The Domestic Politics of Preferential Trade Agreements in Hard Times

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Abstract

We present a theory of why some countries negotiate trade agreements during economic downturns. We argue that political leaders can gain from such agreements because of the signals they send to their publics. Publics are less likely to blame leaders for bad economic conditions when they have implemented sound economic policies, such as signing and implementing agreements designed to liberalize and expand trade. Leaders have particular reason to seek this type of insurance if they compete for office in a competitive political environment. The more democratic their political system is, the more they can gain from implementing trade agreements. We evaluate this argument by analyzing all preferential trade agreements (PTAs) ratified by countries since 1951. We find that democratic countries are especially likely to ratify PTAs during hard economic times.

Introduction

The financial crisis of 2008-2009 stimulated widespread fears that protectionism would rise across the globe. Observers expressed concern that this episode would resemble the Great Depression, which was accompanied, if not deepened by, the global spread of protectionism (Kindleberger 1973). Indeed, the received wisdom is that economic downturns frequently prompt countries to raise trade barriers (Conybeare 1983; Cassing, McKeown, and Ochs 1986; Bohara and Kaempfer 1991; Bagwell and Staiger 2003). Surprisingly, however, the crisis generated little protectionism and the volume of trade recovered quickly after the downturn. The leaders of the G20 pledged each year from 2008 to 2011 that they would resist the temptation to raise trade barriers.[1] An OECD study found that these leaders' efforts had succeeded in averting the growth of protectionism and other studies have arrived at a similar conclusion (OECD 2010; Bown 2011; Vandenbussche and Viegelahn 2011; Kee, Neagu, and Nicita 2013; Gawande, Hoekman, and Cui 2014).

Not only did heads of state work to avoid a spike in barriers to overseas commerce during the financial crisis, leaders in the Americas, Europe, and East Asia were negotiating trade agreements during this episode, most notably the Trans-Pacific Partnership (TPP), the Transatlantic Trade and Investment Partnership (TTIP), and the Regional

[1] See http://www.nytimes.com/2008/11/16/washington/summit-text.html?pagewanted=all; http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/wto-omc/pledge-engagement.aspx?view=d.

Comprehensive Economic Partnership (RCEP). This development was no coincidence. Rather, as we argue in this paper, it reflects a broader tendency for leaders of democratic countries to form trade agreements during hard economic times.

More specifically, we argue that democratic leaders may choose to negotiate and implement trade agreements because they yield political as well as economic benefits. Such agreements can help them retain office in the face of economic downturns, especially in countries with competitive political systems. In democracies, leaders have to be concerned that citizens will hold them responsible for the downturn and vote them out of office. Policies designed to liberalize and promote the flow of trade signal to voters that the downturn was not the product of rent-seeking or incompetence, but instead was due to circumstances beyond the leader's control.

We test this argument by analyzing the formation of preferential trade agreements (PTAs), which are a broad class of international institutions that include common markets, customs unions (CUs), free trade areas (FTAs), and economic unions. These agreements have marked the global landscape for centuries, but have proliferated especially rapidly over the past half-century. PTAs are designed to foster economic integration among member-states by improving and stabilizing the access that each member has to the other participants' markets. These agreements are thus a source of liberalization among the contracting parties, although they also discriminate against third parties (Freund and Ornelas 2010). Consistent with our argument, we find that democracies experiencing hard times are particularly likely to form PTAs. During the period since World War II,

democratic countries have displayed a greater tendency to establish these agreements than their non-democratic counterparts, and they have been most likely to enter PTAs during downturns in the business cycle.

A Theory of PTAs in Hard Times

It is widely recognized that PTAs influence the flow of trade and investment, but we argue that national leaders often conclude these agreements for political as well as economic reasons (Mansfield and Milner 2012). We also argue that leaders entering a PTA realize domestic political benefits that are difficult to obtain through unilateral trade policy measures alone. A rational government will only form an agreement with other countries if the expected benefits—both domestic and international—of doing so exceed the costs of negotiating and ratifying the agreement. Trade agreements generate important benefits for both governments and the public. They can convey information to the public and interest groups preferring free trade about the nature and activities of leaders. Such information can contribute to political support for leaders, helping them retain office.

Leaders may prefer different levels of protection, based on the weights that they assign to the benefits of rents versus social welfare (Gawande, Krishna, and Olarreaga 2009). Promoting social welfare yields political support among the public and free trade interest groups that helps lengthen a leader's tenure in office. The public and these groups, however, generally cannot be certain of what balance between rents and social welfare a government truly desires. They need some kind of reassurance about the motives and

actions of the government. The public also has heterogeneous preferences about trade policy; some individuals prefer high levels of protection, whereas others prefer freer trade. We assume that the median member of society, who commands the attention of leaders, prefers some positive level of trade barriers (that is, she is not committed to a free trade policy). Since trade barriers create rents for certain interest groups, office-holders may seek to raise barriers beyond the level preferred by the median individual to extract these rents. The public, which does not gain from these rents and probably loses because of them, does not know the extent of government rent-seeking since citizens do not know their leaders' exact trade preferences or policies. Governments would like to limit the amount of protection they furnish since it hurts the economy in the long run and, to the extent that voters cast ballots based on economic conditions, damages their reelection prospects.

But governments may be tempted to provide protection to certain domestic groups. Rents for governments rise with the level of protection. Although leaders may not desire as much protection as key interest groups demand, they may be tempted by the rents that accrue from furnishing protection. Faced with special interests that demand protection, particularly when the economy sours, leaders need to find ways to reassure the mass public that they are not being captured by protectionist interests and that they are making sound foreign economic policy. Increasing trade barriers may win leaders support from some import-competing interests, but doing so can also antagonize pro-trade interest groups as well as the general public, which will be harmed if protectionism contributes to

slumping economic growth. PTAs provide a mechanism for leaders to manage such societal pressures.[2]

Others have made similar arguments about the role of trade agreements and domestic politics (Maggi and Rodriguez-Clare 1998 and 2007; Staiger and Tabellini 1999; Mitra 2002). Maggi and Rodriguez-Clare (1998), for example, argue that governments may form trade agreements to provide credible commitments vis-á-vis the public and interest groups. They show that governments face a time inconsistency problem. Many interest groups demand protectionist trade policy, especially during economic downturns. Although governments find it difficult to resist these demands, protection causes investment distortions, which harm the government politically in the longer run by reducing efficiency and growth. Governments then use trade agreements to make policy commitments that are credible and prevent interest groups from pressing for heightened trade barriers in the future.

For leaders, concluding a trade agreement can help to reassure the public that they are making sound foreign economic policy. Leaders, however, also worry about the domestic costs involved in ratifying agreements. Balancing these two forces is a central part of a decision maker's calculation about whether to sign a PTA. A country's regime type is crucial in this regard.

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[2] We recognize that PTAs may have important economic effects and that leaders may be motivated by a desire to achieve economic benefits. Our point, however, is that trade agreements also have important domestic political effects that have not been sufficiently appreciated.

Democracies have greater political incentives to enter PTAs than other countries. The free, fair, and regular elections that are the hallmark of democracies motivate leaders to sign such agreements. Leaders in various types of polities are caught between the pressures of special interest groups and the preferences of voters. Some special interests press for policies—such as protectionist trade policies—that benefit them but adversely affect the overall economy. Heads of state may want to satisfy these interest groups in exchange for benefits like campaign contributions or other sources of political support. But giving in to all interest group demands would have very harmful economic consequences and could imperil their hold on office.

Leaders, at the same time, have a hard time convincing the public that they will not accede to special interest demands. As Maggi and Rodriguez-Clare (1998) point out, governments face a time inconsistency problem vis-à-vis interest groups. They would like to be able to resist some protectionist demands; but when such demands arise, governments are usually better off giving in to each group that presses for protection. The public and free trade interest groups know this and are harmed by government rent-seeking (Maggi and Rodriguez-Clare 1998 and 2007). They can threaten action to lower the incumbent government's probability of retaining office. But they also face an informational problem. Members of the public may not know the preferences of or the exact trade policy chosen by the government, and thus they cannot distinguish perfectly between adverse exogenous economic shocks and the extractive policies of leaders. An economic downturn could be caused by either highly protectionist policies or an exogenous shock, such as a

global recession or an international crisis. Both events, for example, might increase the price that the public pays for goods and services, and thus dampen the public's political support for the government.

Leaders, in turn, would like to find a way to demonstrate to the public that poor economic performance is not the result of extractive policies, thereby reducing the domestic political costs that they face. While they could choose to unilaterally lower trade barriers, doing so is time inconsistent. Leaders can reduce barriers, but they and the public know that future special interest demands for protection may well be met. So heads of government must find other ways to reassure the public that they will not engage in excessive protectionism.

One way of doing so is by entering into an international trade agreement, which is both a visible commitment to restrict protectionism and an institutional reassurance to the public and free trade interest groups that a relatively open trade policy has been adopted. The agreement commits participating countries to a level of trade barriers below each government's ideal unilateral level and it serves as a monitoring mechanism. Other member-states can use aspects of the trade institution (such as the dispute settlement mechanism included in various trade agreements) to signal to each participating government's society if its trade barriers rise above the agreed upon level. The agreement is public and therefore provides information that domestic groups can use to monitor their leaders. The monitoring that an international trade agreement provides can help political leaders overcome their reassurance problem.

Thus, entering into a trade agreement can bolster support for a government, even when the economy experiences a downturn. When elections take place in the face of adverse economic circumstances, citizens may blame incumbents and vote them out of office. As such, chief executives need to find ways to reassure the public and other domestic groups that economic downturns are beyond their control and are not simply an outgrowth of leaders buckling under to the demands of protectionist groups.[3]

PTAs provide such a political reassurance mechanism. These agreements allow leaders to commit to lower trade barriers and signal voters that leaders' trade policies did not directly cause hard economic times. In turn, these leaders are more likely to remain in office since voters have reason to view them as competent economic stewards, even during recessions. The more electoral competition that exists, the more that leaders have to worry about being ejected from office and the greater their need to reassure the public. Hence, we argue that democratic governments should be more likely to sign trade agreements than other governments.

For autocracies, the calculations differ. Interest group pressures for protectionism in autocracies vest leaders with an incentive to resist entering PTAs that reduce the rents

[3] Mitra (2002) builds on the analysis conducted by Maggi and Rodriguez-Clare (1998), but demonstrates that the commitment problem for politicians is more general than they posit. The demand for a precommitment to an FTA does not have to be driven by the possibility of capital misallocation alone, as Maggi and Rodriguez-Clare (1998) argue, or by the possibility of organizational costs arising in the expectation of protection. Demand for such an agreement can occur when governments or interest groups face resource costs prior to lobbying because of the actions taken in the expectation of successful lobbying. Mitra shows that the inability of governments to commit unilaterally to resist protectionist pressures by interest groups creates substantial costs for governments. Under certain conditions, these costs can drive governments to seek international trade agreements.

they can provide to supporters. Equally, autocrats have less need to reassure the public that they are competent economic decision makers since electoral competition does not determine their fate. Consequently, autocrats have less incentive to enter into trade agreements than their democratic counterparts.

Our argument focuses on political leaders because they initiate and ratify PTAs. But interest groups may also play an important role. Indeed, many theories of trade policy that examine domestic politics focus on interest groups since they have the resources and coherence necessary to overcome collective action problems and exert influence on politicians (Grossman and Helpman 1994; Gawande, Krishna, and Olarreaga 2009; Manger 2009). Some interest groups prefer free trader; others are more protectionist. From our standpoint, opponents of trade openness are most important when they are able to exert influence as veto players in the negotiation and ratification of PTAs. We therefore account for such veto players in our empirical analysis. However, while interest groups help to shape the demand for PTAs, they do not control the political process through which these agreements are initiated and ratified. At the end of the day, political leaders must initiate and advance these agreements, and their incentives to do so are our primary focus.

Our argument assumes that the median member of the public is not strongly protectionist. We assume that the median member of society does not oppose trade barriers completely, but that she also supports trade enough that leaders want to pursue trade agreements. PTAs rarely eliminate all barriers to trade; more typically they lower some barriers and liberalize the economy in other ways. But does the public desire such

exposure to the international economy? The Pew Research Center Global Attitudes Survey examined attitudes toward trade in a large number of countries in 2002, 2007, and 2008. In all of these cases, an overwhelming majority of respondents felt that trade was good for their country. Other surveys, such as the Latinobarometer and Afrobarometer, also show majority support for free trade across those regions (Mansfield and Milner 2012: 31-32). In sum, public opinion polls in countries in Europe, Latin American, and Africa provide support for the claim that the median member of the public views trade favorably, providing some justification for our assumption that the public tends to be more supportive of open trade than of protectionism.

Another claim we rely on is that some members of the public and certain interest groups are aware of the trade agreements their government has signed and generally view such accords favorably. Public opinion data suggests that, in many countries, there is a public awareness of and a favorable attitude about international trade accords. Many of the same surveys noted above, as well as the International Social Survey Programme, which have been conducted in numerous countries over time provide evidence that large majority of those surveyed had heard quite a bit about the major PTAs their country was involved in, and most respondents felt that being a member of that PTA benefited his or her country (Mansfield and Milner 2012: 31-32). Furthermore, we know that the institutions set up by trade agreements can help transmit information to domestic groups about governments' behavior. Many PTAs have bodies that report about the signatories' behavior over regular intervals (Martin 2000: chap. 7). The legalized dispute processes, for instance, often

associated with international institutions, such as the World Trade Organization's (WTO's) dispute settlement mechanism, also play an important role in transmitting information about the policies of member governments to previously uninformed sub-subnational actors, such as the voting public.

Our argument also emphasizes how international agreements can help leaders reduce the potential for lost political support by reassuring the public in advance about their intentions. But does society care about whether the government has signed and abided by PTAs? Recent public opinion research claims that it does. Herrmann, Tetlock, and Diascro (2001), for example, suggest that voters value trade agreements and believe they are needed to support an open trading system, implying that leaders may pay a political price for violating the rules of such institutions.

Regime Type, the Business Cycle, and PTAs

We have argued that voters in a democracy consider the state of the economy when going to the polls. Thus, governments are likely to be penalized when the economy performs badly. Voters assume that such downturns are at least partly attributable to the policies enacted in response to interest group pressures. As such, governments face a credibility problem; voters are more likely to remove them from office in bad economic times, even if they did not give in to special interest demands and over-protect the economy. Leaders therefore seek ways to demonstrate to the public that they are not

overly solicitous to special interests that demand protection. One way to demonstrate this is to sign a trade agreement.

In political systems where the public cannot vote leaders out of office, this problem is less severe. In systems with competitive elections, by contrast, the problem is acute. The more leaders' fortunes depend on the voting public, the more incentives they will have to find mechanisms to reassure the public that they have not given in to special interest demands and thus hurt the economy. Consequently, the more democratic a country is, the greater the incentive for leaders to make a credible commitment to an open trade policy and hence the more likely they are to sign international trade agreements.

This dynamic is especially pronounced during hard economic times, when leaders are often suspected of having chosen policies that favored special interests and contributed to the downturn. Leaders thus seek membership in PTAs during dips in the business cycle to demonstrate that they are not overly influenced by protectionist interests. For the chief executive of countries marked by competitive political systems, these pressures are especially pronounced. Thus, we expect democracies to respond to economic downturns by initiating and ratifying PTAs even more frequently than they do in good times.

Our data, which are described in greater detail below, reveal numerous cases where a democracy ratified trade agreements during economic hard times. Japan, for instance, ratified a PTA with Singapore in 2002 (Japan's first) in the face of an economic decline. Israel signed agreements with Bulgaria and Romania in 2001, during an economic slump. Zambia, a new democracy that had just held its first multi-party elections in decades, joined

the both Southern African Development Community (SADC) and the African Economic Community during an economic downturn in 1992. From 1991 to 1993, Switzerland concluded a large number of PTAs with East and Central European countries, as well as one with Israel under the EFTA umbrella, in a period when it experienced poor economic performance. Finally, as we mentioned earlier, many of the countries negotiating and forming trade agreements during the Great Recession were democracies.

Our argument emphasizes the effects of the business cycle in democracies, but that is hardly the only factors guiding the establishment of PTAs. Domestic interest groups, international politics, and economic factors have also been linked to PTA formation and we try to account for these influences in our empirical analysis.

An Empirical Model of PTA Formation

Our analysis centers on estimating the following model:

$$\text{PTA Ratification}_{ij} = \beta_0 + \beta_1 \text{Democracy}_i + \beta_2 \Delta\text{GDP}_i + \beta_3 (\text{Democracy}_i \times \Delta\text{GDP}_i) + \beta_4 \text{Veto Players}_i + \beta_5 \text{Existing PTA}_{ij} + \beta_6 \text{Trade}_{ij} + \beta_7 \text{GDP}_i + \beta_8 \text{Dispute}_{ij} + \beta_9 \text{Ally}_{ij} + \beta_{10} \text{Former Colony}_{ij} + \beta_{11} \text{Contiguity}_{ij} + \beta_{12} \text{Distance}_{ij} + \beta_{13} \text{Hegemony} + \beta_{14} \text{Post-Cold War} + \beta_{15} \text{GDP Ratio}_{ij} + \beta_{16} \text{\% Dyads Ratifying PTA} + \beta_{17} \text{Global Business Cycle} + \beta_{18} \text{GATT}_{ij} + \varepsilon_{ij}$$

The Dependent Variable

In the process of concluding a PTA, countries negotiate, sign the agreement, and then bring it home for domestic ratification. In democracies, governments often require (formal or informal) legislative ratification. In other countries, ratification may involve the legislature or the support of other individuals within the regime. In any case, governments have to satisfy veto players before the agreement can be ratified and ratification is the final stage in the process of forming a PTA.

Our dependent variable, $PTA\ Ratification_{ij,}$ is the log of the odds that state *i* ratifies a PTA in year *t* with state *j*, where we observe 1 if this occurs and 0 otherwise. Our analysis covers the period from 1951 (for variables measured in year *t*-1 and 1952 for variables measured in year *t*) to 2010 (for variables measured in *t*-1 and 2011 for variables measured in *t*). We address reciprocal agreements, which involve policy adjustment on the part of all members, and exclude arrangements where one state unilaterally grants another country preferential access to its market. Since we are interested in the formation of preferential agreements, the observed value of $PTA\ Ratification_{ij}$ is 1 in years when states initially ratify a new PTA or when *i* or *j* joins a PTA to which the other state is already a party, but not in subsequent years when the agreement is in force.

If the exact year of ratification could not be determined, we rely on the date that state *i* signed the PTA with state *j*. Since most agreements are ratified relatively soon after they are formed and since we are missing ratification dates in less than 30 percent of the

cases of PTA formation, this is a reasonable approach. Since states *i* and *j* need not—and, indeed, often do not—ratify a trade agreement in the same year, our unit of analysis is the annual "directed dyad." Consequently, for each dyad in each year, there is one observation corresponding to state *i* and a second observation corresponding to state *j*. For example, in the case of the United States-Mexican dyad in 1985, we include one observation where the U.S. is *i* and Mexico is *j*, and a second observation where Mexico is *i* and the U.S. is *j*. Each monadic variable, is included in this model only once, for the country listed as *i* in each particular observation. Because focusing on directed dyads doubles the number of observations in the sample, thereby producing standard errors that are too small, we cluster the standard errors over the undirected dyad.

The Independent Variables

Our primary independent variables are the regime type of each nation-state and fluctuations in the business cycle. First, $Democracy_i$ indicates whether state *i*'s political regime type is democratic or not in year *t*. To measure regime type, we rely on a widely-used index constructed by Gurr, Jaggers, and Moore that ranges from 1 for the most autocratic countries to 21 for the most democratic states, as well as data drawn from the Polity Project (Gurr, Jaggers, and Moore, 1989; Jaggers and Gurr 1995; Marshall and Jaggers 2009).[4]

[4] We used the Polity IV data, generated in 2011.

In the following analysis, we use three different thresholds for democracy: (1) a score of 20-21 on the aforementioned index, (2) a score of 16-21, and (3) a score of 12-21. Almost all OECD countries are coded as democratic based on the first threshold (the exceptions are the Czech Republic, Estonia, Mexico, South Korea and in certain years, Belgium and France). So too are a number of smaller countries. In 2010, for example, Costa Rica, Estonia, Lithuania, Mauritius, Mongolia, Taiwan, Trinidad, and Uruguay were democratic based on the most restrictive definition. Using the second threshold adds various countries to the democratic ranks; depending on the year in question, these countries include Argentina, Brazil, Burundi, Georgia, India, Liberia, Nepal, Pakistan, South Africa, Turkey, Ukraine, and all of the OECD countries that did not cross the first threshold.

The third threshold generates a much more heterogeneous set of countries—including contemporary Algeria, Cambodia, Iraq, Nigeria, Russia, Sri Lanka, and Thailand—some of which fall outside the bounds of what most observers would consider democratic. Our argument implies that the tendency for democracies to enter PTAs during hard times should be most pronounced if countries have the most fully formed democratic institutions and least pronounced if countries have less democratic institutions. By comparing results across these three thresholds, we can assess this implication.

Second, to measure the business cycle, we include ΔGDP_i, the percentage change in the gross domestic product (GDP) of state *i* from year *t*-1 to year *t*.[5] We also include the

[5] GDP data are taken from the Penn World Tables (Heston, Summers, and Aten 2011) and are expressed in constant U.S. dollars.

interaction between $Democracy_i$ and ΔGDP_i to address our argument that democracies are especially likely to establish PTAs during economic downturns. Our data reveal that on average it takes countries about 349 days (205 days is the median) to ratify an international trade agreement after it has been signed. Since leaders usually have some ability to manipulate the timing of the domestic ratification process, we assume that this less than one year period also corresponds to the time of the economic shock they are experiencing.

We also include a variety of variables that have been linked to PTA formation in prior research, many of which might be associated with a country's regime type, its business cycle, or both. To begin, there is ample reason to expect that interest groups influence the negotiation and ratification of trade agreements. We account for their effect by examining the number of veto players in a country. These actors have institutional capacity to affect whether an executive is able to pass trade legislation. The number of veto players affects the transaction costs that the government bears when ratifying a PTA. These costs are greater in countries marked by a large number of veto players, which in turn reduces the incentives for leaders to try to negotiate and ratify PTAs. Consequently, the odds of a state entering a preferential arrangement are likely to decline as the number of veto players rises.[6]

[6] On veto players, see Henisz (2000 and 2002) and Tsebelis (2002).

We therefore include *Veto Players*$_i$, which indicates the extent of constitutionally mandated institutions that can exercise veto power over decisions in state *i* as well as the alignment of actors' preferences between those institutions within the state (Henisz 2000 and 2002).[7] This measure is continuous and ranges from 0 to 1. When *Veto Players*$_i$ equals 0, there is a complete absence of veto players in states *i*. Higher values indicate the presence of effective political institutions that can balance the power of the executive. Note that *Democracy*$_i$ and *Veto Players*$_i$ are measured in year *t* because prior research indicates that these variables should have a contemporaneous effect on PTA ratification and there is little reason to worry that our results would be compromised by any simultaneity bias. After all, it seems highly unlikely that the decision to form a PTA, much less the ratification of such an agreement, would influence either a state's regime type or the number of domestic veto players (Mansfield and Milner 2012). The remaining variables in our model are measured in year *t*-1.

Existing PTA$_{ij}$ indicates whether states *i* and *j* are already members of the same PTA(s). Participating in a trade agreement is likely to affect a state's proclivity to create or join another arrangement with the same partner. *Trade*$_{ij}$ is the logarithm of the total value of trade (in constant 2000 US dollars) between states *i* and *j*.[8] Various observers argue that

[7] We use the most recent version of these data, which were updated in 2012. Henisz has developed two measures of veto points, one that includes the judiciary and one that does not. We use the latter measure since there is little reason to believe that the judiciary would influence the decision to enter a PTA. However, our results are quite similar when we use the alternative measure.

[8] We add .001 to all values of trade since some dyads conduct no trade in particular years and the logarithm of zero is undefined.

increasing economic exchange creates incentives for domestic groups that benefit as a result to press governments to enter PTAs, since these arrangements help to avert the possibility that trade relations will break down in the future (Nye 1988). Moreover, heightened overseas commerce can increase the susceptibility of firms to predatory behavior by foreign governments, prompting firms to press for the establishment of PTAs that limit the ability of governments to behave opportunistically (Yarbrough and Yarbrough 1992).[9]

Besides economic relations between countries, economic conditions within countries are likely to influence PTA formation. Particularly important in this regard is a state's economic size. Large states may have less incentive to seek the expanded market access afforded by PTA membership than their smaller counterparts. We therefore analyze GDP_i, the logarithm of state *i*'s gross domestic product (in constant 2000 US dollars).

In addition, political relations between states may influence whether they join the same PTA, independent of their respective domestic political structures. Cooperation also depends on the extent of differences in preferences between countries' leaders. The further apart are these preferences, the less likely is cooperation. To account for these preferences, we include a number of variables that measure the foreign policy differences between states. Military hostilities between states signal large differences in preferences between countries and may discourage economic cooperation and thus their propensity to

[9] Note that we use the International Monetary Fund's *Direction of Trade Statistics* (various years) as the main source for the trade data. We deflate these data using the US GDP deflator.

sign PTAs. Similarly, political-military cooperation may promote economic cooperation (Mansfield 1993; Gowa 1994). $Dispute_{ij}$ is coded 1 if states *i* and *j* are involved in a dispute, 0 otherwise. Though many studies of political disputes rely on the militarized interstate disputes (MIDs) dataset (Jones, Bremer, and Singer 1996; Ghosn and Palmer 2003), these data do not extend beyond 2000. To analyze the longest possible time frame, we therefore use the PRIO data on interstate armed conflict, which covers the period from 1951 to 2011.[10] $Ally_{ij}$ equals 1 if states *i* and *j* are members of a political-military alliance, 0 otherwise. We code this variable using the ATOP data (Leeds et al. 2002).[11] Further, since previous research has found that a former colonial relationship between *i* and *j* increases the likelihood that they will enter the same PTA, we include $Former\ Colony_{ij}$, which equals 1 if states *i* and *j* had a colonial relationship that ended after World War II, 0 otherwise (Mansfield and Reinhardt 2003; Mansfield and Milner 2012).[12]

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[10] We use v4-2008 of the data from: http://www.prio.no/CSCW/Datasets/Armed-Conflict/UCDP-PRIO/. Their data includes 4 types of conflict: (1) extra-systemic armed conflict occurs between a state and a non-state group outside its own territory; (2) interstate armed conflict occurs between two or more states; (3) internal armed conflict occurs between the government of a state and one or more internal opposition group(s) without intervention from other states; and (4) internationalized internal armed conflict occurs between the government of a state and one or more internal opposition group(s) with intervention from other states (secondary parties) on one or both sides. Type 3 conflicts were dropped. We kept the other three types and expanded the data so that all possible dyads between the countries on side A and those on side B were created. Data that did not have an independent country as one of the sides were then dropped. These then should be all dyadic conflicts in the Uppsala data. See Gleditsch et al. (2002) and Harbom et al. (2008).

[11] For the ATOP data, we use version 3.0, specifically the atop3_0ddyr.dta file which is the directed dyad dataset. Because the data only go to 2003, data for 2004 were filled in with 2003 data. See Leeds et al. (2002).

[12] Data on former colonial relations are taken from Kurian (1992).

Geographic proximity is another important influence on PTA formation. States often enter PTAs to obtain preferential access to the markets of their key trade partners. These partners tend to be located nearby, since closer proximity reduces transportation costs and other impediments to trade. We introduce two variables to capture distance. $Contiguity_{ij}$ is a dummy variable that is coded 1 if states *i* and *j* share a common border or are separated by 150 miles of water or less. $Distance_{ij}$ is the logarithm of the capital-to-capital distance between *i* and *j*. It is useful to include both variables since some states have distant capitals (for example, Russia and China) yet share borders, while other states do not share borders but are in relatively close proximity (for example, Benin and Ghana).[13]

In addition, systemic conditions are likely to affect the prospects of PTA formation. Since there is evidence that declining hegemony contributes to the proliferation of preferential arrangements, we include *Hegemony*, the proportion of global GDP produced by the state with the largest GDP (in our sample, the US for each year). This variable therefore takes on the same value for each country in year *t*-1. We further include *Post-Cold War*, which equals 0 from 1950 to 1988 and 1 thereafter, to account for the spike in PTAs after the Berlin Wall's collapse. We also examine whether power disparities influence the establishment of preferential arrangements by including $GDP\ Ratio_{ij}$, which is the natural logarithm of the ratio of the country GDPs for each dyad. In computing this variable, the larger GDP is always in the numerator; hence a negative sign on the coefficient

[13] Data on distance and contiguity are taken from CEPII's gravity data set (Head, Mayer, and Ries 2010).

of this variable would indicate that a greater disparity between the countries decreases the likelihood of ratification.

Because various observers have argued that the spread of trade agreements has been marked by diffusion, we add the percent of all dyads in the system that ratified a PTA in year *t*-1, *% Dyads Ratifying PTA*. Since a given country's business cycle us likely to be affected by the global business cycle, we include *Global Business Cycle*, a measure drawn from the OECD's Composite Leading Indicators data. This variable is created by assessing trends in various aspects of economic output to identify upturns or downturns in the international economy. We rely on the OECD composite measure that identifies annual change (from January to January) in the business cycle. Because the General Agreement on Tariffs and Trade (GATT) and WTO recognize and attempt to govern the establishment of PTAs, members of these global institutions may also be disproportionately likely to enter preferential arrangements (Mansfield and Reinhardt 2003). To account for this possibility, we introduce $GATT_{ij}$, which equals 1 if states *i* and *j* are both members of the GATT in each year prior to 1995 or if they are both members of the WTO in years from 1995 on, and 0 otherwise.[14]

Initially, we estimate the model with regional fixed effects, using eight regional categories identified by the World Bank, since it is widely argued that the prevalence of PTAs varies across regions. We then estimate the model with country fixed effects for state

[14] Data are taken from the WTO web site: http://www.wto.org.

i and *j* to account for any unobserved heterogeneity across countries in PTA formation.[15] Finally, ε_{ij} is a stochastic error term.

Descriptive statistics for all of these variables are presented in Table 1. The sample in the following analyses is comprised of all pairs of states during the period from 1951 to 2011. Because the observed value of the dependent variable is dichotomous, we use logistic regression to estimate the model. Tests of statistical significance are based on robust standard errors clustered on the dyad to address any potential problems with heteroskedasticity or the directed dyad research design. To account for temporal dependence in the formation of PTAs, we include a spline function of the number of years that have elapsed (as of *t*) since each dyad last formed a PTA with knots at years 1, 4 and 7, as suggested by Beck, Katz, and Tucker (1998). In the following table, however, the estimates of this function are omitted to conserve space.

Results

In Table 2, we report the estimates of our model. The first two columns show our results when $Democracy_i$ is coded 1 for states that score 20 or 21 on the Polity regime type

[15] We rely on fixed effects for countries rather than dyads because almost 85 percent of the dyads in our sample do not form a PTA during the period we analyze and are dropped from the sample when the model is estimated with dyad-specific fixed effects. There is no reason to expect that the small set of country-pairs used to estimate the model with dyad-specific fixed effects are representative of all country-pairs. Consequently, that estimation technique risks generating results that are misleading, which is why various observers counsel against using dyadic fixed effects in analyses of data as sparse as ours (Beck and Katz 2001; King 2001). The use of country-specific fixed effects avoids this problem.

index, the third and fourth columns shows the results when it is coded 1 for states that score 16 or greater, and the final two columns show our results when this variable is coded 1 for states that score 12 or higher. The estimated effects of regime type under various macroeconomic conditions drawn from our data and based on the country fixed effects specification are shown in Figures 1-3. Regardless of how stringent a definition of democracy that we use, democracies are much more likely to form PTAs during downturns in the business cycle than during periods of economic growth. The likelihood of a non-democracy joining a trade agreement, in contrast, is much less sensitive to the business cycle.

Equally, democracies are more likely to establish PTAs than other types of regimes, but this tendency is most pronounced during hard times. Finally, both of these tendencies become increasingly pronounced as we impose increasingly strict definitions of democracy. Among states suffering an 8 percent reduction in GDP, for example, democracies are more than four times as likely to accede to a PTA as non-democracies if we define democracies as states that score 20 or 21 on the Polity index, roughly 55 percent more likely if we define democracies as states that score 16 or greater on this index, and about 15 percent more likely if we define democracies as states that score 12 or greater on it, based on the fixed effects specification.

As expected, the odds of ratifying a PTA also rise as the number of veto players falls. In each model, the estimated coefficient of $Veto\ Players_i$ is negative and statistically significant. To further analyze the effects of this variable, we compare the predicted

probability of state *i* forming a PTA when it has few veto players—which we define as the 10th percentile in the data—to the predicted probability when it has many such players—which we define as the 90th percentile in the data, holding constant the remaining variables in the model. Based on the results in the second column of Table 2, a state with few *Veto Players*$_i$ is about 20 percent more likely to ratify a PTA than one with more *Veto Players*$_i$. This figure varies some depending on how democracy is defined, but these results nonetheless reinforce the point that domestic politics plays an important role in shaping the decision to enter trade agreements.

Not surprisingly, however, various economic and international factors are also important in this regard. States that trade extensively tend to form PTAs; in each case, the estimated coefficient of *Trade*$_{ij}$ is positive and statistically significant. Increasing the mean of *Trade*$_{ij}$ by one standard deviation increases the predicted probability of ratification by over 15 percent, holding constant the remaining variables in the model. Further, based on the country fixed effects specification, there is evidence that larger countries are less likely to enter PTAs than their smaller counterparts since the estimated coefficients of *GDP*$_i$ are negative and significant.

Turning to the systemic variables, there is evidence of the diffusion of PTAs and that the odds of ratifying such an arrangement rose in the Cold War's aftermath. The estimated coefficient of *Post-Cold War* is positive and statistically significant in each instance. So too is the coefficient of *% Dyads Ratifying PTA*, which indicates that PTA formation tends to

cluster over time. States may be either strategically conditioning their behavior on what their counterparts do or simply following the herd.

PTAs are also especially likely to form as a hegemonic power rises. The estimated coefficients of *Hegemony* in Table 2 are positive and statistically significant, indicating that the odds of ratifying a preferential arrangement rise as the portion of the world's output accounted for by the leading economy increases. Increasing the mean value of *Hegemony* by one standard deviation yields almost a 30 percent rise in the predicted probability of ratification. This result differs from what we found in earlier research, perhaps because the current analysis covers a longer time frame (Mansfield and Milner 2012).

In addition, alliances, GATT/WTO membership, and existing PTA membership promote the ratification of preferential arrangements. As expected, allies are more likely to form preferential agreements than other states. However, political-military disputes have little effect on PTAs; the estimated coefficients of $Dispute_{ij}$ are positive, but are not statistically significant. That members of the multilateral regime are more likely to form PTAs than other states might seem surprising at first blush since this institution was intended to combat regionalism and bilateralism. However, the GATT's Article XXIV made specific provisions for such agreements and PTAs have flourished among members of this regime. It also might seem surprising that countries that already participate in the same PTA are more likely to form another one than states that are not PTA partners. But in 2005, for example, 1,126 country pairs were parties to two preferential agreements; 415 pairs to three PTAs; 82 pairs to four PTAs; 27 dyads to five PTAs; and three pairs to six

PTAs. In 1976, for instance, Papua New Guinea and Australia inked a bilateral agreement, followed by both countries joining the South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA) in 1980. Singapore and New Zealand signed a bilateral agreement in 2000, after which both countries entered the Trans-Pacific Strategic Economic Partnership Agreement in 2005. In 1997, the Greater Arab Free Trade Agreement (GAFTA) was signed. Among the members were three countries (Morocco, Tunisia, and Libya) that were also in the Arab Maghrib Union, as well as six members (Iraq, Egypt, Syria, Yemen, Kuwait, and the United Arab Emirates) that were already joined under the Council of Arab Economic Unity (CAEU).

The results also show that contiguous states are unlikely to form PTAs. In combination with the observed effects of $Distance_{ij}$, this suggests that PTAs are most likely to form between states that are nearby but do not share a border. Finally, while many observers assume that PTAs are formed between a large, rich country and a small, poor one, our results indicate otherwise. The coefficient estimate of $GDP\ Ratio_{ij}$ is negative and statistically significant, implying that greater imbalances in national income discourage the ratification of PTAs. Since countries that are equally powerful may be better able to conclude agreements that involve reciprocal concessions, this result may not be that surprising. But the idea that most small countries are forced into PTAs with larger ones against their will does not seem to be borne out (Gruber 2000). Finally, the estimated coefficient of *Global Business Cycle* is negative and statistically significant, indicating that

PTAs are more likely to form during economic downturns than during upswings in the international economy.

A number of robustness checks provide further support for our claims. To begin, we replace the Polity measures of democracy with another well-known measure developed by Przeworski and his colleagues (2000), and updated by Cheibub, Gandhi, and Vreeland (2010). Doing so has no bearing on our findings. Next we replace the Penn World Tables data on GDP and the change in GDP with data drawn from the World Bank's *World Development Indicators*. A key difference between these data sets is that the WDI data do not start until 1960 so all the years between 1950 and 1960 are dropped with this variable.[16] This change does not alter our main results.

Next, we want to make sure that our results do not simply reflect the European Community/European Union (EU), which is comprised of democracies that have formed many trade agreements since World War II. We therefore started by dropping all European countries and then drop all pairs in which either country is an EU member. Neither of these tests yields any changes to our core results. In addition, our results are virtually unchanged when we estimate the base model using a rare events logit specification, which accounts for the fact that the formation of a PTA is an uncommon occurrence (King and Zeng 2001). Equally, although we think a one year lag is most appropriate given the average time between the signing and ratification of a trade agreement, we also measured

[16] The correlation between the WDI and the Penn World Tables measure is only 0.80. This may be because the Penn World Tables data are in constant international dollars while the WDI data are in US dollars. We prefer the Penn World Tables data due to the longer temporal coverage.

the percentage change in GDP over two-year and five-year intervals. In both cases, no matter which democracy cutoff we use, our findings still hold.

Further, we analyze the first PTA that a given pair of countries forms and drop any subsequent agreement that they join from the sample. We also explore whether our results change if we code the dependent variable when PTAs are signed by member-states, rather than when they are ratified. None of these tests yield any changes to our results.

Finally, we account for several domestic variables that might affect the observed influence of regime type and the business cycle on PTA formation. First, we include various measures of the timing of national elections, but find no evidence that they influence either trade agreements or the effects of regime type and the business cycle on such agreements. Second, we examine the partisan orientation of government. Interestingly, we find preliminary evidence that right-wing governments are less likely to join PTAs than left-wing governments, and that leftist governments in democratic countries are especially likely to enter PTAs. Nonetheless, introducing partisanship in our statistical model does not alter the effects of regime type and the business cycle. In sum, our results seem to be very robust.

Conclusions

The received wisdom is that economic downturns promote protectionism. It is therefore surprising that economic hard times sometimes lead political leaders to negotiate and ratify trade agreements that reduce trade barriers and promote trade among the

members. We have argued that domestic political incentives exist for democratic leaders to establish trade agreements during hard economic times. Of course, domestic politics is not the sole factor shaping PTAs; we have found that a wide variety of economic and international political variables also exert a strong influence of the establishment of these agreements. But the domestic political logic of PTAs has been understudied and underappreciated to date, a gap that we have aimed to help fill in this study.

PTAs signal to the public that a country's leader is not totally captured by protectionist special interests. Hence, when economic troubles arise, voters and pro-trade interest groups are less likely to blame the leader for them. Establishing trade agreements that tend to liberalize and expand overseas commerce indicates to the public that its leader is not exploitative or incompetent and that hard economic times should be attributed to sources beyond his or her control. Under these circumstances, leaders have a better chance of retaining office in the face of bad economic times. Leaders realize political gains as a result and the general public also benefits from freer trade.

Where leaders face greater political competition, these considerations are particularly important. In more democratic settings, leaders are more concerned with how the public reacts to bad economic times and thus more likely to enact policies that reassure the public. Trade agreements help to provide such reassurance. We therefore expect that leaders in more democratic political environments will be more likely to negotiate and ratify PTAs in bad times than otherwise.

Autocrats are often less susceptible to the political consequences of economic downturns (Bueno de Mesquita et al. 2003). Hence, they have less reason to pursue trade agreements in general and during bad times. Indeed, during dips in the business cycle, they may avoid making agreements because the distributional effects of doing so may harm their supporters. Autocrats often depend on the support of the major sectors of the economy and may, in turn, heavily protect these sectors to generate political support. Reducing trade barriers in bad times may undermine this support and thus jeopardize their hold on power. Consistent with this observation, we find that the business cycle has relative little bearing on when non-democracies enter trade agreements.

Our research suggests some good news. PTAs do less to promote welfare than unilateral or multilateral trade liberalization; but with the WTO struggling to advance multilateral liberalization and the difficulties that many countries face unilaterally liberalizing foreign commerce, PTAs may be the best way to keep the global trading system open. Moreover, it is good news that democracy has been spreading globally and that democratic leaders have political reasons to resist protectionism in the face of bad economic times.

Table 1. Descriptive statistics.

	Obs.	Mean	Std. Dev.	Min.	Max.
PTA Ratification	1021530	0.009	0.094	0	1
Democracy ≥ 20	1021530	0.259	0.438	0	1
Democracy ≥ 16	1021530	0.472	0.499	0	1
Democracy ≥ 12	1021530	0.533	0.499	0	1
ΔGDP	1021530	0.019	0.072	-0.656	1.191
ΔGDP × Democracy ≥ 20	1021530	0.003	0.019	-0.199	0.291
ΔGDP × Democracy ≥ 16	1021530	0.007	0.032	-0.310	0.296
ΔGDP × Democracy ≥ 12	1021530	0.009	0.036	-0.337	0.315
Veto Players	1021530	0.227	0.218	0	0.720
Existing PTA	1021530	0.106	0.308	0	1
Trade	1021530	-2.622	4.978	-6.908	13.016
GDP	1021530	17.319	2.041	12.161	23.298
Dispute	1021530	0.000	0.021	0	1
Ally	1021530	0.106	0.308	0	1
Former Colony	1021530	0.007	0.082	0	1
Contiguity	1021530	0.020	0.140	0	1
Distance	1021530	8.735	0.763	2.349	9.901
Hegemony	1021530	0.223	0.033	0.165	0.315
GDP Ratio	1021530	2.436	1.794	0.000	11.077
Post-Cold War	1021530	0.598	0.490	0	1
% Dyads Ratifying PTA	1021530	0.008	0.009	0	0.038
Global Business Cycle	1021530	2.963	2.098	-4.529	7.579
GATT	1021530	0.471	0.499	0	1

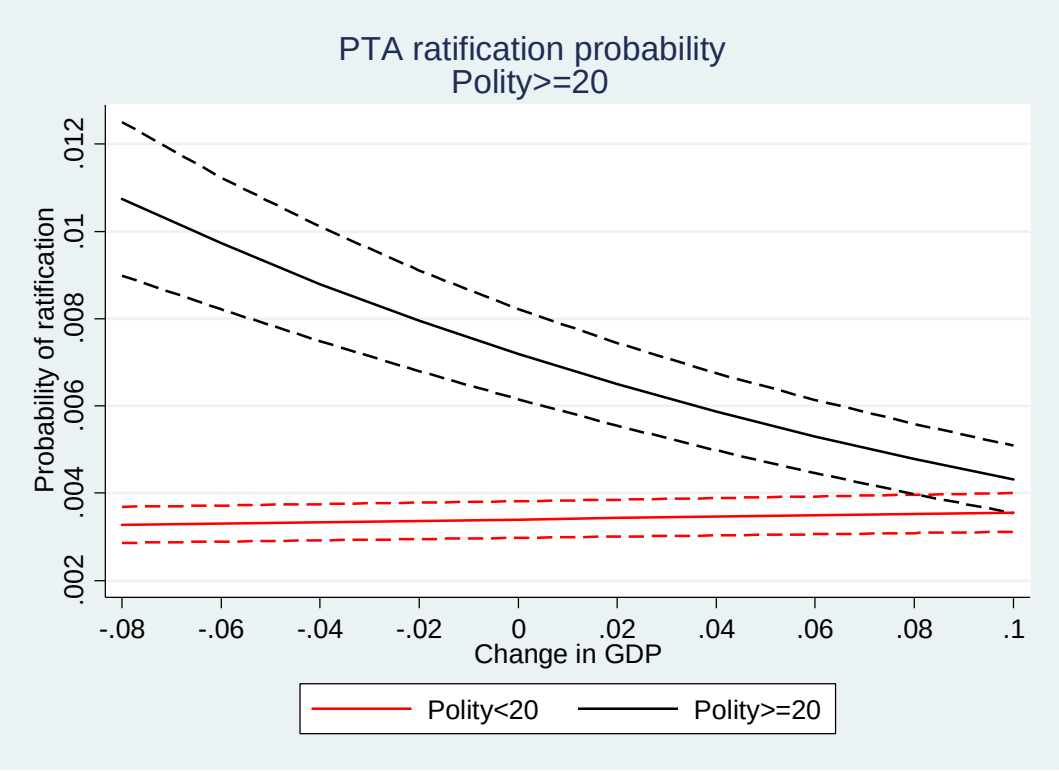
Table 2. Estimated effects of regime type and the business cycle on PTA ratification, 1951-2011.

	Democracy ≥ 20		Democracy ≥ 16		Democracy ≥ 12	
	Region FEs	Country FEs	Region FEs	Country FEs	Region FEs	Country FEs
Democracy	0.545**	0.768**	0.305**	0.301**	0.129**	-0.043
	(0.039)	(0.056)	(0.036)	(0.047)	(0.036)	(0.048)
ΔGDP	0.232*	0.468**	0.274*	0.529**	0.346**	0.629**
	(0.115)	(0.125)	(0.125)	(0.133)	(0.126)	(0.135)
Democracy × ΔGDP	-4.774**	-5.706**	-1.883**	-2.258**	-1.820**	-2.256**
	(0.532)	(0.563)	(0.306)	(0.344)	(0.275)	(0.308)
Veto Players	-0.521**	-1.019**	-0.619**	-1.096**	-0.384**	-0.755**
	(0.071)	(0.096)	(0.085)	(0.105)	(0.085)	(0.108)
Existing PTA	0.133*	-0.170**	0.133*	-0.157**	0.130*	-0.155**
	(0.054)	(0.056)	(0.054)	(0.056)	(0.054)	(0.056)
Trade	0.034**	0.056**	0.035**	0.056**	0.034**	0.055**
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)
GDP	-0.010	-0.346**	0.003	-0.343**	0.000	-0.358**
	(0.011)	(0.051)	(0.011)	(0.051)	(0.011)	(0.051)
Dispute	0.429	0.259	0.465	0.263	0.452	0.249
	(0.257)	(0.264)	(0.257)	(0.265)	(0.256)	(0.265)
Ally	0.308**	0.848**	0.300**	0.842**	0.303**	0.845**
	(0.054)	(0.052)	(0.054)	(0.052)	(0.053)	(0.052)
Former Colony	-1.739**	-1.959**	-1.764**	-1.959**	-1.754**	-1.956**
	(0.400)	(0.436)	(0.400)	(0.435)	(0.400)	(0.435)
Contiguity	-0.596**	-0.734**	-0.607**	-0.733**	-0.611**	-0.732**
	(0.062)	(0.061)	(0.062)	(0.061)	(0.062)	(0.061)
Distance	-1.041**	-1.116**	-1.040**	-1.115**	-1.041**	-1.114**
	(0.050)	(0.044)	(0.050)	(0.043)	(0.050)	(0.043)
Hegemony	10.739**	8.848**	10.491**	8.352**	10.344**	7.995**
	(0.573)	(0.822)	(0.577)	(0.829)	(0.578)	(0.831)
Post-Cold War	0.964**	1.134**	0.931**	1.100**	0.936**	1.138**
	(0.042)	(0.046)	(0.042)	(0.046)	(0.042)	(0.046)
GDP Ratio	-0.174**	-0.201**	-0.173**	-0.200**	-0.173**	-0.200**
	(0.009)	(0.010)	(0.009)	(0.010)	(0.009)	(0.010)
% Dyads Ratifying PTA	44.733*	44.355**	44.139**	43.447**	44.319**	43.460**
	(1.111)	(1.156)	(1.115)	(1.160)	(1.112)	(1.157)
Global Business Cycle	-0.113**	-0.114**	-0.112**	-0.113**	-0.112**	-0.113**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)

GATT	0.182**	0.212**	0.179**	0.211**	0.193**	0.231**
	(0.029)	(0.043)	(0.029)	(0.043)	(0.029)	(0.043)
Constant	0.933*	7.693**	0.840	8.251**	0.934*	8.807**
	(0.456)	(1.364)	(0.456)	(1.370)	(0.455)	(1.374)
N	1033945	1021530	1033945	1021530	1033945	1021530
Clusters	29394	28598	29394	28598	29394	28598
Log-likelihood	-42778.87	-40009.48	-42855.35	-40099.8	-42879.23	-40112.61

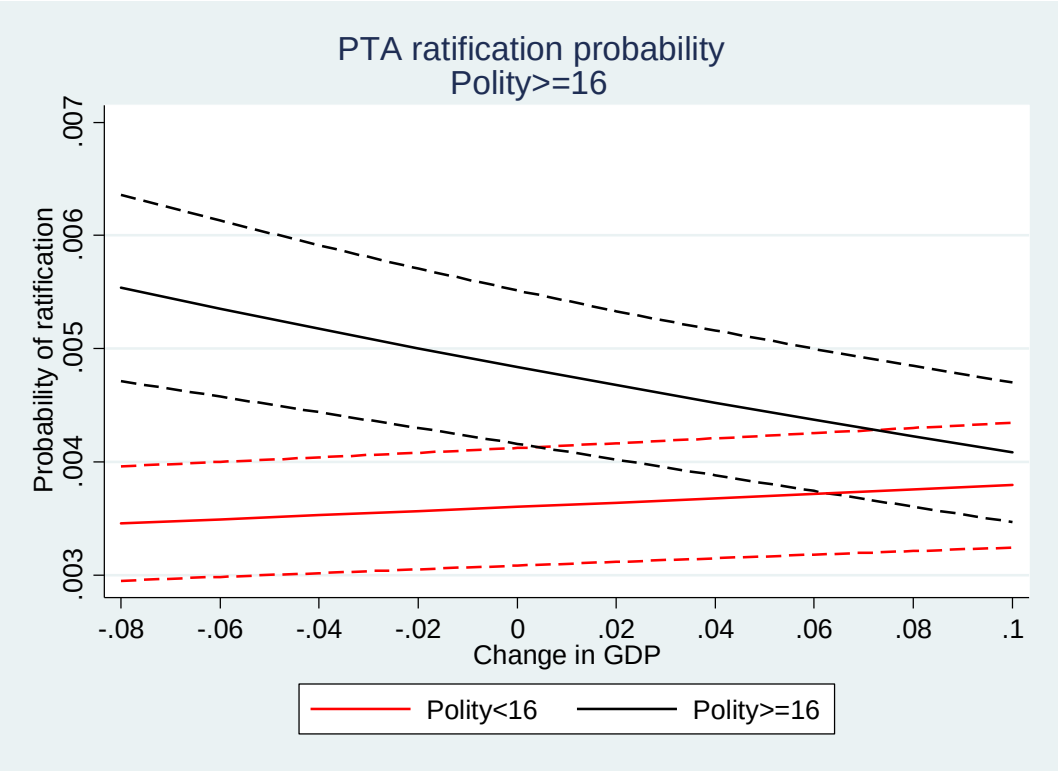
Note: Entries are logistic regression estimates with robust standard errors clustered by dyad in parentheses. Statistical significance is indicated as follows: ** $p < 0.01$; * $p < 0.05$. All tests of significance are two tailed.

Figure 1. Predicted probability of democracies and non-democracies ratifying a PTA under various domestic economic conditions, 1951-2011, where democracy is defined as a Polity score of 20 or greater.



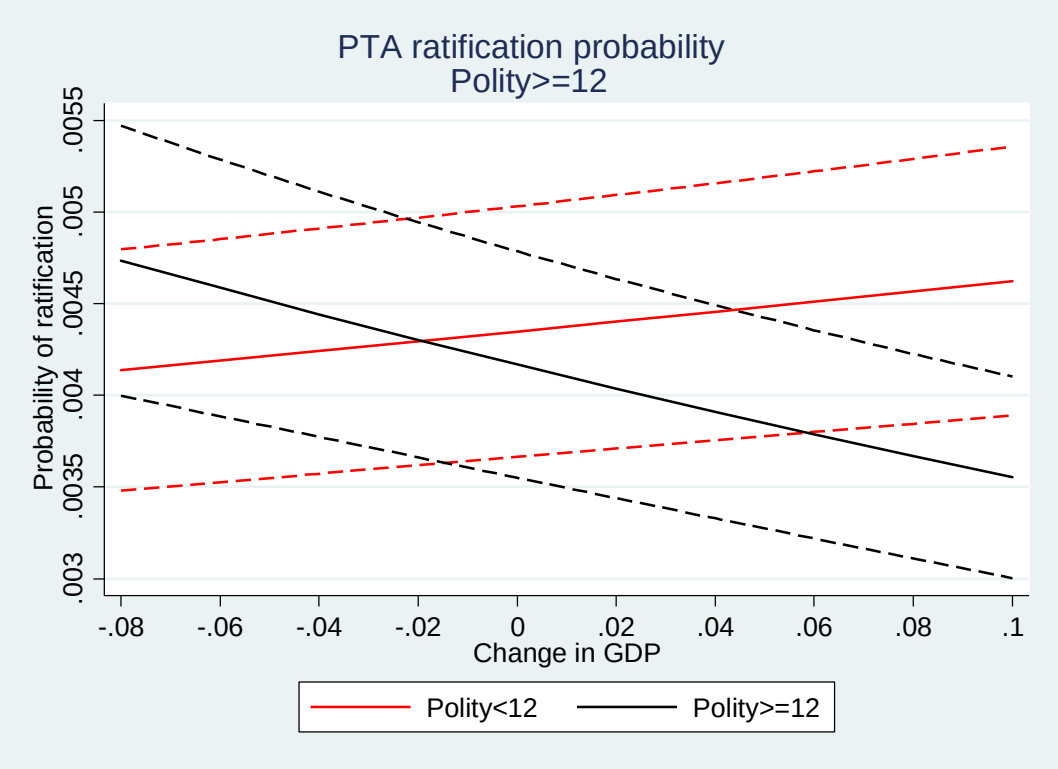
Note: Dashed lines represent 95% confidence intervals.

Figure 2. Predicted probability of democracies and non-democracies ratifying a PTA under various domestic economic conditions, 1951-2011, where democracy is defined as a Polity score of 16 or greater.



Note: Dashed lines represent 95% confidence intervals.

Figure 3. Predicted probability of democracies and non-democracies ratifying a PTA under various domestic economic conditions, 1951-2011, where democracy is defined as a Polity score of 12 or greater.



Note: Dashed lines represent 95% confidence intervals.

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