Do Democracies Trade More Freely?

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Do democracies trade more freely? If so, what are the characteristics of the democratic polity that are relevant to trade policy? This chapter surveys the empirical evidence to address the first question, and presents a simple model of trade and politics to address the second.

Democracies are, in general, characterized by divided polities. Two specific forms of this divided polity - separation of powers across decision makers and electoral accountability of leaders - are key to the trade-liberalizing tendencies of these regimes. The presence of a divided polity alters the reversion points - which in turn shifts the agendas for trade liberalization. The effect is to make democracies both more willing to cooperate in Preferential Trading Agreement (PTA) formation, to unilaterally liberalize, as well as better able to extract concessions from non-democracies. Divided polities effect both unilateral and bilateral strategies and outcomes in the trade liberalizing arena.

Within economics, the political origins of trade barriers have been thoroughly investigated. The approach usually follows a similar pattern: take a simplified Heckscher-Ohlin or Ricardo-Viner specific factors model to describe the economic environment, and overlay some political structure to explore the formation of barriers to free trade: direct democracy by Mayer (1984), political support from competing groups as in Hillman (1982) or Grossman and Helpman (1994), lobbying by Bhagwati (1982) , Findlay and Wellisz (1982), Magee Brock and Young (1989). In so doing, the economic approach has been to focus on the pressures brought to bear on vote- or support-maximizing politicians to supply policy. Hence the political economy of trade literature focuses on the choice over the level of tariff (and occasionally on the choice of instrument) based on underlying redistributional incentives of policy-makers or on the ability of interest groups to influence the policy-makers.

These modifications of the policy-maker's objective function (policy-makers are modelled as politically responsive) and the trade barrier formation processes modelled in this literature are at best "reduced forms" of the political process. Institutional features of the polity are usually missing, and certainly cross-country variations in these institutions have not been considered. Rodrik (1995) observes the paucity of work on the cross-country variation in the levels of protection, and identifies that institutions matter in this context (p. 1484).

Scholars in international relations and comparative politics have, on the other hand, stressed the notion that international arrangements (regarding collective security, for example) operate within a system that is both anarchic (in the sense of no authority to enforce contracts), and characterized by a complex system of self-enforcing agreements that limit unilateral improvements in domestic conditions or a states' power at the expense of anothers'. This system, itself the outcome of bargaining and negotiation between countries, relies on the willingness of states to "cooperate" with each other. These scholars have noted the willingness of democracies to cooperate along a variety of dimensions: they fight fewer wars with each other, or with autocracies than do autocracies with each other (Russet 1993), or to recognize and enforce one another's laws[1]. Explanations have hinged on institutional features (Bueno de Mesquita et al. 1999), such as electoral competition.

Here we investigate whether the regime type of a state operating in an anarchic world-trading environment affects its willingness to abstain from beggar-thy-neighbor (or rent-shifting) policies that improve domestic conditions at the expense of its trading partners. If democracies fight fewer wars with each other, do they fight fewer trade wars with each other? The evidence suggests that the institutions of democracy work to enhance cooperation over trade policies.

This chapter presents a single, coherent model structure that explores these questions and then summarizes some of the recent empirical results. Where democracies are characterized by divided polities, the central conclusions of this chapter are that

1. Democracies have a greater tendency to *unilateral* liberalization;
2. Democracies are more cooperative with respect to their willingness to join tariff-reducing PTAs, and
3. Democracies are better able to extract concessions (in the form of reduced tariffs) from their trading partners than are non-democracies.

Legislatures and Elections

Two characteristics of the structure of democratic states are examined here: the responsiveness of the policy-makers to the interests of the broad electorate (the role of elections and consent), and the role of domestic legislatures in democracies (the effect of divided government or separation of powers). Both institutions (elections and separated authority) can be viewed as characteristic of a "divided polity".

Following Pahre (this volume, ch. 1), we define a divided polity as the institutional structure in which there are two or more actors whose choices affect the outcome of the policy game. This is a characteristic of the "rules of the game" - the structure of the polity - and is not a consequence of the preferences of the actors.[2] This definition of "divided polity" is very broad. It captures the direct effect of two branches of government (an executive and a legislature) that must agree on policy before it is implemented, as in the ratification games of this volume (Pahre, this volume Ch. 4), and elsewhere (e.g. Pahre 1997, Mansfield et al. 2000, Milner and Rosendorff 1996, 1997, Martin 2000, Iida 1993, Mo 1995). It also captures the indirect effect - where a policymaker attempts to balance the conflicting claims of competing constituents in order to maximize the probability of reelection (or political support, more generally).

For instance, the executive tries to address the protectionist desires of special interests with those of the societal welfare in the aggregate, for whom less protection or even free trade may be preferred. At election time, voters choose whether or not to vote for the incumbent and lobbying interests choose whether or not to contribute to the campaign funds of the incumbent or an opponent. These decisions will undoubtedly affect the policy chosen by the incumbent, and hence the outcome of the policy game.

In a broader sense, both elections and divided authority are institutional mechanisms to induce governments to behave in a "representative manner". Persson, Roland and Tabellini (1997) show that separation of powers (when appropriately designed) induces the revelation of the information necessary for voters to make informed decisions. If voters behave retrospectively, government behavior is constrained to be more representative. Ferejohn (1986) shows that elections can act to limit the extractive behavior of executives in the presence of moral hazard. Kubota and Milner (2005) share our interest in the effect of political institutions on trade policy. They suggest that with democracy comes an expansion of the support base for a policy-maker (the "selectorate", following Bueno de Mesquita 1999, increases in size). A tariff raises the price, lowering the support consumers might have for the policy-maker. A policy-maker can maintain consumer support by providing a transfer to those consumers who are members of the selectorate. As the selectorate increases in size, more transfers are required which becomes too expensive; alternatively, the policy-maker can lower the tariff, effectively improving the welfare of consumers at large. As the selectorate gets large, the optimal policy switches from a tariff to freer trade. While Kubota and Milner focus on the extension of the franchise, the institutions of interest here are legislatures (and the separation of powers) and elections (the accountability of the executive), both of which are characteristic of democracies.

Democracy and Divided Polity

In what follows, a state is identified as "democratic" if elections act to keep leaders to some degree accountable to the voters at large. It is the absence of regular, free and fair elections that identifies a state as nondemocratic (Schumpeter [1942] 1976, Powell 2000 , Mansfield at al. 2002). But to win elections, politicians must satisfy competing interests. The voters at large, responding to the income effects of protection may prefer zero or moderate tariffs, while import competing firms are likely to demand high levels of protection; export interest lobby for zero tariffs or even subsidies for exports. A vote-maximizing policy-maker must balance these demands, and will do so at the margin. We permit the degree of democracy to be proxied by the degree to which the preferences of the voters at large are represented in the policymaking process of the executive.

The first claim is that *when the voters' control over political leaders via competitive elections increases, this increases the willingness to liberalize and reduces the desire to protect special interests at the expense of the broad electorate.*

The view that elections keep incumbents accountable is deeply ingrained in democratic culture (Manin, Przeworski and Stokes 1999). An election can sanction a poorly behaved incumbent, by eviction from office. The prospect of not being reelected leads incumbents to shirk less in representing the electorate (the retrospective voting approach (Barro 1973 , Ferejohn 1986)). Secondly, we show that *as the voters' electoral control rises, the willingness of the executive to cooperate rises.* Democracies are more likely to strike trade barrier reducing agreements.

The third claim concerns the nature of the international bargain. Electoral accountability increases the bargaining power of the international negotiator. If international negotiators choose a tariff pair that is Pareto efficient, *a more democratic* *state extracts more concessions from (and offers fewer concessions to)* its trading partners in international trade negotiations.

A country will also be identified as (more) democratic when there is divided authority over policy-making. The presence of multiple veto-players in the policy-making process is not in itself a measure of democracy (Tsebelis 2002), but the presence of a domestic legislature that must ratify/enact/implement a trade policy reflects a polity that is more democratic than one that invests almost complete authority in a chief executive.

The fourth claim is that *if a country is endowed with a more protectionist legislature, this will increase the bargaining powers of the international trade negotiators at the international bargaining table.* The negotiators will, under democracy, extract greater concessions from other countries than under alternative regime specifications.

In the electoral case, we defined two groups (voters and special interests) who differ largely in their preferences over outcomes. Similarly, in the separation of powers case, the executive and the legislature are likely to have differing preferences. Clearly, preferences matter - but preferences alone do not determine outcomes. The desires of constituents impact policy making, but the nature of the effect of preferences depends on the institutions through which these preferences are expressed. Institutions mediate conflicting desires and differing institutions will generate differences in outcomes even under the same preference orderings. In what follows we specify a rather straightforward preference ordering, and investigate solely the impact of changes in the institutional details on trade policy outcomes.

THE UNDERLYING ECONOMY

Trade policy is fundamentally redistributive - tariffs raise some relative prices and hence raise some incomes relative to others. Different groups experience trade policy differently, and these differences leads to differences in preferences over policy. In what follows we present the bare essentials of a three good, two country world economy - in order to derive the effects of trade policy on economic actors' well-being and hence their interest in proposing or opposing a tariff. Then in the next section we bring in the institutional structure in order to understand how these groups with divergent preferences interact to generate a trade policy outcome.

Consider two countries that are identical, except for their regime type, and their endowments. Each country produces and consumes three goods labelled x and m and z. On the demand side, utility is assumed to be additively separable, $U(x,m) = u(x) + u(m) + z$, where z is the numeraire good, and the units are chosen such that the price of a unit of z is 1. On the supply side, home's endowment of x is given as $\beta > \frac{1}{2}$, while foreign's endowment of x is $1-\beta$. World output is therefore fixed at unity. Similarly, home's endowment of m is $1-\beta$ while foreign's endowment is β. Since preferences are identical, home will export good x and will import good m.

Home can apply the specific tariff t on the imports of good m. If the price abroad of good m is p_m, then the local price is $p_m + t$, where t is home's (non-prohibitive) tariff. Similarly, if the price of x at home is p_x, then the price of x abroad is $p_x + \tau$ where τ is the (non-prohibitive) tariff applied by foreign.

Utility maximization and market clearing yields equilibrium prices, consumption, imports and exports. See the appendix for details. Social welfare is expressed as the sum of consumer surplus, profits (of the export and import-competing firms) and tariff revenue: $W(t,\tau) = C(x(\tau), m(t)) + \Pi^x(\tau) + \Pi^m(t) + T(t)$. Similarly, for foreign , $W^* (t, \tau) = C^* (x (\tau) , m (t)) + \Pi^{x*} (\tau) + \Pi^{m*} (t) + T^* (\tau)$.

The Welfare Optimizing Tariff

Assume for now that each government has only social welfare in mind (this assumption will be relaxed in the next section). The governments choose their tariffs simultaneously, and we investigate the Nash equilibrium in tariff levels. The separability of the payoffs leads to a reaction function for each player that is independent of the other player's tariffs – the Nash equilibrium is one of dominant strategies. Home government solves for $\arg\max_t W (t, \tau)$ which we label t^W; similarly, foreign solves for $\arg\max_\tau W^* (t, \tau)$ which we label τ^{W^*}. It is well established that the optimal tariffs are positive as a small tariff generates a reduction in consumer surplus that is more than compensated for by an improvement in the terms of trade. This is the Johnsonian beggar-thy-neighbor tariff: in a two country world, both countries are "large", and implement the optimal tariff. By symmetry, $t^W = \tau^{W^*}$. Notice too that home has a preferred foreign tariff $\tau^W : W_\tau < 0$; this implies that home's (and foreign's) preferred foreign (home) tariff is $\tau^W = 0 \ \left(= t^{W^*}\right)$.

REPRESENTATION

Any policy-maker (in any regime) is assumed to experience benefits from two sources: in addition to the benefit associated with increasing social welfare, governments obtain a fraction of the rents that accrue to the import-competing sector (Bhagwati's (1998) "takings", government's "grasping hand" of Olsen (1993)). These rents could take the form of political contributions to the government (as in democracies where lobbies organize and collectively contribute to a political candidate's electoral campaign fund) or they can take the form of extraction or appropriation as might be the case in an autocratic society where individual property rights are not perfectly secure. This political support function is therefore rising both in the profits of the firms and in social welfare.

$$G(t, \tau, \Psi) = c\Pi^{m}(t) + \Psi W(t, \tau)$$

where c is a positive and exogenous constant, $c \in (0,1)$ and $\Psi > 0$ measures the responsiveness of the representative to the concerns of the voters at large[3]. Variation across representatives and regimes will be captured by Ψ, an institutional parameter than measures the importance to the policy-maker of the interests of the broad society. The larger is Ψ, the more responsive is the policy maker to the interests of the electorate at large and the better is the "quality of democracy" (Bhagwati 1998). The smaller is Ψ, the more the policy-maker is captured by the special interests represented by the firms, and the less representative of broad societal interests the policy-maker is.

We will denote foreign's regime type as Ψ, and foreign's policy-maker maximizes

$$G^{*}(t, \tau, \Psi^{*}) = c\Pi^{x*}(\tau) + \Psi^{*} W^{*}(t, \tau)$$

Once again, the two governments set their tariff policies simultaneously, and the Nash equilibrium in tariffs are dominant strategies. Each policy-maker of type Ψ (at home) solves for $\arg\max_t G(t, \tau, \Psi)$. Similarly in foreign and the pair of Nash strategies are functions of each country's regime type: $\left(t^{G}(\Psi), \tau^{G}(\Psi^{*})\right)$.

Notice that $t^{G}(\Psi) > t^{W}$; when the interests of the protectionist sector are taken into account by the policymaker - for electoral reasons - the tariff is larger than the purely social welfare maximizing tariff.

DEMOCRACY AND LIBERALIZATION

Our first result establishes that any representative that is more responsive to the interests of the electorate at large will adopt a lower domestic tariff unilaterally. Since the optimal strategy is a dominant strategy, the policy-maker will always adopt a lower tariff as s/he become more responsive to social welfare relative to the special interests of the import-competing sector.

Proposition 1 $\frac{\partial t^G}{\partial \Psi} < 0$ *and* $\frac{\partial t^G}{\partial c} > 0$.

The proofs are in the appendix. This implies that the more responsive a policy-maker is to broader societal concerns, the lower is the non-cooperative Nash tariff. Democracy provides an incentive to unilaterally liberalize.[4]

Trade policy however is the outcome of negotiations between countries. Our interest is the effect of regime type on the prospects for international cooperation; in particular, when will the politically motivated policy-makers agree to forgo beggar-thy-neighbor tariffs and cooperate within a liberalized trading regime?

Elections and Cooperation

Does the policy-maker have more or less to gain from cooperating at free trade as his/her responsiveness to the electorate rises? Consider the tariff game played an infinite number of times, and let us examine the properties of a cooperative equilibrium, where cooperation is supported by the threat of an infinite reversion to the Nash equilibrium - the grim trigger punishment.

There are two important components to a cooperative solution. What are the gains from cooperation? and secondly, can cooperation be sustained? Fearon (1998) addresses this issue of bargaining and enforcement, and suggests that sometimes they are at odds: the stronger are the enforcement provisions of any agreement, the tougher will be the bargaining to get to an agreement in the first place, given that the players will have to stick with it for a long time. Alternatively, the looser is the enforcement criterion, the more willing players may be to reach an agreement sooner.

Consider the prisoners dilemma structure outlined above in the game with a single policy-maker in each country. The noncooperative tariff t^G, and define some cooperative tariff $t^C < t^G(\Psi)$ and $\tau^C < \tau^G(\Psi^*)$ for all (Ψ, Ψ^*). The optimal defection here is also t^G (this follows from the separability of utility / the equilibrium in dominant strategies). Consider the equilibrium in which countries cooperate unless or until a defection is observed, in which case the grim trigger is pulled. The first result is that the gains from cooperation rise with the level of democracy at home. The intertemporal gains from cooperation are

$$g_C(\Psi, \Psi^*) = \frac{1}{1-\delta}\left[G\left(t^C, \tau^C, \Psi\right) - G\left(t^G(\Psi), \tau^G(\Psi^*), \Psi\right)\right]$$

where δ is the discount rate.

Proposition 2 *As a country becomes more democratic, ceteris paribus, its gains from cooperation increase. That is* $\frac{\partial}{\partial\Psi} g_C(\Psi, \Psi^*) > 0.$

The proof is in the appendix; the intuition here is straightforward. As home becomes more democratic, the policy-maker has more to gain from enhancing social welfare. Social welfare is always enhanced by cooperation, and hence the policy-maker does relatively better (at the margin).

What about the incentive to defect? The gains from defection are $g_D(\Psi) = G\left(t^G(\Psi), \tau^C, \Psi\right) - G\left(t^C, \tau^C, \Psi\right)$. Define $g(\Psi, \Psi^*) = g_C(\Psi, \Psi^*) - g_D(\Psi)$, the difference between sticking to the cooperative regime and defecting once, and being punished thereafter.

Proposition 3 *For any pair of cooperative tariffs, the difference between the gains (for the home executive) from cooperating and the gains from defecting grow with the degree of democracy at home; i.e.* $\frac{\partial}{\partial \Psi} g(\Psi, \Psi^*) > 0$

As the measure of democracy rises - in this instance, accountability to the will of the society at large - governments have more to gain from acceding to free trade agreements. There is an increased, unilateral willingness to be more cooperative in the international environment. [5]

We have focussed here on the accountability of the executive to the will of the electorate at large, and found a unilateral incentive to liberalize and a more accommodating position in the international negotiating environment.

Electoral Accountability and the Nature of the Agreement

Consider now how the cooperative tariff pair $\left(t^C, \tau^C\right)$ might be found. Any number of bargaining structures can be considered. Our only restriction here will be that the pair chosen must be *efficient* in the sense that the pair maximizes joint political support. That is we now require that $\left(t^C, \tau^C\right) = \arg\max G(t, \tau, \Psi) + G^*(t, \tau, \Psi^*)$. Notice that efficiency here is measured not in terms of social welfare, but rather is determined by a pair of tariffs that maximize the sum of both governments' political support.

Separability of the political support functions yields $t^C(\Psi, \Psi^*)$ and $\tau^C(\Psi, \Psi^*)$. Clearly $t^C(\Psi, \Psi^*) < t^G(\Psi)$ and $\tau^C(\Psi, \Psi^*) < \tau^G(\Psi^*)$; joint maximization requires that each country adopt a lower tariff than they would under the Nash, non-cooperative environment.

How does increased electoral accountability affect the efficient tariff pair? Does more democracy at home increase or decrease the country's bargaining power when negotiations begin? The next proposition establishes that as a country becomes more democratic, its can extract greater concessions from its trading partners, in the form of lower tariffs abroad. Further, depending on parameter values (in particular, the slope of the demand functions), the home tariff could rise or fall as home becomes more democratic. That is the home tariff could rise, and the foreign tariff always falls as home becomes more democratic - a more democratic state may be able to offer fewer concessions in addition to being able to extract greater concessions from its trading partners. In a sense, the "bargaining power" shifts in favor of the democratic state.

Proposition 4 *As a country becomes more democratic, it's partner's efficient tariff falls, i.e.* $\frac{\partial}{\partial\Psi}\tau^C(\Psi,\Psi^*) < 0$. *Moreover, if* $p_m' > \pi$, *then a country's own efficient tariff rises as it becomes more democratic, i.e.* $\frac{\partial}{\partial\Psi}t^C(\Psi,\Psi^*) > 0$.

As the electorate becomes stronger in having social welfare reflected in the government's objective function, they demand more access to foreign markets - hence the fall in the foreign tariff. Domestically, if the efficient tariff drives the domestic tariff below the social welfare maximizing level, increased voice of the electorate will force the efficient tariff up, raising the domestic tariff. If, on the other hand, the efficient tariff is higher than the social welfare maximizing level, increased electoral accountability will force it downwards.

In summary, increased electoral accountability at home increases its bargaining power with respect the level of the foreign tariff - it will fall. Further under appropriate conditions, the domestic tariff may rise with increased democracy. Freedom at home can pry open markets abroad.

Do we find a similar sort of result when we shift our attention from the role of elections in a democracy to the effect of separating powers over policy to multiple branches of government? We find that democracies are more willing to provide concessions to other democracies when bargaining over mutual tariff reductions. This is the focus of the next section.

INSTITUTIONS: SEPARATION OF POWERS

An important aspect of democracy is the division of authority (or authority is jointly held) across branches of government. In the trade policy realm, the legislature usually delegates authority to the executive (a prime minister or president) to negotiate with other states over trade issues. This of course gives the executive some authority or discretion to negotiate over trade policy at the international bargaining table. Two possible roles for the legislature emerge. A legislature may be required to *ratify* any proposal before it can be implemented. Such a ratification process is characteristic of democracies (Mansfield, et al. 2000, Milner 1997, Milner and Rosendorff 1997) and occurs in both presidential and parliamentary systems. Ratification is often prior to the negotiation of the agreement in parliamentary systems – the prime minister may have to cobble together an acceptable policy with the legislative majority before taking office, and any incentive to defect from such an agreement is circumscribed by the parliaments' ability to pass a motion of no-confidence in the government. In other instances, a trade agreement may require implementing legislation before it can be adopted; in others, a referendum or plebiscite may be necessary. In presidential systems, formal ratification procedures are required. Such a structure balances authority across institutions of government, and has an effect on the degree of liberalization that is feasible (see Pahre 1997 as an example).

The second role for the legislature is that it takes responsibility for implementation of trade policy when international negotiations have *broken down*. In the US, the legislature is ultimately responsible for international agreements under the constitution; in parliamentary systems, an act of parliament can determine the level of trade barriers if necessary. The effects of varying this assumption, and investing authority over the outcome when negotiations break down (sometimes called the "status quo" outcome) in a variety of agents, is studied in chapter 4 of this volume (Pahre this volume, ch 4). In this chapter we focus on the effect of ultimate responsibility lying with a relatively protectionist legislature.

We establish in this section that democracies offer fewer concessions and can extract greater concessions than can autocracies when bargaining over trade barriers. That is democracies can force lower tariffs abroad than can autocracies in the same negotiations; furthermore, democracies lower their tariffs less than do autocracies in the same negotiations.

For the purposes of our model, consider now a second player in any democracy, which we call the legislature, (L), in addition to the executive, labelled E. We assume, following Rogowski (1987) that since members of the legislature represent smaller constituencies than the executive (who is responsive to a national constituency), it is easier for special interests to influence preferences of their representatives. Representatives from smaller districts are unable to be insulated from the protectionist interests of groups well–represented in their districts. The effect is that for members of the legislature generally, and for the median member particularly, the $\Psi^E > \Psi^L$. The effect of this assumption is to make the legislature more protectionist than the executive.

For the purposes of the analysis, countries are symmetric, with $\Psi^A = \Psi^{A^*}$.

In an autocracy, there is no division of power. We do make a restriction about the nature of representation under autocracy: autocrats do not usually weigh the interests of social welfare very highly - they are not very responsive to the interests of the average member of society since they are not reined in by elections or any other form of citizen control[6]. To bias the model against our intended result (that democrats concede more when negotiating with other democrats), we will prove the most difficult case where autocrats have preferences that are just as liberal as democratic executives. This way, the political institutions are shown to affect policies, and that the results are not driven by preferences. I.e. we examine the case where $\Psi^{E}=\Psi^{A^{*}}$.

We adopt a bargaining approach. Consider first the two autocrats. The pair of autocratic executives A and A^{*} must bargain to an agreement. Should A and A^{*} fail to agree, the Nash equilibrium pair of tariffs to the non-cooperative tariff setting game played by the two autocrats is implemented. That is, failure by the executives to negotiate successfully leads to the pair $\left(t^{A},\tau^{A^{*}}\right)$ being implemented, yielding threat point payoffs of

$$g^{AA^{*}}=\left(G^{A}\left(t^{G}\left(\Psi^{A}\right),\tau^{G}\left(\Psi^{A^{*}}\right),\Psi^{A}\right),G^{A^{*}}\left(t^{G}\left(\Psi^{A}\right),\tau^{G}\left(\Psi^{A^{*}}\right),\Psi^{A^{*}}\right)\right).$$

We are faced with a standard bargaining problem. Given the symmetry of the two countries, we apply the egalitarian solution (Mas-Colell et al. 1995 p841), and require that the gains from cooperation be split equally among the agents[7]. In Figure 1 below, where the utility possibility frontier is indicated, the bargaining solution lies on the 45° line at AA^{*} .

FIGURE 1 about here.

Consider now a mixed pair (one autocrat, abroad and one democrat, at home). Both are aware that any failure to successfully negotiate a deal will mean that the democratic legislature and the autocrat set tariffs non-cooperatively. If negotiations breakdown, the foreign negotiator A^{*} will implement its dominant strategy $\tau^{A^{*}}$ in the non-cooperative game, while the home legislature behaves similarly, and adopts t^{L}.

The international negotiators negotiate to an agreement; with respect to their domestic polities, the international negotiators are the agenda setters - they set the cooperative tariffs. The legislature can reject the agreement and implement its best, non-cooperative domestic tariff - the legislature controls the reversion point. The threat point payoffs then would be $g^{EA^*} = \left(G^E\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A^*}\right), \Psi^E\right), G^{A^*}\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A^*}\right), \Psi^{A^*}\right)\right).$

Our strategy here is to compare the location of g^{EA^*} and g^{AA^*} in payoff space. Suppose we start from the situation where $\Psi^L = \Psi^E$, that is the legislature and the executive share the same weight on social welfare. Then we will let Ψ^L fall incrementally (i.e. the legislature becomes more protectionist relative to the executive).

Consider the payoff to the foreign autocrat,$G^{A^*}\left(t^L, \tau^{A^*}, \Psi^{A^*}\right)$; as the foreign legislature begins to separate from the executive the home breakdown tariff begins to rise. Higher (home) tariffs means that foreign's welfare unambiguously falls - foreign's exports start to shrink reducing foreign's welfare. So g^{EA^*} must lie south of g^{AA^*}.

At home, the executive has now ceded control to the legislature in the instance that negotiations break down. But the tariff that the legislature would set if negotiations were to break down would be exactly the same as that the executive would set because $\Psi^L = \Psi^E$. That is $t^G\left(\Psi^L\right) = t^G\left(\Psi^E\right)$. Hence the home executive, at the margin, sees no reduction in its welfare. Putting these two effects together, we see that g^{EA^*} lies directly below g^{AA^*}, as indicated in Figure 1.

Let us now compare the two cases. Notice in Figure 1 that relative to the jointly autocratic case (at AA^*), the payoff to the democratic state (at EA^*) is higher and the payoff to the foreign state is lower when foreign. Either the democracy's tariffs have risen, the autocrat's have fallen or both. In either case, we can describe the democracy as becoming less willing to offer concessions during bargaining, and more able to extract greater concessions out of its (non-democratic) bargaining partners

The result here is consistent with a conjecture of Schelling's: a hard-line legislature can be used by the executive branch to extract an international agreement more in the home executive's interest[8] (Schelling 1960, 28-29). The foreign autocrat, in comparison, has no hardline legislature to point to in order to extract more concessions. The paradoxical effect of bringing a protectionist legislature into the analysis is to extract greater concessions (perhaps via lower tariffs) abroad, and to offer fewer concessions (and obtain high tariffs) at home.

Summarizing the finding of this section, we have

Proposition 5 *A democracy (relative to an autocracy) offers fewer concessions to and extracts greater concessions from an autocracy in trade barrier negotiations.*

STYLIZED FACTS / EMPIRICAL EVIDENCE

In the previous sections the more democratic is the polity, the better is that state in extracting concessions in trade barrier negotiations. Democracies were shown to be more likely to unilaterally liberalize and were more cooperative internationally. The institutional features of interest were the presence of a protectionist legislature and the accountability of the executive to the electorate. Clearly, the institutional structure of government decision-making has an influence over the trade barrier levels chosen, and the willingness to engage in cooperative trade policy.

In this section I report some empirical results drawn from Bliss and Russet (1998), Mansfield et al. (2000, 2002), and Remmer (1998), with the purpose of providing some evidence in support of the hypotheses ventured above.

The general empirical approach is to investigate the role of regime type after the standard explanatory variables for the volume of trade are controlled for. In this approach, a standard gravity model of trade is adopted to capture the effects of the "economic" variables. GDPs, populations and distance are usually included in the regressions: higher GDPs, larger populations and smaller distances are all expected to lead to higher trade volumes.[9]. Crucial to these analyses is that an appropriate measure of regime is used. In particular, it is crucial that the measures used capture to some degree at least the role of elections and separation of powers. The Polity III data do a relatively good job.

Polity III

The Polity III dataset of Jaggers and Gurr (1995) on regime type combines data on 5 dimensions that address the institutional differences between democracies and autocracies. These 5 categories can be divided into two sets, one highlighting accountability to the electorate, and the other, institutions:

1. Accountability to the Electorate: Consent
   - the competitiveness of the process for selecting a country's chief executive
   - the openness of the process
   - the competitiveness of political participation within a country
2. Institutions and Restraint
   - the extent to which institutional constraints limit the chief executive's decision-making authority
   - the degree to which binding rules govern participation in the political process.

Jaggers and Gurr score each country-year pair along each of these dimensions, and generate 2 aggregate scores - one estimates the level of democracy, the other, autocracy, each on a 0 to 10 point scale. Usually the difference between the democratic score and the autocratic score is taken to establish a continuous regime score on a 21 point scale, running from -10 to 10. While it is clear that these measures do capture, to some degree, the institutional features of interest, they are far from being a complete measure of the complex condition known as "democracy". For instance, they omit the "freedoms" we usually associate with democracy - press, association, speech etc. They also omit what might be a crucial determinant of commercial relations, the role of the rule of law, independent judiciary, protection of private property, freedom from arbitrary expropriation etc. Nevertheless, the theoretical approach is to focus not on legal protections, but rather on institutional features of government in order to investigate their effects on trade policy. No doubt these other aspects of democracy may act to strengthen the willingness of policymakers to reduce trade barriers - this is a matter for better data and future research.

Bliss and Russet (1998): Democracy Matters.

Bliss and Russet (BR) (1998) consider 882 pairs of states for each year between 1962 and 1989. For each pair the (log of the) sum of exports and imports between them were regressed on a measure of the regime score of the least democratic state in the pair, among other variables. BR consider only the score of the least democratic of the pair, on the belief that it is the least democratic state that acts as the "weak link" – the least democratic partner would most influence relations between the states.

The other variables BR include are a measure of language differences, the existence of pre-existing militarized disputes, whether the countries were militarily allied and whether they country had an open trade stance, in addition to the gravity variables. In pooled time series estimations, BR find that democracy is significantly and positively related to trade volume.

Mansfield et al. (2000): Joint Democracy Matters

These results are confirmed by similar set of regressions undertaken by Mansfield et al. (2000), where the volume of trade, once again controlled for by the gravity variables, is significantly affected by the regime characteristics of both countries in the pair. Using the same measure of democracy for each state as BR, a country was labelled a democracy if its score was above 6, and autocracy if its score was below -6. The volume of trade was regressed against two dummy variables (the first would take the value of 1 when the pair was mixed – one democracy and one autocracy, and the second would take on a value of 1 if the pair were jointly autocratic). The omitted category was then the democratic pair, and the coefficients for the two dummies would then be interpreted relative to the omitted category. The sample is all pairs of states listed as members of the interstate system by the Correlates of War Project (Singer and Small, 1994) for 1960, 1965, 1970, 1975, 1980, 1985 and 1990. Again pooled time series regressions were estimated.

The coefficient on the mixed case was negative and significant – mixed pairs are likely to have significantly less trade between them than are joint democracies. Mixed dyads were predicted to engage roughly in 15% to 20% less trade than those composed of two democracies. The results for pairs of autocracies were not significant, however.

This result is shown to be robust to alternative specifications of the thresholds for democracy and autocracy.

Remmer (1998): Economic Cooperation

Instead of trade flows on the left hand side, consider the effects of regime type on the likelihood of a state signing an economic agreement with a trading partner. Such an agreement may be a tariff reduction agreement, or any other deal that facilitates freer trade. This sidesteps the problems of endogeneity in the regressions mentioned above: trade volumes are affected by GDP, and GDP is affected by the gains from trade. In order to avoid this simultaneity problem, consider instead the willingness of a state to sign an international trade agreement, or more precisely to join a preferential trading area (PTA). In order to be GATT– consistent, these PTAs pledge to substantially eliminate barriers to trade between the signatories.

Remmer investigates the countries of the Mercosur and finds that democracy did lead to more economic agreements, even before the Mercosur was founded. She runs logistic regressions, running the number of economic agreements signed between a pair of Mercosur countries in a given year, against measures of democracy. Her dichotomous regime variable is different from, but highly correlated with the Polity dataset used in the rest of the studies cited here. She finds some support from the proposition that democracy promotes cooperation – democratic pairs are several times more likely to enter into economic agreements with one another than other pairs of states.

Mansfield et al. (2002): Democracy and PTAs

In a similar investigation, Mansfield et al. (2002) study the effect of regime type on the willingness of a broad set of states to enter into common PTA[10]. The unit of analysis is the dyad, and the dependent variable is a dummy that takes the value 1 when both members of the dyad are signatories to a common PTA. Again, the

Jaggers and Gurr (1995) regime scores are used, and as before the 21 point scale generated by the difference between the democracy score and the autocracy score for each state is used. The sum of the regime scores for each country in the dyad is then computed. This variable runs from -20 to 20, with larger scores indicating that the pair of countries is more democratic. Again, we focus on post-World War II data, and all pairs of countries for which data is available for each 5 year period between 1960 and 1990 are examined. The data is pooled across time and country-pairs and a logistic regression is conducted, and the significance tests are based on Huber standard errors (appropriate for time-series cross section models with binary dependent variables). The estimate of the democratic score is positive and significant at the 0.1% level.

Mansfield et al. (2002) also establish that the result is robust to alternative specifications: in one case they replace the sum of the two regime scores with the individual regime scores, and the estimates are positive and significant; they also use an alternative dataset with fewer countries but annual data, and once again, democratic dyads are more likely to establish PTAs than mixed pairs, or pairs of autocracies.

Using the estimates of the regression, the authors predict the probability of a PTA forming in any year across the possible dyads. Two democracies are more than double as likely to sign a PTA as are a mixed pair, which in turn are more than double as likely to cooperate in a PTA as two autocracies.

ALTERNATIVE EXPLANATIONS

We have argued that divided polity leads to greater trade liberalization - lower tariffs and an increased willingness to cooperate internationally on trade issues. This increased willingness to cooperate internationally among democracies has been noted by other scholars, particularly among political scientists. Democracies share similar values and norms that lead to non-violent solutions to conflict (Dixon 1994); they have a rule of law that protects property and does not permit rent seeking or expropriation (Olson 1993).

In slightly different formulation, a number of scholars have suggested that trade liberalization seems to be coincident with democratization (e.g. Haggard and Webb 1994). However Rodrik (1994) suggests that trade policy reforms are usually preceded by changes in the political regime, in any direction, democracy or otherwise. Geddes (1992) and Przeworski (1991) have suggested that fledgling democracies are susceptible to challenge, and are the least likely to reform. Verdier (1998) suggests that increased democracy means that similar sectors in each country are empowered politically, and the effect is likely to be more protection at least while trade is powered by comparative advantage.

These works provide little insight in to the effect of the institutional structure of democracies on policy; democracy empowers and restrains the use of that power to make policy. It delegates and separates power and authority across branches and agents. It is exactly these structural differences that are the focus of this chapter.

The link between trade and regime type is somewhat bound up with the question of the link between democracy and peace. If democracy supports trade, and trade supports peace, then there is another urgent reason to encourage democratization in unstable regions of the globe. These ideas are founded in Kant and Cobden: peace and democracy are closely tied via the desire to maintain good trading relations. Bliss and Russet (1998) quote President Clinton's 1994 State of the Union address:

> "Ultimately, the best strategy to ensure our security and build a durable peace is to support the advance of democracy elsewhere. Democracies

> don't attack each other. They make better trading partners and partners in diplomacy."

Polacheck (1997) investigates closely the linkage between democracy, trade and peace, and provides support for the liberal view that democracy leads to more trade; more trade implies greater gains from economic interaction that would be put in jeopardy by conflict. Hence war is less likely when there are large gains from trade that would be lost in the event of hostilities. Trade creates security externalities and Mansfield (1994) shows that war is negatively related to trade.

CONCLUSION

Regime type affects the volume of trade between countries, and their willingness to enter into free(r) trading arrangements with its trading partners. There is also evidence to suggest that democracies cooperate more generally in the international economic arena. This increased willingness to cooperate suggests that increased democratization will lead to more cooperation and less conflict in the world (trading) system.

The particular aspects of democracy that appear to be important are two: the effect of dividing authority over trade policy across different arms of government, each with slightly different sources of electoral power and influence; the second is the role of elections in maintaining accountability of policy-makers to the society at large. Divided polity actually increases the bargaining power of the executives at the international bargaining table; accountability lessens the policy-maker's incentive to divert wealth to special interests and to lower the deadweight costs of such redistribution.

Other aspects of democracy are no doubt important: the contestably of elections, the degree of divided government, the free flow of information, the freedom to associate and to lobby etc. These no doubt influence policy-making at some level. Similarly, aspects of autocracies are missing here – the role of the military and political oppression, for example. Moreover, there are some aspects of democracy that may appear to be undesirable with respect to well functioning markets: too much lobbying by interest groups can lead to much wasted, unproductive resources that are merely dissipated by the lobbying effort, and have almost no effect on the policymakers – demosclerosis (Bhagwati 1982, Lohmann 1996). Similarly, there may be benefits from autocracy: a benevolent dictator may be insulated from pressures to protect or redistribute.

Comparative advantage and factor specificity are important in determining the pattern of trade and protection. But institutions matter too. Comparative advantage, factor endowments and their specificity combine to determine who gains and loses from trade and barriers to trade. It is the nature of the political process that determines which of the affected sectors (the gainers or losers) are successful in the policy-making arena.[11]

This work is not intended to be a complete description of the effect of democracy on trade; rather it represents the first steps in theorizing the connections between regime type and redistributional policy; the first steps in understanding the economic benefits of democracy.

APPENDIX

Utility maximization yields the demand functions: $x = u'^{-1}(p_x)$ and $x^* = u'^{-1}(p_x + \tau)$, $m = u'^{-1}(p_m + t)$ and $m^* = u'^{-1}(p_m)$, and market clearing implies that local and foreign demand must sum to unity for each good: $u'^{-1}(p_x) + u'^{-1}(p_x + \tau) = 1$ and

$u'^{-1}(p_m + t) + u'^{-1}(p_m) = 1$. Solving for the equilibrium prices yields $p_x(\tau)$ and $p_m(t)$. It is evident that

$$\frac{\partial p_x(\tau)}{\partial \tau} < 0 \text{ and } \frac{\partial p_m(t)}{\partial t} < 0 \text{ while } \frac{\partial (p_x(\tau) + \tau)}{\partial \tau} > 0 \text{ and } \frac{\partial (p_m(t) + t)}{\partial t} > 0. \quad (1)$$

Home's equilibrium consumption of good x and m can be expressed as $x(\tau) = u'^{-1}(p_x(\tau))$ and $m(t) = u'^{-1}(p_m(t) + t)$, with

$$x' > 0 \text{ and } m' < 0. \quad (2)$$

To derive an expression for social welfare, notice that the indirect utility for this economy with income y is given by $y + C(x(\tau), m(t))$ where $C(x(\tau), m(t)) = u(x(\tau)) - p_x(\tau)x(\tau) + u(m(t)) - (p_m(t) + t)m(t)$ is the consumer surplus associated with the consumption of x and m. National income y is, of course, equal to the sum of profits and tariff revenue. Hence the social welfare is expressed as the sum of consumer surplus, profits and tariff revenue: $W(t, \tau) = C(x(\tau), m(t)) + \Pi^x(\tau) + \Pi^m(t) + T(t)$ where $\Pi^x(\tau) = \beta p_x(\tau)$, $\Pi^m(t) = (p_m(t) + t)(1 - \beta)$ and tariff revenue is given by $T(t) = t(m(t) - (1 - \beta))$. Similarly, for foreign , $W^*(t, \tau) = C^*(x^*(\tau), m^*(t)) + \Pi^{x*}(\tau) + \Pi^{m*}(t) + T^*(\tau)$ where $C^*(x^*(\tau), m^*(t)) = u(x^*(\tau)) - (p_x(\tau) + \tau)x^*(\tau) + u(m^*(t)) - p_m(t)m^*(t)$, $\Pi^{x*}(\tau) = (p_x(\tau) + \tau)(1 - \beta)$ and $\Pi^{m*}(t) = p_m(t)\beta$. Tariff revenue is given by $T^*(\tau) = \tau(x^*(\tau) - (1 - \beta))$.

Setting $W_t = 0$ yields $t^W = (m(t) - (1 - \beta))\frac{p_m'(t)}{m'(t)} > 0$ since imports are positive and both $p_m'(t)$ and $m'(t)$ are negative (from equations 1 and 2). Similarly, $\tau^{W^*} = (x^*(\tau) - (1 - \beta))\frac{p_x'(\tau)}{x^{*\prime}(\tau)} > 0$. Also $W_\tau = u'(x(\tau))x' - p_x'(\tau)x(\tau) - p_x(\tau)x'(\tau) + \beta p_x'(\tau) = -p_x'(\tau)x(\tau) + \beta p_x'(\tau) = p_x'(\tau)(\beta - x(\tau)) < 0$ since exports are positive. Recalling that $G(t, \tau, \Psi) = c\Pi^m(t) + \Psi W(t, \tau)$, and setting $G_t = 0$ yields $t^G = \frac{-c(1-\beta)(p_m'(t)+1)}{\Psi m'(t)} + \frac{p_m'(t)}{m'(t)}(m(t) - (1 - \beta))$.

Proofs

Proof of Proposition 1. Totally differentiating the first order condition, $0 = \frac{\partial}{\partial t}G_t dt + \frac{\partial}{\partial \Psi}G_t d\Psi$ or $\frac{\partial t^G}{\partial \Psi} = -\frac{G_{t\Psi}}{G_{tt}}$. Now $G_{tt} < 0$ (the second order condition) and $G_{t\Psi} = W_t$. The Nash tariff to this game is larger than that which maximizes W (i.e. $t^G > t^W$); hence $W_t < 0$ when evaluated at $\left(t^G, \tau^G\right)$. Then $\frac{\partial t^G}{\partial \Psi} < 0$. The proof is similar for $\frac{\partial t^G}{\partial c} > 0$. ■

Proof of Proposition 2. $\frac{\partial}{\partial \Psi} g_C\left(\Psi, \Psi^*\right) = \frac{\partial}{\partial \Psi}\left[G\left(t^C, \tau^C, \Psi\right) - G\left(t^G\left(\Psi\right), \tau^G\left(\Psi^*\right), \Psi\right)\right]$ $= W\left(t^C, \tau^C\right) - \left(G_t \frac{\partial}{\partial \Psi} t^G\left(\Psi\right) + W\left(t^G\left(\Psi\right), \tau^G\left(\Psi^*\right)\right)\right)$. Now $G_t = 0$ when evaluated at $\left(t^G\left(\Psi\right), \tau^G\left(\Psi^*\right)\right)$. Hence $\frac{\partial}{\partial \Psi}\, g\left(\Psi, \Psi^*\right) = W\left(t^C, \tau^C\right) - W\left(t^G\left(\Psi\right), \tau^G\left(\Psi^*\right)\right)$. Now $W\left(t^C, \tau^C\right) - W\left(t^W, \tau^W\right) > 0$ since cooperation dominates the Nash equilibrium to the optimal tariff setting game (in this symmetric world). Now $t^W < t^G\left(\Psi\right)$ and $\tau^W < \tau^G\left(\Psi^*\right)$ for all values of Ψ, Ψ^*; then home welfare declines as home tariff rises above the optimal tariff $\left(W_t < 0 \text{ for all } t > t^W\right)$ and home welfare declines as the foreign tariff rises $\left(W_\tau = p_x'\left(\tau\right)\left(\beta - x\left(\tau\right)\right) < 0 \text{ for all } \tau > 0\right)$. Hence $W\left(t^C, \tau^C\right) - W\left(t^G\left(\Psi\right), \tau^G\left(\Psi^*\right)\right) > W\left(t^C, \tau^C\right) - W\left(t^W, \tau^W\right) > 0$. ■

Proof of Proposition 3. $\frac{\partial}{\partial \Psi} g\left(\Psi, \Psi^*\right) = \frac{\partial}{\partial \Psi} g_C\left(\Psi, \Psi^*\right) - \frac{\partial}{\partial \Psi} g_D\left(\Psi\right)$. $\frac{\partial}{\partial \Psi} g_C\left(\Psi, \Psi^*\right) > 0$ from proposition 2 and $\frac{\partial}{\partial \Psi} g_D\left(\Psi\right) = \frac{\partial}{\partial \Psi} G\left(t^G\left(\Psi\right), \tau^C, \Psi\right) = W\left(t^G\left(\Psi\right), \tau^C\right) - W\left(t^C, \tau^C\right)$ from the proof of Lemma 1. Now $W\left(t^G\left(\Psi\right), \tau^C\right) - W\left(t^C, \tau^C\right) < 0$, since welfare is reduced by a rise in tariffs from the cooperative level. Hence $\frac{\partial}{\partial \Psi} g\left(\Psi, \Psi^*\right) > 0$ ■

Proof of Proposition 4. Let $\Gamma\left(t^C, \tau^C; \Psi, \Psi^*\right) = G\left(t, \tau, \Psi\right) + G^*\left(t, \tau, \Psi^*\right)$. Totally differentiating the first order condition on t, we have $0 = \frac{\partial}{\partial t}\Gamma_t dt + \frac{\partial}{\partial \Psi}\Gamma_t d\Psi + \frac{\partial}{\partial \Psi^*}\Gamma_t d\Psi^*$. Now $\frac{\partial t^C}{\partial \Psi^*} = -\frac{\Gamma_{t\Psi^*}}{\Gamma_{tt}}$ and $\Gamma_{t\Psi^*} = W_t^* < 0$, while $\Gamma_{tt} < 0$ (the second order condition). So $\frac{\partial t^C}{\partial \Psi^*} < 0$ and by symmetry, $\frac{\partial \tau^C}{\partial \Psi} < 0$. Recall that $\Gamma_{t\Psi} = W_t$; if $t^W > t^C$, then $W_t > 0$ when evaluated at $\left(t^C, \tau^C\right)$. Then $\frac{\partial t^C}{\partial \Psi} > 0$. The condition for $t^W > t^C$

is easily shown to be $-p'_m < \frac{c(1-\beta)}{[\Psi^*(\beta-m^*)+c(1-\beta)]} \equiv -\pi$. ■

Proof of Proposition 5. Consider two autocracies, A and A^*. When negotiations break down, each implements the Nash tariff $\left(t^G\left(\Psi^A\right), \tau^G\left(\Psi^{A*}\right)\right)$, yielding payoffs $G^A\left(t^G\left(\Psi^A\right), \tau^G\left(\Psi^{A*}\right), \Psi^A\right)$ and $G^{A*}\left(t^G\left(\Psi^A\right), \tau^G\left(\Psi^{A*}\right), \Psi^{A*}\right)$. Now allow home to become a democracy, initially with $\Psi^A = \Psi^E = \Psi^L$. Then $G^A\left(t^G\left(\Psi^A\right), \tau^G\left(\Psi^{A*}\right), \Psi^A\right) = G^E\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A*}\right), \Psi^E\right)$, and let Ψ^L fall slightly. Then $\frac{d}{d\Psi^L}G^E\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A*}\right), \Psi^E\right)\Big|_{\Psi^E=\Psi^L} = \left.\frac{\partial G^E}{\partial t}\frac{dt^G\left(\Psi^L\right)}{d\Psi^L}\right|_{\Psi^E=\Psi^L}$, while

$\frac{d}{d\Psi^L}G^{A*}\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A*}\right), \Psi^{A*}\right)\Big|_{\Psi^E=\Psi^L} = \left.\frac{dG^{A*}}{dt}\frac{dt^G\left(\Psi^L\right)}{d\Psi^L}\right|_{\Psi^E=\Psi^L}$. Now $\left.\frac{\partial G^E}{\partial t}\right|_{\Psi^E=\Psi^L} = 0$ since $t^G\left(\Psi^E\right) = \arg\max G^E$. So $\frac{d}{d\Psi^L}G^E\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A*}\right), \Psi^E\right)\Big|_{\Psi^E=\Psi^L} = 0.$ $\frac{dG^{A*}}{dt} < 0$ for all t and $\frac{dt^G\left(\Psi^L\right)}{d\Psi^L} < 0$ by Proposition 1. Hence $\frac{d}{d\Psi^L}G^{A*}\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A*}\right), \Psi^{A*}\right)\Big| > 0$. So as Ψ^L falls, so does $G^{A*}\left(t^G\left(\Psi^L\right), \tau^G\left(\Psi^{A*}\right), \Psi^{A*}\right)$. Hence the reversion point g^{EA^*} lies directly below g^{AA^*} in Figure 1. The bargaining outcome EA^* will lie to the southeast of AA^* for any utility possibility frontier. That is home's utility rises and foreign's falls. ■

Notes

[1]Political scientists, and to a lesser degree, and more recently economists, have been interested in the distinctive nature of democracies – do they grow faster (Barro 1986), do they fight fewer wars (Russet, 1993), have lower military expenditures (Garfinkel 1994), are they less corrupt or extractive (Lake and Baum 1998)?

[2]Two actors with identical (or similar) preferences limits the consequences of the divided polity (Hug and Konig, this volume), however.

[3]This paper takes the contribution schedule as given and exogenous. Recent advances by Grossman and Helpman (1994) have endogenized the contribution schedule given the decision to organize. Our purpose here is to study features of democracy when political organization occurs, and we set up the simplest structure of a single lobby with an exogenous schedule.

[4]Levy (1999) investigates the change in the "most cooperative" tariff with a change in the weight put on social welfare in Grossman and Helpman (1994) economy with a single lobby. He finds a non-monotonic relationship.

[5]A similar result is established in Milner, Mansfield and Rosendorff (2002), where the executive is purely extractive, in the context of periodic aggregate shocks. In that model, the international agreement limits the extractive possibilities of the executive, but provides some insurance against being evicted from office in periods of bad aggregate economic conditions. Since democrats are more responsive to the electoral process, deomcrats are more willing to "buy" this insurance, and are hence more willing to cooperate internationally.

[6]Olsen (1993) argues that "dictators" are more likely to excessively extract "takings" from the productve assets within their domain than are Kantian republics.

[7]Mas-Colell et al. (1995) note that this solution to the bargaining problem fails to be independent of the utility units.

[8]The Schelling conjecture is investigated in some detail in Milner and Rosendorff (1997) in a spatial model of divided government and international negotiations. The conjecture is shown to hold only for a limited degree of difference in the underlying preferences of the legislature and the executive. Of course, this is the same bargaining strategy used by car dealers when the dealership manager must approve any deal struck by a showroom salesperson.

[9]The gravity equation has been highly successful in explaining volumes of trade flows between countries; moreover, the model is consistent with a broad set of trade-theoretic models. See Deardorff (1984), for instance.

[10]While willingness to sign a common PTA is evidence of interstate cooperation, it not immediate that a PTA is welfare improving – PTAs are discriminatory (they remove barriers only for members), and appear often to be motivated, by trade-diversion rather than trade-creation (Bhagwati 1993). The empirical investigations here address trade within the dyad, and since the model that follows is one of a two-country world, the trade diversionary effects of the PTA are of lesser importance given the question at hand.

[11]There is also likely to be interesting variation within the class of "democracies". For instance, more majoritarian systems, with low costs of organizing will reward organized, mobile, import-competing factors, while less majoritarian systems with high costs of organizing will reward smaller groups engaged in active lobbying (Rogowski 1989 and Alt and Gilligan 1994).

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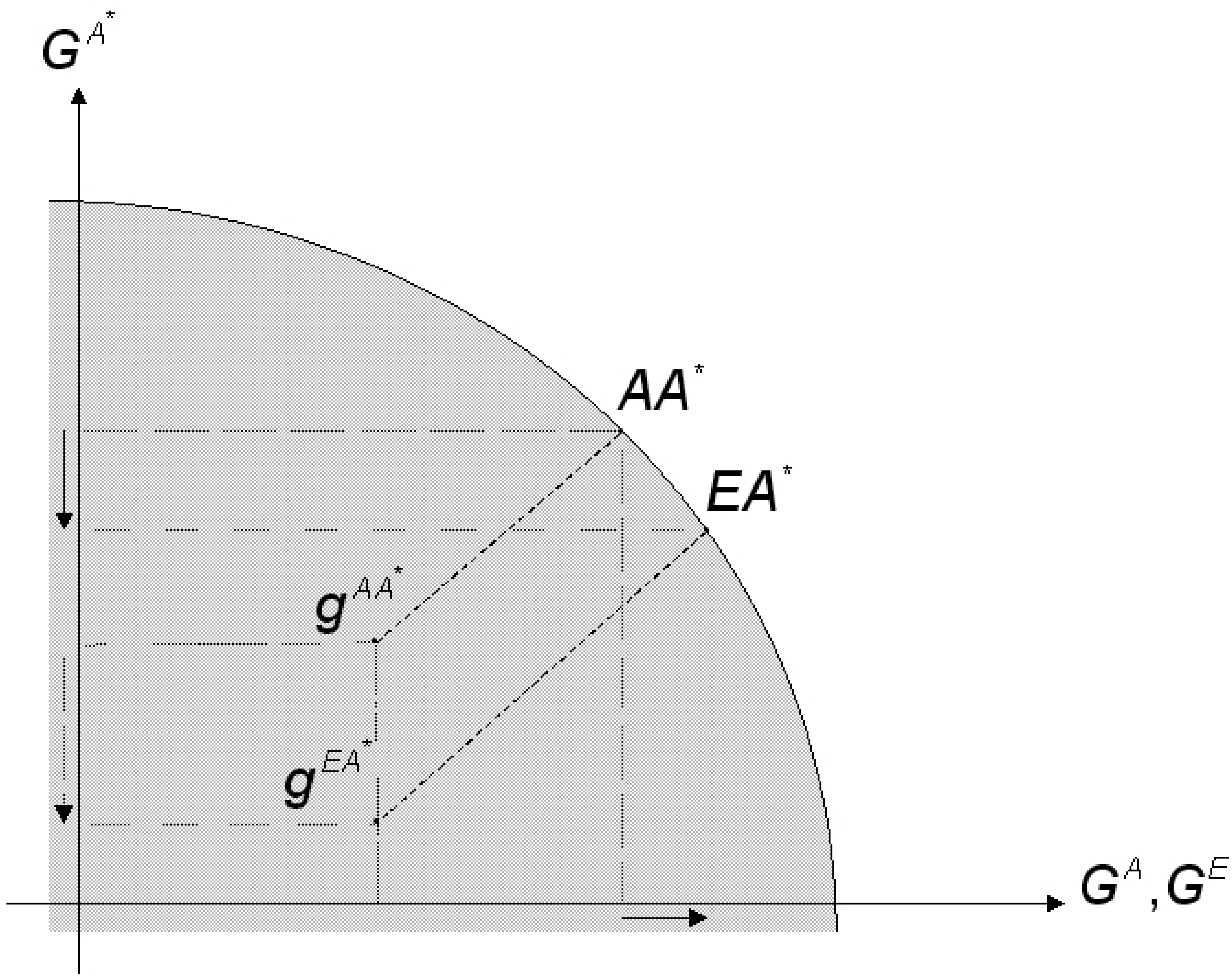

FIG. 1. The Autocratic Pair and the Mixed Pair