

For Whom Does Democracy Free Trade?

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Abstract

Most research on democracy and trade policy indicates that democracies are more liberal than autocracies. I argue, in contrast, that the effects of democracy on trade policy vary across trading partners. Because the typical median voter has a low capital endowment relative to the national mean, (s)he benefits from trade with relatively capital-abundant countries but is hurt by trade with relatively labor-abundant ones. Democracy, which increases the median voter's influence, thus leads to trade liberalization with wealthier countries but increased protection against poorer ones. I test and find support for this hypothesis using dyadic trade flows from 1950-2000 and dyadic trade barriers in the 1990s. My results imply that democratization has led and will lead to discrimination in international trade, primarily via nontariff barriers. The spread of democracy thus heightens the need for multilateral trading rules that combat the discriminatory use of such measures.

Does democracy promote free trade? A growing body of research says “yes”:
democracies trade more than autocracies (Bliss and Russett 1998), have lower tariffs (Milner and Kubota 2005), and are more likely to conclude liberalizing trade agreements (Mansfield, Milner, and Rosendorff 2002). Given the global trend toward democracy (Freedom House 2002), this is good news. As democracy spreads, more and more countries should open their own markets and gain access to others. This, according to a recent World Bank study, could boost global welfare by up to \$300 billion, with the bulk of these gains going to poor countries that have historically lacked foreign market access (Anderson and Martin 2006). Democratization is thus desirable, not only in its own right, but also as a means to global economic integration, economic development, and perhaps a more equitable distribution of global wealth.

Perhaps. But this rosy scenario assumes that democracies treat all trading partners equally, when in fact they may not. For example, in 1989 the U.S. signed the Canada-U.S. Free Trade Agreement with little domestic opposition. Only a few years later, however, the effort to include Mexico in the North American Free Trade Agreement proved highly contentious (Mayer 1998). This example suggests that democratic governments may find it harder to liberalize trade with poorer countries than with countries at the same level of economic development. Although this example is only suggestive, it is consistent with theoretical work on the political economy of trade. As Mayer (1984) demonstrates, a median voter that is relatively well-endowed with labor should support imports of capital-intensive goods but oppose imports of labor-intensive goods. We might thus expect the median American voter-as-worker to support trade with capital-abundant Canada but to oppose trade with labor-abundant Mexico. More generally, because median voters are typically well-endowed with labor, we should expect them to support trade with richer countries but to oppose trade with poorer ones. If so, then democratization—which

increases the median voter's influence—should lead to liberalization with wealthier trading partners but to increased protection against poorer ones.

If this argument is correct, then democratization is a double-edged sword: it should cause countries to open their markets to wealthier partners but to close their markets to poorer ones. Continued democratization could thus exclude the world's poorest countries from the benefits of open trade. Moreover, democratization in developing countries could foster the development of “hub-and-spoke” trading relations, in which developing-country spokes trade with developed-world hubs but not with each other. Such hub-and-spoke patterns can hurt poor countries, both by diverting investment and by reducing poor countries' international bargaining power (Baldwin 1994). My argument thus raises the disturbing possibility that the spread of domestic political equality could worsen global economic inequalities.

Theory

Because my argument builds upon upon Mayer's (1984) Heckscher-Ohlin-Samuelson model of trade politics, I briefly summarize that model before discussing my own extensions. Mayer analyzes a small, open economy—henceforth called “Home”—whose production employs both capital and labor. Let k^H denote Home's aggregate capital-labor ratio. Each inhabitant i of Home owns one unit of labor and some positive amount of capital: let k^i denote i 's personal capital-labor endowment. i 's trade policy preferences are determined by her factor ownership and the factor intensity of import goods. i prefers protection if she is, compared with the nation as a whole, relatively well-endowed with the import good's intensively used factor of production and prefers free trade if the opposite is true. Hence, if i is relatively well-endowed with labor (i.e. $k^i < k^H$) then i opposes imports of labor-intensive goods but favors imports of capital-intensive goods. Conversely, if i is relatively well-endowed with capital (i.e. $k^i > k^H$) then

i opposes imports of capital-intensive goods but favors imports of labor-intensive goods. These hypothesized trade policy preferences are a straightforward application of the Stolper-Samuelson (1941) theorem and are strongly supported by recent research on individual trade policy preferences (Scheve and Slaughter 2001; Baker 2005; Mayda and Rodrik 2005). Their firm basis in both theory and empirical evidence makes them a strong foundation for my argument.

In Mayer's model, trade policy is set by the national median voter, who has a capital-labor endowment k^V . Virtually all research on both trade policy (Dutt and Mitra 2002; Milner and Kubota 2005) and inequality (Milanovic 2000; Moene and Wallerstein 2001) assumes that the median voter is capital-poor and labor-rich relative to the national mean. This assumption is valid wherever income is unequally distributed, as it is in all countries of the world. I thus assume that $k^V < k^H$ for all countries. Given this assumption, the median voter should seek protection against labor-intensive imports but liberalization for capital-intensive ones. If median voters set policy in all countries, all countries should have high trade barriers against labor-intensive imports but no barriers against capital-intensive ones. This is perhaps the central insight of Mayer's (1984) model.

I extend Mayer's argument in two ways. First, I develop the dyadic implications of his model. Although Mayer does not explore these, they follow directly from the Heckscher-Ohlin theorem. Let k^F denote the aggregate capital-labor ratio of foreign trading partner "Foreign." The Heckscher-Ohlin theorem states that Home will import labor-intensive goods from Foreign if the latter is relatively labor-abundant (i.e. $k^H > k^F$) but will import capital-intensive goods from Foreign if the latter is relatively capital-abundant (i.e. $k^H < k^F$). Labor-rich median voters should thus seek protection against Foreign if $k^H > k^F$ but should seek liberalization with Foreign if $k^H < k^F$. Put differently, median voters should seek protection against poorer countries but

liberalization with richer ones. Of course, “poorer” and “richer” are relative terms: Mexico is poor relative to the U.S but rich relative to India. Mexico’s median voter should thus seek liberalization with the former country but protection against the latter.

Second, I relax Mayer’s assumption that trade policy is set solely by the median voter. Although this assumption is useful for analyzing trade policy in democracies, it is less useful for explaining policy in autocracies. It is not clear, for example, that autocrats such as Ferdinand Marcos or Mobutu Sese Seko ever paid much heed to the median voter’s preferences.¹ Of course, if the median voter does not set trade policy alone, then she must share policymaking influence with someone else. Relaxing the median-voter assumption thus requires us to specify who besides voters is politically important.

Previous research shows that interest groups influence trade policy (McGillivray 1997; Busch and Reinhardt 1999). I thus assume that Home contains not only unorganized voters but also organized interest groups. Interest-group trade policy preferences, like voter preferences, are determined by factor ownership and the factor intensity of imports. However, the distribution of factor ownership among interest groups differs from that among voters. Because interest groups are, by definition, organized, they tend to consist of wealthier, more educated people who have advantages at collective action (Rothenberg 1989).² Interest groups thus tend, on average, to have a higher capital endowment than do voters, as shown in Figure 1.

Figure 1 about here

¹ The term “voter” refers throughout to people who could vote if elections were held. Voters thus exist even in autocracies, but their influence is limited if autocrats can rig or not hold elections.

² Although some interest groups (e.g. labor unions) represent labor, even unions tend to consist of more-skilled rather than less-skilled workers. More importantly, the existence of labor-rich interest groups does not conflict with my assumption that interest groups are, *on average*, more capital-rich than voters.

Figure 1 presents the frequency distribution of capital-labor ratios for both voters and interest groups.³ The voter distribution, shown by the solid line, is left-skewed for reasons discussed above. The median voter's capital-labor ratio (k^V) is thus below the national average (k^H). Interest-group ratios, shown by the dashed line, are normally distributed in Figure 1, but this is not crucial. What is crucial is that the median interest group's capital-labor ratio (k^G) is above both the median voter's and the national average. I thus assume that $k^V < k^H < k^G$.

These differences in factor ownership lead to differences in the trade policy preferences of the median voter and the median interest group, as shown in Table 1.

Table 1 about here

When Home is wealthier than Foreign ($k^H > k^F$), the median voter—who is relatively well-endowed with labor—prefers protection against imports, which are relatively labor-intensive. In contrast, because the median interest group is relatively well-endowed with capital, it prefers free trade under these conditions. These preferences are reversed when Foreign is wealthier than Home ($k^H < k^F$). In this case, imports are relatively capital-intensive, the median voter seeks free trade with Foreign, and the median interest group seeks protection. The median voter and the median interest group thus always have conflicting policy preferences. The former supports and the latter opposes trade barriers when Foreign is relatively poor, but these positions are reversed when Foreign is relatively wealthy.⁴

³ For convenience, I treat voters and interest groups as distinct. This is not crucial, however: my conclusions would not change if we treated interest groups as organized groups of voters drawn disproportionately from the right-hand side of the voter capital-labor distribution.

⁴ These categorical statements apply only to the median voter and interest group. Some interest groups and voters will align with one another, but the group medians will not.

Translating these preferences into policy outcomes requires a model of the political process. I assume that all governments want primarily to stay in power, and that this requires support from voters, interest groups, or both. Voters provide popular support, while interest groups provide money that can be used to finance campaigns, to disseminate propaganda, to maintain a repressive apparatus, and so on. Governments can maximize voter support by catering to the median voter's policy preferences and can maximize interest-group contributions by catering to the median interest group's. However, because the median voter and the median interest group have different policy preferences, the government cannot fully satisfy both.

Different governments balance voter and interest-group pressures in different ways. Democratic governments need the median voter's support to stay in power and thus strive mainly to satisfy the median voter. Autocratic governments, in contrast, can remain in power even without the median voter's support, provided they have enough resources to buy off or repress potential challengers. Autocratic governments thus attach less weight to voter support but more to interest-group contributions. Pure democracy and pure autocracy are, of course, ideal types: in practice, most democratic governments cater to interest groups as well as voters, while most autocratic governments strive to maintain at least some popular support. For this reason, I expect a continuous relationship between the degree of democracy and the influence of voters and interest groups: an increase in democracy increases the median voter's influence relative to the median interest group's. Formally, governments minimize the following loss function:

$$L(p) = D(p - p^V)^2 + (1 - D)(p - p^G)^2,$$

where L is government political losses from trade policy, D is the degree of democracy, $D \in [0, 1]$, p is the level of protection, p^V is the median voter's ideal level of protection, and p^G is the

median interest group's ideal level of protection. Higher values of D indicate greater democracy. It is clear from this function that a rise in democracy increases the salience of the median voter's ideal point: this ideal point is irrelevant when D equals 0 but wholly determines policy when D equals 1. Differentiating this function with respect to p , setting the first derivative equal to zero, and rearranging it yields the equilibrium policy for any level of democracy:

$$p = Dp^V + (1 - D)p^G.$$

In pure democracies, governments adopt the median voter's ideal trade policy. In pure autocracies, governments adopt the median interest group's ideal trade policy. Between these two extremes, governments set policy between the two ideal points, moving toward the median voter's as the degree of democracy rises. Although this result is intuitively obvious, its implications for trade policy are not because both ideal points are contingent on Home and Foreign factor endowments. If Home is wealthier than Foreign ($k^H > k^F$), then the median voter will be more protectionist than the median interest group ($p^V > p^G$). In this case, an increase in democracy will lead to higher protection. However, if Home is poorer than Foreign ($k^H < k^F$), the median voter will be more liberal than the median interest group ($p^V < p^G$) and an increase in democracy will lead to trade liberalization. The impact of democracy on trade policy thus depends on Home and Foreign factor endowments.

In practice, all countries trade with multiple partners. Because some partners are richer while others are poorer, both voters and interest groups should want liberalization with some partners but protection against others. A change in Home's regime type should thus have different effects on trade policies toward different partners. An increase in democracy should

lead to trade liberalization with richer partners but increased protection against poorer ones. The remainder of this paper tests this hypothesis.

Before proceeding to empirical tests, it is worth noting that my argument does not rest on specific assumptions about voter information. Democracy should have the hypothesized effects if voters can obtain information about trade policies—as in Mansfield, Milner, and Rosendorff (2002)—but it should also have these effects if voters simply vote on the basis of their incomes, as in Rogowski and Kayser (2002). I thus expect to find support for my hypothesis regardless of the degree of voter information.

Democracy and Trade Openness

I test my hypothesis by examining the conditional effects of democracy on dyadic trade openness, where $\ln(1 + Openness_{ijt})$ is the log of 1 plus country i 's imports from country j as a percentage of i 's GDP at time t , i.e. $\ln[1 + (\text{imports}_{ijt} \div \text{GDP}_{it}) \times 100]$.⁵ I add 1 to openness before logging because 44 percent of the openness values are zeroes and would otherwise be dropped.⁶ Although openness is not a direct measure of trade policy, it constitutes a reasonable proxy when other non-policy determinants of openness are included on the right-hand side and has two important advantages over more direct measures. First, openness incorporates the effects of all types of trade barriers and thus allows us to measure the impact of democracy on

⁵ Dyadic trade and GDP data are from Gleditsch's (2002) Expanded Trade and GDP Data Set. I log openness because the measure is highly skewed, but I obtain similar results using the unlogged measure.

⁶ Results are very similar if I employ the log of openness alone, so neither the effects of adding 1 nor the effects of the sample change are large. However, most of the zeroes involve very poor trading partners, so this sample change is not only large and non-random but also greatly reduces variation in dyadic income ratios. For this reason, the full sample is preferable. Although adding 1 before logging slightly complicates interpretation of my results, it allows me to keep the zero cases in the sample.

both tariff and nontariff barrier (NTB) protection. Second, openness data are available for numerous countries and years: my sample includes 165 countries and extends from 1950 to 2000, for a maximum of 817,672 observations. These advantages lead me to employ openness as my primary measure, although I also test my hypotheses with available tariff and NTB data.

I employ two measures of $Democracy_{it}$, country i 's level of democracy at time t . The first is the 21-point Polity score, which ranks countries from highly autocratic (-10) to highly democratic (10). The Polity results are of particular interest, as they facilitate comparison with most previous research on democracy and trade policy (Polachek 1997; Bliss and Russett 1998; Mansfield, Milner, and Rosendorff 2002; Frye and Mansfield 2004; Milner and Kubota 2005). However, to ensure that my results do not hinge on a single measure, I also employ the inverted seven-point Freedom House measure, which also ranks countries from highly autocratic (1) to highly democratic (7).⁷

I measure the relationship between home and partner factor endowments with $Ratio_{ijt}$, the ratio of i 's to j 's logged real purchasing-power-parity GDP per capita at time t . That is, Ratio is $\ln(\text{GDP per capita}_{it}) \div \ln(\text{GDP per capita}_{jt})$.⁸ A ratio above 1 indicates that i has a higher capital-labor ratio than its trading partner j , while a ratio less than 1 indicates the opposite. I measure capital-labor ratios with GDP per capita partly because such data are widely available, but also because GDP per capita is highly correlated with other possible factor-endowment measures. For example, in a sample covering 63 countries and 27 years, the correlation between GDP per capita and capital stock per worker is .90.⁹ I am thus confident that GDP per capita is a

⁷ Polity data are from the Polity IV Data Set. Freedom House data are from Freedom House (2002).

⁸ Data on GDP per capita are from Penn World Tables 6.1.

⁹ Penn World Tables 5.6, the last version to include data on capital stock per worker.

reasonable measure of the capital-labor ratio, in addition to being much more widely available than alternatives.

I test my conditional hypothesis with $Democracy_{it} \times Ratio_{ijt}$, an interaction term formed by multiplying the two components. If my hypothesis is correct, democracy should promote trade openness when $Ratio < 1$ but should discourage trade openness when $Ratio > 1$. More generally, the impact of democracy on trade openness should become less positive (or more negative) as ratio rises. The interaction term should thus be negatively signed.

I include a large number of controls that previous research has found to influence trade. Four are standard gravity-model controls. $\ln(GDP_{jt})$ is the log of country j 's real GDP at time t . Because wealthier countries should export more, GDP_{jt} should be positively signed. $\ln(Population_{jt})$ is the log of country j 's population at time t . Because—holding GDP constant—larger countries should be less open to trade, $population_{jt}$ should be negatively signed. $\ln(Distance_{ij})$, the log of the Great Circle distance between i and j , controls for the negative impact of distance on trade and should be negatively signed. Finally, $Contiguity_{ij}$, a dummy variable coded 1 if i and j share a land border, controls for the tendency of contiguous countries to trade more with one another and should be positively signed.

In addition to these economic controls, I include five political-institutional variables. $Democracy_{jt}$, country j 's democracy score at time t , controls for partner regime type. If democracy promotes trade openness, then countries should trade more with more democratic partners and $democracy_{jt}$ will be positively signed.¹⁰ $Alliance_{ijt}$ is a dummy coded 1 if i and j belonged to the same military alliance at time t . Because allies typically trade more than non-

¹⁰ Much research shows that democratic *dyads* trade more with one another. However, I cannot include dyadic democracy scores because I have to include i 's monadic score to test my hypothesis. Including both simultaneously is problematic because i 's monadic score is also incorporated into the dyadic one.

allies (Gowa and Mansfield 1993), alliance should be positively signed. MID_{ijt} , a dummy coded 1 if i and j were involved in a militarized interstate dispute at time t , controls for the negative impact of MIDs on trade (Mansfield and Bronson 1997) and should be negatively signed. $GATT_{ijt}$ is a dummy coded 1 if i and j belonged to the General Agreement on Tariffs and Trade (GATT) at time t . Although GATT membership should boost trade openness, Rose (2004) finds no evidence of this and Milner and Kubota (2005) find that GATT members actually have higher tariffs. The expected sign of the GATT dummy is thus somewhat unclear. Finally, RTA_{ijt} is a dummy coded 1 if i and j belonged to a regional trade arrangement at time t . Because such arrangements tend to boost trade (Rose 2004), RTA should be positively signed.¹¹

I estimate an error-correction model of the following form:

$$\Delta \ln(1 + \text{Openness}_{ijt}) = \beta_0 + \beta_1 \ln(1 + \text{Openness}_{ijt-1}) + \gamma \Delta \mathbf{X}_t + \lambda \mathbf{X}_{t-1} + \varepsilon_{ijt},$$

where $\Delta \ln(1 + \text{Openness}_{ijt})$ is the annual change in logged openness, $\ln(1 + \text{Openness}_{ijt-1})$ is the one-year lag of logged openness, $\Delta \mathbf{X}_t$ is a vector of annual changes in all right-hand-side variables, \mathbf{X}_{t-1} is a vector of one-year lags of all right-hand-side variables, and γ and λ are vectors of coefficients for the first-differenced and lagged independent variables, respectively. I employ an error-correction model for several reasons. First, it guards against potential integration problems (Beck and Katz 2004). Second, including first differences and lags of all independent variables allows us to estimate both their immediate and their lagged effects: the immediate

¹¹ Population data are from Penn World Tables 6.1. Distance data were assembled by Gleditsch and Ward and are available at <http://privatewww.essex.ac.uk/~ksg/capdist.html>. Contiguity data are from Stinnett, Tir, Schafer, Diehl, and Gochman (2002); alliance data are from Gibler and Sarkees (2004); and MID data are from Ghosn and Bennett (2003). GATT membership data are from Reinhardt (1999), and RTA data are from Rose (2004).

effects are given by γ , the lagged effects are given by λ , and the “error correction rate” or the rate at which openness adjusts to changes in \mathbf{X} is given by the coefficient on the lagged dependent variable. Third, a fully-specified error-correction model imposes fewer restrictive assumptions than other time-series models, which implicitly assume that either immediate or lagged effects are zero (De Boef and Keele 2006).¹² The error-correction model is thus the most general and conservative one I can estimate.

My sample consists of all countries and years for which data are available. Both the Polity and the Freedom House data extend from 1950 to 2000, although not all countries have data for all years. The Polity analysis includes 165 home countries and 165 partner countries, for a total of 817,672 observations. The Freedom House data are somewhat more limited, covering 157 home and partner countries for a total of 546,690 observations.

To correct for possible serial correlation, I employ robust-cluster estimators that correct for within-dyad correlation of residuals. Results are shown in Table 2.

Table 2 about here

The top half of the table presents coefficients for the first-differenced variables, which indicate the immediate effects of these variables. The bottom half presents coefficients for the lagged variables, which indicate lagged effects. Columns 1 and 2 present results for the Polity measure, while columns 3 and 4 present results for the Freedom House measure.

Results for the controls are unexceptional: nearly all are signed as expected and highly significant. The only theoretically surprising result is the negative sign on the GATT dummy,

¹² For example, a model with just differences assumes that all effects are immediate, while one with just lags assumes that all effects are lagged. For further discussion of ECMs, see De Boef and Keele (2006).

but this is consistent with previous empirical work on both trade (Rose 2004) and trade policy (Milner and Kubota 2005). Turning to the variables of interest, my results suggest that home democracy has no significant immediate effects on trade openness but has significant conditional lagged effects.¹³ The lagged interaction term is negatively signed and significant for both democracy measures, indicating that the impact of democracy on trade openness becomes less positive (more negative) as the ratio of home to foreign GDP per capita rises. Home democracy itself has a significant positive lagged coefficient, but this estimate is not very informative because it indicates that democracy promotes trade openness when Ratio equals zero—a value that, empirically, never exists. A full understanding of these estimates thus requires that we calculate conditional democracy coefficients and standard errors. I do this below, following a discussion of long-run effects.

The lagged coefficients alone are not very informative, as they do not give the total lagged impact of X but must rather be interpreted in conjunction with the error correction rate, given by the coefficient on lagged openness. We are ultimately interested in the total impact a change in democracy has on trade openness, i.e. the immediate impact plus all lagged effects. In error correction parlance, this total impact is known as the long-run multiplier (LRM). The LRM is easily calculated by dividing the X coefficients by the coefficient on lagged openness, but this procedure does not generate standard errors for the LRMs. I thus employ the Bewley (1979) transformation to generate these standard errors.¹⁴ LRMs for all variables are shown in columns 2 and 4. The LRMs mirror the immediate and lagged coefficients, but the LRMs are larger because they incorporate all immediate and lagged effects.

¹³ To facilitate presentation, I multiply all democracy coefficients by 100 in Table 2.

¹⁴ See De Boef and Keele (2006) for further discussion of Bewley's method.

To interpret these estimates, we must calculate conditional democracy coefficients and standard errors at different values of home-partner income ratios. I do this graphically in Figure 2 following the procedure outlined in Kam and Franzese (forthcoming).

Figure 2 about here

The figure plots conditional democracy coefficients (on the y-axis) at different values of home-partner income ratios (on the x-axis). These coefficients are based on the LRM results; hence they show the total effect of a one-unit change in democracy at different income ratios. The solid lines show how the democracy coefficient changes as the income ratio rises, while the dashed lines indicate 95% confidence intervals. The Polity results, shown in 2(a), and the Freedom House results, shown in 2(b), are very similar. Both show the expected downward-sloping relationship: democracy has a highly significant positive impact on trade openness when Home is poorer than Foreign, but this impact becomes smaller—and eventually negative—as the income ratio rises. More precisely, in the Polity analysis, democracy significantly increases openness when the income ratio is less than 1.03, has no significant effect when the income ratio is between 1.03 and 1.20, and significantly reduces openness when the income ratio is greater than 1.20. The results for the Freedom House analysis are very similar: the corresponding figures are 1.10, 1.10 to 1.21, and 1.21, respectively. The close correspondence between the two sets of results is striking, not only because they employ different measures, but also because the samples are very different: at 546,690 observations, the Freedom House sample is 33 percent smaller than the Polity sample.

In my theory, democratization leads to trade liberalization (greater openness) when the income ratio is less than 1 and leads to protection (less openness) when this ratio is greater than

1. In practice, the cut-point at which the impact of democracy equals zero is 1.1, and hence slightly above the predicted tipping point. This small discrepancy probably reflects the fact that my theory treats voters solely as producers, whereas in practice they are consumers as well. A growing body of research shows that voters' consumer interests influence their trade policy preferences (Baker 2003, 2005), although these and other studies also show that voters' producer interests affect their policy preferences in the hypothesized ways. Because voters-as-consumers should prefer free trade, all voters should be slightly more liberal than they would be on the basis of producer interests alone. This implies that the home-foreign income ratio must be somewhat higher than 1 before the median voter's producer interest in protection outweighs her consumer interest in free trade. Although the existence of consumer interests thus raises the income ratio at which democracy begins to have protectionist effects, it is worth emphasizing that this is an intercept effect that does not notably alter the logic of my argument.

The horizontal axes in Figure 2 present the full range of income ratios in my sample: .53 to 1.90. Because some of these are extreme values, it is worth examining the frequency of the various conditional effects. Given the threshold values discussed above, democracy significantly increases openness in 56 percent of the dyads in my sample, has no significant impact in 27 percent of dyads, and significantly reduces openness in 17 percent of dyads. These figures make two important points. First, it is true that democracy "generally" promotes trade openness, in that it does so about three times as often as it reduces openness. In this sense, my results are consistent with previous research on democracy and trade. Second, however, democracy significantly reduces openness in a non-trivial proportion of cases. Although 17 percent may not seem high, this figure is nonetheless disturbing because the partner countries in this group—most of Africa and the poorest states in Asia and Latin America—are very poor, very populous, and

relatively constant over time (i.e. membership in this disadvantaged group does not change much over time). The negative effects of democracy on trade openness thus fall consistently on large numbers of people in the world's poorest countries. That democracy promotes trade in the majority of dyads does not alleviate this distributional concern.

The substantive effects of democracy on openness are complicated. I thus defer discussion of these effects until after the next section, which examines the impact of democracy on trade barriers.

Democracy and Trade Barriers

Although trade openness is a reasonable proxy for trade policy, it is nonetheless useful to examine the conditional effects of democracy on more direct measures. Doing so allows us to determine (1) whether democracy in fact affects trade openness via the hypothesized trade-policy channel, and (2), if so, which forms of protection underlie the democracy-openness relationship. The latter question is important because the rules of the multilateral trading system may make it harder to discriminate among trading partners with some policy instruments than with others. Since its inception, the GATT has required members to employ Most-Favored-Nation (MFN) tariffs that apply equally to all other members. GATT/WTO rules thus make it difficult to levy different tariff rates against different partners. Historically, however, GATT/WTO members have used NTBs such as voluntary export restraints and antidumping duties in a discriminatory fashion. In some sectors, such as textiles and clothing, discriminatory quantitative restrictions have even been institutionalized in agreements such as the Multi-Fiber Arrangement. Hence, to the extent that democracy leads to discrimination among partners, I expect this to occur primarily through the discriminatory use of NTBs.

I employ two measures of trade protection, both from the United Nations Commission on Trade and Development's *Trade Analysis and Information System* (TRAINS).¹⁵ $MFN\ Tariff_{ij}$ is country i 's average MFN tariff rate toward country j , while $NTB\ Coverage_{ij}$ is country i 's NTB coverage ratio toward j , i.e. the proportion of i 's imports from j covered by NTBs. I measure NTB protection with coverage ratios partly because this is the most informative available measure and partly to facilitate comparison with previous work on NTBs (Mansfield and Busch 1995; Lee and Swagel 1997; Gawande and Hansen 1999).

Although TRAINS provides multiple years of data for some countries, the data do not permit time-series cross-section analysis. Over one-third of the countries have data for only one year and would thus be dropped from a time-series analysis, and the average number of years is only 3 for tariffs and 2 for NTBs. Moreover, the observations are unevenly spaced—in some countries, observations are separated by only one year, while in others they are separated by up to seven—and longitudinal variation within countries is small compared with cross-national variation. I thus create a purely cross-sectional dataset by averaging values for all variables across available years.¹⁶

Most of the independent variables are identical to those from the previous analysis, except that, like the dependent variable, they have been averaged across the years for which trade

¹⁵ Specifically, they come from Jon Haveman's extracts, which combine data from TRAINS versions 2-8.

¹⁶ Some readers may be concerned that it is inappropriate to test my hypotheses with a cross-sectional analysis, given my frequent references to the effects of democratization. Note, however, that my theoretical model is not inherently dynamic but rather generates comparative statics: variation in democracy should produce variation in trade policies, whether this variation is cross-sectional or longitudinal. Cross-sectional analyses do assume that the independent and dependent variables have reached their equilibrium relationship. However, to the extent that this assumption is wrong, my hypotheses are *less* likely to be supported.

barrier data are available.¹⁷ I have, however, included several new variables that may influence trade policy. *Government Spending_i*, country *i*'s government consumption spending as a percentage of GDP, is included because generous income transfers may reduce opposition to free trade and thus lead to lower trade barriers (Adsera and Boix 2002).¹⁸ *Growth_i*, country *i*'s GDP per capita growth rate, is included to control for business cycle effects (Cassing, McKeown, and Ochs 1986). *ln(Export Dependence_i)*, the log of country *i*'s exports to country *j* as a percentage of *i*'s GDP, is included because more export-dependent countries may be less willing to employ trade barriers that provoke retaliatory measures from trading partners (Gawande and Hansen 1999). In alternative models, I also included other controls such as dyadic distance, contiguity, *i*'s unemployment rate, and *i*'s exchange rate. Because the inclusion of these controls did not weaken my results but sometimes led to a loss of cases, I omit them from the final analysis.

Because both MFN tariff rates and NTB coverage ratios are bounded from below at zero, ordinary least-squares (OLS) regression will bias my coefficients downward. This is a minor concern for tariffs, as only 3 percent of the tariff observations are zeroes. However, with two-thirds of the NTB observations censored, OLS estimates will be biased downward by about 67 percent (Greene 1981). I thus employ Tobit regressions for both tariffs and NTBs. Because a given country's trade policies toward different partners are almost certainly not independent, I

¹⁷ Alliance, MID, GATT, and RTA consist almost entirely of ones and zeroes even after averaging. I thus continue to code these as dummy variables to simplify interpretation of the results. This makes no difference to my results.

¹⁸ Data on government spending, growth, and export dependence are from the World Bank's *World Development Indicators*. I did not include government spending in the openness regressions because doing so would have truncated the sample dramatically. I did not include per capita GDP growth because it is already incorporated into the dependent variable. I did not include export dependence because it is simultaneously determined by most of the same variables that determine import openness and is thus almost perfectly correlated with the latter.

control for the non-independence of dyadic trade policies with robust standard errors clustered by country. Results are shown in Table 3.

Table 3 about here

The control results are interesting, in that some (partner democracy, export dependence) have a significant negative impact on tariffs but a significant positive impact on NTBs. This suggests that, while these variables lead to tariff liberalization, governments may offset these tariff reductions with increased use of NTBs. Turning to the variables of interest, the results do not look very supportive: neither home democracy nor its interaction with income ratios is statistically significant. These results are not very informative, however: as before, we must examine the conditional effects of democracy at different values of the income ratio.

Conditional democracy coefficients and their confidence intervals are presented in Figure 3.

Figure 3 about here

Figures 3(a) and (b) show the impact of the Polity and Freedom House measures, respectively, on MFN tariffs. In both figures, democracy has a significant negative impact on tariffs at intermediate values of the income ratio but insignificant effects at very low and high values. The Polity (Freedom House) measure is significant when the income ratio ranges from .73 to 1.32 (.61 to 1.37). This means that democracy leads to significantly lower tariffs in anywhere from 88 to 95 percent of cases. Although the democracy coefficients become slightly less negative as the income ratio rises—as my theory predicts—it is not clear that this conditional effect is responsible for democracy’s insignificance at high income ratios. Rather, its insignificance at both low and high income ratios probably reflects the scarcity of observations at

these extremes. The main result of the tariff analysis is thus that democracy has a significant and nearly unconditional negative impact on tariffs. This suggests that the WTO's MFN rules indeed prevent governments from practicing tariff discrimination.

Figures 3(c) and (d) present the impact of the Polity and Freedom House measures on NTB coverage. In this case, the two figures are almost identical: both show that democracy's impact on NTBs grows more positive as the income ratio rises, becoming significant when the income ratio reaches 1.16. These results are closer to my predictions, and, together with the tariff results, they provide a compelling explanation for the observed impact of democracy on trade openness. At low levels of the income ratio, democracy's liberalizing effects on tariffs outweigh its protectionist effects on NTBs. However, as the income ratio rises, the tariff effects grow weaker while the NTB effects grow stronger, and the latter eventually outweigh the former. Because tariff rates and NTB coverage are not directly comparable, Figure 3 alone does not permit us to assess democracy's net impact on trade barriers. However, we can infer this impact from the openness results. The latter imply that the tariff effects outweigh the NTB effects when the income ratio is less than 1.03 (i.e. when democracy significantly increases openness), that the two effects roughly cancel each other out when the income ratio is between 1.03 and 1.20 (i.e. when the impact of democracy on openness is insignificant), and that the NTB effects outweigh the tariff effects when the income ratio is greater than 1.20 (i.e. when democracy significantly reduces openness). The close correspondence between the openness and the trade barrier results thus improves our understanding of both and increases our confidence in my theory.

Substantive Effects

Although democracy has the expected qualitative effects on trade openness and trade policy, it remains to be seen whether these effects are substantively important. In examining

democracy's substantive effects, I focus on trade openness because (1) it is difficult to combine the tariff and NTB results to assess democracy's net impact on trade barriers, and (2) openness is a more interesting outcome: we are typically less concerned with the exact tariff or NTB level than with the impact these policies have on trade.

Because the effects of democracy on openness vary across dyads, they cannot be easily summarized. Any statement about average effects conceals great variation across importing countries and across each importing country's trading partners. Nonetheless, to illustrate democracy's conditional effects, it is useful to examine the relationship between democracy and openness in middle-income countries. Because middle-income countries trade with both richer and poorer partners, a change in their domestic democracy will have more varied dyadic effects than it would in either a very rich or a very poor country.

Consider, for example, the predicted impact of Uruguay's democratization between 1984 and 1985. Uruguay's Polity score increased by 16 points, from -7 to 9, while its Freedom House score increased by 2.5 points, from 3.5 to 6. Because Uruguay's home-foreign income ratios ranged from .85 to 1.4, this democratization should have had qualitatively different effects on openness with different partners. To calculate these effects, I assign to each of Uruguay's dyadic relationships a Polity coefficient that corresponds to the dyadic income ratio: for example, dyadic income ratios of .9 and 1.2 would imply dyadic Polity coefficients of .001 and -.0004, respectively. Multiplying these coefficients by Uruguay's 16-point rise in the Polity score yields dyadic effects of .016 and -.0064, which—because my dependent variable is logged—imply a 1.6 percent increase and a .64 percent decrease, respectively, in my dependent variable. Because the dependent variable is the log of $(1 + \text{openness}_{ij})$, I multiply these figures by $(1 + \text{openness}_{ij}) \div \text{openness}_{ij}$ to derive percentage changes in openness. For example, if openness in the dyad with

the income ratio of .9 was .5 percent of GDP, the change in Uruguay's Polity score should have led to a $1.6 \times (1.5 \div .5) = 4.8$ percent increase in openness in this dyad. Predicted openness after democratization would thus be $.5 \times 1.048 = .524$ percent of GDP. Using 1984 as the base year, I employ this procedure to predict the impact of Uruguay's democratization on openness.

Given my estimates, Uruguay's democratization should have led to greater openness with 102 countries but lower openness toward 66 countries. Uruguay's openness toward wealthier countries should have increased by 16 percent, from 4.96 to 5.74 percent of GDP, while its openness toward poorer countries should have fallen by 15 percent, from .92 to .78 percent of GDP. The Freedom House results yield similar predictions.¹⁹ As these figures make clear, the absolute impact of percentage changes in openness depends on how open a country or dyad is to begin with. That said, changes in openness of 15 percent seem rather large: in 2000, for example, a 15 percent change in U.S. openness would have amounted to nearly 2 percent of U.S. GDP, or roughly 185 billion dollars of imports. Moreover, the percentage impact of democracy on openness is larger in countries that are either richer or poorer than Uruguay because the democracy coefficients grow larger as income ratios become more extreme. Hence, democracy will have a larger negative percentage impact in rich countries with high dyadic income ratios but a larger positive percentage impact in poor countries with low income ratios. The conditional effects of democracy are thus substantial.

The Uruguay example illustrates several more general points. First, in absolute terms, the positive effects of democratization outweigh the negative effects: Uruguay's net predicted openness increased by 11 percent. This is typically—though not always—true, simply because

¹⁹ Uruguay's actual post-democratization history fits these predictions quite well: Uruguay's openness with wealthier partners doubled (from 4.96 to 9.77) between 1984 and 1994, while its openness toward poorer partners fell by nearly 80 percent (from .92 to .20).

democracy boosts openness with wealthy countries that export a lot but depresses openness with poor countries that export little. Home democratization would thus promote home import openness in most countries. Second, however, the effects of home democratization on partner exports are more ambiguous. Although Uruguay's democratization boosted rich-country exports more than it depressed poor-country exports in absolute terms, these effects were roughly equal relative to partner GDP because poor countries have smaller economies. Moreover, because the countries hurt by Uruguay's democratization were much poorer than those that were helped—the former's average per capita income was \$1,318, as opposed to \$9,710 for the latter—the negative effects may have been felt more acutely than the positive ones. Third, because the negative effects of democratization fall on poorer partners, and because poor countries tend to be more populous, democratization often hurts more people than it helps. Uruguay's democratization increased market access for 2.04 billion people but reduced access for 2.77 billion people. Taking all of these factors together, the net welfare effects of democratization are somewhat unclear. What is clear, however, are the distributional effects on partner countries: domestic democratization helps richer partners but hurts poorer ones.

In moving beyond this particular case, we need to ask two questions. First, what, historically, has been the global impact of democratization? Second, what will future democratization bring? To answer these questions, I compare actual global imports and exports in 2000 with predicted global imports and exports under two alternative scenarios: (1) a fully autocratic world in which all countries have Polity scores of -10 (Freedom House scores of 1), and (2) a fully democratic world in which all countries have Polity scores of 10 (Freedom House scores of 7). To calculate predicted imports, I first determine how much each country's 2000 Polity (Freedom House) score would have to change to equal its minimum or maximum value. I

then combine these changes in democracy scores with democracy coefficients in the manner described above to estimate how different each country's 2000 openness scores would be under each scenario. Because openness values cannot simply be summed across countries—1 percent of GDP implies very different import values in, say, the U.S. and Peru—I convert openness scores into absolute values of imports in 2000. Finally, I sum these imports for rich countries on the one hand and poor countries on the other, where rich and poor countries are defined as all countries with per capita incomes above and below the 2000 global median, respectively. The procedure for calculating exports is identical, except that I sum trade values across partner rather than home countries. Results are shown in Figure 4.

Figure 4 about here

Figures 4(a) and 4(b) present results based on Polity scores, while 4(c) and 4(d) present results based on the Freedom House measure. The vertical axes show predicted import and export levels in 2000, with actual 2000 values normalized to 100. The horizontal axes present three global regimes: “Autocracy” (all countries are autocratic), “Actual” (all countries have their actual 2000 values), and “Democracy” (all countries are democratic). The solid lines show how imports would vary under these different regimes, while the dashed lines show similar variation in exports.

4(a) illustrates how rich-country trade would change if the world became either more autocratic or more democratic. Under global autocracy, rich countries would have imported about 7.5 percent (\$385 billion) more than they actually did in 2000 because these countries would have imported more from poor ones if they had been more autocratic. On the other hand, rich countries would have exported about 6.5 percent (\$329 billion) less under global autocracy

because poor countries would have imported less from rich ones if they had been more autocratic. If we treat these differences as the historical impact of democratization in all countries to their 2000 levels, it is clear that global democratization has substantially reduced rich countries' imports but substantially increased their exports. Further democratization to full global democracy would have little impact on rich-country imports, however, because most rich countries are already democratic, but it would boost rich countries' exports by about 3 percent (\$151 billion) because currently undemocratic poor countries would import more from rich ones.

4(b) illustrates poor-country trade under the same scenarios. Notably, 4(b) is the mirror image of 4(a). Under global autocracy, poor-country imports would have been 24 percent (\$151 billion) lower than they were in 2000 because poor countries would have imported less from rich ones if they had been more autocratic. However, poor countries would have exported 81 percent (\$562 billion) more than they did in 2000 because rich countries would have imported more from poor ones if they had been more autocratic. Historically, global democratization has thus greatly boosted poor countries' imports but has even more dramatically lowered their exports. Further democratization would boost poor-country imports by 21 percent (133 billion) because poor countries would import more from rich ones, but it would have little impact on poor-country exports because rich importers are already democratic. Figures 4(c) and 4(d) present the Freedom House estimates, which are qualitatively identical to the Polity estimates but are generally larger in magnitude.

Whether one employs the Polity or the Freedom House estimates, four things are clear. First, the effects of democratization—both past and prospective—are large. Second, it is hard to say whether democratization has, historically, been good or bad for global economic welfare. Rich countries import less and export more than they would in an autocratic world, while poor

countries import more but export less. Because both imports and exports contribute to economic welfare, the net welfare effects of current levels of democracy are unclear. Third, future democratization seems likely to raise global welfare above its current level.²⁰ It should boost rich countries' exports without reducing their imports and should boost poor countries' imports without reducing their exports. This should occur because (1) democratization leads, on average, to protection in rich countries but liberalization in poor ones, and (2) most rich countries are already democratic. Further democratization will thus occur in poor countries that should become more open. Fourth, however, this positive net impact will not erase distributional concerns. As middle-income countries democratize, they will close their markets to poorer countries even as they become more open on balance. For reasons discussed below, such discrimination is cause for concern.

Conclusion

Since its creation in 1947, the GATT/WTO has been criticized for serving the interests of rich countries while neglecting those of poor ones. As Srinivasan (1999: 1052) notes,

Tariffs and other barriers in industrialized countries on [developing countries'] exports were reduced to a smaller extent than those on exports of developed countries in each round of multilateral trade negotiations. Products in which [developing countries] had a comparative advantage such as textiles and apparel were taken out of the GATT disciplines altogether....In sum, the GATT was indifferent, if not actively hostile, to the interests of developing countries.

Although the existence of such discrimination is clear, its causes are not. Some people argue that rich-world protectionism excluded poor countries from the GATT/WTO system from the start.

²⁰ But not necessarily above the level under full global autocracy.

Others claim that poor countries wedded to protectionist development strategies voluntarily opted out. Most observers would probably agree that both arguments hold some truth.

The results presented here provide a simple explanation for this state of affairs. Because most rich countries have been democratic since the GATT's creation, they have had little desire to liberalize trade with poor countries. They have thus employed the GATT/WTO framework mainly to liberalize trade among themselves. Conversely, most poor countries were until recently undemocratic. They consequently had no wish to liberalize trade with rich countries and opted out of GATT/WTO negotiations. Recently, democratization in many poor countries has led them to engage more actively in international trade (Milner and Kubota 2005). However, my results imply that this trend will not solve the problem of trade discrimination and should in fact make it worse.

Rich countries now discriminate against poor ones, in part because they are democratic. This discrimination is a political equilibrium, so—barring a return to autocracy in the rich world—we cannot expect it to go away.²¹ We can, however, expect democratizing middle-income countries to close their markets to poorer countries even as they open their markets to richer ones. Democratization in middle-income countries should thus boost discrimination in international trade. Democratization in very poor countries seems less problematic, as it should promote liberalization with nearly all partners. However, even here, democratization should lead to more liberalization with rich partners than with poor ones. Continued democratization should thus exacerbate trade discrimination.

²¹ Political reforms, such as campaign finance reform or referenda, might even shift policymaking influence away from interest groups and toward median voters in rich countries. My results imply that such developments would increase protectionism against poor countries and worsen discrimination.

This is worrisome for two reasons. First, this discrimination could cause trade diversion as imports from wealthy countries crowd out imports from poorer ones. This should not harm the welfare of importing countries because, given my results, it seems almost certain that trade creation will outweigh trade diversion. It could, however, hurt exporting countries whose exports are crowded out, particularly since these exporters will be the poorest countries in the world. Second, and perhaps more importantly, rising discrimination could reinforce hub-and-spoke trading patterns in which developing-world spokes trade with developed-world hubs but not with each other. Such hub-and-spoke relationships pose two risks. First, they create strong incentives for exporters to invest in hubs rather than spokes because hub exports enjoy access to all spoke markets while spoke exports do not. Hub-and-spoke relationships thus divert investment away from capital-poor spokes toward capital-rich hubs (Baldwin 1994). Because the spokes need investment to develop, this is cause for concern. Second, if poor countries do not trade with one another, they depend more on trade with rich countries. This reduces their collective bargaining power in international trade negotiations and hence their ability to reform an unfavorable status quo.

Fortunately, my trade-barrier results suggest a possible solution to these problems. The conditional NTB results imply that countries have been able to discriminate with NTBs. On the other hand, the unconditional tariff results imply that the MFN rule has prevented countries from discriminating with tariffs. The most obvious solution to future discrimination would thus be to impose MFN discipline on NTBs. This is, of course, easier said than done. Some NTBs, such as antidumping duties, are inherently discriminatory in that they target particular countries alleged to have unfair trading practices. Others, such as import licenses, could be nondiscriminatory in principle, but detecting and preventing discrimination in practice would be difficult. Ending

discrimination may thus require the full conversion of NTBs into tariff equivalents. Although this will also be hard, my results imply that it could become the most pressing task for the multilateral trading system. If continued democratization indeed creates pressures for both liberalization and discrimination, then the value of the GATT/WTO will depend less on its ability to deliver the former than on its capacity to prevent the latter.

References

- Adsera, Alicia and Carles Boix. (2002) "Trade, Democracy, and the Size of the Public Sector." *International Organization* 56 (Spring): 229-262.
- Anderson, Kym and Will Martin (eds.). (2006) *Agricultural Trade Reform and the Doha Development Agenda*. Washington, DC: World Bank.
- Baker, Andy. (2003) "Why Is Trade Reform so Popular in Latin America? A Consumption-Based Theory of Trade Policy Preferences." *World Politics* 55(April): 423-55.
- Baker, Andy. (2005) "Who Wants to Globalize? Consumer Tastes and Labor Markets in a Theory of Trade Policy Beliefs." *American Journal of Political Science* 49(October): 924-938.
- Baldwin, Richard E. (1994) *Towards an Integrated Europe*. London: Centre for Economic Policy Research.
- Beck, Nathaniel and Jonathan N. Katz. (2004) "Time-Series—Cross-Section Issues: Dynamics, 2004." Working Paper.
- Bliss, Harry and Bruce Russett. (1998) Democratic Trading Partners: The Liberal Connection, 1962-1989. *The Journal of Politics* 60(November): 1126-1147.
- Busch, Marc L. and Eric Reinhardt. (1999) "Industrial Location and Protection: The Political and Economic Geography of U.S. Nontariff Barriers." *American Journal of Political Science* 43(October): 1028-1050.
- Cassing, James, Timothy J. McKeown and Jack Ochs. (1986) "The Political Economy of the Tariff Cycle." *American Political Science Review* 80(September): 843-862.
- De Boef, Suzanna and Luke Keele. (2006) "Taking Time Seriously: Dynamic Regression Models." Working Paper.
- Dutt, Pushan and Devashish Mitra. (2002) "Endogenous Trade Policy through Majority Voting:

- An Empirical Investigation.” *Journal of International Economics* 58(October): 107-133.
- Freedom House. (2002) *Freedom in the World* 2001-2002. Somerset, NJ: Transaction.
- Frye, Timothy and Edward D. Mansfield. (2004) “Timing Is Everything: Elections and Trade Liberalization in the Postcommunist World.” *Comparative Political Studies* 37(May): 371-398.
- Gawande, Kishore and Wendy L. Hansen. (1999) “Retaliation, Bargaining, and the Pursuit of ‘Free and Fair’ Trade.” *International Organization* 53(Winter): 117-159.
- Ghosn, Faten and Scott Bennett. (2003) “Codebook for the Dyadic Militarized Interstate Incident Data, Version 3.0.” Online: <http://cow2.la.psu.edu>.
- Gibler, Douglas M. and Meredith Sarkees. (2004) “Measuring Alliances: the Correlates of War Formal Interstate Alliance Data set, 1816-2000.” *Journal of Peace Research* 41(March): 211-222.
- Gleditsch, Kristian S. (2002) “Expanded Trade and GDP Data.” *Journal of Conflict Resolution* 46(October): 712-724.
- Gowa, Joanne and Edward D. Mansfield. (1993) “Power Politics and International Trade.” *American Political Science Review* 87(June): 408-20.
- Greene, William. (1981) “On the Asymptotic Bias of the Ordinary Least Squares Estimator of the Tobit Model.” *Econometrica* 49(March): 505-513.
- Heston, Alan, Robert Summers and Bettina Aten. (2002) *Penn World Table* Version 6.1. Center for International Comparisons at the University of Pennsylvania.
- Kam, Cindy D. and Robert J. Franzese. (Forthcoming) *Modeling and Interpreting Interactive Hypotheses in Regression Analysis: A Brief Refresher and Some Practical Advice*. Ann Arbor, MI: University of Michigan Press.
- Mansfield, Edward D. and Marc L. Busch. (1995) “The Political Economy of Nontariff Barriers:

- A Cross-National Analysis.” *International Organization* 49(Autumn): 723-749.
- Mansfield, Edward D. and Rachel Bronson. (1997) Alliances, Preferential Trading Arrangements, and International Trade. *American Political Science Review* 91(March): 94-107.
- Mansfield, Edward D., Helen V. Milner and Peter Rosendorff. (2002) Why Democracies Cooperate More: Electoral Control and International Trade Agreements. *International Organization* 56(Summer): 477-514.
- Mayda, Anna Maria and Dani Rodrik. (2005) “Why Are Some People (And Countries) More Protectionist than Others? *European Economic Review* 49(August): 1393-1430.
- Mayer, Frederick W. (1998) *Interpreting NAFTA: The Science and Art of Political Analysis*. New York: Columbia University Press.
- Mayer, Wolfgang. (1984) “Endogenous Tariff Formation.” *American Economic Review* 74(5): 970-985.
- McGillivray, Fiona. (1997) “Party Discipline as a Determinant of the Endogenous Formation of Tariffs.” *American Journal of Political Science* 41(April): 584-607.
- Milanovic, Branko. (2000) “The Median-Voter Hypothesis, Income Inequality, and Income Redistribution: An Empirical Test with the Required Data.” *European Journal of Political Economy* 16(September): 367-410.
- Milner, Helen V. and Keiko Kubota. (2005) “Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries.” *International Organization* 59(Winter): 107-144.
- Moene, Karl Ove and Michael Wallerstein. (2001) “Inequality, Social Insurance, and Redistribution.” *American Political Science Review* 95(December): 859-874.
- Polachek, Solomon W. (1997) “Why Democracies Cooperate More and Fight Less: The

- Relationship Between International Trade and Cooperation.” *Review of International Economics* 5(August): 295-309.
- Reinhardt, Eric. (1999) “Aggressive Multilateralism: The Determinants of GATT/WTO Dispute Initiation, 1948-1998.” Paper prepared for delivery at the 1999 Annual Meeting of the International Studies Association, Washington, DC, February 17-20.
- Rogowski, Ronald and Mark Andreas Kayser. (2002) “Majoritarian Electoral Systems and Consumer Power: Price-Level Evidence from the OECD Countries.” *American Journal of Political Science* 46(July): 526-539.
- Rose, Andrew K. (2004) “Do We Really Know That The WTO Increases Trade?” *American Economic Review* 94(March): 98-114.
- Rothenberg, Lawrence S. (1989) “Putting the Puzzle Together: Why People Join Public Interest Groups.” *Public Choice* 60(March): 241-257.
- Scheve, Kenneth F. and Matthew J. Slaughter. (2001) “What Determines Individual Trade-Policy Preferences?” *Journal of International Economics* 54(August): 267-292.
- Srinivasan, T.N. (1999) “Developing Countries in the World Trading System: From GATT, 1947, to the Third Ministerial Meeting of the WTO, 1999.” *The World Economy* 22(November): 1047-1064.
- Stinnett, Douglas M., Jaroslav Tir, Philip Schafer, Paul F. Diehl, and Charles Gochman. (2002). “The Correlates of War Project Direct Contiguity Data, Version 3.” *Conflict Management and Peace Science* 19(Summer):58-66.
- Stolper, Wolfgang F. and Paul A. Samuelson. (1941) “Protection and Real Wages.” *Review of Economic Studies* 9(November): 58-73.

Figure 1. Factor Endowments of Voters and Interest Groups

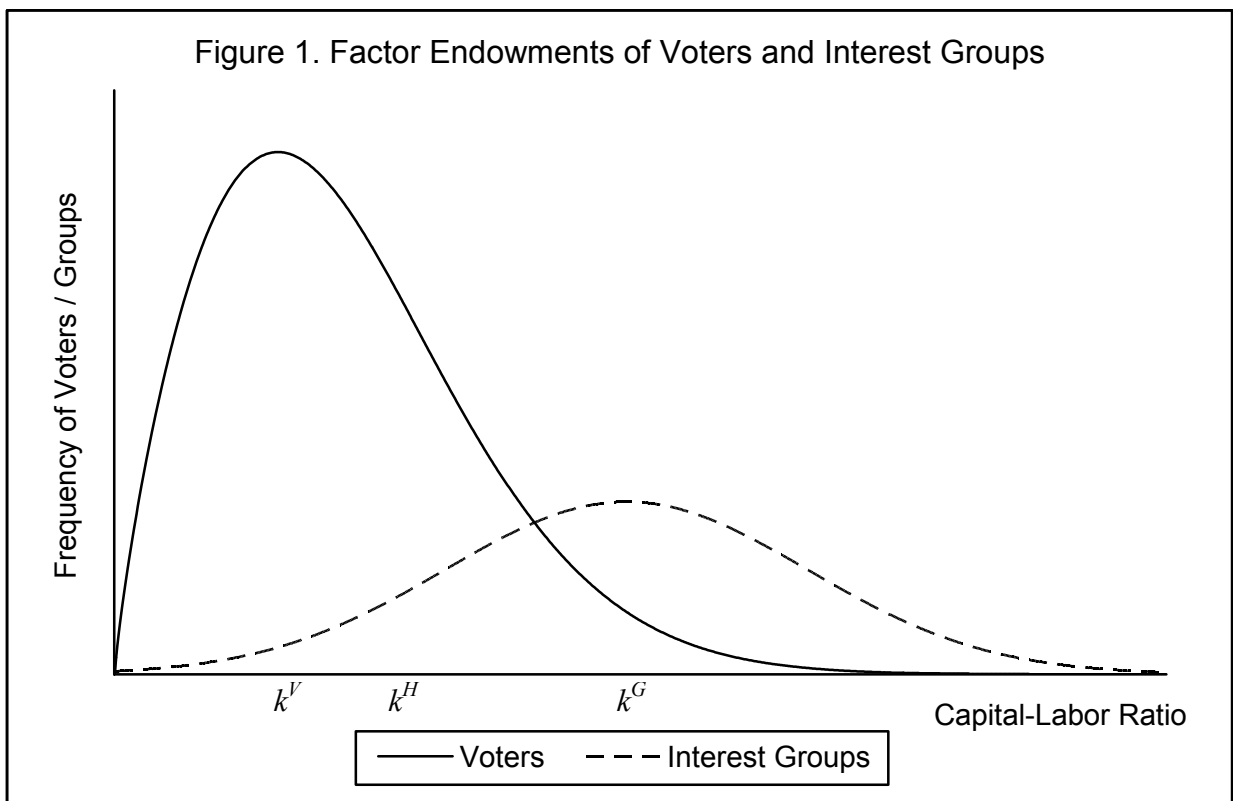


Table 1. Median Voter and Interest Group Policy Preferences		
	Home and Foreign Capital-Labor Ratios	
	$k^H > k^F$	$k^H < k^F$
Median Voter	Protectionism	Free Trade
Median Interest Group	Free Trade	Protectionism

Table 2. Conditional Effects of Democracy on Trade Openness

Explanatory Variable	Democracy Measure			
	Polity		Freedom House	
	(1) Coefficient	(2) Long Run Multiplier	(3) Coefficient	(4) Long Run Multiplier
<i>First Differences</i>				
$\Delta Democracy_{it}$	.015 (.023)		.249 (.114)*	
$\Delta(Democracy_{it} \times Ratio_{ijt})$	-.014 (.021)		-.192 (.103)	
$\Delta Ratio_{ijt}$	-.048 (.010)**		-.021 (.013)	
$\Delta Democracy_{jt}$	.002 (.003)		.005 (.014)	
$\Delta \ln(GDP_{jt})$	.009 (.002)**		.013 (.002)**	
$\Delta \ln(Population_{jt})$	-.016 (.004)**		-.016 (.004)**	
$\Delta Alliance_{ijt}$	.006 (.003)*		.007 (.003)*	
ΔMID_{ijt}	-.013 (.003)**		-.015 (.003)**	
$\Delta GATT_{ijt}$	-.002 (.001)**		-.003 (.001)**	
ΔRTA_{ijt}	.025 (.010)*		.025 (.011)*	
<i>Lags</i>				
$Democracy_{it-1}$	.029 (.005)**	.566 (.099)**	.211 (.020)**	4.02 (.417)**
$Democracy_{it-1} \times Ratio_{ijt-1}$	-.026 (.004)**	-.506 (.085)**	-.182 (.017)**	-3.47 (.359)**
$Ratio_{ijt-1}$	.008 (.001)**	.158 (.013)**	.016 (.001)**	-.300 (.024)**
$Democracy_{jt-1}$	.011 (.001)**	.222 (.019)**	.046 (.005)**	.877 (.082)**
$\ln(GDP_{jt-1})$	.004 (.000)**	.077 (.003)**	.004 (.000)**	.074 (.003)**
$\ln(Population_{jt-1})$	-.002 (.000)**	-.030 (.002)**	-.002 (.000)**	-.030 (.003)**
$\ln(Distance_{ijt-1})$	-.003 (.000)**	-.059 (.003)**	-.003 (.000)**	-.059 (.003)**
$\ln(Contiguity_{ijt-1})$	.009 (.001)**	.168 (.024)**	.008 (.001)**	.162 (.025)**
$Alliance_{ijt-1}$	.003 (.001)**	.057 (.010)**	.002 (.001)**	.046 (.011)**
MID_{ijt-1}	-.016 (.002)**	-.303 (.044)**	-.016 (.003)**	-.312 (.060)**
$GATT_{ijt-1}$	-.001 (.000)**	-.014 (.003)**	-.000 (.000)**	-.007 (.003)**
RTA_{ijt-1}	.013 (.003)**		.012 (.003)**	.225 (.049)**
$\ln(Openness_{ijt-1})$	-.052 (.003)**		-.056 (.003)**	
Constant	-.049 (.003)**			
Observations	817,672		546,690	
F (P > F)	46.13 (0.0000)		37.11 (0.0000)	
Dependent Variable: $\Delta \ln(Openness_{ijt})$ *p<.05 **p<.01 Robust (dyad-clustered) standard errors in parentheses All democracy coefficients multiplied by 100				

Figure 2. Conditional Effects of Democracy on Trade Openness

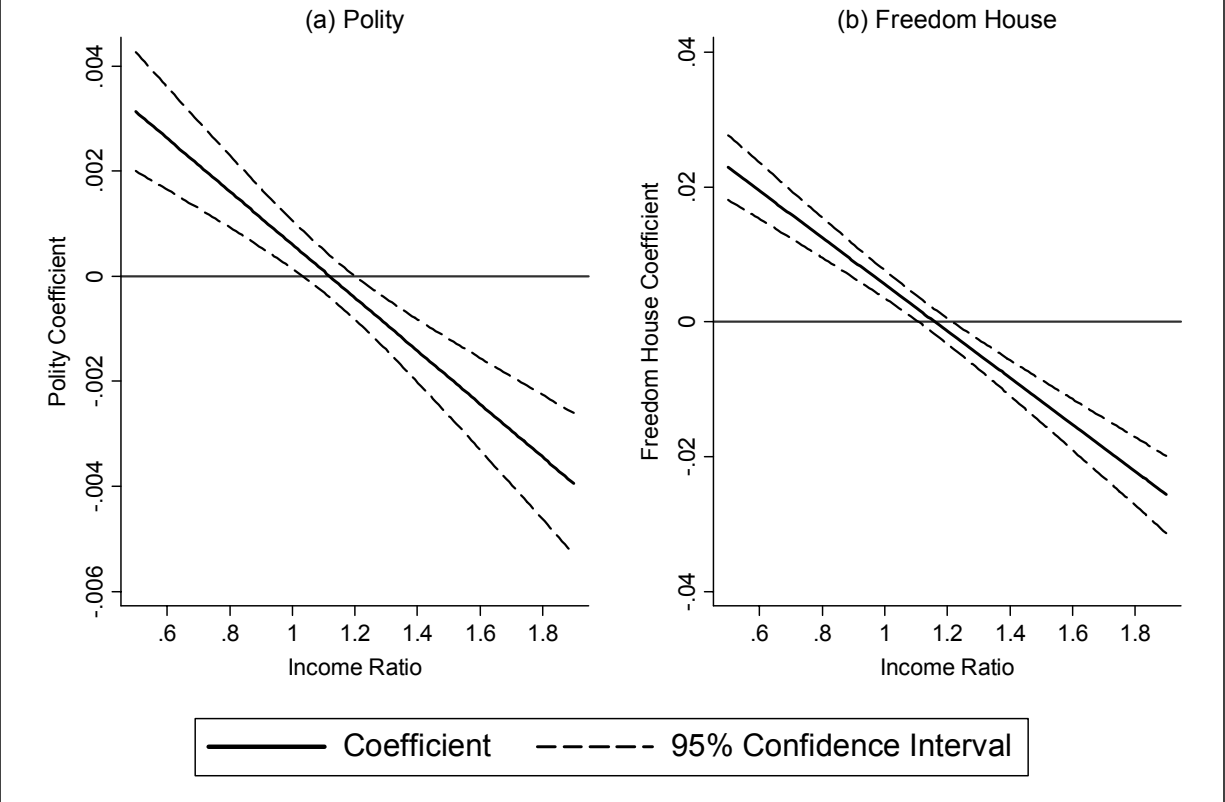


Table 3. Conditional Effects of Democracy on Trade Barriers

Explanatory Variable	Dependent Variable			
	MFN Tariff _i		NTB Coverage _i	
	Polity	Freedom House	Polity	Freedom House
Democracy _i	-.657 (.571)	-2.60 (1.87)	-1.30 (1.40)	-3.04 (5.33)
Democracy _i × Ratio _{ij}	.228 (.488)	1.03 (1.56)	1.89 (1.23)	5.57 (4.35)
Ratio _{ij}	-11.6** (4.01)	-16.5* (8.10)	7.27 (10.0)	-9.68 (22.2)
Democracy _j	-.113** (.034)	-.532** (.164)	.510** (.142)	2.06** (.598)
Government Spending _i	-.435** (.163)	-.355* (.160)	.130 (.410)	.041 (.409)
Growth _i	.015 (.209)	-.007 (.203)	.954 (.861)	1.03 (.873)
ln(Export Dependence _{ij})	-3.82** (1.39)	-3.66** (1.35)	16.3** (3.77)	15.9** (3.64)
Alliance _{ij}	-1.41 (.93)	-1.28 (.875)	6.58** (2.36)	7.16** (2.35)
MID _{ij}	-.045 (2.04)	-.182 (1.81)	12.4* (5.35)	12.8* (5.19)
GATT _{ij}	2.32* (1.03)	2.45* (1.09)	7.49* (3.68)	7.36* (3.58)
RTA _{ij}	-3.86** (1.11)	-4.13** (1.10)	3.99 (4.57)	3.80 (4.70)
Constant	32.7** (4.72)	43.9** (9.08)	-37.8** (13.8)	-36.7 (27.0)
Uncensored Observations	13,614	13,869	3,310	3,269
Left-Censored Observations	423	426	6,664	7,000
Countries	92	93	77	78
χ^2 (p > χ^2)	55.56 (0.0000)	66.93 (0.0000)	80.87 (0.0000)	80.29 (0.0000)
*p<.05 **p<.01 Robust (country-clustered) standard errors in parentheses				

Figure 3. Conditional Effects of Democracy on Trade Barriers

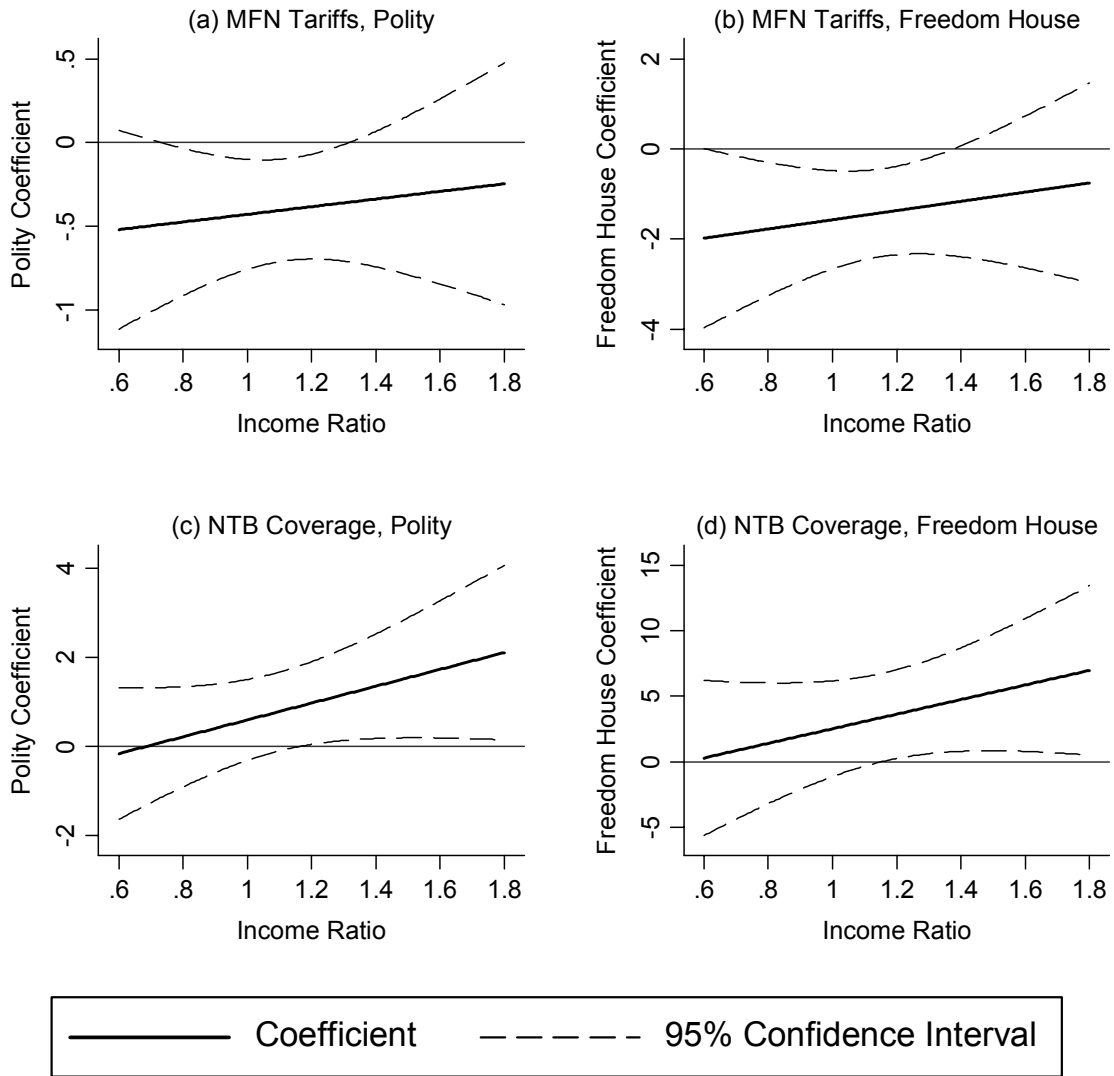
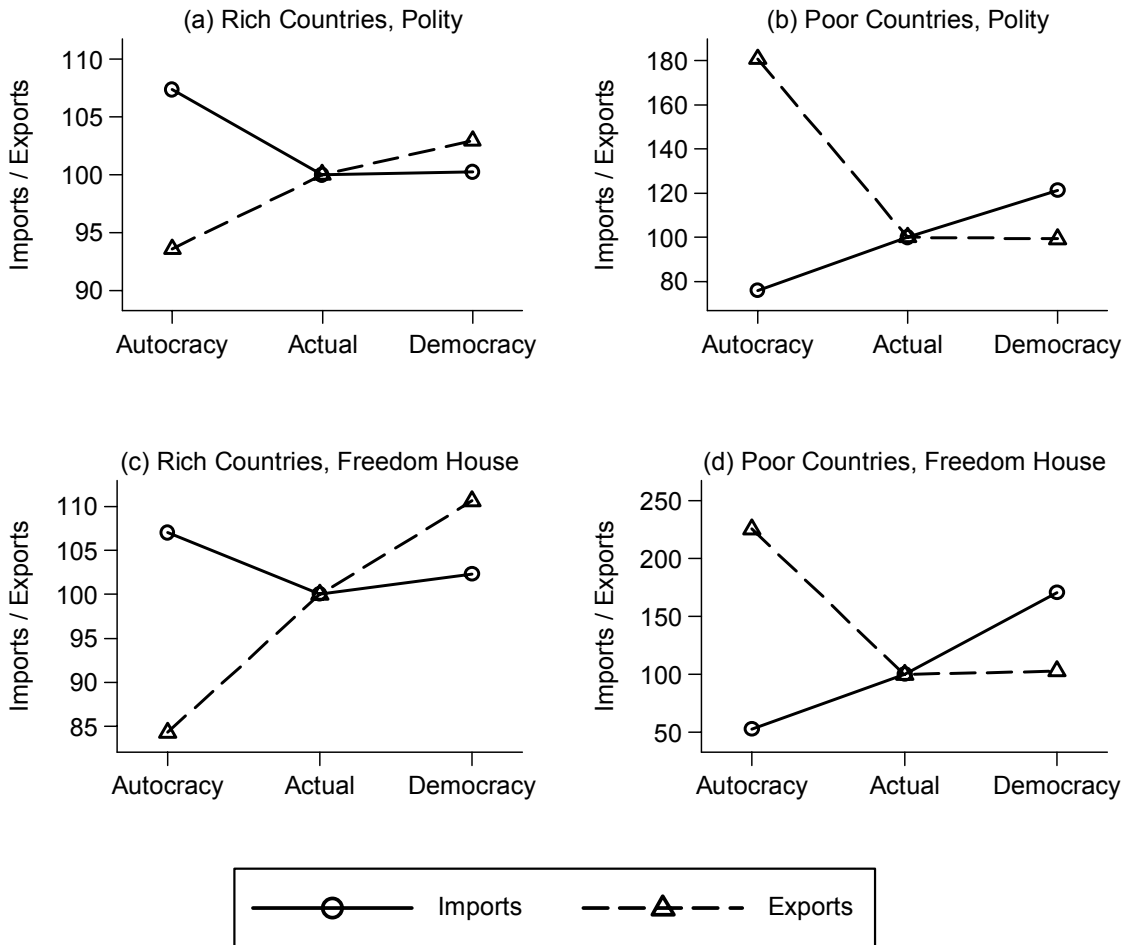


Figure 4. Estimated Global Imports and Exports under Different Regimes
 Actual Imports / Exports in 2000 = 100



Rich Population in 2000 = 2 billion

Poor Population in 2000 = 4 billion