Chapter Eight

Trade Policy Openness, Government Spending, and Democratic Consolidation

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The current political environment in the United States demonstrates clearly that trade policy can be a highly contentious issue within democracies. Despite low unemployment and a growing economy, members of Congress have increasingly demanded that protectionist barriers be raised against trade with China. In the 2004 presidential election, the protectionist message of John Edwards appeared to resonate with middle-class workers, even though the vast majority of them probably benefit from trade openness (via cheaper consumer goods), and a relatively small percentage of them will actually lose their jobs as a result of trade. Part of the reason for this apparent contradiction may well reside in the lack of an extensive social insurance policy for those who do lose their jobs as a result of trade: even though a majority may expect to benefit from trade ex ante, a majority might still reject openness because its downside risks are too high in the absence of insurance (see, for example, Fernandez and Rodrik 1993). That such a dynamic shows signs of influencing public policy even in the United States, with its large internal market that is relatively isolated from shocks in the global economy, suggests that sustaining openness in democracies that lack substantial social safety nets may be a dicey proposition (Adsera and Boix 2002).

In the United States, if the anxiety generated by trade policy openness combined with limited social insurance were indeed to become a primary issue determining how people cast their votes, policy would likely change—either in the direction of less openness to the global economy or more welfare state spending. But as Adsera and Boix (2002) note, a third possibility lurks at the margins: actors who expect with a high degree of certitude that they will benefit from openness (and hence who don't stand to benefit from insurance) might try to circumvent democratic institutions and impose openness through a dictatorship. In a country with firmly entrenched democratic institutions like the US, such a possibility is remote. On the other hand, such a dynamic would seem more plausible at the margins within a country with relatively fragile democratic institutions. In this chapter we hypothesize that democracies that are both open to trade and that do not provide substantial social insurance are more prone to failure than democracies that are either closed to trade or that maintain high levels of social insurance. Initial results utilizing a new measure of trade policy openness are promising.

Openness, Spending, and Democratic Consolidation

The general relationship between democracy and trade openness is subject to considerable theoretical and empirical debate. In autocratic regimes the orientation of trade policy will obviously depend upon the particular desires of the (non-elected) leadership. An autocratic government might pursue trade liberalization in an effort to maximize tax returns over the long-term by increasing economic efficiency and hence aggregate economic output—such a government may well be more insulated, after all, from lobbying by domestic groups that favor trade protection (see Haggard

1990). On the other hand, autocratic governments often appear to draw strong political support from small, powerful groups in the political system that favor protection, and frequently use trade barriers in ways aimed at distributing benefits that consolidate their rule and maximizing tax revenues in the short term (see Wintrobe 1998). Democratization may well be compatible with trade liberalization in nations in which a majority of voters would stand to gain demonstrably via higher real wages (Milner and Kubota 2005), but whether this is actually the case in any particular nation should hinge on local endowments of labor and other factors of production relative to trading partners (see Dutt and Mitra 2002). Policy outcomes in democracies may also vary considerably depending on the types of electoral institutions that are put in place (Rogowski 1987). While the recent rush to free trade in the developing world has coincided with the spread of democracy in a general way, just which of these phenomena is the cart and which is the horse is not very clear. Increasing trade openness appears to have pre-dated democratic reform in many cases— e.g. Chile, Turkey, Taiwan, and South Korea (and now China)—but not others (see Haggard and Webb 1994).

Although frequently overlooked in many empirical studies of the causes of democratization (e.g. Przeworski et al. 2000), a growing body of work has recently considered the effects of economic openness—measured in terms of either trade or capital flows—on democracy, with divergent conclusions. Li and Reuveny (2003) provide an excellent overview of these conclusions. Arguments that *trade* openness facilitates democracy tend to focus on the societal demands that trade generates. Trade, for example, can spark development; citizens in developed countries, in turn, demand greater influence over political decisions (e.g. Lipset 1994). Trade can facilitate income equality, especially in labor-abundant developing economies in which demand for labor

rises in line with increased exports of labor-intensive goods, and this shift in the distribution of income itself tends to be associated with democracy (see Acemoglu and Robinson 2001; Rueveny and Li 2003). Or trade might generate a new international business constituency with a vested interest in peace, and peace, in turn, is most likely to be achieved in the presence of democracies (e.g. Oneal and Russett 1997, 1999). Empirical findings are mixed. Li and Reuveny (2003) themselves find that trade openness is negatively associated with democratic institutions: in analyzing a large sample of countries over the years 1970-1996, the authors find that higher levels of trade openness are associated with lower levels of democracy. On the other hand, Milner and Kubota (2005) find that democracy is correlated with lower tariff rates in developing countries. This finding appears generally consistent with Boix and Garicano's (2001) argument that the effect of trade openness on democracy is itself contingent on the distribution of factors within a particular economy. When skilled workers are the abundant factor, trade openness increases inequality within society (driving up the wages of skilled workers, deflating the wages of already poorer unskilled workers), and growing inequality is not conducive to democratic stability.

A separate, but related, literature considers the relationship between economic openness and government spending. Specifically, several studies have found that openness to trade is broadly correlated with the size of the public sector (Cameron 1978; Rodrik 1998; Garrett 1998; Adsera and Boix 2002). One explanation given for this relationship is that integration into world markets increases specialization within an economy. Increased specialization, in turn, implies less diversification and hence greater exposure to the risks arising from volatility in the global economy. To hedge against these risks, states that are open to world markets increase public expenditures to compensate losers (Katzenstein 1985) and expand the size of the non-exposed

public sector (Rodrik 1998).[1] Leaving aside the rather questionable argument that greater trade openness will generate more (rather than less) volatility in incomes in all instances, "race-to-the-bottom" arguments challenge the tenability of this relationship into the future, particularly in an era of global capital markets that might put pressure on governments to lower tax rates in order to be a more hospitable locale for international investors who might finance export industries. The degree to which national governments in different types of economies may still have room to finance generous welfare states even in the context of large international flows of capital is, of course, still hotly debated (see Garrett 1998; Mosley 2003).

A handful of recent studies bridge the gap between these two literatures, arguing that social spending, economic openness and democracy should be considered simultaneously (Adsera and Boix 2002, Rudra and Haggard 2005, Rudra 2005). Rudra (2005) argues that previous studies considering the relationship between democracy and economic openness do not sufficiently consider the political dynamics underlying such a relationship, and shows that increased trade and financial openness only lead to greater democracy when social spending also increases.[2] Similarly, Adsera and Boix (2002) argue that previous studies linking public expenditures with trade openness do not adequately consider the political mechanisms that give rise to the relationship. These studies view government spending in largely functionalist terms: something that makes integration into world markets politically feasible. This view strikes the authors as implausible in light of the redistributive characteristics of trade and fiscal policies. Instead, Adsera and Boix argue that three different equilibria relating government spending, openness and regime type are equally plausible. First, policymakers may simply choose not to integrate into world markets: by insulating their domestic economies, they don't need to worry about compensating the losers from trade, and hence

can limit the amount of income redistribution that they pursue. Second, the winners from trade could strike a bargain with potential losers, such that redistribution programs to compensate those hurt by trade are set up as a precondition for economic openness. Here, open regimes would coexist with relatively large public sectors. Finally, those who benefit from trade can open the economy without compensating losers, but are only able to do so if they manage to exclude potential losers from the decision-making process. This normally requires that they operate within an authoritarian setting, or (simultaneously) establish such a setting! The model hinges on a group of swing voters who benefit from trade during global economic upswings, but are hurt substantially during global recessions. Given uncertainty about future world economic conditions, free trade interests can only garner the support of these voters—and hence win elections—if they offer redistributive packages designed to compensate actors who suffer in an open economy when global markets are in recession. These effects, the authors emphasize, should occur at the margins, as other factors also influence regime type and government spending decisions.

We expand the logic of this argument by applying it to regime stability. Imagine a democratic regime that is both open to trade and that does not provide substantial compensation to those harmed by trade. In the context of the Adsera-Boix model, this outcome is clearly out of equilibrium, though it can easily be imagined how such an outcome might come about. Obviously, it could be that other issues are more salient politically than the issue of gains and losses associated with trade. Alternatively, one might speculate that in a period of global economic growth, swing voters who benefit from trade in boom times and lose from trade in bust times might acquiesce to an open regime absent compensation for as long as they expect the world economy to continue thriving. But the sustainability of such an outcome is tenuous, ceteris paribus. Over time, swing

voters demand insurance in exchange for their support of a free trade regime, particularly if global economic prospects worsen; otherwise, many will prefer a shift toward protectionism. In a democratic setting, policy should move in one of these directions over time, all else equal.

To actors who always benefit from free trade, either of these possibilities is costly, and they may well try to resist. In Adsera and Boix's model, therefore, a third possibility exists: the strongest advocates of free trade might try to impose a dictatorship in order to maintain trade openness without redistribution. Of course, in most democracies, this outcome is highly unlikely: in institutionalized democracies, coups are rare. But within a democracy that is for other reasons already relatively susceptible to failure, such a possibility should not be dismissed. Again, since we are here considering open democracies that don't provide government compensation, free trade interests would be the status quo party in our scenario—they are the ones in charge already, and as such they likely hold considerable influence over the instruments of state coercion. All else equal then, democracies that are both highly open and that do not provide compensation for those citizens exposed to losses from a shift in world markets should be especially susceptible to democratic breakdown or failure.

Hypothesis: *Democracies that are both open to trade and have limited government spending are more prone to failure, ceteris paribus, than other democracies.*

Plausibility probes

Before proceeding to the quantitative analysis, it would perhaps be useful to first consider a handful of historical cases to determine the plausibility of the causal argument outlined above. The discussion here is necessarily cursory, and in no way represents a rigorous test of our hypothesis. Rather, we simply aim to show that the interaction between openness to trade and government spending sometimes appears to be a salient factor influencing the stability of democratic regimes. To the extent such factors do appear to be salient, it both justifies undertaking a more systematic empirical test of our hypothesis and improves our confidence that any confirming findings generated by a large-n study are not spurious.

Stable democracies

As Adsera and Boix (2002) show, many of the world's most stable democracies over the course of the 20th century either combined openness to trade with high levels of government spending, or alternatively, pursued limited government spending while maintaining more limited exposure to trade. In Britain, for example, the expansion of the franchise in the 19th century put the laissez-faire system combining trade openness and limited government under increasing strain. By the early 20th century, the pro-free trade Liberal Party began to implement a number of compensation programs, such as an old-age pension program and unemployment insurance (the Labor Party would later advocate similar policies). Though the Conservatives pushed for—and in the 1930s enacted—more protectionist measures as an alternative, the country after 1945 clearly moved into "the camp of open borders and sizable public intervention." A similar dynamic occurred in Scandinavia (Adsera and Boix 2002). More recently, while the Franco dictatorship in Spain pursued—after the late 1950s—trade liberalization without significant increases in government spending, since the transition to democracy in the mid-1970s Spain has combined continued trade liberalization with

dramatic increases in government spending (Adsera and Boix 2002). Australia and New Zealand, meanwhile, pursued more limited government spending but higher protectionist barriers to trade over much of the 20th century (Adsera and Boix 2002). To this list we might add the United States; though by some measures the U.S. is actually relatively open to trade, workers' exposure is more limited here due to the large domestic market (and, hence, the low ratio of trade to GDP). India, one of the most enduring democracies among developing countries, has of course maintained very high protectionist barriers to trade since it achieved independence; only in the 1990s did it begin to dismantle some of these barriers.

Cases of democratic breakdown: Chile and Argentina

Now consider two cases that suffered well-known democratic breakdowns during the 20th century: Argentina and Chile. To what extent can the causal processes outlined in the previous section help us to understand transitions to authoritarianism in these countries?

In Argentina, events preceding the 1930 military coup appear at least somewhat consistent with the argument. During the late 19th century and early 20th century, conservative agricultural interests dominated a political system that limited voting rights to the upper classes. In turn, the country embraced a liberal trade policy where it exported—according to its comparative advantage—agricultural products in exchange for manufactured goods; the government's role in the economy, moreover, was generally quite limited (Manzetti 1993: 24-5; on trade policies, see also Berlinski 2003). Following electoral reforms in 1912—which expanded the suffrage—Conservative dominance waned and Radical administrations governed the country from 1916 until the 1930 coup. The Radicals continued to promote open trade policies—in part because landowning elites

continued to hold important posts in the government—but tried to garner support among the middle class via political patronage, and in particular by increasing the number of government jobs (Manzetti 1993: 31-2). As Manzetti (1993: 33) writes, these policies produced a "fiscal deficit on the eve of the Great Depression," which in turn led "commercial and land-owning elites [to] put pressure on the government to cut its deficit and redirect funds" away from social programs. These pressures culminated in a military coup which reasserted conservative rule. In short, it seems that the combination of open trade policies and limited government efforts at redistribution was a destabilizing factor within the increasingly democratic political system that emerged in the 1910s. Radical efforts to placate middle class voters via patronage (and the growing fiscal imbalances and corruption problems that resulted), in turn, helped to trigger a conservative backlash—though other factors were of course salient, such as the growing world economic crisis.

In Chile, on the other hand, the causal processes that we specified in section II do not appear to be particularly central. Here, a 1973 military coup violently ended the presidency of Salvador Allende, ushering in the brutal Pinochet dictatorship that would rule the country through the 1980s. For the 15 years preceding the coup Chilean politics were characterized by a tripartite split; the presidency was held alternatively by the Right, Center, and Left during this period (Oppenheim 1993: 22). The Right's candidate, Jorge Alessandri, won the 1958 election and proceeded to implement orthodox, pro-market and pro-foreign investment economic policies that eschewed a large government role— expecting instead that wealth would trickle down to the poor via a capitalist development model (Oppenheim 1993: 23). But government spending began to increase later in Alessandri's term— partly in response to a devastating earthquake that hit the country in 1960 (Sigmund 1977: 26)— and in general government spending in Chile was relatively high by Latin American standards

(Foxley et al. 1979) while the country since the 1930s had pursued protectionist import-substitution industrialization (Ritter 1992: 6). The government's role in the economy increased somewhat under the centrist Eduardo Frei (1964-1970) and more dramatically under Allende, who aimed to build a socialist economy (Oppenheim 1993). It was only after the bloody 1973 coup that Pinochet's authoritarian regime implemented an orthodox market-based economic program that emphasized privatization and that by 1978 had led to a sharp drop in tariff rates (Foxley 1983). In short, Chile was characterized neither by open trade policies nor limited government prior to the 1973 coup; democratic breakdown occurred in this case for reasons other than those specified in our argument.

These short plausibility probes suggest that further testing is warranted. While the dynamics we describe were not salient in Chile, they do appear to be at least somewhat relevant in Argentina's 1930 coup. Moreover, many of the world's most stable democracies either pursued open trade policies combined with high government spending, or protectionist policies. Again, we hardly expect the dynamics we described in part II to be salient in all or even most cases of democratic breakdown. Rather, we simply expect that, *at the margins*, a combination of open trade policies and limited government spending can contribute to democratic instability; to test this hypothesis more systematically, quantitative tests appear necessary.

Quantitative research design

Since our hypothesis is concerned with democratic failure, our approach is to model the likelihood of transition from democracy to autocracy within a sample of democratic countries. We thus use logistic regression in which our dependent variable is coded 1 if democratic failure occurred in the

following year and 0 otherwise. We code countries as being democratic or autocratic based on Przeworski et al's (2000) classification of regimes worldwide from 1950-1990; whether a democratic failure (e.g., a transition to autocracy) occurred was likewise coded based on Przeworski et al's (2000) classification.

Measuring trade policy openness and government spending
Our hypothesis clearly requires measures of government spending and trade policy openness. To measure government spending within countries, we begin by using World Bank data on government consumption as a percentage of GDP within countries. We use the measure because it is available for a large sample of countries over an extended time frame; however, Adsera and Boix (2002) note that the measure does not capture all government spending. As such, we also check the robustness of our results by using a measure of government revenue that comes from Burgoon (2006).

Measuring trade policy openness, meanwhile, is not a straightforward task. In a world in which trade policy distortions are increasingly hidden, estimating a country's trade barriers is difficult: simply using tariff data, for example, clearly fails to deal with non-tariff barriers to trade. Trade to GDP ratios are also problematic, as they tend to bias against countries with large internal markets and countries that are relatively isolated from other countries (and hence would be expected to trade less for any given level of policy openness).[3] To deal with these problems, we use a new measure of trade policy openness derived by estimating country/year fixed effects using a gravity model of trade. The logic behind this operationalization is straightforward: after controlling for factors widely known to affect trade (distance between countries and market size), remaining

country-specific effects should to a large extent reflect protectionist trade barriers (Hiscox and

Kastner, n.d.).

The basic gravity model posits that the volume of trade between two nations is an increasing

function of the incomes of those nations and a decreasing function of the distance between them,

although other variables, including whether the countries share a common border, a common

language, and/or a common currency are often added to the model (e.g., Linneman 1966; Aitken

1973; Frankel, Stein, and Wei 1995; Rose 2000). The model has proved to be an extremely

effective framework for gauging what patterns of trade are normal or natural among nations (see

Frankel and Wei 1993: 3; Baier and Bergstrand 2001: 3-4).[4] By implication, the model should also

be able to help us in identifying abnormal or distorted patterns of trade and estimating the extent to

which these are due to the trade policies of particular nations. The basic gravity model is typically

expressed in log-linear form as:

$$(1) \qquad \ln M_{ij} = \alpha + \beta \ln Y_i + \gamma \ln Y_j - \delta \ln D_{ij} \, ,$$

where M_{ij} represents total trade flow into country i from country j, Y_i and Y_j denote national

incomes (outputs), D_{ij} is the distance between the economic centers of each country, and α, β, γ, and

δ are positive parameters. This equation is estimated for a cross-section of country pairs in a

specific year or pooled over a number of years. While it is still common to criticize the model for

lacking theoretical underpinnings (e.g., Leamer and Levinsohn 1995), recent work has actually

provided the basic gravity equation with a firm foundation in trade theory (e.g., Anderson 1979;

Bergstrand 1985; Bergstrand 1989). In particular, Deardorff (1998) has shown that the root

equation from which the log-linear form (1) follows — $M_{ij} = \alpha \, Y_i^{\,\beta} \, Y_j^{\,\gamma} \, D_{ij}^{\,-\delta}$ — can be derived from

Heckscher-Ohlin and Ricardian models of trade as well as models based upon imperfect competition and increasing returns to scale.[5]

To use the basic gravity model to provide estimates of policy-induced distortions in trade flows, we can add dummy variables for each importing country in each year for which the model is estimated. This has the effect of relaxing the restriction that the intercept of the gravity equation must be the same for all importing countries (in each year). Country i's annual income is a constant for each importing country-year, but we need to control for the separate effects of income on imports and not have them subsumed in the country-year intercepts when the model is estimated. To this end we assume that the own income elasticity of imports is approximately one, which fits well with results from numerous multi-country, multi-year estimations of the gravity model to date (e.g., Aitken 1973; Bergstrand 1985; McCallum 1995; Wall 1999) and is consistent with theoretical expectations (Grossman 1998: 39).[6] The practical effect of this constraint is that, like other notable gravity model studies that have applied the same assumption implicitly (e.g., Pritchett 1996; Frankel and Wei 1993; Frankel and Romer 1999), we use trade as a proportion of income as the dependent variable. The regression equation can now be written as

$$(2) \qquad \ln (M_{ijt} / Y_{it}) = \alpha_{it} + \beta \ln Y_{jt} - \delta \ln D_{ij} + \varepsilon_{ijt},$$

where α_{it} is the importing country-year intercept for country i in year t, and ε_{ijt} is an error term. A similar approach has been used to gauge the effects of regional trade agreements on trade flows by using dummy variables for pairs of nations in the same regional bloc as a proxy for regionally specific discriminatory policies (e.g., Aitken 1973; Frankel and Wei 1993). The set of estimated coefficients, α_{it}, from a regression using (2) provides a way to evaluate the distorting effects of each importing country's policies in each year when compared to the mean for the entire sample. The

country-year dummy variables stand in for the (unmeasured) relative openness of trade policy orientations.

We estimated (2) using a panel of bilateral trade flows to and from 76 countries for the years from 1960 through 2000. The 76 countries are all the countries for which reliable bilateral trade data are available for all 41 years. To calculate the dependent variable for the analysis we use the value of imports to country i from country j in year t (x_{ijt}) in constant dollars. The nominal trade data come from the *Expanded Trade and GDP Data Set* compiled by Gleditsch (2002), and recently updated through 2000. The primary source for this data is the International Monetary Fund's *Direction of Trade Statistics*, which began reporting bilateral trade flows in 1958, though Gleditsch used alternative sources to fill in missing values in some bilateral series.[7] Gleditsch also uses leads and lags to replace data that is missing at either the beginning or the end of each bilateral series. We excluded dyads that required a lead or a lag of five or more years during the period 1960-2000.[8] As a result, the data set that we use is not "square": some countries have more trade partners than others. The minimum number of partners for any one country is 35 (for Jordan and Chad), the OECD nations typically have complete data on all or nearly all 75 potential partners in the set, and the average number of partners across importing nations is 59.3. In general, data for developed countries are more complete than for developing countries. The data on nominal GDP for country i and j (y_{it} and y_{jt}) also come from Gleditsch (2002), for which the primary source is the *Penn World Tables* and secondary sources include the CIA's *World Factbook*.[9] The distance measure we use (d_{ij}) is the direct-line distance in kilometers between the major airports in countries i and j, reported in Hengeveld (1996). The results of estimating equation (2) are presented in Table 1.

[INSERT TABLE 8-1 HERE]

Using the mean sample intercept as the "benchmark" for measuring the country-year effects is a reasonable convenience. But to render the results into a form that more closely resembles alternative measures of tariff and non-tariff barriers to trade, we have expressed these effects as differences from the sample maximum intercept — which turns out to be Belgium in 1980. For our purposes, this maximum intercept serves as a "free trade" benchmark. We then express these deviations as positive percentages of the predicted log of ratio of imports to GDP when all variables are set to their sample means and the intercept is set to its "free" trade maximum. All relative comparisons between the scores from country to country and year to year remain the same after these transformations, of course, but the results take on a more intuitive form where higher percentages represent increased trade distortions. Table 2 summarizes the average value during the 1990s of this measure—which we refer to as Basic Country-Fixed Effects, or BCFE—for all 76 countries.

[INSERT TABLE 8-2 HERE]

Of course, a potential problem with this measure is that other factors unrelated to government policy may influence bilateral trade flows. That is, the measure cannot distinguish between the effects of changes in trade policies and other changes, specific to particular importing countries in particular years, that also affect trade flows and are not accounted for in the model. As such, we re-estimated (2) after adding numerous additional controls, including factor endowments differentials, per capita income in the exporting country, and other geographical features like remoteness and

whether a country is landlocked or not. Even when all of these additional controls are added, the

resulting country/year-specific effects remain highly correlated (.98) with those estimated using the

basic model (2). We thus proceed here using the BCFE measure. Elsewhere (Hiscox and Kastner,

n.d.) we report on a series of tests that show the measure to be quite robust to changes in model

specification and changes in the composition of the sample used to derive it.

Operationalizing the interaction

To test our hypotheses, we need to examine whether regimes that have both low levels of

government spending *and* high levels of trade policy openness are especially prone to failure. To do

so, we clearly need an interactive variable that combines the two measures described in the

previous section. Multiplying the two continuous variables together would generate an interactive

term that is difficult to interpret, and worse, that could produce misleading results. To see why,

consider how such a variable would look. The variable would take a small value in countries that

are both open to trade and have low government spending. As government spending goes up, the

variable would take on higher values, suggesting that the variable should be negatively correlated

with the probability of democratic failure. But the variable takes on its highest values when both

government spending is high and trade barriers are high. Yet our hypothesis in no way suggests that

democracies that are both closed to trade and have high government spending should be more

stable than democracies that are open to trade and have high government spending; if anything, we

suspect that the reverse may be true.

To get around this problem, we converted government spending into a dummy variable (which we

will call *small government*) equal to 1 if government spending is in the lower quartile of all

observations in the sample, and equal to 0 otherwise. This cutoff point is obviously arbitrary; below, we report further tests that show our initial results to be robust to a range of alternative cutoff points on either side of the 25th percentile. Furthermore, on an intuitive level the results would be easiest to interpret were we to interact *small government* with a variable that measures openness to trade rather than closure to trade. That is, the variable that we interact with *small government* should get larger as a country is more open to trade. To create such a variable, we simply subtracted a country's BCFE score for a given year from the maximum value of BCFE. This new variable (*trade policy openness*) is scaled the same as BCFE, but now the highest values correspond to the most open countries. Our interactive variable, then, is *small government * trade policy openness*. Our hypothesis suggests that this variable should be positively correlated with the probability of a democratic failure (democracies that have small governments and are open to trade should be more prone to failure than democracies with big governments or democracies that are closed to trade).

Control variables

It has been recognized for some time that democracy and development are correlated (Lipset 1959), though the reasons for that correlations are not without controversy. It is suggested by some, for example, that development increases the likelihood of a transition to a democracy, though recent research by Przeworski et al (2000) suggests that the driving force behind the relationship is that democracy is simply more likely to survive when a country is developed than when it is not. As such, we control for logged real per capita income (*per capita income*), which comes from the Penn World Tables. We also include a variable that measures percent change in per capita income from

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the previous year (*change pci*), to control for economic shocks that might influence the possibility of regime change.

Additionally, we include several control variables that existing studies (e.g. Przeworski et al 2000) have suggested may influence the probability of regime transitions including: the percentage of the population that was Catholic (as of 1980—*percent Catholic*); the percentage of the population that was Muslim (as of 1980—*percent Muslim*); whether the country's territory once was part of the British Empire (*UK legal origin*); and the number of previous democratic failures since 1960 (*previous failures*). All models contain a control for the number of years since entry into the sample as a democracy(*time*). For example, if a country became a democracy in 1972, and the year is 1987, then this variable would be coded 16 (since 1987 would be its 16th year as a democracy). The variable begins at 1 for countries that were democracies in 1960. Including such a variable helps to control for temporal dependence in the data (Beck et al 1998). Finally, in some models we add regional dummy variables, to control for factors that are region-specific that might not be captured in the other control variables.

Sample

The start date for our analysis is 1960, which is the first year for which we have a measure of trade policy openness. The end date is 1990, the final year for which regime types were coded by Przeworski et al (2000). Our sample consists of 963 country/year observations for 45 countries (all democracies). Democratic failures occurred 23 times (in 16 different countries), or in approximately 2.4 percent of the observations. Table 3 lists each case of democratic failure, and the year preceding its occurrence (the last full year of democracy).

[INSERT TABLE 8-3 HERE]

Results

Initial results are reported in Table 4. Column A reports results without the inclusion of the interactive variable (*openness to trade * small government*); column B then adds the interactive variable. The coefficient on the interactive term is both in the expected direction (positive, meaning associated with a higher probability of failure) and highly significant. Columns C and D add regional dummies to the equation. Adding the regional dummies does not greatly alter the interactive term's coefficient or significance. It appears, in other words, that openness to trade and the size of the government sector interact in a significant way to influence the probability of democratic failure.

[INSERT TABLE 8-4 HERE]

For a substantive interpretation of these results, consider Figure 1, which shows predicted probabilities of democratic failure using the results of the model presented in column C of Table 4. Here we compare the relationship between trade policy openness and the probability of failure in countries with low government spending (*small government* = 1) to the relationship between openness and failure in countries with higher government spending (*small government* = 0); all continuous control variables are held at their mean values, and all dichotomous control variables are held constant at their median values. For democracies with low government spending, increasing trade policy openness is clearly associated with a growing likelihood of failure. When

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small government equals 0, however, the probability of failure remains rather steady even as openness increases. Simple simulations using Clarify (King et al. 2000) reveal that the upward slope of the small government curve is highly significant (meaning countries that have low government spending and high trade openness are significantly more likely to fail than countries with low government spending and low trade openness), though we should caution that the standard errors become rather large as countries become more open. In summary, these results confirm our hypothesis, though the large standard errors suggest that the magnitude of the predicted effect is subject to considerable uncertainty.

[INSERT FIGURE 8-1 HERE]

Further robustness checks

As an alternative way to test our hypothesis without using interactive variables, we estimated the relationship between trade policy openness and democratic failure separately for countries with low government spending (*small government* = 1) and higher government spending (*small government* = 0). Our expectation here is that increasing trade openness should be correlated with a higher probability of failure for democracies with low spending, but not in countries with higher spending. We used the same control variable used in the regression reported in column C of Table 5. As expected, increased trade policy openness is positively and significantly correlated with an increased risk of failure when *small government* = 1 (n=223), but it is not even remotely significant (z statistic: .05) when *small government* = 0. This simple test, then, produces the same basic results reported above without the use of interactive variables.

Second, recall that we arbitrarily chose the 25th percentile as a cutoff for countries to be classified as having low government spending (*small government* = 1). We did this because interacting two continuous variables here would produce highly misleading results. As a robustness check, we chose a series of alternative cutoff points on either side of the 25th percentile to distinguish between low and higher-spending governments. If we instead chose the 15th percentile as a cut-off point (meaning *small government* equals 1 only for countries that have lower government spending than 85 percent of the countries in the sample), the interactive variable continues to be positive and significant at the 99 percent level of confidence; the same is true for the 20th percentile as a cutoff point. When the cutoff point is instead the 30th or the 35th percentile, the interactive variable remains positive, but its significance declines to the 95 percent level. When the cutoff is the 40th percentile, the significance level of the (still positive) interactive term drops to the 90 percent level. In short, the results do not seem to depend heavily on the precise delineation point between low government spending and "non-low" government spending; instead, the results are quite robust to a range of alternative cutoff points.

Finally, we generated the variable *small government* using data on government revenue rather than government consumption; the dataset we use here (Burgoon 2006) only extends back to 1975, but the results again are encouraging. Despite the smaller sample size, the interactive variable remains significant at the 95 percent level of confidence.

Conclusion

Recent work, and in particular the work of Asdera and Boix, has found that trade policy openness, the size of the public sector, and regime type are closely intertwined. We build on those findings by arguing that openness to trade and government spending should interact in important ways in influencing the prospects of democratic survival. Though our results are clearly preliminary in nature, they nonetheless suggest that democracies that are both open to trade and that have small public sectors are significantly more likely to fail than other democracies. If these results endure tougher scrutiny, then they point toward an important influence on the prospects for democratic consolidation.

[INSERT TABLE 8-5 HERE]

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Table 1:
Estimation of a gravity model of bilateral imports*

Independent variables:

Income of exporting country	1.47
	(395.22)
Distance between countries	-1.47
	(-174.59)
Constant (mean intercept)	-13.58
	(-170.20)
F-Statistic for country-year	11.28
Intercepts (3116 categories)	
Adjusted R-squared	0.54
Observations	184,910

* Dependent variable is log(imports/GDP). All explanatory variables also logged (see text for full descriptions of each); both least squares regressions also include 3115 country-year dummy variables (individual coefficients not shown); t statistics are in parentheses.

Table 2
Country Averages for BCFE, 1990-2000 (sorted by openness)*

Country	BCFE	Country	BCFE	Country	BCFE
BEL	8.7931	CIV	34.223	COL	46.056
NLD	14.2169	SEN	34.788	DOM	46.691
NZL	18.7440	MAR	35.409	GHA	47.192
FRA	18.8615	JOR	35.801	PAK	47.798
PRT	19.0978	TUN	36.034	ZAR	47.855
ESP	19.6546	COG	36.861	PRY	47.973
GER	20.0338	PHL	37.362	MLI	48.271
JPN	20.0478	GAB	37.856	CHN	48.446
USA	20.9774	SAU	37.930	CAF	50.092
ITA	22.0853	LKA	38.016	EGY	50.515
CHE	23.5089	PER	38.028	NER	51.408
THA	24.5358	IDN	38.199	BFA	51.438
GBR	24.5761	ZAF	38.731	IRN	51.941
CAN	24.9918	BOL	38.840	HTI	52.916
IRL	25.5443	MRT	39.034	IND	53.688
AUS	25.6953	HND	39.282	ETH	54.334
FIN	26.6348	MEX	39.859	GIN	55.291
KOR	26.7230	BRA	39.885	TCD	56.342
CHL	26.8340	CMR	40.447		
DNK	26.9743	MDG	40.958		
SWE	27.0648	ARG	41.237		
AUT	27.4592	ECU	41.350		
CRI	28.9325	GTM	41.422		
NOR	29.0084	NIC	41.592		
ISL	30.0402	TUR	41.672		
TGO	31.0094	VEN	42.647		
GRC	31.8652	BEN	43.197		
URY	32.9316	NGA	44.179		
ISR	33.7376	SLV	44.604		

*See appendix for key to Penn World Tables 3-letter country codes

Table 3
Democratic Failures*

Country	Year
Guatemala	1962
	1981
Honduras	1962
Ecuador	1962
Peru	1961
	1967
	1989
Brazil	1963
Chile	1972
Argentina	1961
	1965
	1975
Uruguay	1972
Greece	1966
Ghana	1971
	1980
Nigeria	1965
	1982
Congo, Rep.	1962
Turkey	1979
Pakistan	1976
Sri Lanka	1976
Philippines	1964

*Year indicates the final full year of democratic governance.

Table 4:
Logistic regression
Dependent variable: probability of democratic failure

| Independent variables:	A	B	C	D
Time	-.073*	-.072**	-.045	-.044
	(-1.58)	(-1.66)	(-.99)	(-.95)
Per capita income	-1.478***	-1.250***	-1.480**	-1.645**
	(-3.01)	(-2.34)	(-2.11)	(-2.08)
Change pci	-8.196**	-9.982**	-10.447**	-10.731**
	(-1.76)	(-2.17)	(-2.10)	(-2.14)
Previous failures	.035	-.104	-.362	-.364
	(.07)	(-.20)	(-.65)	(-.65)
Percent Muslim	.013*	.012	.018*	.013
	(1.30)	(1.09)	(1.32)	(.79)
Percent Catholic	..005	.010	-.005	.007
	(.52)	(.27)	(.41)	(.44)
UK legal origin	-.635	.251	-.540	-.178
	(-.73)	(.27)	(-.48)	(-.15)
Africa			2.366***	1.905
			(2.64)	(1.14)
South America			1.610**	1.260
			(2.25)	(.91)
Asia				-.487
				(-.31)
Middle East				-.478
				(-.31)
North America				.681
				(.31)
Small government	.327	-3.802***	-3.582**	-3.914***
	(.65)	(-2.57)	(-2.32)	(-2.40)
Openness to trade	.014	-.055*	-.029	-.031
	(.61)	(-1.51)	(-.71)	(-.76)
Small government * trade openness		.119***	.109***	.120***
		(2.87)	(2.53)	(2.59)
Constant	8.412**	8.693**	9.130**	10.656*
	(2.04)	(2.13)	(1.75)	(1.61)
N	963	963	963	963
Pseudo R-squared	.2205	.2660	.3285	.3304

Note: z-statistics in parentheses.
*>.90 significance in one-tailed test
** >.95 significance in one-tailed test
***>.99 significance in one-tailed test

Figure 1: Predicted Probabilities

← Less open to trade   More open to trade →
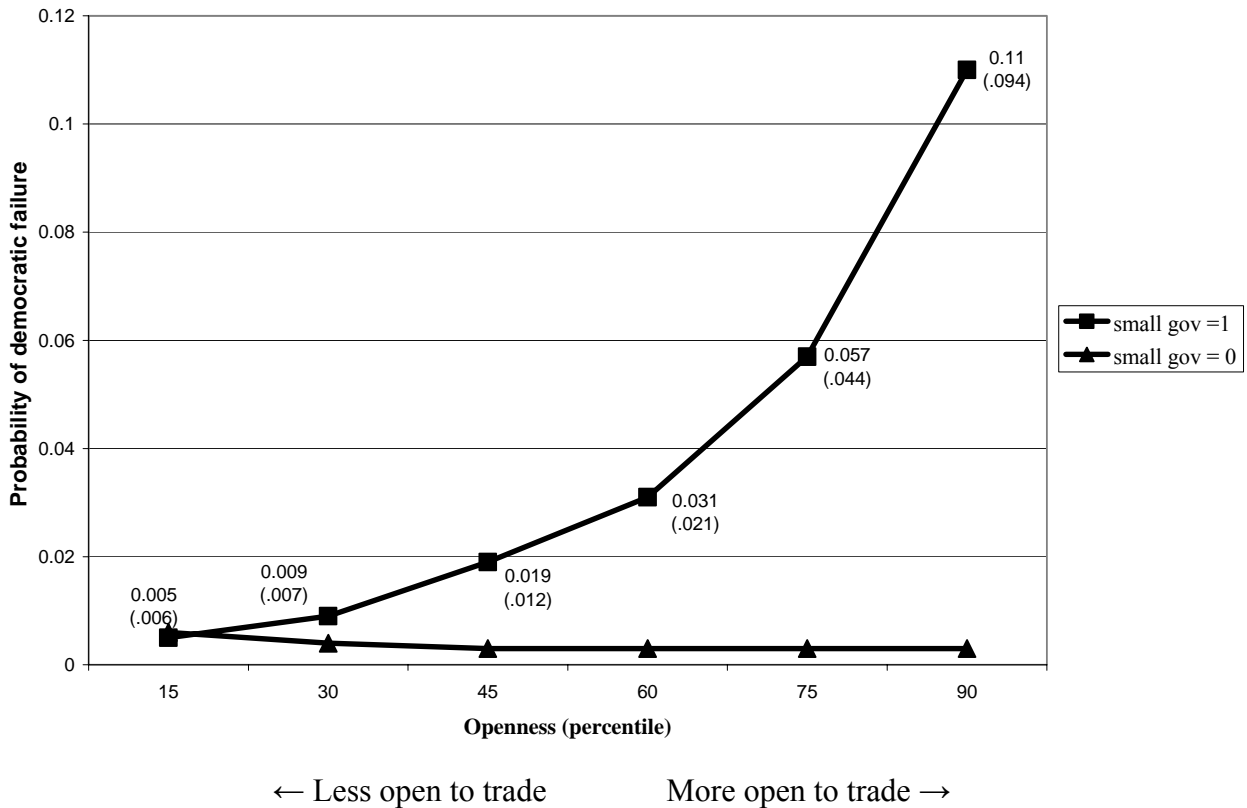
Note: Predicted probabilities obtained using Clarify (King et al. 2000), and are based on the model reported in column C of Table 4. All continuous controls are held at their mean values, and dichotomous controls at their median. (So, for example, for an otherwise average democracy with low government spending and that is more open to trade than 75 percent of the countries in the sample, the predicted probability of failure in a given year is 5.7 percent.) Standard errors are in parentheses.

Appendix: Penn World Tables country codes

Code	Country	Code	Country	Code	Country	Code	Country
ARG	Argentina	ECU	Ecuador	ISR	Israel	PAN	Panama
AUS	Australia	EGY	Egypt	ITA	Italy	PER	Peru
AUT	Austria	ESP	Spain	JOR	Jordan	PHL	Philippines
BEL	Belgium	ETH	Ethiopia	JPN	Japan	PRT	Portugal
BEN	Benin	FIN	Finland	KOR	Korea,	PRY	Paraguay
BFA	Burkina Faso	FRA	France		Republic	SAU	Saudi Arabia
BOL	Bolivia	GAB	Gabon	LBR	Liberia	SEN	Senegal
BRA	Brazil	GBR	United	LKA	Sri Lanka	SLV	El Salvador
CAF	C African		Kingdom	MDG	Madagascar	SOM	Somalia
	Republic	GER	Germany	MEX	Mexico	SWE	Sweden
CAN	Canada	GHA	Ghana	MLI	Mali	TCD	Chad
CHE	Switzerland	GIN	Guinea	MMR	Myanmar	TGO	Togo
CHL	Chile	GRC	Greece	MAR	Morocco	THA	Thailand
CHN	China	GTM	Guatemala	MRT	Mauritania	TUN	Tunisia
CIV	Cote d'Ivoire	HND	Honduras	MYS	Malaysia	TUR	Turkey
CMR	Cameroon	HTI	Haiti	NER	Niger	URY	Uruguay
COG	Congo, Rep.	IDN	Indonesia	NGA	Nigeria	USA	United States
COL	Colombia	IND	India	NIC	Nicaragua	VEN	Venezuela
CRI	Costa Rica	IRL	Ireland	NLD	Netherlands	ZAF	South Africa
DNK	Denmark	IRN	Iran	NOR	Norway	ZAR	Congo, Dem.
DOM	Dominican	IRQ	Iraq	NZL	New Zealand		Republic
	Republic	ISL	Iceland	PAK	Pakistan		

[1] Cameron's (1978) explanation is different: specialization implies the formation of larger corporations capable of achieving economies of scale. This, combined with a relatively specialized labor force, facilitates the expansion of trade unions which in turn demand greater government spending on welfare state provisions. For an overview of the literature on trade openness and public expenditures, within the context of an excellent review of the political economy of trade, see Adsera and Boix (n.d.).

[2] In a similar vein, Rudra and Haggard (2005) show that, in the context of increasing trade openness, social spending is more likely to be preserved in democracies than authoritarian countries.

[3] Elsewhere (Hiscox and Kastner n.d.) we review existing measures of trade policy openness more thoroughly; space constraints prevent a thorough review here.

[4] First applied by Tinbergen (1962), Poynohon (1963), and Linneman (1966) the model has been applied for a variety of purposes, such as testing for the trade flow effects of customs and currency unions; see, for instance, Aitken (1973), Sattinger (1978), Frankel (1993), Eaton and Tamura (1994), and Frankel and Romer (1999). For a review of general results, see Oguledo and MacPhee (1994).

[5] As Grossman (1998) has made clear, the "force of gravity" is generated by specialization, which may have multiple supply-side sources. When economies are specialized, citizens of country i will want to buy products that are only available (or more abundantly available) from country j. The more income that residents of i have, the more of j's goods they will be able to buy; and the more things firms in country j

produce, the more things consumers in *i* will want to buy. The outputs of both nations

thus should enter into the determination of the trade flow with positive coefficients.

[6] In fact, the most straightforward theoretical derivations of the gravity model (e.g.,

Anderson 1979; Deardorff 1998) imply unit income elasticities.

[7] Because we use logs, we changed all 0 values to $1,000, the smallest non-zero value in

the Gleditsch dataset.

[8] Not only were we wary of including a great deal of imputed data, but the degree of

"missingness" in several dyadic trade series raises concerns about the reliability of the

data actually reported for those series.

[9] All trade and GDP data are expressed in millions of 1992 dollars. For countries for

which substantial GDP data were missing we applied the same rules described above in

excluding from the set any countries for which data were under-reported.