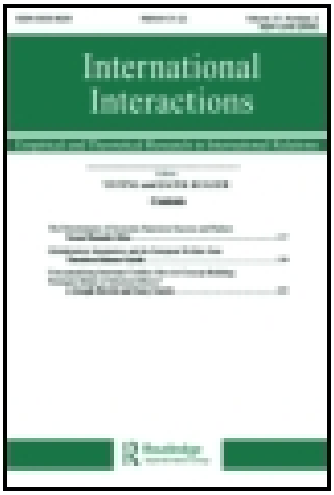

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Buying National: Democracy, Public Procurement, and International Trade

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Buying National: Democracy, Public Procurement, and International Trade

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Many studies show that democracy promotes freer trade. However, because they typically focus on "at-the-border" barriers such as tariffs, we know little about democracy's effects on "behind-the-border" barriers such as discrimination in government procurement. We address this question by asking how democracy affects governments' incentives to discriminate against foreigners when buying goods and services. We argue that "buy national" policies have unclear costs and are harder to attack than policies that visibly interfere with consumers' ability to buy foreign goods. This makes such provisions more attractive than tariffs to democratic leaders seeking reelection. We thus hypothesize that democracy leads to lower tariffs but to greater discrimination in public procurement. We support this hypothesis with an analysis of procurement and imports in 138 countries from 1990 to 2008. Our results imply that a full understanding of the democracy–trade policy relationship requires attention to increasingly prominent behind-the-border barriers to trade.

KEYWORDS democracy, international trade, public procurement

Does democracy promote free trade? The conventional wisdom says "yes": Many studies show that democracies have more liberal trade policies than autocracies (Frye and Mansfield 2004; Mansfield, Milner, and Rosendorff 2000, 2002; Milner and Kubota 2005). This result has important policy

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implications, as it suggests that the ongoing "third wave" of democratization (Huntington 1993) will advance the process of global trade liberalization. Other studies, however, sound a more cautionary note, suggesting that the effects of democracy on trade policy may be context-specific. For example, scholars have argued that democracy can either increase or decrease protectionism, depending on countries' factor endowments (Kono 2008; O'Rourke and Taylor 2006; Tavares 2008), the nature of market structure (Verdier 1998), or the types of trade barriers employed (Kono 2006). Although these studies do not necessarily challenge the claim that democracy *generally* promotes freer trade, they do suggest that the democracy–trade policy relationship is more complex than is commonly believed.

Most of what we know about democracy and trade policy comes from studies of "at-the-border" trade barriers such as tariffs. This is understandable, as such barriers have historically been the main instruments of trade protection. In recent decades, however, global trade negotiations have steadily reduced these at-the-border barriers, and governments have turned to "behind-the-border" measures such as subsidies, regulatory standards, and discriminatory public procurement. A full understanding of the democracy–trade policy relationship requires that we examine these increasingly important behind-the-border barriers. This article takes a step in that direction by asking how democracy affects discrimination in public procurement.

Public procurement refers to government purchases of goods and services from the private sector. Discrimination means favoring, either explicitly or implicitly, domestic over foreign producers. Procurement discrimination is an increasingly important issue in international trade, as a recent row over "Buy American" provisions illustrates. The 2009 US stimulus act required that any manufactured goods purchased with stimulus funds be American-made. In other words, it required the government-as-consumer to discriminate against foreign producers. Not surprisingly, US trading partners were upset: The European Union ambassador warned that the US policy "risks entering into a spiral of protectionist measures around the globe that can only hurt our economies further,"[1] while the official Chinese news agency fumed that such policies "could become just the poison that worsens global economic hardships."[2] As these reactions suggest, the world's largest trading states see procurement discrimination as a central issue in international trade.

The reaction of US trading partners is easy to understand, in light of the economic stakes. Governments are the world's largest single purchasers of goods and services: In recent years, government spending has

[1]President Obama to Water Down "Buy American" Plan after EU Trade War Threat. *The Times,* February 4, 2009.

[2]Reuters, February 14, 2009. http://www.reuters.com/article/2009/02/15/us-china-usa-buyamerican-idUSTRE51E05420090215.

averaged nearly 30% of GDP in the high-income Organization for Economic Cooperation and Development (OECD).[3] Although some of this spending is invariably domestic (for example, salaries for government employees), government outlays that could potentially be devoted to imports are nonetheless large. Studies show that these "contestable" procurement markets amount to trillions of dollars per year worldwide (Audet 2002; Beviglia-Zampetti 1997). It is thus not surprising that exporters object when they are shut out of procurement markets.

Despite the importance of procurement discrimination, we know little about its political causes. Economists have studied the economic effects of such discrimination, showing that it can influence domestic prices and international trade.[4] However, as Weiss and Thurbon (2006) observe, political scientists have almost wholly ignored this policy domain. As a consequence, although we know that some governments discriminate more than others (Lowinger 1976; Trionfetti 2000), we do not know why.

This article offers one answer to this question. We argue that political regime type affects governments' incentives to discriminate in public procurement. Our argument is simple. First, all governments face interest-group pressures for protectionism. All else equal, they would prefer to provide this with tariffs, which generate both tax revenues and interest-group support. Second, governments also face public pressures for relatively free trade. Because democratic governments are more responsive to such pressures, democracy increases the incentive to liberalize trade (Mansfield et al. 2002; Milner and Kubota 2005). Third, some trade barriers have more transparent effects than others. Direct taxes such as tariffs are highly transparent and visibly increase the cost of imports. In contrast, procurement discrimination is typically opaque and has unclear effects on citizen welfare. This makes procurement discrimination hard both to observe and to condemn. Fourth, the government's political rivals know this and are thus more likely to attack tariffs than procurement discrimination. Finally, concern about such political challenges leads democrats but not autocrats to substitute procurement discrimination for tariffs. We thus hypothesize that democracy leads to lower tariffs but to increased discrimination in public procurement.

We test this hypothesis with data on 138 countries from 1990 to 2008. Because it is difficult to measure discrimination directly, we test our hypothesis indirectly, examining the relationship between procurement spending and imports under different regime types. We find that procurement spending has no effect on imports in autocracies, implying that autocratic governments have roughly the same propensity to import as the private sector. In contrast, procurement spending leads to significantly lower imports in democracies, implying that democratic governments are less likely than the

[3]World Bank *World Development Indicators*.

[4]See Evenett and Hoekman (2005) for a discussion and review.

private sector to spend money on imports. In effect, they tax money away from a nondiscriminatory private sector and spend that money preferentially on domestic goods and services. This supports our hypothesis that democracies are more likely than autocracies to buy national. In addition, we show that democracy reduces tariffs both in a broad sample of rich and poor countries and in rich and poor subsamples. This supports our argument that democratic governments substitute away from tariffs and toward less-transparent procurement discrimination.

Our results imply that a full understanding of the democracy–trade policy relationship requires attention to all types of trade barriers. Although at-the-border and behind-the-border barriers may have similar protectionist effects, our results imply that they are not perfect political substitutes. As the world becomes more democratic, protectionism may increasingly shift away from tariffs and toward more complex and opaque nontariff barriers—as has indeed been the trend in recent years. Hence, to understand where democracy's Third Wave is driving the global trading system, we need to consider trade policy in all its myriad forms.

THE ECONOMICS OF BUYING NATIONAL

Before proceeding, let us define precisely what we mean by *procurement discrimination*. Governments engage in procurement discrimination when they favor domestic over foreign suppliers when purchasing otherwise similar goods or services.[5] Such discrimination is sometimes explicit, as with the Buy American provisions—an outright ban on foreign purchases—or with price discrimination that requires foreign suppliers to undercut domestic ones by a certain amount. More commonly, however, discrimination is implicit, as when governments have tacit understandings with domestic producers (Lowinger 1976), give foreign producers insufficient notice of contracting opportunities, or draft technical specifications to benefit local suppliers (Beviglia-Zampetti 1997). All of these practices advantage domestic over foreign producers.

We assume that procurement discrimination constitutes a barrier to trade. Although this assumption may seem trivial—after all, public funds earmarked for domestic output cannot be spent on imports—the effects of procurement discrimination are in fact not theoretically clear-cut. Baldwin (1970) and Baldwin and Richardson (1972) showed that, if markets are perfectly competitive and government demand for a good is smaller than domestic output, discriminatory procurement has no effect on imports, domestic output, or prices. The fall in government demand for imports is

[5]By "otherwise similar" we mean that domestic producers do not have obvious cost or quality advantages over their foreign competitors.

exactly offset by a rise in private demand, as the government consumes more of domestic output. Miyagiwa (1991) extended the analysis to imperfect competition and showed that procurement discrimination can, depending on the conditions, have negative, positive, or no effects on imports. In general, discrimination is more likely to reduce imports and welfare when government demand is high and products are more differentiated. Ultimately, however, whether procurement discrimination constitutes a trade barrier is an empirical question.

Two types of empirical evidence suggest that procurement discrimination in fact impedes trade. First, econometric studies show that such discrimination reduces imports (Brulhart and Trionfetti 2004; Trionfetti 2000). Perhaps for this reason, economists almost universally condemned the Buy American provisions as protectionist.[6] Second, governments treat procurement discrimination as a trade barrier. As mentioned earlier, the US's trading partners were irate about the Buy American measures, and more generally, governments have sought to control procurement discrimination through the WTO's Agreement on Government Procurement (GPA). The GPA, which entered into force in 1996, prohibits a variety of practices—for example, price discrimination and local content requirements—that favor domestic over foreign firms (Grier 1996). Although quite recent, the GPA culminates decades of effort to control procurement discrimination through multilateral trade negotiations. Both the longstanding attention to this issue and the difficulty of reaching agreement in this sensitive area indicate that governments see discriminatory procurement as an important barrier to trade.

Given this, we assume that procurement discrimination is a trade barrier that protects domestic industries from foreign competition. In this sense, it is comparable to tariffs, quotas, and other conventional trade barriers. However, as we discuss later, it also differs from these instruments in politically important ways. These differences become clear when we consider the incentives created by democratic competition, or the lack thereof.

THE POLITICS OF BUYING NATIONAL

A large literature contends that democracies have more liberal trade policies than autocracies (for example, Frye and Mansfield 2004; Mansfield et al. 2002; Milner and Kubota 2005). Although theoretical models vary, they also share some common assumptions. First, they generally assume that leaders want to maintain power, either for its own sake or as a means to obtain rents. Second, to accomplish this goal, leaders need support—in varying degrees—from both interest groups and the median voter. Third, democracy increases the need for the median voter's support because the latter can

[6]See, for example, Irwin (2009).

depose leaders through competitive elections. Fourth, interest groups and the median voter have different preferences: Interest groups seek protection from imports and higher tariffs, while the median voter prefers lower prices and lower tariffs. Finally, in some models (Kono 2006; Mansfield et al. 2002), leaders themselves prefer high tariffs, which generate revenues that can be used for rents or to maintain power. In sum, these are models in which leaders and interest groups prefer high tariffs, the median voter prefers lower tariffs, and democracy increases the median voter's political influence. Given these assumptions, it follows that democracy leads to freer trade.[7]

We take these assumptions as a starting point for our argument. However, following Mansfield et al. (2002) and Kono (2006)—as well as empirical work by Guisinger (2009)—we also assume that voters face informational problems and, left to their own devices, remain rationally ignorant of trade policy. This makes it difficult for voters-as-principals to discipline politicians-as-agents and potentially severs the link between regime type and trade policy. Different scholars have addressed this dilemma in different ways.

Mansfield et al. (2002) argue that international institutions provide information about illegal protectionist policies, an argument supported empirically by Pelc (2013). Bailey (2001) takes a different tack, arguing that voters need not even be informed to influence policies. Rather, forward-looking politicians should represent uninformed voters to prevent their opponents from informing such voters in the first place. As Bailey (2001:46) explains,

> The mechanism is . . . one of anticipated reaction . . . . Rival politicians, interest groups, the media, and the president have incentives to activate diffuse interests if representatives pay too little attention to these interests. Rational legislators forestall such attacks by serving these voters preemptively. This anticipation mitigates the need to mobilize these interests and, thus, makes the process "quiet" and difficult to observe directly.

In other words, democratic politicians represent uninformed voters because if they did not, those voters *would* become informed through attacks by the government's political rivals. However, in equilibrium, voters remain

[7]These assumptions need not hold in extreme form: It need not be the case that all interest groups want protection, that mass publics want completely free trade, or that democratic leaders are perfectly responsive to mass publics. All that is required is that, on balance, mass publics are more liberal than interest groups and that democrats are more responsive to the public than autocrats. On the first point, perhaps the best evidence is empirical work on the Grossman-Helpman (1994) model (Gawande and Bandyopadhyay 2000; Goldberg and Maggi 1999) showing that trade barriers are lower than would be expected on the basis of interest-group pressures alone. On the second point, the greater responsiveness of democratic politicians to mass publics is virtually a defining feature of democracy.

uninformed and never actually punish politicians because the latter remain on the equilibrium path.

Like Bailey (2001) and Denzau and Munger (1986), Kono (2006) argues that democratic competition deters politicians from adopting policies that would be attacked by their political rivals. However, in applying this argument to trade policy, he contends that some trade barriers are more likely to be challenged than others. Since we build closely on Kono (2006) here, we briefly review the details of his argument.

First, like many models (for example, Grossman and Helpman 1994; Rogowski and Kayser 2002), Kono (2006) assumes that governments maximize a weighted sum of money and popular support. Money can be obtained either from interest groups—who are willing to contribute more for higher trade barriers—or directly, from tariff revenues. Governments can employ various types of trade barriers—both tariffs and nontariff barriers (NTBs)—all of which generate diminishing marginal contributions with respect to themselves and each other. That is, when any trade barrier is high in a given sector, an increase in that or other trade barriers generates fewer marginal interest-group contributions because imports have already been substantially depressed. Importantly, tariff revenues also decline as nontariff barriers rise because the latter reduce the quantity of imports that can be taxed. This means that, all things equal, all governments would prefer to protect their markets with tariffs, which raise money in two ways: via interest group contributions and via direct tariff revenues.

All things are not equal, however, because governments must also consider the public's reaction to different types of trade barriers. Following Magee, Brock, and Young (1989), Kono (2006) argues that some trade barriers have more transparent effects than others. At one extreme, tariffs are simply import taxes whose costs are easily explained: A 20% tariff on autos makes autos 20% more expensive. At the other extreme, technical barriers to trade (TBTs) such as health and safety standards have highly complex effects: Their impact on prices is difficult to quantify and explain, and such standards might actually improve consumer welfare if they lead to safer products. In many cases, TBTs are purely protectionist and do not help consumers.[8] However, because their effects are so complex, an unambiguous case against them is difficult and time-consuming to make.

These differences in policy complexity have political consequences because politicians must weigh the costs and benefits of attacking government policies. Political campaigns are expensive, and politicians have limited budgets. The government's opponents thus prefer to attack policies whose costs can be explained quickly, easily, and cheaply. Tariffs, whose costs are

[8]For example, the United States banned imports of Mexican avocados for decades, on the grounds that they were pest infested, despite abundant evidence that no such risk existed (Plume 1996).

easy to explain, make an inviting target. TBTs, whose effects are more complex, are less likely to be attacked. Evidence suggests that this strategy is rational: For example, Pelc (2013) shows that the public pays much more attention to traditional WTO "merchandise" disputes than to highly technical "nonmerchandise" disputes. This supports the idea that traditional at-the-border barriers make more inviting political targets than highly complex TBTs.

Governments thus face a trade-off. Tariffs raise more money than TBTs because they generate tax revenue as well as interest-group contributions. However, tariffs are also more likely to be attacked and publicized and hence to reduce popular support. Governments are thus likely to use tariffs when (1) they can repress political opponents—thus preventing the latter from criticizing their policies—and (2) they can maintain power without popular support. Governments are more likely to rely on TBTs when these conditions do not hold.

This argument generates a straightforward prediction about regime type and trade policy. Autocratic governments should protect their markets with tariffs, which generate tax revenue as well as interest-group contributions. Autocrats can employ tariffs with impunity because (1) they can repress political opponents, thus preventing them from informing the public about tariff barriers; and (2) they can maintain power without popular support and are thus less threatened by any criticism that does occur. Autocrats can thus enjoy the financial advantages of tariffs without paying a high political cost. Conversely, autocrats should keep TBTs low because TBTs depress imports and hence tariff revenues. Autocracies should thus have high tariffs but low TBTs.

Democratic governments have different incentives. Although they would also like to raise money via tariffs, they must fear the consequent political costs. They cannot repress attacks on their policies, nor can they stay in power without popular support. Democratic governments should thus avoid electoral criticism by keeping tariffs low, but they should also seek interest-group contributions in exchange for less-transparent TBTs. Democracies should thus have low tariffs but high TBTs. Empirically, Kono (2006) finds support for this argument: Democracy leads to lower tariffs, higher levels of "core" NTBs such as quotas, voluntary export restraints, and import licences, and even higher levels of TBTs such as health, safety, and other technical standards. Democracies thus seem to lower transparent tariffs but to replace them with complex and opaque NTBs.

It is worth noting what this argument does *not* assume. First, it does not assume any differences between interest-group or mass public preferences in autocracies and democracies. The only difference between the two regime types is that autocratic governments can repress criticism and are less dependent than democratic ones on popular support. Second, the argument does not assume that TBTs are actually popular. Although some, like the EU

ban on hormone-treated beef, do enjoy popular support (Davis 2003), this is not central to the argument. The argument, rather, is that TBTs with complex and opaque effects make poor targets for the government's opponents. Democratic governments adopt such policies, not because they actively garner public support, but rather because they are typically ignored by political opponents and hence by the public.

Finally, note that, in equilibrium, there should be no political conflict over trade policy, and the public should remain rationally ignorant. There should be no conflict in autocracies because governments can repress the opposition and control the flow of information. There should be no conflict in democracies because democratic governments choose opaque policies that will not be attacked. Because the political process generates no information about trade policy, the public should be generally uninformed, as Guisinger (2009) finds in the US case. Nonetheless, the public influences the choice of trade barriers in democracies via its latent potential to punish politicians who stray from the equilibrium path.

We argue that procurement discrimination is the kind of opaque protectionism that democratic governments prefer. Procurement discrimination is opaque in at least two ways. First, it is hard to say with certainty whether such discrimination even exists. As Miyagiwa (1991) notes, the US is unusual in having explicit "buy national" legislation. Not only do most countries not advertise such practices; they also discriminate in ways that are inherently nontransparent: For example, they give foreign producers insufficient notice of contracting opportunities or draft technical specifications to favor local suppliers (Beviglia-Zampetti 1997; Evenett 2002). This makes it difficult even to know whether governments are discriminating against foreign producers. Second, even when such discrimination is clear, its domestic welfare effects are not. Economic theory has produced no consensus on the welfare effects of procurement discrimination (Evenett and Hoekman 2005), and the data needed to assess such effects empirically are hard to obtain (Hoekman 1998). To the average citizen, it is probably not clear why procurement discrimination should affect her welfare at all, as it does not obviously affect her cost of living. Procurement discrimination is thus hard to observe, and hard to condemn unambiguously even when it is observable. These characteristics make procurement discrimination a politically unattractive target for challengers with scarce campaign resources.[9]

[9]There is also some evidence that procurement discrimination, when visible, may be politically popular. For example, a February 2009 Pew poll asked US respondents whether requiring the government to spend money on US-made goods and services was a "good idea, because it keeps jobs in the US" or a "bad idea, because it risks trade retaliation" (http://www.people-press.org/files/legacy-pdf/490.pdf); 66% of respondents said this was a good idea, while only 24% thought it a bad idea. These figures suggest that the median voter approves of procurement discrimination and hence that governments can practice such discrimination without fear of an electoral backlash. We emphasize, however, that such public approval is

Given this, Kono's (2006) argument has clear implications for procurement discrimination. Autocrats should protect their markets with tariffs, which generate both tax revenues and interest-group contributions. At the same time, they should eschew procurement discrimination, which would reduce tariff revenues and force autocrats to spend more on procured goods and services. Democratic governments, in contrast, should avoid tariffs that invite political attacks. Instead, they should raise interest-group contributions by protecting domestic markets via procurement discrimination. Democracy should thus lead to lower tariffs but to increased discrimination in public procurement. The remainder of this article tests this hypothesis. Because others have shown that democracy leads to lower tariffs (Kono 2006; Milner and Kubota 2005), we focus mostly on the democracy-procurement discrimination relationship. However, we do provide a comparison with tariffs to verify that democracy induces the hypothesized substitution effects.

DATA AND ANALYSIS

To test our hypothesis, we must measure discrimination in government procurement. This is difficult to do. Statute law is unhelpful because discrimination is typically not explicit: The Buy American provisions are the exception, not the rule (Miyagiwa 1991). Detailed information on the tendering process would be useful—governments that consistently choose higher-priced domestic bids might be guilty of discrimination—but, despite the WTO's efforts, such information is not widely available. Scholars attempting to measure discrimination have thus turned to outcome-based measures. For example, Lowinger (1976) and Trionfetti (2000) both compare the government's propensity to import with that of the private sector. Obtaining detailed data on private and public-sector demand for domestic output and imports, they compare the ratio of imports to domestic consumption in the private and public sectors. The private sector's propensity to import is invariably greater than the public sector's, suggesting that governments generally discriminate in favor of domestic producers. However, governments vary in their propensity to import, implying that they discriminate to different degrees.

The main drawback of this approach is that the data constraints are severe. Both Lowinger (1976) and Trionfetti (2000) examine only a handful of rich democracies in a single year. Such limited data do not permit a comparison of democracies and nondemocracies. We thus adopt a simpler approach: We estimate the impact of procurement spending on imports, controlling for other factors. Our dependent variable, $Imports/GDP_{i,t}$ is country i's imports of goods and services in year t, expressed as a percentage of GDP. Our key

not central to our argument. Rather, the central idea is that procurement discrimination is hard to observe and attack and hence likely to go unnoticed.

independent variable, $Procurement/GDP_{i,t}$, is *i*'s contestable procurement spending in year *t*, also as a percentage of GDP.[10] Ceteris paribus, the procurement coefficient indicates the government's propensity to spend procurement funds on imported rather than domestic goods and services. We discuss our predictions for this coefficient, following a discussion of our procurement measure.

We believe that the spending–imports relationship tells us something about procurement discrimination: Governments that do not spend procurement funds on imports are probably discriminating. This inference only makes sense, however, if we examine spending categories that can in principle be devoted to imports. We must therefore exclude some types of spending. For example, salaries for government employees cannot be spent on imports, and, while military procurement potentially could be, in practice this sector is domestically biased for national security reasons (Audet 2002). Studies of the contestable procurement market—that is, procurement that could potentially be spent on imports—thus typically exclude these types of spending. The standard measure (Audet 2002; EC 2000) is government spending on goods and services less compensation of employees and defense expenditures. We follow previous studies and employ this measure. The World Bank's *World Development Indicators* provides longitudinally comparable data on such spending from 1990 onwards. Once all variables are included in our analysis, our sample contains 138 countries from 1990 to 2008.

Our analysis regresses imports against contestable procurement spending. To derive specific hypotheses about the spending coefficient, we must consider how procurement spending affects national demand for imports. Note that an increase in procurement spending simply transfers purchasing power from private to public hands: The government has taken money from the private sector via taxes and has chosen to spend that money itself. How this transfer affects imports depends on the degree of procurement discrimination. If the government does not discriminate at all—that is, it bases its purchasing decisions solely on price and quality—then an increase in procurement spending simply transfers money from one nondiscriminatory buyer (the private sector) to another (the government). In this case, the net effect of procurement spending on imports—and the procurement coefficient—should be zero. On the other hand, if the government discriminates, then an increase in procurement spending transfers money from a nondiscriminatory private sector to a discriminatory government. In this case, procurement spending should reduce imports, and the spending coefficient

[10]Both variables are from the World Bank's *World Development Indicators*. Summary statistics for these and all other variables are presented in the appendix.

should be negative. Spending coefficients should thus range from zero to negative, with larger negative coefficients indicating more discrimination.[11]

Because we expect the spending–imports relationship to depend on regime type, we include two measures of $Democracy_{i,t}$, country i's political regime type in year t. The first is the dichotomous regime type measure developed by Álvarez, Cheibub, Limongi, and Przeworski (ACLP;1996) and extended by Cheibub, Gandhi, and Vreeland (2010). This measure is coded 1 for democracies and zero for autocracies. Countries are considered democratic if both the chief executive and the legislature are chosen through competitive elections; otherwise, they are considered autocratic. Our second regime-type measure is based on the legislative index of electoral competitiveness from the World Bank's *Database of Political Institutions* (DPI). This measure ranges from zero (no legislature) to 7 (fully competitive legislative elections): We dichotomize it so that countries with fully competitive elections are coded 1 and countries with less than fully competitive elections are coded zero.

We employ dichotomous measures based on electoral competitiveness because, in our theory, it is electoral competition—specifically, potential criticism of government policy and the consequent threat of losing power—that makes leaders sensitive to public preferences and creates incentives for procurement discrimination. Other features of democracy, such as checks and balances, may be relevant in other ways but are not central to our theoretical argument. We thus employ measures based on the single dimension of electoral competition to ensure the cleanest possible match between our theory and empirical test.[12]

We include $Procurement/GDP_{i,t} \times Democracy_{i,t}$ to see if the spending–imports relationship varies across regime types. We hypothesize that democracies discriminate in procurement while autocracies do not. If this is true, then the coefficient on procurement—which indicates the spending–imports relationship in autocracies—should be statistically indistinguishable from zero. The coefficient on the interaction term should be negative, which would indicate that democracies are less likely than autocracies to spend procurement funds on imports. Finally, the procurement coefficient for democracies (the sum of the first two coefficients) should be negative and significant, indicating that spending reduces imports in democracies.

Isolating the spending–imports relationship requires that we control for other determinants of imports. The appropriate set of controls is not

[11]The spending coefficient could be positive if the government were less discriminatory than the private sector. However, empirical research by Lowinger (1976) and Trionfetti (2000) indicates that this is not the case.

[12]We recognize that, in practice, different dimensions of democracy are highly correlated and not easily disentangled. Nonetheless, we believe that our measures provide a cleaner test of our argument than other popular measures (for example, Polity), whose variation is often driven by nonelectoral dimensions such as constraints on the chief executive (Gleditsch and Ward 1997).

well established because, in contrast to dyadic models—which have been analyzed exhaustively—monadic models of trade openness are uncommon. We follow Eichengreen and Leblang (2008), who employ a monadic model of trade openness to estimate the impact of democracy on trade. Like them, we include logged GDP, logged population, logged land area, and the logged average GDP-weighted distance from other countries on the right-hand side.[13] In addition, we include a dummy for WTO membership and a variable measuring the number of preferential trade agreements (PTAs) of which country *i* is a member, as membership in both types of international institutions should increase trade (Mansfield and Bronson 1997; Tomz, Goldstein, and Rivers 2007).[14]

We employ two estimation strategies. One is ordinary least-squares (OLS) regression with a lagged dependent variable and robust-cluster standard errors that correct for serial correlation and panel heteroskedasticity, an approach recommended by Beck and Katz (1996). Our second approach is the Arellano-Bover/Blundell-Bond estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998). This is an optimal generalized method of moments (GMM) estimator that eliminates fixed effects through first differencing and employs lagged levels and first differences of all variables as instruments. Specifically, both the lagged dependent variable and endogenous right-hand-side variables are instrumented with lagged levels and first differences of themselves from years *t*-2 and *t*-3. We restrict ourselves to these two lags to prevent the instrument matrix from becoming too large, as the use of too many instruments leads to poor finite-sample properties (Cameron and Trivedi 2010:297). We employ Windmeijer (2005) robust standard errors that correct for panel-specific serial correlation.

One advantage of the GMM estimator is that it produces consistent estimates even with endogenous regressors. This is important, as a number of our regressors—including our key independent variable—are potentially endogenous. Studies show that trade openness affects social spending (Rodrik 1998; Rudra 2002; Rudra and Haggard 2005), and while these results do not necessarily carry over to procurement spending, they do suggest a possible endogeneity concern. Similarly, some have argued that democracy is endogenous to trade openness (Eichengreen and Leblang 2008; Li and Reuveny 2003), while the potential endogeneity of GDP and WTO/PTA membership is clear. We thus treat procurement spending, democracy, the procurement-democracy interaction, GDP, WTO membership, and PTA membership as endogenous in the GMM regressions.

[13]Data on GDP, population, and land area are from the World Development Indicators. Data on dyadic distances are provided by Kristian Gleditsch (http://privatewww.essex.ac.uk/~ksg/data-5.html).

[14]Data on WTO membership are from Tomz et al. (2007). Data on PTA membership are from the WTO (http://www.wto.org/).

TABLE 1 Democracy, Procurement, and Imports

	Democracy Measure			
	ACLP		DPI	
Independent Variable	(1) OLS	(2) GMM	(3) OLS	(4) GMM
Procurement/GDP	−0.502**	−0.833**	−0.455**	−0.861**
× Democracy	(0.182)	(0.392)	(0.163)	(0.290)
Procurement/GDP	0.114	0.036	0.157	0.156
(Democracy = 0)	(0.088)	(0.242)	(0.101)	(0.248)
Procurement/GDP	−0.388**	−0.797**	−0.298*	−0.704**
(Democracy = 1)	(0.193)	(0.269)	(0.153)	(0.169)
Democracy	2.35**	8.17**	2.06*	6.78**
	(1.18)	(2.18)	(1.22)	(1.27)
Ln (GDP)	−0.205	−1.14**	−0.217	−0.655
	(0.267)	(0.467)	(0.284)	(0.464)
Ln (Land Area)	−0.469**	−2.70**	−0.463**	−1.94**
	(0.151)	(0.781)	(0.167)	(0.698)
Ln (Population)	−0.008	0.674	−0.037	−0.313
	(0.225)	(0.824)	(0.220)	(0.838)
Ln (Distance)	0.033	3.43	−0.212	2.61
	(0.944)	(2.45)	(1.01)	(2.40)
WTO Membership	−0.661	−0.465	−0.657	−1.07**
	(0.546)	(0.422)	(0.518)	(0.492)
Number of RTAs	0.016*	0.095**	0.021**	0.085**
	(0.009)	(0.027)	(0.009)	(0.021)
Lagged Imports/GDP	0.943**	0.832**	0.939**	0.856**
	(0.016)	(0.048)	(0.017)	(0.045)
Constant	13.3	39.4**	14.7*	37.1
	(7.67)	(16.1)	(8.11)	(13.7)
Observations (Countries)	1,473 (138)	1,473 (138)	1,432 (135)	1,432 (135)
$P > \chi^2$	.000	.000	.000	.000

Dependent variable: Imports/GDP.
Robust-cluster standard errors in parentheses, *$p < .10$, **$p < .05$.

Results are presented in Table 1. The first two columns show results for the ACLP regime-type measure, while the last two show results using the DPI measure. Columns 1 and 3 present the OLS results, while columns 2 and 4 present GMM results. The first three rows show results for our variables of interest.

The first row presents results for the interaction term. This variable is significant and negatively signed in all four models, indicating that procurement has a significantly more negative impact on imports in democracies than in nondemocracies. Although this is consistent with our hypothesis, this result alone does not tell us how procurement affects imports under each regime type. For this, we must examine the conditional effects of procurement at each value of our regime type measure.

The second row—"Procurement (Democracy = 0)"—presents results for the procurement variable itself, which tells us how procurement spending affects imports in nondemocracies. This variable is insignificant in all four

models, indicating that such spending has no effect. In other words, transferring purchasing power from the private sector to the government does not affect imports in nondemocracies. This implies that nondemocratic governments have the same propensity to import as the private sector, and hence that the former are no more discriminatory than the latter.

The third row—"Procurement (Democracy = 1)"—shows how procurement spending affects imports in democracies. In all four models, this impact is negative and significant. This implies that, when democratic governments take money out of the private sector, they are less likely than private consumers to spend that money on imports. In other words, democratic governments discriminate against foreign producers when buying goods and services. Taken together, the significant negative results for democracies and the null results for autocracies support our hypothesis that democracies practice procurement discrimination, while autocracies do not.

What do these results mean substantively? Depending on the model, a one percentage point increase in procurement/GDP in democracies reduces imports/GDP by anywhere from 0.3 to 0.8 percentage points, with an average estimate of 0.55. This means that, on average, increasing procurement/GDP by one standard deviation (3.4 percentage points) should reduce imports/GDP in democracies by around 1.9 percentage points. Is this a large effect?

On the one hand, this is less than one-tenth of a standard deviation in imports/GDP, which does not seem large. Certainly, our results do not indicate that procurement discrimination explains the lion's share of variation in trade openness. This likely reflects the fact that contestable procurement spending amounts, on average, to only 4.4% of GDP in our sample. Although substantial in absolute terms—4.4% of trillions of dollars is a lot of money—this is simply not a large enough share of total import demand to drive much of the variation in imports.

On the other hand, what we are trying to measure is the government's propensity to discriminate against imports relative to domestic private consumers. As noted earlier, a procurement/GDP coefficient of zero implies that the government is no more discriminatory than the private sector: Hence the transfer of purchasing power from private to public hands has no effect. At the other extreme, a procurement/GDP coefficient of –1.0 implies that the government discriminates completely: The government spends nothing on imports, so any transfer of money from private to public hands results in an equally large fall in imports/GDP. Viewed from this perspective, an average procurement/GDP coefficient of –0.55 seems like a large effect. For every dollar that the private sector spends on imports, democratic governments spend only 45 cents, and the remaining 55 cents are diverted toward domestic producers. Put differently, any amount that the government taxes and spends—again, on goods and services that can in principle be imported—reduces imports by over half that amount. In our

view, this constitutes substantial discrimination in public procurement. How much this discrimination affects trade depends, of course, on how much a given government taxes and spends.

Robustness Checks

Although these results are supportive, several questions remain. First, could the observed effects of democracy reflect a spurious association with changes in the global procurement regime? Second, is there evidence that democracies in fact substitute procurement discrimination for tariffs? Third, could our results reflect not discrimination but a democratic propensity to spend money on services, which may be inherently less tradable? We address these questions with additional analyses.

As noted earlier, the global procurement regime changed in 1996 with the creation of the Agreement on Government Procurement (GPA). Unlike most WTO agreements, the GPA is a plurilateral agreement that creates reciprocal obligations only among WTO members that have signed it (41 at present). In principle, the GPA should prevent signatories from discriminating against each other's goods and services providers, although there is not much evidence that this has occurred (Evenett 2002; Liang 2006). Although the GPA's strictures are dyadic, applying only to member–member trade, one would expect its effects to show up at the national level, given that most of the world's large economies are members. This raises an important concern.

Because virtually all GPA members are democracies, it is possible that our results reflect the association between democracy and GPA membership. Although this seems unlikely—this would imply that the GPA actually increased discrimination by members—it is nonetheless important to address this concern. We cannot do so by simply including a GPA dummy on the right-hand side, as GPA membership should not affect imports per se: Rather, it should modify the spending–imports relationship. This implies that, to control for GPA membership, we need to interact both procurement and its interaction with democracy with GPA membership. Although this is simple to do, we prefer to avoid the presentational complications of three-way interactions by splitting the sample into GPA members and nonmembers. Results for the non-GPA sample are shown in Table 2.

Table 2 is identical to Table 1 except that the analyses were performed on the subsample of non-GPA members. Note that, while the sample size falls by 22%, only four countries drop from the sample. This is because most GPA members remain in the sample for some years, until their membership enters into force. The subsample results are easily summarized. The effects of procurement in nondemocracies remain insignificant in all four models. The interaction terms remain negatively signed and significant in all four models. The effects of procurement in democracies remain negative and significant in three of the four models. Our results are thus robust to the exclusion of GPA

TABLE 2 Nonmembers of GPA

	Democracy Measure			
	ACLP		DPI	
Independent Variable	(1) OLS	(2) GMM	(3) OLS	(4) GMM
Procurement/GDP	−0.489**	−0.964**	−0.376**	−0.924**
× Democracy	(−.186)	(0.432)	(0.159)	(0.292)
Procurement/GDP	−.110	0.043	0.123	0.241
(Democracy = 0)	(−.075)	(0.228)	(0.085)	(.236)
Procurement/GDP	−0.379*	−0.920**	−0.253	−0.683**
(Democracy = 1)	(0.209)	(0.345)	(0.162)	(0.211)
Democracy	2.08**	8.19**	1.70*	6.80**
	(1.06)	(2.22)	(1.01)	(1.20)
Ln (GDP)	−.336	−1.44**	−0.348	−0.757
	(0.232)	(0.552)	(0.242)	(0.444)
Ln (Land Area)	−0.282**	−2.68**	−0.199*	−1.70**
	(0.116)	(0.727)	(0.108)	(0.620)
Ln (Population)	0.119	0.692	0.158	−0.184
	(0.195)	(0.670)	(0.179)	(0.777)
Ln (Distance)	−0.220	0.661	−0.480	0.254
	(0.722)	(2.33)	(0.618)	(1.54)
WTO Membership	−0.639	−0.764*	−0.437	−1.45**
	(0.604)	(0.458)	(0.527)	(0.504)
Number of RTAs	0.004	0.078*	0.005	0.046
	(0.010)	(0.041)	(0.009)	(0.029)
Lagged Imports/GDP	0.955**	0.794**	0.963**	0.815**
	(0.012)	(0.046)	(0.011)	(0.043)
Constant	12.7**	58.6**	11.6**	45.9**
	(5.29)	(19.1)	(4.92)	(13.8)
Observations (Countries)	1,143 (134)	1,143 (134)	1,102 (131)	1,102 (131)
$P > \chi^2$	.000	.000	.000	.000

Dependent variable: Imports/GDP.
Robust-cluster standard errors in parentheses, *$p < .10$, **$p < .05$.

members, which implies that they are not driven by the association between regime type and GPA membership.

We do not show results for the GPA member subsample, which is small and consists almost entirely of democracies: 96% of the country-years are democratic, with Singapore the only exception. The virtual absence of nondemocratic observations makes it pointless to condition the effects of procurement on regime type. However, we note that the unconditional effects of procurement are negative and significant in this subsample, as we would expect for a sample of democracies. The effects of procurement within the GPA group are thus consistent with our argument.

Our argument implies a substitution effect: Democracies reduce tariffs but increase procurement discrimination in their place. Thus far, we have focused on procurement discrimination because previous studies (for example, Kono 2006; Milner and Kubota 2005) have shown that democracy leads

to tariff liberalization. However, Milner and Kubota (2005) focus explicitly on developing countries, while Kono's (2006) sample is dominated by developing countries. This forces us to ask: Do democracies generally substitute procurement discrimination for tariffs, or is this result specific to developing countries? To answer this question, we examine the relationship between democracy, tariffs, and procurement discrimination in different subsamples of countries. If our argument is correct, we should find that democracy generally has offsetting effects on the two forms of protectionism.

Our dependent variable for the tariff analysis, $Tariff_{i,t}$, is country i's average statutory tariff in year t. Our tariff data come from the same source as Milner and Kubota's (2005)—the World Bank—except that the data have been updated since then, and our sample includes developed as well as developing countries.[15] We regress tariffs against the ACLP measure of democracy and a number of standard controls. The controls include logged GDP per capita, to control for economic development; the economic growth rate, to control for business-cycle effects; logged population, in case larger countries are more likely to levy "optimal tariffs"; GDP-weighted distance from world markets, in case geographic remoteness reduces the need for tariff protection; a dummy for WTO membership, in case the WTO exerts pressures for lower tariffs; the number of RTAs that country i belongs to, in case RTA membership reduces tariffs; and, following Milner and Kubota (2005), the average global tariff rate, to proxy for global trends that affect all countries. Finally, we include the 1-year lagged tariff and employ country-clustered standard errors to correct for serial correlation. Results are shown in Table 3.

The first column of Table 3 shows results for the full sample (156 countries with varying years from 1990–2008). Results for controls are generally as expected: Richer countries have lower tariffs, faster economic growth is associated with lower tariffs, global tariffs are positively correlated with domestic tariffs, and WTO membership is associated with lower tariffs. Turning to democracy, our results show that democracies have lower tariffs than autocracies. This, along with our previous finding that democracies discriminate more in public procurement, suggests that democracy indeed causes governments to substitute away from tariffs and toward procurement discrimination.

As noted, Milner and Kubota's (2005) finding that democracy reduces tariffs was based on a sample of developing countries. It is thus important to ask whether this result is more generally true. To answer this question, we split our sample into "low-income" and "high-income" groups: specifically,

[15]Available at http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:21051044~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html. Data on PPP GDP per capita and economic growth rates are from the *World Development Indicators*.

TABLE 3 Tariffs versus Procurement Discrimination

	Tariffs			Procurement Discrimination	
Independent Variable	All	Low-Income	High-Income	Low-Income	High-Income
Democracy	−0.360**	−0.422*	−0.379**	2.47	0.638
	(0.172)	(0.222)	(0.185)	(1.58)	(1.87)
Procurement/GDP				0.049	0.420
				(0.125)	(0.348)
Procurement/GDP × Democracy				−0.482*	−0.581*
				(0.257)	(0.324)
Ln (GDP per capita)	−0.360**	−0.384**	−0.146		
	(0.070)	(0.106)	(0.192)		
Economic Growth	−0.027**	−0.026**	−0.017		
	(0.010)	(0.012)	(0.018)		
Global Average Tariff	0.088**	0.111**	0.009		
	(0.032)	(0.041)	(0.017)		
Ln (Population)	−0.058	−0.088	0.035	−0.030	0.572
	(0.039)	(0.059)	(0.032)	(0.382)	(0.857)
Ln (Distance)	0.030	−0.063	0.140	0.249	−01.89
	(0.291)	(0.463)	(0.176)	(1.15)	(1.96)
WTO Membership	−0.658**	−0.671**	−0.270	−0.755	−0.598
	(0.169)	(0.200)	(0.185)	(0.845)	(0.705)
Number of RTAs	0.008*	0.012**	−0.005	0.014	0.050
	(0.004)	(0.006)	(0.004)	(0.016)	(0.016)
Ln (GDP)				−0.539	−0.362
				(0.563)	(0.760)
Ln (Land Area)				−0.379**	−0.390
				(0.172)	(0.260)
Lagged Tariff	0.835**	0.825**	0.918**		
	(0.018)	(0.019)	(0.025)		
Lagged Imports/GDP				0.925**	0.955**
				(0.019)	(0.014)
Constant	4.71**	5.52**	1.10	20.4**	12.8**
	(1.43)	(2.10)	(2.01)	(9.59)	(12.7)
Observations (Countries)	1,535 (156)	1,177 (123)	358 (42)	896 (96)	577 (50)
$P > \chi^2$	.000	.000	.000	.000	.000

Dependent variables: For Tariff columns, Tariff; for Procurement Discrimination columns, Imports/GDP. Robust-cluster standard errors in parentheses, $^{*}p < .10$, $^{**}p < .05$.

into countries that lie below and above the average global GDP per capita in each year. The second column of Table 3 shows results for low-income countries, while the third column shows results for high-income countries. Not surprisingly, given that GDP per capita is right-skewed, the former group is larger than the latter (123 countries as opposed to 42). Nonetheless, the democracy–tariff relationship is similar in both groups: Democracy leads to significantly lower tariffs in both low-income and high-income countries. The coefficient is slightly larger for low-income countries, but this difference is not statistically significant. Democracy thus appears to have generally liberalizing effects on tariffs.

The last two columns of Table 3 show how democracy affects procurement discrimination in low-income and high-income countries, defined as before (we omit results for the full sample here, as these are shown in Table 1). We employ the baseline model 1 from Table 1, but perform the analysis separately for low-income countries (column 4) and high-income countries (column 5). The results are easily summarized: Results for low-income and high-income subsamples are similar to those for the full sample. Procurement spending again has no significant effect on imports in autocracies, as shown by the procurement coefficient. However, the negative procurement-democracy interaction shows that democracies discriminate significantly more in public procurement than do autocracies, in both low-income and high-income countries. Hence, as with the full sample, the procurement discrimination results for poor and rich countries are the mirror image of the tariff results. Whether we look at the full sample or subsamples based on income level, we find that democracy leads to tariff reductions but greater procurement discrimination. This suggests that democracy generally leads governments to substitute away from transparent tariffs and toward opaque discrimination in public procurement.

A final question concerns the meaning of our results. Because we cannot measure procurement discrimination directly, we infer such discrimination from the procurement spending–imports relationship. Although our inference is plausible, our results are also consistent with alternative interpretations. For example, it is possible that democracies spend more on services, such as health care, that are typically not traded. This would also produce the observed results, but for reasons that have little to do with procurement discrimination. It is thus important, to the extent possible, to address such concerns.

First, we note that our dependent variable is constructed to minimize such concerns. As noted, our procurement measure excludes military spending and spending on government employees, that is, categories of spending that are inherently (or in practice) domestic. Our measure thus includes only spending that is, at least in principle, "contestable" and open to foreign competition, and our results capture only the relationship between this type of spending and imports. If, for example, democratic governments spend extensively on services that are not contestable, this will not affect our results.

That said, there may be categories of spending that are contestable in principle (and hence included in our measure) but largely domestic in practice, due, for example, to inherent difficulties of cross-border trade in services. We thus perform an additional test to verify that democratic governments do not engage disproportionately in such spending. Our test is straightforward. If our earlier results reflect a democratic propensity to spend procurement funds on services, then procurement spending in democracies should boost the domestic service sector to a greater extent than procurement spending in autocracies. If this is not the case, then our

procurement-imports results are likely to reflect democratic procurement discrimination.

Our dependent variable for this test is $Services/GDP_{i,t}$, country *i*'s value-added in services as a percent of GDP.[16] We also control for GDP per capita, include a lagged dependent variable, and employ country-clustered standard errors to correct for serial correlation. Results using both the ACLP and DPI democracy measures, as well as OLS and GMM, are shown in Table 4.

Not surprisingly, GDP per capita is consistently positive and significant, indicating that more-developed countries have larger service sectors. Procurement spending is also positively signed and significant in three models, indicating that higher procurement spending in autocracies leads to a larger service sector. This suggests that autocratic governments are more inclined than the private sector to spend money on services. Note, however, that the procurement–democracy interaction term is insignificant, indicating that democracies do not differ from autocracies in their propensity to spend money on services. This suggests that our earlier results do not reflect a democratic propensity to spend procurement funds on services and, conversely, strengthens our confidence that those results in fact reflect democratic procurement discrimination.[17]

TABLE 4 Democracy, Procurement, and the Service Sector

	Democracy Measure			
	ACLP		DPI	
Independent Variable	(1) OLS	(2) GMM	(3) OLS	(4) GMM
Procurement/GDP	0.084**	0.171*	0.067**	0.030
	(0.035)	(0.096)	(0.030)	(0.135)
Democracy	0.694**	6.15**	0.582**	1.63
	(0.290)	(2.33)	(.273)	(1.18)
Procurement/GDP	−0.015	−0.222	0.037	0.109
× Democracy	(0.069)	(0.179)	(0.052)	(0.237)
Ln (GDP per capita)	0.349**	2.36**	0.415**	2.12**
	(0.108)	(0.995)	(0.112)	(0.897)
Lagged Services/GDP	0.945**	0.624**	0.940**	0.681**
	(0.012)	(0.057)	(0.014)	(0.053)
Constant	−0.471	−3.35	−0.751	−1.88
	(0.668)	(7.95)	(0.690)	(7.26)
Observations (Countries)	1,395 (134)	1,395 (134)	1,435 (132)	1,435 (132)
$P > X^2$	.000	.000	.000	.000

Dependent variable: Services/GDP.
Robust-cluster standard errors in parentheses, $^{*}p < .10$, $^{**}p < .05$.

[16] Services data are from the *World Development Indicators*.

[17] This arguably raises an additional puzzle: If all governments (including autocracies) spend more on services than the private sector—and if services are generally less tradable than goods—why doesn't

CONCLUSION

Contestable government procurement markets account for trillions of dollars in spending per year. Discrimination against foreign suppliers thus constitutes an important barrier to trade. The salience of this issue is evident in both the WTO's efforts to control such discrimination and the reluctance of most WTO members to subject their national procurement policies to multilateral disciplines. Despite its importance, however, research on the causes of procurement discrimination is scarce. Although many studies examine the determinants of tariffs and more traditional NTBs, few explore the political economy of procurement discrimination. This article takes a first step toward this goal.

We argue that, while democracy may reduce traditional trade barriers such as tariffs, it increases the incentives to protect domestic markets through procurement discrimination. Because such discrimination protects domestic industries but does not impose obvious costs on voters-as-consumers, discriminatory procurement policies are relatively immune from political attacks. Knowing this, democratic governments have strong incentives to buy national. In contrast, autocratic governments prefer to rely on tariffs, which generate tax revenue in addition to interest-group support. We support this argument by showing that the procurement–imports relationship varies across regime types in anticipated ways: Procurement spending has no effect on imports in autocracies but reduces imports in democracies. Autocratic governments-as-consumers thus behave much like the private sector, whereas democratic governments are more likely than private consumers to discriminate. We also show that democracies have lower tariffs and hence that democracy induces substitution away from tariffs and toward procurement discrimination.

This result has important implications for our understanding of democracy and trade policy. First, our results imply that democracy affects the form of trade protection. Although previous research shows that democracies have lower tariffs (Milner and Kubota 2005), we find that democracies are more likely to employ less-transparent forms of protection such as procurement discrimination. This suggests that a full understanding of the democracy–trade policy relationship requires that we examine, not only at-the-border

procurement spending in autocracies reduce imports? One possible answer is that service-sector growth displaces output in import-competing sectors, in which case the former could actually lead to increased imports. Empirically, we included our services measure in our Table 1 regressions and found no significant relationship between service-sector size and imports: Hence, service-sector growth does not affect import demand in our sample. The inclusion of services also did not affect our procurement–imports results, underscoring the point that our main results are not driven by a government penchant for services. On a different topic, it is worth noting that democracy itself is positively signed and significant. This suggests that democracies promote the service sector in ways not mediated by our procurement measure, for example, through spending on noncontestable services or via regulatory differences.

barriers, but also increasingly important domestic impediments to trade. A second, corollary point is that, if democracy has offsetting effects on different types of protectionism, its overall impact on trade policy is less straightforward than is commonly believed. Our results thus add to the growing evidence (Kono 2006, 2008; O'Rourke and Taylor 2006; Tavares 2008; Verdier 1998) that democracy can, depending on the circumstances, either encourage or discourage trade.

REFERENCES

Álvarez, Mike, José Antonio Cheibub, Fernando Limongi, and Adam Przeworski. (1996) Classifying Political Regimes. *Studies in Comparative International Development* 31(2):3–36.

Arellano, Manuel, and Olympia Bover. (1995) Another Look at the Instrumental Variable Estimation of Error-Components Models. *Journal of Econometrics* 68(1):29–51.

Audet, Denis. (2002) Government Procurement: A Synthesis Report. *OECD Journal on Budgeting* 2(3):149–194.

Bailey, Michael. (2001) Quiet Influence: The Representation of Diffuse Interests on Trade Policy, 1983–1994. *Legislative Studies Quarterly* 26(1):45–80.

Baldwin, Robert E. (1970) *Nontariff Distortions of International Trade*. Washington, DC: Brookings Institution.

Baldwin, Robert E., and J. David Richardson. (1972) Government Purchasing Policies, Other NTBs, and the International Monetary Crisis. In *Obstacles to Trade in the Pacific Area*, edited by H. E. English and Keith A. J. Hay. Ottawa: Carleton School of International Affairs.

Beck, Nathaniel, and Jonathan N. Katz. (1996) Nuisance vs. Substance: Specifying and Estimating Time-Series-Cross-Section Models. *Political Analysis* 6(1):1–36.

Beviglia-Zampetti, Americo. (1997) The UNCITRAL Model Law on Procurement of Goods, Construction and Services. In *Law and Policy in Public Purchasing*, edited by Bernard M. Hoekman and Petros C. Mavroidis. Ann Arbor: University of Michigan Press.

Blundell, Richard, and Stephen Bond. (1998) Initial Conditions and Moment Restrictions in Dynamic Panel Data Models. *Journal of Econometrics* 87(1):115–143.

Brulhart, Marius, and Federico Trionfetti. (2004) Public Expenditure, International Specialisation and Agglomeration. *European Economic Review* 48(4):851–881.

Cameron, A. Colin, and Pravin K. Trivedi. (2010) *Microeconometrics Using Stata:* Revised Edition. College Station, TX: Stata Press.

Cheibub, José Antonio, Jennifer Gandhi, and James Raymond Vreeland. (2010) Democracy and Dictatorship Revisited. *Public Choice* 143(1–2):67–101.

Davis, Christina L. (2003) *Food Fights over Free Trade: How International Institutions Promote Agricultural Trade Liberalization*. Princeton, NJ: Princeton University Press.

Denzau, Arthur T., and Michael C. Munger. (1986) Legislators and Interest Groups: How Unorganized Interests Get Represented. *American Political Science Review* 80(1):89–106.

Eichengreen, Barry, and David Leblang. (2008) Democracy and Globalization. *Economics & Politics* 20(3):289–334.

European Commission. (2000) Measuring the Impact of Public Procurement Policy, First Indicators. *Single Market News*, 20.

Evenett, Simon J. (2002) The WTO Government Procurement Agreement: An Assessment of Current Research and Options for Reform. Paper prepared for the World Bank conference, "Informing the Doha Process: New Trade Research for Developing Economies," Cairo, Egypt.

Evenett, Simon J., and Bernard M. Hoekman. (2005) Government Procurement: Market Access, Transparency, and Multilateral Trade Rules. *European Journal of Political Economy* 21(1):163–183.

Frye, Timothy, and Edward D. Mansfield. (2004) Timing is Everything: Elections and Trade Liberalization in the Postcommunist World. *Comparative Political Studies* 37(4):371–398.

Gawande, Kishore, and Usree Bandyopadhyay. (2000) Is Protection For Sale? Evidence on the Grossman-Helpman Theory of Endogenous Protection. *Review of Economics and Statistics* 82(1):139–152.

Gleditsch, Kristian S., and Michael D. Ward. (1997) Double Take: A Reexamination of Democracy and Autocracy in Modern Polities. *Journal of Conflict Resolution* 41(3):361–383.

Goldberg, Penelopi, and Giovanni Maggi. (1999) Protection For Sale: An Empirical Investigation. *American Economic Review* 89(5):1135–1155.

Grier, Jean H. (1996) Japan's Implementation of the WTO Agreement on Government Procurement. *University of Pennsylvania Journal of International Economic Law* 17(2):605–658.

Grossman, Gene M., and Elhanan Helpman. (1994) Protection for Sale. *American Economic Review* 84(4):833–850.

Guisinger, Alexandra. (2009) Determining Trade Policy: Do Voters Hold Politicians Accountable? *International Organization* 63(3):533–557.

Hoekman, Bernard. (1998) Using International Institutions to Improve Public Procurement. *The World Bank Research Observer* 13(2):249–269.

Huntington, Samuel P. (1993) *The Third Wave: Democratization in the Late Twentieth Century*. Norman, OK: University of Oklahoma Press.

Irwin, Douglas. (2009) If We Buy American, No One Else Will. *New York Times*, January 31.

Kono, Daniel Yuichi. (2006) Optimal Obfuscation: Democracy and Trade Policy Transparency. *American Political Science Review* 100(3):369–384.

Kono, Daniel Yuichi. (2008) Democracy and Trade Discrimination. *The Journal of Politics* 70(4):942–955.

Li, Quan, and Rafael Reuveny. (2003) Economic Globalization and Democracy: An Empirical Analysis. *British Journal of Political Science* 33(1):29–54.

Liang, Margaret. (2006) Government Procurement at GATT/WTO: 25 Years of Plurilateral Framework. *Asian Journal of WTO and International Health Law and Policy* 1(2):277–289.

Lowinger, Thomas C. (1976) Discrimination in Government Procurement of Foreign Goods in the US and Western Europe. *Southern Economic Journal* 42(3):451–460.

Magee, Stephen P., William A. Brock, and Leslie Young. (1989) *Black Hole Tariffs and Endogenous Policy Theory: Political Economy in General Equilibrium*. New York: Cambridge University Press.

Mansfield, Edward D., and Rachel Bronson. (1997) Alliances, Preferential Trading Arrangements, and International Trade. *American Political Science Review* 91(1):94–107.

Mansfield, Edward D., Helen V. Milner, and Peter Rosendorff. (2000) Free to Trade: Democracies, Autocracies, and International Trade. *American Political Science Review* 94(2):305–322.

Mansfield, Edward D., Helen V. Milner, and Peter Rosendorff. (2002) Why Democracies Cooperate More: Electoral Control and International Trade Agreements. *International Organization* 56(3):477–514.

Milner, Helen V., and Keiko Kubota. (2005) Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries. *International Organization* 59(1):107–144.

Miyagiwa, Kaz. (1991) Oligopoly and Discriminatory Government Procurement Policy. *The American Economic Review* 81(5):1320–1328.

O'Rourke, Kevin H., and Alan M. Taylor. (2006) Democracy and Protectionism. NBER Working Paper 12250. Cambridge, MA: National Bureau of Economic Research.

Pelc, Krzysztof J. (2013) Googling the WTO: What Search-Engine Data Tell Us About the Political Economy of Institutions. *International Organization* 67(3):629–655.

Plume, Janet. (1996) Trade Pacts Leave a Bitter Taste. *Journal of Commerce*, February 25.

Rodrik, Dani. (1998) Why Do More Open Economies Have Bigger Governments? *Journal of Political Economy* 106(5):997–1032.

Rogowski, Ronald, and Mark Andreas Kayser. (2002) Majoritarian Electoral Systems and Consumer Power: Price-Level Evidence from the OECD Countries. *American Journal of Political Science* 46(3):526–539.

Rudra, Nita. (2002) Globalization and the Decline of the Welfare State in Less-Developed Countries. *International Organization* 56(2):411–445.

Rudra, Nita, and Stephan Haggard. (2005) Globalization, Democracy, and Effective Welfare Spending in the Developing World. *Comparative Political Studies* 38(9):1015–1049.

Tavares, José. (2008) Trade, Factor Proportions and Politics. *Review of Economics and Statistics* 90(1):163–168.

Tomz, Michael, Judith L. Goldstein, and Douglas Rivers. (2007) Do We Really Know That the WTO Increases Trade? Comment. *American Economic Review* 97(5):2005–2018.

Trionfetti, Federico. (2000) Discriminatory Public Procurement and International Trade. *The World Economy* 23(1):57–76.

Verdier, Daniel. (1998) Democratic Convergence and Free Trade. *International Studies Quarterly* 42(1):1–24.

Weiss, Linda, and Elizabeth Thurbon. (2006) The Business of Buying American: Public Procurement as Trade Strategy in the USA. *Review of International Political Economy* 13(5):701–724.

Windmeijer, Frank. (2005) A Finite Sample Correction for the Variance of Linear Efficient Two-Step GMM Estimators. *Journal of Econometrics* 126(1):25–51

APPENDIX

TABLE A1 Summary Statistics

Variable	Mean	Std. Deviation	Minimum	Maximum
Imports/GDP	48.1	27.5	6.96	212
Procurement/GDP	4.42	3.43	0.044	36.7
Democracy (ACLP)	0.641	0.480	0	1
Democracy (DPI)	0.755	0.430	0	1
Ln (GDP)	23.9	2.16	18.2	30.1
Ln (GDP per capita)	8.42	1.24	5.51	11.3
Economic Growth	2.71	5.65	−32.2	148
Ln (Land Area)	11.8	2.18	5.56	16.6
Ln (Population)	15.9	1.77	10.6	20.9
Ln (Distance)	8.89	0.243	8.63	9.55
WTO Membership	0.773	0.419	0	1
Number of RTAs	25.4	20.0	0	98
Tariff	12.9	9.33	0	94
Global Average Tariff	13.2	3.58	9.53	24.7
Services/GDP	56.6	13.4	12.9	84.5