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Democracy and Trade Discrimination

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Abstract

Scholars continue to debate the relationship between democracy and free trade. This paper contributes to this debate by showing that the effects of democracy on trade policy vary across trading partners. Because democratization shifts political power from wealthier individuals to poorer ones, it creates political pressures for trade liberalization with wealthier partners but for 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 show that democratization leads to trade discrimination against poor countries, primarily via nontariff barriers. This result explains many features of the contemporary global trading system and also highlights the need to combat discrimination in international trade.

Does democracy promote free trade? Scholars have begun to debate this question in earnest, with some arguing unequivocally that it does (Bliss and Russett 1998; Mansfield, Milner, and Rosendorff 2002; Milner and Kubota 2005) and others claiming that it does so only under certain conditions (Kono 2006; Tavares 2008). Given the global trend toward democracy (Freedom House 2002), the answer is of more than academic interest. If democracy indeed promotes trade, then the spread of democracy should reinforce the global trading system, perhaps opening markets for poor countries that have historically lacked market access. However, if democracy can lead to either liberalization or protection, then the prognosis for world trade is less clear-cut. Either way, understanding and predicting the future of the global trading system requires an understanding of the democracy-trade policy relationship.

I argue that the effects of democracy on trade policy vary not only across countries but also across trading partners. Like Milner and Kubota (2005) and Tavares (2008), I assume that democratization shifts political influence from capital to labor. This, according to Mayer (1984), should create pressures for lower tariffs on capital-intensive goods but higher tariffs on labor-intensive goods. In an augmented Heckscher-Ohlin setting, the former goods are supplied by wealthier partners and the latter by poorer partners. Democratization should thus lead to liberalization with richer partners but to increased protection against poorer ones.

This simple insight sheds light on many important developments in global trade. For example, it helps explain the evolution of the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO): why, in its early years, a GATT dominated by wealthy democracies discriminated against poor-country exports; why those poor countries, which were mostly autocratic, eschewed participation in the GATT; why the recent wave of democratization led many poor countries to join the GATT/WTO and to demand market access;

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and why this demand continues to meet resistance from the WTO's wealthy, democratic members. My results also explain a number of trends in regional trade arrangements (RTAs): why, for many years, RTAs were clubs of either rich democracies or poor autocracies; why many poor democracies have recently sought RTAs with wealthy partners; and why the implementation of North-South RTAs has often been slow. In short, the geographic spread of democracy from rich countries to poor ones potentially explains many of the central contours of the global trading system.

My results imply that waves of democratization can, depending on their composition, either help or hinder world trade. The "First Wave" (Huntington 1991), which involved wealthy countries in the early twentieth century, may have contributed to the downfall of the first era of globalization, while the "Third Wave," involving poor countries in the late twentieth century, may be reinforcing the second era. Because most remaining autocracies are poor, continued democratization augers well for world trade. Nonetheless, this process is a double-edged sword because it should lead developing countries both to open their markets to richer partners and to close them to poorer ones. It could thus lead to "hub-and-spoke" trading patterns, in which poor-country spokes trade with rich-world hubs but not with each other. This could hurt poor countries, both by reducing their market access and by diverting investment toward already capital-rich hubs. My results thus imply that the spread of democracy will require stronger efforts to combat discrimination in international trade.

Theory

Because my argument builds on Mayer's (1984) model, I summarize the latter before discussing my own extensions. In Mayer's model, trade policy is determined by the median voter, whose preferences reflect her endowments of capital and labor. If the median voter is

well-endowed with capital relative to her national mean, then she will support imports of labor-intensive goods but oppose imports of capital-intensive goods. Conversely, if the median voter is well-endowed with labor relative to her national mean, she will support imports of capital-intensive goods but oppose imports of labor-intensive goods. These hypothesized trade-policy preferences are a straightforward extension of the Stolper-Samuelson (1941) theorem and are consistent with both micro-level evidence on trade-policy preferences (Baker 2005; Mayda and Rodrik 2005; Mayda, O'Rourke, and Sinnott 2007) and macro-level studies on trade-policy outcomes (Rogowski 1989; Dutt and Mitra 2002, 2005; Tavares 2008). Because there is both micro- and macro-level support for Mayer's model, I take it as a starting point for my argument.

Like Dutt and Mitra (2002) and Milner and Kubota (2005), I assume that the median member of society is capital-poor and labor-rich relative to the national mean. This assumption is correct wherever the income distribution is right-skewed, as, empirically, it is in all countries (Milanovic 2000). Given this, median voters in all countries should seek liberalization for capital-intensive imports but protection against labor-intensive imports *if the median voter is the median member of society*.

The median voter will not be the median member of society if there are restrictions on the franchise. For example, in nineteenth-century Britain, the median voter was the median member of a small, propertied elite. More generally, if we think of the median voter as the person whose support is critical to holding power, it seems likely that this person's capital will decline with the degree of democracy. As Weyland (2002: 60) notes, "democratization reduces the political clout of the vested interests... such as protectionist business sectors and the military. At the same time, it enhances the role of the electorate, including the large mass of poor people." Democratization also reduces corruption (Sung 2004), and hence the influence of wealthier people who are more

likely to give bribes (Hunt and Laszlo 2006). Finally, as Lijphart (1997: 1) observes, wealthier individuals are more likely to engage in “intensive” modes of participation such as lobbying and making financial contributions, whereas voting “is less unequal than other forms of participation.” Because “intensive” participation confers influence in all regime types, while voting matters only in democracies, democratization should shift political influence from richer to poorer individuals. Put differently, it should reduce the median voter’s capital endowment.¹

Both Milner and Kubota (2005) and Tavares (2008) conceptualize the effects of democracy in this way. Milner and Kubota argue that democratization changes the composition of the “selectorate” (Bueno de Mesquita, Smith, Siverson, and Morrow 2003), i.e. the set of people empowered to choose leaders. According to them, “In many autocracies, this selectorate consists of...those who own the most capital (116).” Democratization, however, enlarges the selectorate “to include those who own less and less capital [so that] the median voter’s capital ownership will decline (117).” Similarly, Tavares argues that democracy shifts political power to capital-poor individuals, thus lowering the capital endowment of the median voter.

If democracy shifts power from capital-rich individuals to capital-poor ones, then it should create political pressures for lower protection against capital-intensive imports but higher protection against labor-intensive ones. Democracy should thus affect trade policy differently in different countries because, according to Heckscher-Ohlin-Vanek (HOV) theory, rich countries should import labor-intensive goods while poor countries should import capital-intensive ones. Democracy should thus lead to protectionism in rich countries but to liberalization in poor ones. This is exactly what Milner and Kubota (2005) and Tavares (2008) find: the former study only developing countries and find that democratization leads to trade liberalization, while the latter employs a broader sample of rich and poor countries and finds that democracy leads to

protection in the former but liberalization in the latter. Because both studies support the claim that democracy reduces the median voter's capital endowment, I adopt this assumption as well.

My argument is similar to Tavares's (2008), but unlike Tavares, I explore the dyadic implications of Mayer's model. Tavares employs an HOV framework in which the home country (Home) trades with the rest of the world (ROW) and the factor content of trade reflects relative factor endowments. Although this approach is useful, ROW is in fact shorthand for multiple trading partners with different factor endowments. Most countries trade with both richer and poorer partners: hence, if HOV logic also applies to dyadic trade, countries should import capital-intensive goods from wealthier partners but labor-intensive goods from poorer partners. This would imply that median-voter preferences depend on partner factor endowments: capital-poor median voters should want liberalization with wealthier partners but protection against poorer ones, while capital-rich median voters should want the opposite. If this is true, then the effects of democracy should depend on partner factor endowments as well: democratization, which shifts power from richer to poorer individuals, should encourage liberalization with wealthier partners but increased protection against poorer ones.

This hypothesis is consistent with Tavares's: wealthy democracies should still, on average, be more protectionist than poorer ones. Our hypotheses are equivalent, however, only for the two countries that are richer or poorer than all others. They diverge for countries between these extremes and are very different for middle-income countries. Whereas Tavares argues that democratization in such countries has no effect on trade policy, I argue that it leads to lower protection against some partners but to higher protection against others. Although the net effect on the level of protection may be the same, there is a huge distributional difference between an unchanged tariff and a mixture of tariff reductions and tariff hikes against different groups of

countries. Given the prevalence of middle-income countries in the ongoing wave of democratization, it is important to determine whether such distributive effects exist.

Because my argument about democracy's dyadic effects requires an extension of HOV theory to a dyadic setting, a few words about this extension are in order.² Like Dornbusch, Fischer, and Samuelson (DFS, 1980), I assume that there are two factors of production (capital and labor) and a continuum of goods that can be ranked in order of increasing capital intensity. DFS show that, if there is no factor price equalization (FPE)—so that the wage-to-rental ratio is higher in wealthier countries—the pattern of trade is determinate: countries produce goods whose factor content mirrors national factor endowments. This result holds for any number of countries: as Feenstra (2004: 93-94) notes, “If factor prices are not equal, then...a country with a capital/labor endowment higher than its neighbor's must have higher capital/labor intensities in *all of its* traded goods.”

The continuum-of-goods no-FPE model is preferable to standard HOV both because it predicts the factor content of dyadic trade and because it enjoys strong empirical support. Although many studies have rejected the basic HOV model—beginning with Leontief (1953)—Davis and Weinstein (2001) show that HOV with minor amendments predicts the factor content of trade very well. After replicating the standard null result for the basic HOV model, they show that relaxing the assumptions of common technology and factor price equalization dramatically improves model performance.³ Once one allows for cross-country differences in these factors, “countries export their abundant factors and they do so in approximately the right magnitudes,” a result that proves highly robust (Davis and Weinstein 2001: 1444). Davis and Weinstein also show that (1) FPE does not hold even among the rich OECD countries, and (2) the continuum-of-goods model with no FPE predicts trade, not only between OECD countries and ROW, but

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among OECD countries themselves. If the breakdown of FPE leads to specialization even among the wealthy OECD countries—whose factor prices are similar—then the no-FPE model is presumably appropriate for a world containing countries at very different income levels.

For my purposes, a potential problem with the no-FPE model is that countries specialize in entirely different goods. If no country produces goods exported by others, then trade liberalization will not affect the price of domestically produced goods and Stolper-Samuelson wage effects will not occur. In other words, liberalization only has Stolper-Samuelson effects if different countries' production structures overlap. Note, however, that such overlap will occur if we assume, realistically, that trade barriers exist. Why they exist is not important: for example, tariffs might reflect revenue needs rather than political-economy forces. Whatever their cause, trade barriers drive a wedge between the cost of domestic production and the tariff-adjusted cost of foreign production. This wedge causes countries to produce goods that, in a world of completely free trade, would be produced abroad. The presence of trade barriers thus causes different countries' production structures to overlap.

Under these conditions, dyadic liberalization has Stolper-Samuelson effects: liberalization with wealthier partners helps labor but hurts capital, while liberalization with poorer partners helps capital but hurts labor. The dyadic policy implications are clear: democracy, which shifts political power from capital to labor, should encourage liberalization with wealthier partners but protection against poorer ones. I now turn to tests of this hypothesis.

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. $\ln[1 + (\text{imports}_{ijt} \div \text{GDP}_{it}) \times 100]$.⁴ I add 1 to openness

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before logging because 45 percent of the openness values are zeroes and would otherwise be dropped.⁵ Although openness is not a direct measure of trade policy, it constitutes a reasonable proxy when other determinants of openness are included on the right-hand side and has two 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 both tariff and nontariff barrier (NTB) protection. Second, openness data are available for many countries and years: my sample includes 157 countries and extends from 1950 to 2000, for a maximum of 780,754 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 central interest, as they facilitate comparison with previous research on democracy and trade policy (Bliss and Russett 1998; Mansfield, Milner, and Rosendorff 2002; 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 of political rights, which ranks countries from highly autocratic (1) to highly democratic (7). Because the Freedom House measure is included mainly as a robustness check, and because results for the two measures are very similar, I restrict my discussion of substantive effects to the Polity results.

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 $\ln(\text{GDP per capita}_{it}) \div \ln(\text{GDP per capita}_{jt})$. 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 because the latter is highly correlated with alternative factor-endowment measures but is much more widely available.⁶

I test my hypothesis with $Democracy_{it} \times Ratio_{ijt}$, the interaction between democracy and the income ratio. 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 (more negative) as ratio rises. The interaction term should thus be negatively signed. For presentational convenience, I center both components of the interaction term around a mean of zero so that the coefficient on each component gives the impact of that component when the other is at its mean.⁷

I include five standard openness-gravity-model controls: partner GDP and population, dyadic distance and contiguity, and home land area. I also include five political-institutional variables that previous research has found to influence trade: partner democracy, joint alliance membership, dyadic militarized interstate disputes, joint GATT membership, and shared membership in regional trade arrangements (RTAs). A complete description of and rationale for these variables is provided in the appendix.

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

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

where $\Delta \ln(1 + Openness_{ijt})$ is the annual change in logged openness, $\ln(1 + Openness_{ijt-1})$ 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 both to guard against integration problems and because it allows us to

estimate both the immediate and the lagged effects of all variables: the former are given by γ , the latter 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. Because the error-correction model thus imposes fewer restrictive assumptions than other time-series models (De Boef and Keele 2008), it is the most general and conservative one I can estimate.

My sample consists of all countries and years for which data are available. The Polity analysis includes 157 home and partner countries and extends from 1950 to 2000, for a total of 780,754 observations. The Freedom House data are more limited, as they begin in 1973, and provide 543,331 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 1.

Table 1 about here

The top half of the table presents coefficients for the first-differenced variables, which indicate immediate effects. 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. Turning to the variables of interest, my results indicate that home democracy has no significant immediate effects on trade openness but has significant conditional lagged effects. Home democracy has a weakly significant and positive lagged coefficient, indicating that democracy promotes trade openness when Ratio is at the sample mean. 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. Given this, we cannot say how democracy affects openness at non-mean values of Ratio without calculating 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 is known as the long-run multiplier (LRM). LRMs are easily calculated by dividing the X coefficients by the coefficient on lagged openness, but this does not generate standard errors for the LRMs. I thus employ the Bewley (1979) transformation to generate these standard errors.⁸ 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.

To interpret these estimates, we must calculate conditional democracy coefficients and standard errors at different values of home-partner income ratios. Following Kam and Franzese (2007), I do this graphically in Figure 1.

Figure 1 about here

Figure 1 plots conditional democracy coefficients (on the y-axis) at different values of home-partner income ratios (on the x-axis). Coefficients are based on the LRM results and thus show the total effect of a 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 in 1(a) and the Freedom House results in

1(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 1.00 or less, has no significant effect when the income ratio is between 1.00 and 1.19, and significantly reduces openness when the income ratio is greater than 1.19. Results for the Freedom House analysis are strikingly similar, given that the two analyses employ very different samples. The openness analysis thus provides strong support for my hypothesis.⁹

The horizontal axes in Figure 1 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 50 percent of dyads, has no significant impact in 32 percent of dyads, and significantly reduces openness in 18 percent of dyads. These figures make two important points. First, it is true that democracy “generally” promotes openness, in that it promotes trade more often than it reduces it. In this sense, my results support previous research on democracy and trade. Second, however, democracy significantly reduces openness in a non-trivial proportion of cases. Although 18 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 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.

These results are robust to the exclusion of all controls, the use of country fixed effects, and the inclusion of measures of natural resource endowments and property-rights protection. They are also very consistent across decades. These robustness checks are presented in the appendix. One might be concerned that the dependent variable encompasses intra-firm trade, whose determinants lie outside my theory. To the extent that this is true, however, the inclusion of intra-firm trade should weaken my results. It is thus striking that the results hold up so strongly across different model specifications, samples, and time periods.

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

Democracy and Trade Barriers

Although the trade openness results are suggestive, it is useful to examine the effects of democracy on more direct measures. Doing so allows us to determine (1) whether democracy in fact affects openness via trade policy, and (2), if so, which forms of protection underlie the democracy-openness relationship. The latter question is important because the rules of the global trading system may make it harder to discriminate among trading partners with some policies 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. In contrast, GATT/WTO members have historically used NTBs such as voluntary export restraints and antidumping duties in a discriminatory fashion. In some sectors, such as textiles and clothing, discriminatory NTBs have even been institutionalized in agreements such as the Multi-Fiber Arrangement. Hence, to the extent that democracy leads to discrimination among partners, this should occur primarily through the discriminatory use of NTBs.

I hypothesize that, if MFN prevents discrimination, democracy will lead to lower tariffs against all partners. The logic is as follows. The median voter would like free trade with wealthier partners but protection against poorer partners. However, if discrimination is not possible, then the median voter must choose a single tariff rate for all partners. In choosing this rate, the median voter will assign greater weight to wealthier partners because the latter supply the bulk of most countries' imports: on average, in my sample, wealthier partners provide 80 percent of imports while poorer partners provide only 20 percent. Because the economic impact of rich-partner imports outweighs that of poor-partner imports, the median voter will want a low MFN tariff even if this nondiscriminatory rate is suboptimally low for poorer partners.

Democratic governments that choose a low MFN rate can satisfy the median voter's wish for protection against poorer partners through the discriminatory use of NTBs. Because the incentives to employ compensatory NTBs rise with the home-foreign income ratio, democracy should have positive effects on NTBs that grow larger as this ratio rises. Hence, if the MFN constraint is binding, democracy should have unconditional negative effects on tariffs but conditional positive effects on NTBs that rise with the home-foreign income ratio.

I test these hypotheses with two standard measures of trade protection from the United Nations Commission on Trade and Development's *Trade Analysis and Information System* (TRAINS). *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. Although TRAINS provides multiple years of data for some countries, the data do not permit time-series cross-section analysis. Over one-third of countries have data for only one year; the average number of years is only three for tariffs and two for NTBs; and

observations are unevenly spaced, separated by anywhere from one to seven years. I thus create a purely cross-sectional dataset by averaging values for all variables across available years.¹⁰

Most of the independent variables are the same as in the previous analysis, except that, like the dependent variable, they have been averaged across the years for which trade barrier data are available. I do, however, include several new variables that may influence trade policy: government spending as a percent of GDP, economic growth rates, and dyadic export dependence.¹¹ I also include *MFN Tariff_{ij}* in the NTB regressions because previous research shows that the decision to use NTBs is affected by prior tariff levels (Busch and Reinhardt 1999; Mansfield and Busch 1995). This should particularly be the case if, as I expect, NTBs are used to compensate for suboptimally low tariffs against poor countries. I do not include NTBs as a control in the tariff regressions because theory and empirical evidence suggest that tariffs are exogenous to NTBs. Because tariffs are bound by GATT rules, governments are more likely to treat prior tariff levels as constraints; and, empirically, studies show that causality runs from tariffs to NTBs and not vice-versa (Ray 1981).

Because both dependent variables are bounded from below at zero, I perform Tobit regressions, although I obtain very similar results with ordinary least-squares. Since a country's trade policies toward different partners are not independent, I adjust for the non-independence of dyadic policies with robust standard errors clustered by country. Results are shown in Table 2.

Table 2 about here

Democracy has the expected effects on both tariffs and NTBs. Beginning with tariffs, the significant negative democracy coefficients indicate that democracy leads to lower MFN tariffs when the income ratio is at its mean. The interaction terms are insignificant, implying that

democracy's impact on tariffs does not vary significantly across income ratios. The tariff results (and conditional coefficients, not presented here) thus show that democracy leads to lower tariffs against all partners. This suggests that the MFN rule indeed discourages tariff discrimination.

In contrast, the NTB results indicate that democracy has conditional positive effects on NTBs. The significant positive democracy coefficients indicate that democracy leads to higher NTBs at mean income ratios. This is encouraging, since it is consistent with my theoretical prediction that democracy will lead to slightly higher protection at the sample mean ratio of 1.03. The significant positive interaction terms show that democracy's positive impact on NTB protection grows larger as the income ratio rises. Conditional democracy coefficients and their confidence intervals provide further support for this conclusion, as shown in Figure 2.

Figure 2 about here

Figures 2(a) and 2(b) present the impact of the Polity and Freedom House measures, respectively, on NTB coverage. Both figures show that democracy has approximately zero impact on NTB coverage when the home-to-foreign income ratio is at the sample minimum, but that democracy's impact becomes more positive as the income ratio rises. The protectionist effects of democracy on NTBs become significant at a home-foreign income ratio of .98.

Together, the tariff and NTB results provide a compelling explanation for the observed effects of democracy on trade openness. At low income ratios, democracy's liberalizing effects on tariffs outweigh its protectionist effects on NTBs. However, as the income ratio rises, the protectionist NTB effect grows stronger, eventually outweighing the tariff effect. The trade-barrier results thus reinforce the openness results, and the close correspondence between the two increases confidence in the theory.¹²

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

I structure my discussion of substantive effects around two questions. First, what, historically, has been the global impact of democratization? Second, what will future democratization bring? Because democracy has different effects on rich and poor countries, I answer these questions for each group. I do this by comparing actual imports and exports in 2000 with predicted imports and exports under two alternative scenarios: (1) a fully autocratic world in which all countries have Polity scores of -10, and (2) a fully democratic world in which all countries have Polity scores of 10. To calculate predicted imports, I first determine how much each country's 2000 Polity score would have to change to equal -10 or 10. I then combine these changes in Polity scores with the conditional Polity coefficients from the openness analysis to predict each country's 2000 imports under each scenario. Finally, I sum predicted imports across rich home countries, on the one hand, and poor home countries on the other, where rich and poor countries are those with per capita incomes above and below the 2000 global median, respectively. I perform similar calculations for exports and present results in Figure 3.

Figure 3 about here

Figure 3(a) presents results for rich countries, while 3(b) presents results for poor countries. 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 variation in exports.

3(a) shows that, under global autocracy, rich countries would have imported 8 percent (\$416 billion) more than they actually did in 2000 because these countries would have imported more from poor ones had they been more autocratic. However, rich countries would have exported 5.6 percent (\$286 billion) less under global autocracy because poor countries would have imported less from rich ones had they been more autocratic. If we treat these differences as the historical impact of democratization in all countries to their 2000 levels, we can say that global democratization has substantially reduced rich countries’ imports but substantially increased their exports. Further progress to full global democracy would, in contrast, have little impact on rich-country imports because most rich countries are already democratic. It would, however, boost rich countries’ exports by 2.7 percent (\$139 billion) because currently undemocratic poor countries would import more from rich ones.

3(b), which illustrates poor-country trade under the same scenarios, is the mirror image of 3(a). Under global autocracy, poor-country imports would have been 22 percent (\$139 billion) lower than they were in 2000 because poor countries would have imported less from rich ones. However, poor countries would have exported 81 percent (\$564 billion) more than they did in 2000 because rich countries would have imported more from poor ones. Historically, global democratization has thus greatly boosted poor countries’ imports but has even more dramatically

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lowered their exports. Further democratization would boost poor-country imports by 19 percent (120 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.¹³

Finally, total predicted global trade is higher under both full autocracy and full democracy than it actually was in 2000. Going from full global autocracy to the status quo in 2000 reduces total world trade by 4.8 percent (\$278 billion) because the fall in rich-country imports outweighs the rise in poor-country imports. In this case, the rich-country effect dominates because democratization occurs mainly in wealthier countries. In contrast, going from the 2000 status quo to full global democracy raises total world trade by 2.2 percent (\$129 billion) because the rise in poor-country imports outweighs the fall in rich-country imports. In this case, the poor-country effect dominates because democratization occurs primarily in poor countries.

These results underline two points. First, waves of democratization can either help or hinder world trade, depending on their composition. Although the recent wave of democratization in the developing world has boosted world trade, my results imply that earlier democratization in rich countries reduced it. Second, although democratization can either raise or lower trade on balance, it always helps relatively wealthy exporters while hurting relatively poor ones. Hence, although the ongoing wave of democratization should promote trade on balance, it should also lead democratizing poor countries to discriminate against each other. As I discuss below, this is cause for concern.

Conclusion

When the GATT was formed in 1947, it consisted of twenty-three mostly wealthy countries. Although it later grew to include many poor countries, GATT negotiations continued to prioritize market access for rich-world exports (Srinivasan 1999). The reasons for this bias are

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disputed: some blame Northern protectionism, while others claim that poor countries pursuing protectionist development strategies marginalized themselves. Most observers, however, would probably agree that the South's marginalization in GATT negotiations reflected a historical reluctance in both rich and poor countries to liberalize North-South trade.

This seemed to change during the Uruguay Round (1986-1994), when many poor countries not only pushed aggressively for access to rich-world markets but also seemed ready to open their own markets in return. This activism led to agreements on agriculture, textiles, and clothing, which promised to phase out protection in these sectors. However, although the Uruguay Round promised to bring poor countries into the world trading system, this promise remains unfulfilled. The Doha "Development" Round has foundered amidst accusations that Northern countries still restrict Southern exports. Protests against Northern agricultural policies led to the collapse of talks in Cancun in 2003 and the suspension of the Doha Round in 2006. And, although the Agreement on Textiles and Clothing eliminated formal textile quotas, wealthy WTO members have continued to impose numerous safeguard actions against textile imports (Reinert 2000). Integrating poor countries into the world trading system has thus proved more difficult than the WTO's architects had foreseen.

This paper provides a simple explanation for these events. The GATT was formed by a group of rich democracies at a time when most poor countries were autocratic. Because each group of countries had political incentives to restrict trade with the other, mutual protection was a political equilibrium that served the interests of all. This changed when the Third Wave of democratization led poor countries to seek trade with the North. However, although this wave promoted liberalization in poor countries, it had less effect in rich ones because most of the latter were already democratic. Hence, although Southern governments have put their concerns on the

negotiating agenda, they continue to face resistance from the North. The implementation of Uruguay Round agreements has thus been disappointing, and global trade talks have stalled.

The spread of democracy may also explain trends in regional trade arrangements. First, my theory implies that the scarcity of poor democracies prior to the 1980s should have limited the number of North-South RTAs during this period. This seems to be the case: regionalism in the 1960s and 1970s consisted almost wholly of North-North and South-South arrangements. Second, my theory implies that recent democratization in poor countries should have led the latter to initiate RTAs with Northern partners. This also seems to be true: for example, Mexico proposed the North American Free Trade Agreement (NAFTA), just as the countries of Central and Eastern Europe sought free-trade associations with the European Community (EC). Finally, my theory implies that North-South RTAs should face more resistance in Northern democracies than earlier North-North ones. Hence, for example, the US domestic debate over NAFTA was much more acrimonious than the earlier debate over the Canada-US FTA (Mayer 1998), and EC accession negotiations have consistently taken longer for poorer applicant states. The spread of democracy from the rich North to the poor South may thus explain the central features of regional as well as multilateral trade arrangements.

This account of recent economic history raises some questions. First, although my argument explains why poor countries have sought trade with the North, it does not explain why—despite some implementation problems—rich democracies have been receptive. Here, I surmise that Southern liberalization has altered the incentives for Northern governments to open up to poor countries by creating new export markets and investment opportunities for Northern capital. To exploit these opportunities fully, Northern capital has sought not only market access for capital-intensive goods but also WTO agreements such as those on Trade-Related Intellectual

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Property Rights and Trade-Related Investment Measures. Because Southern governments have made their consent to these measures contingent on liberalization by the North, Northern capital has greater incentives to push for domestic liberalization. New market opportunities in the South have thus increased the value of domestic liberalization to Northern capital, and this rise in the intensity of capital's preferences has moved policy in a liberal direction.

A similar argument can be made about US-China trade, which has grown in recent years and assumed great political importance. This development seems puzzling because neither country's regime type has changed: the US is a stable democracy and China a stable autocracy; hence both countries have stable incentives to protect their markets against each other. Note first, however, that China has not clearly reduced its barriers to US exports.¹⁴ The puzzle thus largely concerns US trade policy toward China, which has become undeniably more liberal. My explanation again invokes new market opportunities—this time arising from China's spectacular economic growth—which have led to a huge rise in US foreign direct investment in China. This rise in investment exposure has increased the value of international rules that protect the returns on these investments; hence US investors have pushed hard for China's entry into the WTO and its rules on intellectual property rights and investment. Liberalizing agreements such as Permanent Normal Trade Relations with China have been stepping-stones toward this goal.¹⁵

In sum, new opportunities in the South—created either by more liberal policy orientations or by economic growth—have increased the intensity of Northern capital's desire to bring poor countries under WTO discipline. These capital owners have sought domestic liberalization as a means toward this end. Northern liberalization with poor countries can thus be seen as a reaction to developments in the South. This does not weaken my conclusion that rich democracies should be protectionist toward poor partners: this conclusion is *ceteris paribus* in

nature, and Northern liberalization might well have been greater if wealthy countries had been less democratic. This argument does suggest, however, that democratization may have systemic as well as domestic trade-policy effects because democracy-induced liberalization in one country affects the incentives to liberalize in others. Analysis of these effects via a model that includes interstate bargaining would be a useful direction for future research.

If democratization continues, and global trade talks are revived, poor countries should continue to liberalize trade. However, my results imply that they will do so discriminatorily, opening up to wealthier partners but maintaining or even increasing protection toward poorer ones. Continued democratization could thus lead to hub-and-spoke trading patterns in which developing-world spokes trade with developed-world hubs but not with each other. This could hurt developing countries: because hub exports enjoy access to all spoke markets while spoke exports do not, hub-and-spoke relationships create strong incentives for exporters to invest in hubs rather than spokes. Such relationships thus divert investment away from capital-poor spokes toward capital-rich hubs (Baldwin 1994). Since poor countries need investment to grow, this is cause for concern.

My trade-barrier results suggest that this problem is not insurmountable. Although the NTB results show that countries discriminate with NTBs, the tariff results imply that the MFN rule has prevented countries from discriminating with tariffs. WTO rules are thus, in principle, able to prevent discrimination. The challenge lies in extending MFN discipline to NTBs, some of which (e.g. antidumping duties) are inherently discriminatory. Although this task will be difficult, it may also become the WTO's most pressing task. If democratization indeed creates pressures for both liberalization and discrimination, then the GATT/WTO's value in the future may depend less on its ability to deliver the former than on its capacity to prevent the latter.

Notes

¹ As this discussion suggests, political influence stems not only from voting but also from other activities such as lobbying and bribery. The median-voter framework is thus best viewed, not literally, but as a metaphor for the way in which democracy shifts power from wealthier to poorer individuals.

² For a more detailed discussion, see the appendix at <http://journalofpolitics.org/>.

³ Allowing for trade costs and nontraded goods improves model performance still further.

⁴ Dyadic trade and GDP data are from Gleditsch's (2002) Expanded Trade and GDP Data Set.

⁵ Results are similar if I employ unlogged openness or the log of openness alone.

⁶ For example, the correlation between GDP per capita and capital stock per worker is .90.

⁷ Centering does not affect any conditional estimates. However, without centering, the coefficient on each component gives its impact when the other equals zero—a value that, for the income ratio, empirically never exists. For uncentered results, see the appendix.

⁸ See De Boef and Keele (2008) for further discussion of Bewley's method.

⁹ In theory, democracy should increase openness when $\text{Ratio} < 1$ and decrease openness when $\text{Ratio} > 1$. In practice, democracy's impact equals zero at 1.10, or slightly above the predicted tipping point. This anomaly probably exists because democracy promotes trade unconditionally by strengthening domestic property rights. Including property-rights protection on the right-hand side shifts the intercept down by .10 (without changing the conditional relationship), thus eliminating this anomaly. Because including this variable truncates the sample greatly, I omit it from the final analysis. Results of the property-rights regressions are available in the appendix.

¹⁰ The cross-sectional analysis assumes that the independent and dependent variables have reached their equilibrium relationship. However, to the extent that this is not true, my

hypotheses are less likely to be supported.

¹¹ The openness and trade-barrier models are not identical because not all determinants of openness are determinants of trade policy, and some determinants of trade policy, such as GDP growth, are indirectly incorporated into the openness analysis. A description of and rationale for the trade-barrier controls can be found in the appendix.

¹² An alternative explanation for my results might invoke intra- versus inter-industry trade, since North-North trade tends to be intra-industry while North-South trade tends to be inter-industry. However, this alternative fails to explain the South's recent liberalization with the North and the conditional relationship between democracy and trade policy. Another explanation is that democracy empowers voters-as-consumers, who demand access to high-quality goods from wealthy partners. This does not explain, however, why democracy leads to protection against poor partners. For further discussion of these alternatives, see the appendix.

¹³ One might ask whether these predicted effects are macroeconomically plausible, since any rise in imports not financed through higher exports must be financed through foreign borrowing. My results imply that even a shift to full global democracy or autocracy never worsens the trade balance of either the rich- or poor-country groups by more than 1.2 percent of group GDP. Empirically, many countries have sustained trade deficits larger than this for long periods of time. The above predicted effects thus seem plausible, if not indefinitely then for very long time spans. For further discussion, see the appendix.

¹⁴ For data on this point and further discussion of the U.S. China case, see the appendix.

¹⁵ As predicted, a majority of Americans opposed such liberalization (Program on International Policy Attitudes 2000).

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Table 1. 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>				
$\Delta Democracy_{it}$	.000 (.003)		.010 (.013)	
$\Delta(Democracy_{it} \times Ratio_{ijt})$	-.020 (.021)		-.051 (.088)	
$\Delta Ratio_{ijt}$	-.040 (.010)**		-.031 (.012)**	
$\Delta Democracy_{jt}$	.002 (.003)		.020 (.011)*	
$\Delta \ln(GDP_{jt})$	.010 (.002)**		.013 (.002)**	
$\Delta \ln(Population_{jt})$	-.016 (.004)**		-.018 (.004)**	
$\Delta Alliance_{ijt}$	.007 (.002)**		.009 (.003)**	
ΔMID_{ijt}	-.012 (.003)**		-.015 (.003)**	
$\Delta GATT_{ijt}$	-.002 (.001)**		-.003 (.001)**	
ΔRTA_{ijt}	.025 (.010)**		.025 (.011)**	
<i>Lags</i>				
$Democracy_{it-1}$	.002 (.001)*	.045 (.023)*	.011 (.005)**	.214 (.090)**
$Democracy_{it-1} \times Ratio_{ijt-1}$	-.024 (.004)**	-.484 (.085)**	-.122 (.016)**	-2.29 (.319)**
$Ratio_{ijt-1}$	.008 (.001)**	.156 (.014)**	.009 (.001)**	.163 (.016)**
$Democracy_{jt-1}$	.011 (.001)**	.224 (.019)**	.030 (.004)**	.571 (.069)**
$\ln(GDP_{jt-1})$	.004 (.000)**	.076 (.003)**	.004 (.000)**	.075 (.003)**
$\ln(Population_{jt-1})$	-.001 (.000)**	-.029 (.002)**	-.002 (.000)**	-.032 (.003)**
$\ln(Distance_{ijt-1})$	-.003 (.000)**	-.058 (.003)**	-.003 (.000)**	-.055 (.003)**
$Contiguity_{ijt-1}$	.008 (.001)**	.162 (.025)**	.009 (.001)**	.173 (.025)**
$Alliance_{ijt-1}$	.003 (.000)**	.055 (.010)**	.003 (.001)**	.052 (.011)**
MID_{ijt-1}	-.014 (.002)**	-.286 (.046)**	-.016 (.003)**	-.301 (.060)**
$GATT_{ijt-1}$	-.001 (.000)**	-.013 (.003)**	-.000 (.000)	-.002 (.003)
RTA_{ijt-1}	.013 (.002)**	.257 (.049)**	.012 (.003)**	.234 (.049)**
$\ln(Land_{it-1})$	-.001 (.000)**	-.010 (.001)**	-.001 (.000)**	-.011 (.001)**
$\ln(Openness_{ijt-1})$	-.049 (.003)**		-.053 (.003)**	
Constant	-.032 (.002)**			
Observations	780,754		543,331	
F (P > F)	43.90 (0.0000)		34.74 (0.0000)	
Dependent Variable: $\Delta \ln(Openness_{ijt})$				
*p<.10 **p<.05 Robust-cluster standard errors in parentheses				
All democracy coefficients multiplied by 100				

Table 2. 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	-.574** (.196)	-1.71** (.538)	1.10** (.490)	2.59* (1.50)
Democracy _i × Ratio _{ij}	-.473 (.694)	-1.12 (1.98)	2.44** (1.14)	6.61* (3.85)
Ratio _{ij}	-11.0** (4.30)	-12.6** (4.54)	9.11 (9.62)	14.4 (10.3)
Democracy _j	-.134** (.038)	-.511** (.155)	.529** (.148)	1.97** (.527)
Government Spending _i	.129 (2.18)	-.306 (2.14)	-14.2** (4.64)	-13.9** (4.75)
Growth _i	.064 (.232)	.060 (.223)	1.10 (.808)	1.04 (.832)
ln(Export Dependence _{ij})	-4.84** (1.55)	-4.74** (1.54)	14.0** (3.11)	13.9** (3.21)
Alliance _{ij}	-1.70* (1.00)	-1.61* (.960)	8.80** (2.29)	9.39** (2.30)
MID _{ij}	.054 (1.92)	-.182 (1.75)	11.0** (4.91)	12.0** (4.75)
GATT _{ij}	3.58** (.991)	3.25** (1.07)	2.20 (3.25)	3.56 (3.29)
RTA _{ij}	-3.04** (.921)	-3.54** (.997)	8.44* (4.69)	7.86* (4.77)
Tariff _{ij}			.598** (.224)	.542** (.222)
Constant	12.3* (6.55)	15.6** (6.63)	7.61 (12.0)	-.887 (12.4)
Uncensored Observations	13,005	13,254	3,181	3,141
Left-Censored Observations	271	272	6,532	6,866
Countries	87	88	74	75
χ^2 ($p > \chi^2$)	79.81 (0.0000)	93.72 (0.0000)	106.38 (0.0000)	80.29 (0.0000)

*p<.10 **p<.05 Robust-cluster standard errors in parentheses





