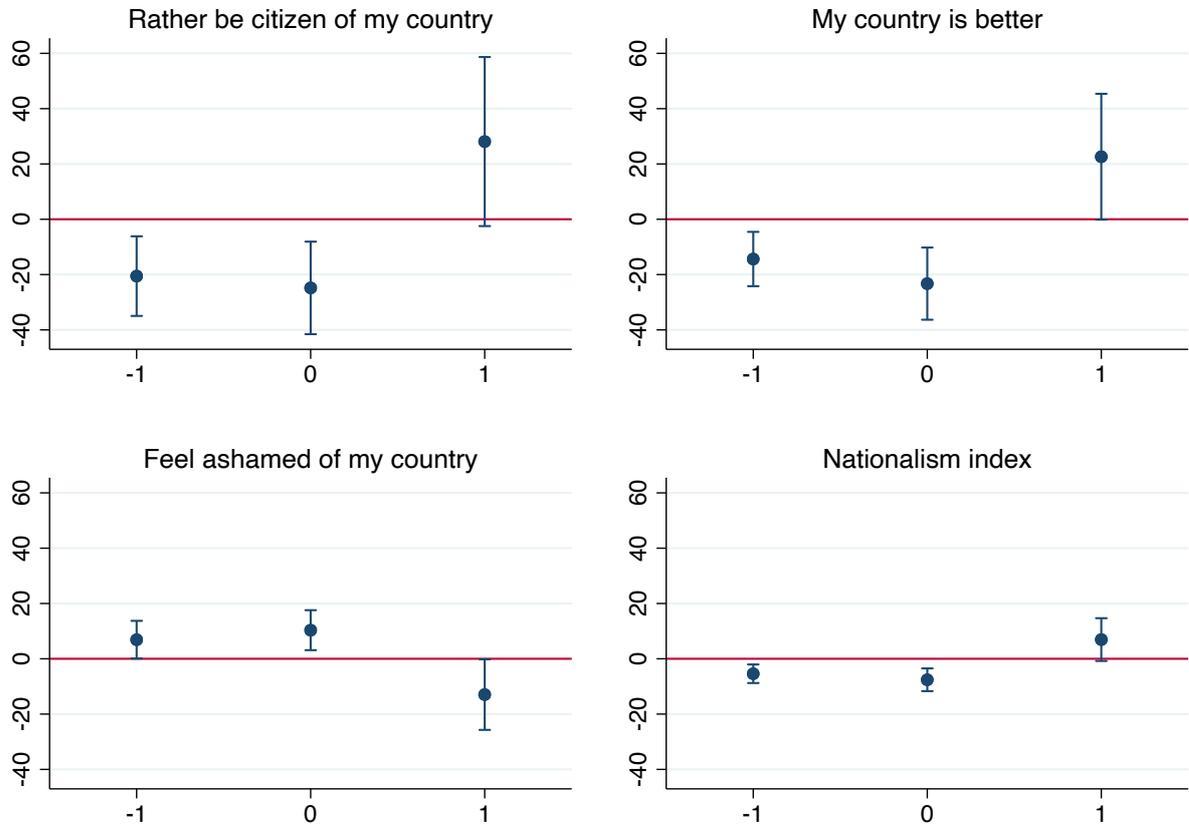
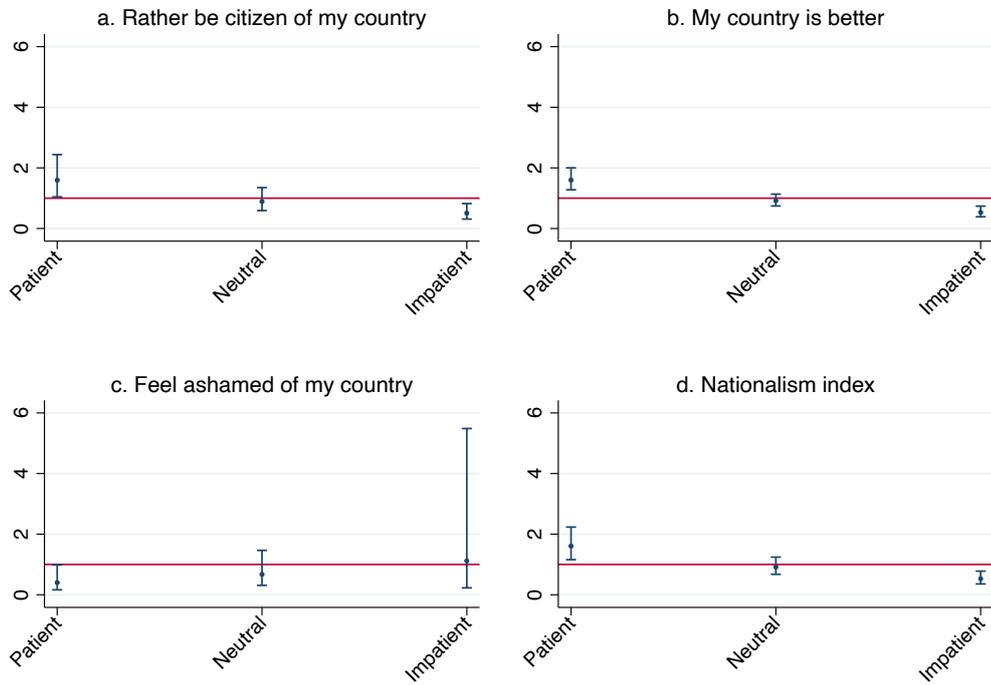


Figure 3: Leading and Lagged Values of Nationalism



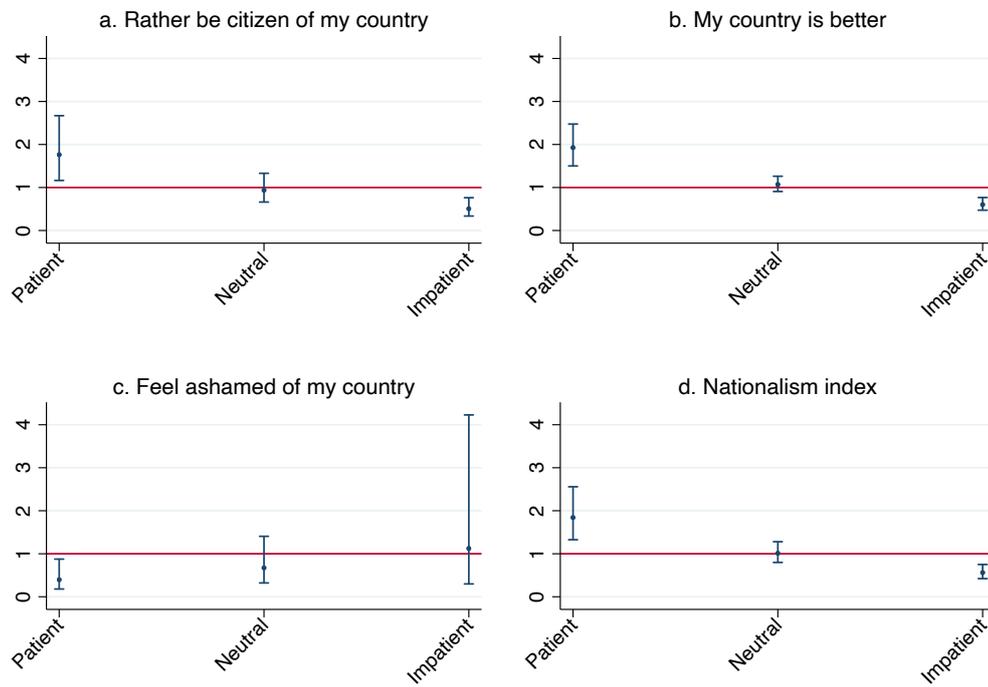
Notes: The estimated impacts are plotted against the number of lags/leads. Solid blue vertical lines correspond to 95% confidence intervals that are robust to arbitrary correlation of the error terms at country-pair level. First-difference estimation results. $N = 975$. Controls for both countries within the dyad include: $\ln(\text{imports})_{t-1}$, import growth $_{t/t-1}$, real effective exchange rate $_{t-1}$, domestic GDP growth $_{t/t-3}$, and rest of the world GDP growth $_{t/t-3}$

Figure 4: The Role of Patience (Verb Ratio)



Notes: $N = 96$. The estimated impacts in response to a one-standard-deviation increase in *Nationalism* are plotted against the corresponding levels of patience (verb ratio). Estimates (blue dots) are reported as incidence rate ratios. Solid blue vertical lines correspond to 90% confidence intervals that are robust to arbitrary correlation of the error terms at country level.

Figure 5: The Role of Patience (Sentence Ratio)



Notes: $N = 96$. The estimated impacts in response to a one-standard-deviation increase in *Nationalism* are plotted against the corresponding levels of patience (sentence ratio). Estimates (blue dots) are reported as incidence rate ratios. Solid blue vertical lines correspond to 90% confidence intervals that are robust to arbitrary correlation of the error terms at country level.

Table 1: Summary Statistics for Measures of Patience

	(1)	(2)
	Verb ratio	Sentence ratio
1. <i>1SD below the median (Patient)</i>	0.684	0.747
2. <i>Median (Neutral)</i>	0.769	0.875
3. <i>1SD above the median (Impatient)</i>	0.852	1

Notes: Descriptive statistics of measures of patience.

Table 2: Baseline Findings

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
<i>Panel A: Results without controls</i>				
$Nationalism_{i-j,t}$	-20.210*	-21.954**	9.000*	-6.725*
	(9.139)	(7.411)	(4.303)	(2.546)
<i>Panel B: Results with full set of controls</i>				
$Nationalism_{i-j,t}$	-23.536*	-23.612**	10.124*	-7.489**
	(9.488)	(7.642)	(4.560)	(2.650)
SD ($Nationalism_{i-j,t}$)	0.029	0.040	0.058	0.117

Notes: First-difference estimation results. $N = 975$. Mean (SD) of the dependent variable: 0.087 (8.010). Column headers specify the nationalism measure employed in a given regression. Sample standard deviations of the different indicators of nationalism are reported in the last row. Controls for both countries within the dyad (in Panel B) include: $\ln(\text{imports})_{t-1}$, import growth $_{t/t-1}$, real effective exchange rate $_{t-1}$, domestic GDP growth $_{t/t-3}$, and rest of the world GDP growth $_{t/t-3}$. Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table 3: Controlling for Political Ideology

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
$Nationalism_{i-j,t}$	-32.499** (11.706)	-27.028** (9.216)	9.815 (7.261)	-8.776** (3.167)
Baseline controls	Y	Y	Y	Y
Political ideology	Y	Y	Y	Y
SD ($Nationalism_{i-j,t}$)	0.028	0.040	0.046	0.116

Notes: First-difference estimation results. $N = 768$. Mean (SD) of the outcome: 0.148 (8.220). Column headers specify the nationalism measure employed in a given regression. Sample standard deviations of the different indicators of nationalism are reported in the last row. Baseline controls for both countries within the dyad include: $\ln(\text{imports})_{t-1}$, import growth $_{t/t-1}$, real effective exchange rate $_{t-1}$, domestic GDP growth $_{t/t-3}$, and rest of the world GDP growth $_{t/t-3}$. To control for political ideology, we include: log of capital-labor ratio, political ideology, and their product. Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table 4: Heavy AD Users

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
<i>Panel A: Results without controls</i>				
$Nationalism_{i-j,t}$	-46.743** (16.437)	-43.317** (12.893)	12.221* (5.823)	-14.861** (4.592)
<i>Panel B: Results with full set of controls</i>				
$Nationalism_{i-j,t}$	-52.619** (17.970)	-48.811** (14.458)	13.605* (6.437)	-16.820** (5.110)
SD ($Nationalism_{i-j,t}$)	0.020	0.029	0.056	0.081

Notes: First-difference estimation results for the subsample of heavy AD users. A given country is defined as a heavy user if it imposes at least one AD measure per year on average. $N = 628$. Mean (SD) of the dependent variable: 0.108 (8.888). Column headers specify the nationalism measure employed in a given regression. Sample standard deviations of the different indicators of nationalism are reported in the last row. Controls for both countries within the dyad (in Panel B) include: $\ln(\text{imports})_{t-1}$, $\text{import growth}_{t/t-1}$, $\text{real effective exchange rate}_{t-1}$, $\text{domestic GDP growth}_{t/t-3}$, and $\text{rest of the world GDP growth}_{t/t-3}$. Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table 5: Using Actual Values of Nationalism

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
<i>Panel A: Results without controls</i>				
$Nationalism_{i-j,t}$	-39.808*	-43.978**	30.647**	-13.285**
	(18.785)	(14.845)	(8.296)	(4.829)
<i>Panel B: Results with full set of controls</i>				
$Nationalism_{i-j,t}$	-10.737	-18.423*	9.024+	-4.504+
	(9.795)	(8.935)	(5.310)	(2.588)
SD ($Nationalism_{i-j,t}$)	0.062	0.086	0.122	0.258

Notes: First-difference estimation results. $N = 73$. Mean (SD) of the dependent variable: 1.26 (9.678). Column headers specify the nationalism measure employed in a given regression. Sample standard deviations of the different indicators of nationalism are reported in the last row. Controls for both countries within the dyad (in Panel B) include: $\ln(\text{imports})_{t-1}$, import growth $_{t/t-1}$, real effective exchange rate $_{t-1}$, domestic GDP growth $_{t/t-3}$, and rest of the world GDP growth $_{t/t-3}$. Robust standard errors clustered at country-pair level in parentheses; ** p < 0.01, * p < 0.05, + p < 0.1.

Table 6: Alternative Measures of Nationalism

	(1)	(2)	(3)	(4)
	Influence pride	Achievements pride	Support even if wrong	Feel close to my country
<i>Nationalism</i> _{<i>i-j,t</i>}	-21.132** (5.561)	-9.983** (3.295)	12.094+ (6.828)	-11.824* (5.852)
Controls	Y	Y	Y	Y
SD (<i>Nationalism</i> _{<i>i-j,t</i>})	0.049	0.070	0.044	0.047

Notes: First-difference estimation results. $N = 975$. Mean (SD) of the dependent variable: 0.087 (8.010). Column headers specify the nationalism measure employed in a given regression. Sample standard deviations of the different indicators of nationalism are reported in the last row. Controls for both countries within the dyad include: $\ln(\text{imports})_{t-1}$, import growth _{$t/t-1$} , real effective exchange rate _{$t-1$} , domestic GDP growth _{$t/t-3$} , and rest of the world GDP growth _{$t/t-3$} . Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Appendix A: Symmetric Multilateral Agreements

In Appendix A, we explore the implications of asymmetric consumer nationalism across countries for multilateral tariff cooperation in the context of symmetric (self-enforcing) multilateral trade agreements. What follows should be regarded as robustness analysis, as given the asymmetry between Home and Foreign (due to consumer preferences) it is only natural to place our main focus on asymmetric cooperative subgame-perfect equilibria.

Let $\tau_C^H = \tau_C^F \equiv \tau_C$ denote the cooperative tariff selected by both Home and Foreign along the equilibrium path. We, then, have the following no-defection conditions for the two trade partners:

$$\textbf{(Home)} \quad \Omega^H(\tau_C, \tau_C) \leq \frac{\delta}{1-\delta} \omega^H(\tau_C, \tau_C) \text{ and} \quad (\text{A1})$$

$$\textbf{(Foreign)} \quad \Omega^F(\tau_C, \tau_C) \leq \frac{\delta}{1-\delta} \omega^F(\tau_C, \tau_C) . \quad (\text{A2})$$

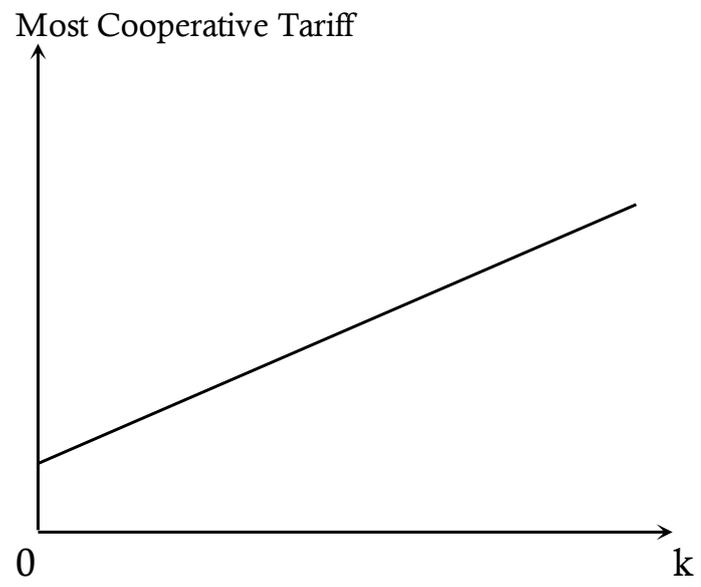
From all the cooperative tariffs that satisfy (A1)–(A2), our interest lies in the most cooperative one, $\hat{\tau}_C$, which is the smallest tariff that does not violate (A1)–(A2).

Our numerical analysis shows that, as τ_C is lowered, a critical tariff is eventually reached at which the incentive constraint for the Foreign government binds whereas the incentive constraint for the Home government is slack (i.e., (A1) holds with strict inequality at the tariff in question). The fact that, as the cooperative tariff is lowered, Foreign’s incentive constraint is the first one to bind is not surprising given our analysis in Section 4. The aforementioned critical tariff is the most cooperative tariff, $\hat{\tau}_C$, that can be sustained in a *symmetric* subgame-perfect equilibrium of our infinitely repeated two-stage game.

Figure A1 depicts $\hat{\tau}_C$ as a function of k . As the figure demonstrates, $\hat{\tau}_C$ is increasing in the degree of Home consumers’ nationalism. Intuitively, consumer nationalism in Home has no effect on Foreign’s one-time gains from cheating, Ω^F , but it does have a negative impact—for the reasons described in Section 4—on the per-period benefit from cooperation for Foreign, ω^F .³¹ Therefore, in the context of symmetric trade agreements, asymmetric consumer nationalism across countries unambiguously has negative implications for multilateral trade cooperation.

³¹We do not analyze here the impact of consumer nationalism in Home on ω^H and Ω^H , as the incentive constraint for the Home government is slack at $\hat{\tau}_C$.

Figure A1: Symmetric Most Cooperative Equilibrium and Consumer Nationalism



Appendix B: Complete Regression Tables

Table B1: Baseline Findings

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
<i>Nationalism_{i-j,t}</i>	-23.536*	-23.612**	10.124*	-7.489**
	(9.488)	(7.642)	(4.560)	(2.650)
<i>Controls for country i</i>				
<i>Domestic GDP growth_{t/t-3}</i>	0.004	-0.013	0.006	-0.000
	(0.190)	(0.192)	(0.192)	(0.191)
<i>REER_{t-1}</i>	0.079*	0.074*	0.075*	0.077*
	(0.031)	(0.030)	(0.031)	(0.030)
<i>World GDP growth_{t/t-3}</i>	-2.948	-3.125	-3.104	-3.052
	(3.552)	(3.594)	(3.606)	(3.589)
<i>ln(imports)_{t-1}</i>	4.687	5.433+	5.222+	5.188+
	(2.896)	(3.030)	(2.997)	(2.944)
<i>Import growth_{t/t-1}</i>	-0.058*	-0.061*	-0.060*	-0.061*
	(0.024)	(0.025)	(0.026)	(0.025)
<i>Controls for country j</i>				
<i>Domestic GDP growth_{t/t-3}</i>	0.378	0.368	0.316	0.372
	(0.226)	(0.223)	(0.218)	(0.224)
<i>REER_{t-1}</i>	-0.060+	-0.062+	-0.062+	-0.063+
	(0.032)	(0.031)	(0.033)	(0.032)
<i>World GDP growth_{t/t-3}</i>	3.106	3.266	3.221	3.207
	(3.592)	(3.622)	(3.635)	(3.621)
<i>ln(imports)_{t-1}</i>	-6.580*	-6.752*	-6.380*	-6.667*
	(3.166)	(3.203)	(3.098)	(3.182)
<i>Import growth_{t/t-1}</i>	0.110**	0.112**	0.111**	0.111**
	(0.021)	(0.021)	(0.021)	(0.021)
<i>SD (Nationalism_{i-j,t})</i>	0.029	0.040	0.058	0.117

Notes: First-difference estimation results. $N = 975$. Mean (SD) of the dependent variable: 0.087 (8.010). Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table B2: Controlling for Political Ideology

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
$Nationalism_{i-j,t}$	-32.499** (11.706)	-27.028** (9.216)	9.815 (7.261)	-8.776** (3.167)
<i>Controls for country i</i>				
$Domestic\ GDP\ growth_{t/t-3}$	0.097 (0.295)	0.063 (0.296)	0.081 (0.306)	0.081 (0.296)
$REER_{t-1}$	0.053 (0.043)	0.047 (0.044)	0.053 (0.043)	0.051 (0.043)
$World\ GDP\ growth_{t/t-3}$	-2.359 (3.813)	-2.568 (3.838)	-2.177 (3.791)	-2.481 (3.837)
$\ln(imports)_{t-1}$	4.871 (4.622)	5.929 (4.792)	5.071 (4.860)	5.588 (4.699)
$Import\ growth_{t/t-1}$	-0.046 (0.035)	-0.052 (0.037)	-0.044 (0.037)	-0.051 (0.036)
$ldeology_t$	45.649+ (26.073)	41.411 (24.907)	38.224 (25.456)	43.322+ (25.301)
$\ln(K/L)_t$	7.256 (14.747)	12.241 (15.781)	2.706 (14.013)	10.008 (15.239)
$ldeology_t \times \ln(K/L)_t$	-3.627+ (2.087)	-3.284 (1.992)	-3.028 (2.037)	-3.439+ (2.024)
<i>Controls for country j</i>				
$Domestic\ GDP\ growth_{t/t-3}$	0.233 (0.410)	0.224 (0.409)	0.156 (0.417)	0.225 (0.409)
$REER_{t-1}$	-0.082+ (0.046)	-0.077+ (0.045)	-0.069 (0.045)	-0.081+ (0.046)
$World\ GDP\ growth_{t/t-3}$	2.442 (3.833)	2.600 (3.845)	2.227 (3.813)	2.543 (3.851)

Table B2: Controlling for Political Ideology (CONTINUED)

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
$\ln(\text{imports})_{t-1}$	-7.339 (6.346)	-7.656 (6.391)	-6.681 (6.228)	-7.542 (6.358)
$\text{Import growth}_{t/t-1}$	0.101** (0.035)	0.104** (0.036)	0.099** (0.034)	0.103** (0.036)
Ideology_t	-26.613 (20.467)	-27.308 (20.457)	-19.682 (20.290)	-27.835 (20.476)
$\ln(K/L)_t$	11.115 (17.527)	8.991 (17.450)	17.590 (17.050)	9.200 (17.753)
$\text{Ideology}_t \times \ln(K/L)_t$	2.253 (1.661)	2.312 (1.660)	1.687 (1.645)	2.355 (1.661)
SD (Nationalism_{i-j})	0.028	0.040	0.046	0.116

Notes: First-difference estimation results. $N = 768$. Mean (SD) of the dependent variable: 0.148 (8.220). Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table B3: Heavy AD Users

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
$Nationalism_{i-j,t}$	-52.619** (17.970)	-48.811** (14.458)	13.605* (6.437)	-16.820** (5.110)
<i>Controls for country i</i>				
$Domestic\ GDP\ growth_{t/t-3}$	-0.179 (0.237)	-0.258 (0.260)	-0.116 (0.239)	-0.222 (0.252)
$REER_{t-1}$	0.120** (0.043)	0.109* (0.045)	0.123** (0.044)	0.114* (0.044)
$World\ GDP\ growth_{t/t-3}$	-4.101 (4.399)	-4.668 (4.484)	-4.024 (4.391)	-4.524 (4.518)
$\ln(imports)_{t-1}$	2.376 (3.947)	6.470 (5.022)	2.012 (4.188)	5.231 (4.667)
$Import\ growth_{t/t-1}$	-0.061+ (0.031)	-0.081* (0.035)	-0.059+ (0.034)	-0.076* (0.034)
<i>Controls for country j</i>				
$Domestic\ GDP\ growth_{t/t-3}$	0.548+ (0.304)	0.518+ (0.296)	0.419 (0.290)	0.534+ (0.297)
$REER_{t-1}$	-0.100* (0.045)	-0.093* (0.045)	-0.109* (0.047)	-0.099* (0.045)
$World\ GDP\ growth_{t/t-3}$	4.146 (4.440)	4.719 (4.509)	3.972 (4.414)	4.596 (4.547)
$\ln(imports)_{t-1}$	-7.291+ (4.172)	-8.862* (4.279)	-6.123 (4.013)	-8.358+ (4.224)
$Import\ growth_{t/t-1}$	0.122** (0.025)	0.132** (0.027)	0.119** (0.025)	0.129** (0.026)
SD ($Nationalism_{i-j,t}$)	0.020	0.029	0.056	0.081

Notes: First-difference estimation results. $N = 628$. Mean (SD) of the dependent variable: 0.108 (8.888). Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table B4: Using Actual Values of Nationalism

	(1)	(2)	(3)	(4)
	Rather be citizen of my country	My country is better	Feel ashamed of my country	Nationalism index
$Nationalism_{i-j,t}$	-10.737 (9.795)	-18.423* (8.935)	9.024+ (5.310)	-4.504+ (2.588)
<i>Controls for country i</i>				
$Domestic\ GDP\ growth_{t/t-3}$	-1.273 (1.114)	-1.469 (1.119)	-1.051 (1.190)	-1.316 (1.118)
$REER_{t-1}$	0.041 (0.190)	0.068 (0.185)	0.048 (0.175)	0.060 (0.186)
$World\ GDP\ growth_{t/t-3}$	-116.698** (11.527)	-106.685** (13.071)	-114.930** (11.513)	-111.861** (12.166)
$\ln(imports)_{t-1}$	21.967 (30.197)	20.857 (30.929)	19.243 (27.667)	20.441 (30.352)
$Import\ growth_{t/t-1}$	0.131 (0.159)	0.187 (0.177)	0.136 (0.151)	0.159 (0.168)
<i>Controls for country j</i>				
$Domestic\ GDP\ growth_{t/t-3}$	0.222 (1.002)	0.548 (1.026)	-0.387 (1.071)	0.330 (1.001)
$REER_{t-1}$	0.129 (0.164)	0.126 (0.162)	0.141 (0.161)	0.118 (0.163)
$World\ GDP\ growth_{t/t-3}$	96.072** (13.512)	86.771** (14.540)	92.743** (14.188)	91.231** (14.112)
$\ln(imports)_{t-1}$	-69.894** (18.985)	-75.780** (19.416)	-61.810** (19.941)	-71.741** (18.989)
$Import\ growth_{t/t-1}$	0.284** (0.101)	0.261* (0.098)	0.219* (0.103)	0.270** (0.098)
SD ($Nationalism_{i-j,t}$)	0.062	0.086	0.122	0.258

Notes: First-difference estimation results. $N = 73$. Mean (SD) of the dependent variable: 1.26 (9.678). Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

Table B5: Alternative Measures of Nationalism

	(1)	(2)	(3)	(4)
	Influence	Achievements	Support	Feel close
	pride	pride	even if wrong	to my country
$Nationalism_{i-j,t}$	-21.132**	-9.983**	12.094+	-11.824*
	(5.561)	(3.295)	(6.828)	(5.852)
<i>Controls for country i</i>				
$Domestic\ GDP\ growth_{t/t-3}$	-0.081	-0.019	-0.018	0.006
	(0.196)	(0.189)	(0.190)	(0.190)
$REER_{t-1}$	0.067*	0.077*	0.073*	0.072*
	(0.030)	(0.031)	(0.031)	(0.031)
$World\ GDP\ growth_{t/t-3}$	-3.347	-3.184	3.156	-2.810
	(3.597)	(3.632)	(3.546)	(3.520)
$ln(imports)_{t-1}$	7.679*	5.499+	4.664	4.046
	(3.268)	(3.044)	(3.076)	(2.975)
$Import\ growth_{t/t-1}$	-0.069**	-0.061*	-0.058*	-0.052*
	(0.025)	(0.025)	(0.025)	(0.024)
<i>Controls for country j</i>				
$Domestic\ GDP\ growth_{t/t-3}$	0.372	0.344	0.356	0.371
	(0.223)	(0.222)	(0.224)	(0.227)
$REER_{t-1}$	-0.051	-0.060+	-0.052	-0.056+
	(0.032)	(0.032)	(0.032)	(0.032)
$World\ GDP\ growth_{t/t-3}$	3.449	3.285	3.278	2.943
	(3.617)	(3.657)	(3.594)	(3.553)
$ln(imports)_{t-1}$	-7.885*	-6.519*	-6.861*	-6.325*
	(3.335)	(3.170)	(3.159)	(3.132)
$Import\ growth_{t/t-1}$	0.117**	0.111**	0.113**	0.108**
	(0.022)	(0.021)	(0.021)	(0.020)
SD ($Nationalism_{i-j,t}$)	0.049	0.070	0.044	0.047

Notes: First-difference estimation results. $N = 975$. Mean (SD) of the dependent variable: 0.087 (8.010). Robust standard errors clustered at country-pair level in parentheses; ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.