Chapter 3: Empirics I: PTA Entry

In the previous chapter, I argued that there is interesting variation in both the frequency with which nondemocracies enter into trade agreements as well as the types of agreements they enter into. In explaining this variation, I proposed that the domestic factors influencing entry into PTAs and the depth of integration work in opposite directions; specifically, the authoritarian states that are most likely to enter into these agreements tend to prefer "shallower" agreements that do not require extensive trade integration.

I theorized that this variation results from the interplay of two factors: the preferences of nondemocratic elite coalitions as well as the institutional characteristics of nondemocratic states. In particular, I argued that dictators generally tend to prefer protectionist trade policies because protectionism gives them greater policy control than trade liberalization, provides them with rents that they can use to reward supporters, and tends to be less politically risky than liberal trade policies. In addition, it is often more difficult for competitive exporters to commit to supporting a dictator after trade liberalization compared to less competitive non-exporters who are more heavily dependent on government support.

These dynamics influence the trade agreements nondemocratic states (fail to) enter into: first, due to their strong preferences for protectionism, I expect nondemocratic states to enter into fewer trade agreements than democratic states. This prediction is consistent with existing arguments about regime type and trade agreements. Secondly, within authoritarian states, I argue that autocrats' protectionist preferences affect membership in international trade organizations differently depending on how personalized or institutionalized an autocracy is. As proposed in Hypothesis 1, more personalist autocracies have a higher likelihood of entering into a trade agreement compared to less personalist and more institutionalized states. This is because personalist dictators are less constrained by their coalitions and as a result they can be more opportunist about their membership in international institutions. As a result, personalist dictators enter into PTAs when they expect to gain political and

economic benefits from membership. For personalist dictators, trade agreements can thus be a tool for regime consolidation.

On the other hand, autocrats in less personalized and more institutionalized authoritarian states require the consent of a larger number of political actors before committing to a trade agreement, and as a result, there is a higher likelihood that actors with a stake in protectionism will veto entry into trade agreements. Consequently, Hypothesis 1 suggested that more institutionalized autocracies will be less likely to enter into a trade agreement compared to more personalized regimes.

My prediction about entry into PTAs is somewhat counter-intuitive, because institutionalized autocracies are often described as being "more similar" to democratic states than other forms of authoritarianism due to the presence of parties, legislatures, and moderate executive constraints. As such, it would be reasonable to expect these states to behave akin to democracies when making choices about PTA entry, in the sense of being more likely to enter into these agreements. However, as I argued in the previous chapter, purely institutional arguments fail to account for variations in preferences across regime types. While more veto players should be associated with a lower likelihood to enter into trade agreements,[1] democratic governments are ultimately accountable to voters with relatively liberal trade preferences. On the other hand, authoritarian governments respond to the preferences of small coalitions that are likely to have more protectionist preferences. When members of protectionist coalitions gain veto power, this is likely to result in a stable protectionist status quo.

In this chapter, will analyze authoritarian entry into trade agreements using cross-national time series data, providing evidence for Hypothesis 1. In the following chapter, I will analyze PTA content and present evidence to support Hypothesis 2, which proposes that conditional upon entry into a trade agreement, I expect to find higher agreement depth with decreasing personalism and increasing institutionalization.

[1] Mansfield and Milner 2012, O'Reilly 2005

Measuring the dependent variable: Trade Agreements

Preferential trade agreements (PTAs) are reciprocal international agreements between two or more states that grant member states preferential market access. This access can be limited to specific goods and/or services, or can include complete market access. PTAs are usually distinguished from nonreciprocal agreements, whereby a developed state grants preferential market access to a developing state.[2] The increasing number and complexity of modern trade agreements is mirrored in a wealth of data recording these agreements and comparing them across multiple dimensions. Table 1 provides an overview of existing datasets that cover post-WWII trade agreements globally.[3]

These datasets generally share a common starting point, which is the World Trade Organization database that records agreements formally notified by WTO member states. However, existing datasets differ significantly in the extent to which they include additional trade agreements not notified to the WTO. The most recent, and most extensive, dataset currently available is the Design of Trade Agreements (DESTA) database, which includes nearly 1000 agreements in the time period between 1948-2017. This database also provides detailed data on PTA design. In coding PTAs, authors take the widest possible definition of what counts as a trade agreement by including "all agreements that have the potential to liberalize trade."[4] Because of this, they include partial scope agreements and some nonreciprocal agreements and only exclude interim and framework agreements. The authors also note that some PTAs are included for which no actual agreement text could be found. As a result, the implementation status of these agreements is somewhat doubtful.

For the purposes of my research question, I adopt a broad definition of trade agreement. A central component of my argument is that certain autocracies enter into trade agreements

[2] Although the terminology is somewhat confusing here: the World Bank uses the term "PTA" specifically to refer to NON-reciprocal trade agreements. However, in the political science literature, the term is most commonly used to describe reciprocal trade agreements.

[3] In addition to the global datasets listed, there is a wealth of databases on regional trade agreements specifically, such as recorded by the Asia Regional Integration Center (https://aric.adb.org/fta). For a list of pre-WW I trade agreements, see Pahre 2007

[4] Duer, Baccini, and Elsig (2014)

that require little actual trade integration. By focusing primarily on the WTO database, we are likely to miss more "marginal" trade agreements, i.e. those that were ineffective, included fewer provisions, or were not fully implemented, especially if signed by non-WTO member states. Therefore, because I am interested in analyzing a wide range of PTAs, I use the DESTA database to identify the universe of trade agreements. The data cover both agreements that have been ratified as well as those that were signed, but not ratified. In my analysis, I include both the signing of base treaties and accessions to existing agreements, which are listed as separate entries in the data. However, I exclude amendments and protocols relating to existing PTAs in order to avoid inflating the number of PTAs signed.

The database also includes a number of nonreciprocal agreements, which I exclude from my data.[5] The costs of signing a non-reciprocal PTA are very small to nondemocracies, since they do not require policy adjustment on the part of the state receiving preferential access. As a result, the dynamics driving nonreciprocal agreements likely differ from those influencing reciprocal agreements. Excluding non-reciprocal PTAs is also consistent with standard practice in the literature on trade agreements. To account for the possibility that some autocracies are more likely to be granted preferential access to developed economies via non-reciprocal trade agreements and as a result are less likely to enter into reciprocal trade agreements, I code a separate variable for entry into a non-reciprocal PTA, which I analyze in the robustness checks below.

Consequently, the dependent variable, *PTA Entry*, is the likelihood that state I will enter into a reciprocal trade agreement with state j in year t. *PTA Entry* takes value 1 if a dyad enters into a trade agreement in year t, and 0 otherwise. The universe of cases studied therefore covers preferential trade agreements signed by dyads between 1948-2017.

[5] Excluded agreements: Lome I-IV, Cotonou, Yaounde I-II, Sparteca, Global System of Trade Preferences.

Dataset	Coverage	Content	Exclusions	Peculiarities	Sources
Design of Trade Agreements (DESTA) Duer, Baccini, and Elsig (2014)	986 PTAs, 1948-2017	Includes "all agreements that have the potential to liberalize trade", detailed coding on 10 different issue areas	Framework agreements, interim agreements	Includes some non-reciprocal PTAs. Includes accessions and treaty amendments as separate entries (could lead to over-counting PTAs). No full texts available for some of these agreements	(1) Builds on WTO data; (2) World Trade Institute (older data, no longer available); (3) Organization of American States' Foreign Trade Information System; (4) Asia Regional Integration Center; (5) World Bank; (6) "website searches of foreign, trade, and economics ministries"
WTO Database	Regional Trade Agreement Information System (RTA-IS): 459 in force and 39 signed or under negotiation as of 2018, 1957-2018	Also lists Preferential Trade Agreements (unilateral, non-reciprocal trade agreements): 34 additional agreements	Agreements not formally notified, agreements between non-member states.	Counts goods and services as two separate trade agreements. When combined, number of trade agreements down to 287. Use term "PTA" specifically for non-reciprocal agreement, in contrast to how it's commonly used in the IR literature	The member countries themselves notify the WTO of trade agreements. Process is likely to under-report total trade agreements.
Economic Integration Agreements (EIA) Baier and Bergstrand (2015)	153 Agreements based on WTO data. 195 countries, 1950-2011	Includes a depth classification based on type of agreement	Only includes PTAs for which agreement text could be found.	Includes Generalized System of Preferences (GSP) Agreements, which grant preferential access to developing countries (non-reciprocal). Database provides PDF files of all included agreements	(1) WTO data, supplemented by (2) Tuck Trade Agreements Database; (3) various GSP agreements (EU and US).
Mansfield and Milner (2012)	Approx. 200, 1950-2005	Reciprocal PTAs, entry and ratification (no detailed content coding)	non-reciprocal agreements excluded, don't include PTAs that augment or replace older ones, exclude partial scope and economic complementarity agreements	Focus on ratification, PTA start date is year of signing and includes ratification dates for all included PTAs (not just entry dates)	(1) WTO data; supplemented by (2) Mansfield and Pevehouse 2000; (3) Goldstein et al. 2007; (4) newspaper search (Factiva and Lexis-Nexis).
Goldstein, Rivers, and Tomz (2007)	161 countries, 1946-2004	Both reciprocal and non-reciprocal agreements included, but clearly identified by type	Not available for more recent years	Provides detailed information on Generalized System of Preferences (GSP) beneficiaries for each year.	WTO data; For GSP: official reports of GATT, UNCTAD, European union, and other sources
Global Preferential Trade Agreements Database (GPTAD) (World Bank and Center for Tuck School of Business at Dartmouth)	330 PTAs, 1957-2009	Includes information on more than 70 provisions	Agreement text must be available	Original text of PTAs searchable, incldudes PTAs not notified to WTO	WTO data; unknown how other PTAs were found.
World Bank Horizontal Depth Database Hofmann, Osnago, and Ruta (2017)	279 agreements signed by 189 countries, 1958-2015	Provides detailed codings across 52 policy areas. Specifies whether provisions fall inside or outside of WTO mandate. Several depth measures provided	Only includes WTO-notified agreements	Distinguishes legally enforceable regulations, inside our outside of WTO mandate, "core" versus "nonâĂŘcore", border versus nonâĂŘborder, and preferential versus nonâĂŘdiscriminatory provisions	(1) Builds on Horn, Mavroidis and Sapir 2010 and background study by Orefice and Rocha (2014); (2) analysis of WTO trade agreement texts

Table 1: Overview of PTA Datasets

Independent variables

Measuring Personalism

The data I use is in directed dyad format, where I control for regime type in state i and state j can be any type of regime. The directed dyad format has the advantage that we need to include each domestic-politics related measure only once for each dyad (i.e. for state i). Data on regime type come from the 2017 version of the Polity IV project, where "nondemocracy" is defined as states receiving a Polity2 score of 5 or lower. Autocratic states are defined as those with a polity score of -6 or lower. My analysis includes anocratic (those with polity score -5 to 5) as well as strictly autocratic states. As I show in the robustness checks, results do not change if only strictly autocratic states are included, and including all nondemocratic states in my analysis makes it more broadly applicable to a wider range of countries. The robustness checks also include alternative measures of nondemocracy.

The key independent variable measures personalism in nondemocracies. Nondemocracies, by virtue of their name, are commonly thought of as a residual category, defined as anything that does not meet the standards of democratic government. But since a country's government can fall short of democracy in many ways and to different degrees, nondemocracies are a highly diverse group of states. Combined with the opaqueness of policy-making processes in these countries, cross-national empirical research on nondemocratic states presents unique challenges that research on democratic states lacks. As I argued in the previous chapter, personalist regimes tend to enter into trade agreements more frequently because of the smaller size of the ruling coalition and fewer constraints on executive policy-making. Both of these are difficult to measure directly, however, since de facto policymaking processes and actors often diverge significantly from formally defined actors and institutions in authoritarian states.[6] However, there are now several large cross-national datasets available that allow for detailed comparisons of regime characteristics across nondemocratic states. This recent

[6] In fact, many contemporary nondemocratic regimes have nominally democratic institutions. As Svolik notes "If we were to trust dictators' declarations about their regimes, most of them would be democracies."

scholarship suggests that autocracies are more than a residual category; instead, questions of how autocratic governments structure their rule and how political decision-making is implemented when democratic institutions are absent deserve to be studied in their own right. As Wright observes: "Little of what we want to understand about autocratic behavior can be explained by measures of 'lack of democracy'. [...] The features differentiating autocratic regimes from each other may in fact be orthogonal to the characteristics measured by democraticness scales."[7]

Most existing attempts at classifying authoritarian regimes use some form of categorical typology, often starting from a distinction between military and civilian rule, and then adding further classifications based on institutional structures or constraints on the leader. For instance, Hadenius and Teorell (2017) distinguish no-party, one-party, and multi-party regimes. Cheibub, Gandhi, and Vreeland (2012) develop a number of ordinal institutional variables.[8] These variables can be used to draw inferences about who rules,[9] what types of institutional structures exist,[10] or how large the group in charge of selecting leader is.[11] Although these concepts are all related, they are nevertheless distinct, making it somewhat difficult to pinpoint exactly what is meant when scholars speak of concepts such as "institutionalization".

In international relations, most existing studies on institutional variation in autocracies use the groundbreaking measure developed by Barbara Geddes. This measure provides information on 280 autocracies between 1946-2010 and classifies regimes as dominant-party, military, personalist, monarchic, oligarchic as well as hybrids of these. The authors define an autocratic regime as "a set of formal and/or informal rules for choosing leaders and policies". In other words, this classification is based primarily on which actors inside a regime's "leadership group" hold the primary decision making power in choosing a leader and setting policies. The membership of this group can shift over time, and it is partly endogenous, since

[7] Wright 2017, 7
[8] See Wright 2017, p. 4 for discussion of these different approaches.
[9] see Geddes, Wright, and Frantz 2014
[10] see Cheibub, Gandhi, and Vreeland 2012
[11] See Bueno de Mesquita et al 2003

leaders themselves make strategic choices that partly determine its composition. Despite this, variation in this measure is primarily cross-national and does not vary much within countries.[12]

In attempting to classify autocratic regime types by their degree of personalism, several potential shortcomings of the data by Geddes, Wright, and Frantz (2014) therefore become apparent: First, it is likely that regimes vary in their levels of of personalism within their assigned regime categories, yet this potential variation is not captured by the typology. For instance, personalist dictators have a tendency to consolidate their rule over time and become more personalist.[13] Therefore, classifying regimes into absolute categories, while useful for analyses of regime spells, leads to a loss of detail when attempting to study underlying institutional phenomena. Secondly, there is potential overlap between the regime categories, i.e. the categories may not be mutually exclusive, thereby complicating analysis. Geddes et al. attempt to account for this by introducing regime hybrids, but attempting to split regimes into further sub-categories is rather tedious and complicates empirical analysis. Thus, classifying regimes into absolute categories leads to a loss of detail when attempting to study underlying institutional phenomena.[14]

Thirdly, the regime typology by Geddes et al. is too broad to allow for direct comparisons of the level of personalism across types of autocracy. For obvious reasons, it is plausible to think of personalist and party-based regimes as being on opposite ends of a spectrum of personalism, with party-based regimes as the least personalist. Formally, the authors define personalist regimes as "autocracies in which discretion over policy and personnel are concentrated in the hands of one man, military or civilian."[15] As research by Gandhi and others has shown, party-based regimes tend to have larger winning coalitions and greater formal constraints on executive power compared to personalist regimes, which have small winning coalitions and few formal constraints on the executive. However, it is more difficult

[12] Wright 2017, 4
[13] add citation
[14] See Svolik 2012 for more detailed discussion of several of these issues.
[15] p. 319

to evaluate how the other regime categories, i.e. monarchies and military regimes, would fit into this classification. Military regimes plausibly have an intermediate amount of personalism. The authors explicitly include what they call "military strongmen" in the personalist category rather than under military regimes; as a result, the military regimes category includes states in which "the leadership group has more ability to constrain leader behavior" than under personalism.[16] Similarly, monarchies may be an intermediate regime category, although the level of personalism likely varies significantly across monarchies, ranging from highly personalist to relatively institutionalized.

As a result of these shortcomings, recently there has been a trend towards a more unified approach to personalism. Rather than understanding personalism as a distinct regime category, work by Geddes, Wright, and Frantz (2017) and Magaloni, Chu, and Min (2013) argues that all regimes have varying underlying degrees of personalism, which should be conceptualized as a continuous variable. This has the advantage that we can measure more subtle variations in personalism within states over time. Thus, Geddes, Wright, and Frantz (2017) develop a time-varying latent variable that measures the underlying level of personalism within an authoritarian state between 1946-2010. This variable captures the level of "personal discretion and control over the key levers of power in his political system". According to the authors,

> "In such regimes, the dictator's choices are relatively unconstrained by the institutions that can act as veto players in other dictatorships [...] Personalist dictators juggle, manipulate, and divide-and-rule other powerful political actors. [...] Personalist dictators are thus powerful relative to other members of the elite, but not necessarily relative to society or to international actors."[17]

In constructing the variable, the authors us a logistic item-response theory (IRT) model that is based on responses to eight variables, four of which are based on a leader's control over the

[16] p. 315
[17] Cited in GWF Codebook, p.1

military, and the other four are based on control over parties and high office. The individual variables are listed in Table 2 below. Among these variables, having discretion over high office and control over the security apparatus are particularly common features (with the highest mean values). The correlation between the new latent personalism variable and the categorical personalism variable based on the Geddes et al. 2014 data is 0.39, which means that these measures are not very highly correlated. The primary advantage of the new data is that it has much higher within-country variation than the older, categorical data, with about half of the data variation within-country.[18] The measure also avoids the difficulties that arise when attempting to compare ideal types.

Variable	**Description**	**Mean**
High office	Whether leader has discretion over appointments to high office	0.647
Create new party	Whether leader created his own support party	0.165
Party exec. committee	Whether regime leader chooses party executive committee	0.319
Rubber stamp party	Whether party executive committee has some independence from leader	0.304
Military promotion	Whether officer promotion depends on loyalty to leader	0.424
Military purge	Whether leader can kill or imprison officers without fair trial	0.365
Security apparatus	Whether controlled by leader or independent	0.603
Paramilitary	Whether leader creates loyal paramilitary forces	0.355

Table 2: Components of continuous personalism variable. Source: Geddes, Wright, and Frantz (2017)

What exactly is the relationship between personalism and institutionalization? It is natural to think of these as being on opposite ends of a spectrum, since personalist rule is identified as the absence of institutions that constrain a dictatorial leaders decision-making. However, Slater (2003) critiques the view that personalism and institutionalization are in direct opposition to each other. He argues that highly personalized regimes can be institutionalized in a way that provides "infrastructural power" to dictators, by which he means that personalized

[18] GWF Codebook p.11

dictators often invest in institutions that help them monitor and control the opposition. Consequently, Slater argues that regimes can be both personalist and institutionalized. In addressing this argument, it is thus helpful to specify precisely which institutions are antithetical to personalism. In particular, as the individual components of the personalism variable show, personalism does not necessarily imply a complete absence of institutions. Many highly personalist regimes have parties and legislatures. Rather, personalism is associated with a failure of these institutions to constrain the leader in his decision-making. Personalism is therefore associated with institutions that are underdeveloped and inefficient in their ability to constrain and contribute to policymaking processes. For instance, a highly personalist dictator may create a "rubber stamp party" that does not have policymaking independence and serves primarily to legitimize the leader's decision making. The presence of such "non-constraining" institutions is therefore consistent with Slater's argument that personalist dictators employ institutions to monitor their opposition and consolidate their power. In fact, my central argument implies that trade agreements are institutional tools for personalist dictators to consolidate their rule. Yet highly personalist regimes lack institutions that have the power to constrain leaders in their decision-making, that provide decision-making power to other elite actors, and that could act as efficient forums of elite bargaining and deliberation.

Because of the advantages of the latent personalism variable in identifying levels of personalism across nondemocratic states discussed above, I choose this measure to be my key independent variable. Figure 1 below shows that the average value of personalism among autocratic states has increased over time. The rise of personalism implies that studying the relationship between personalism and international economic cooperation has become more urgent. In the robustness checks below, I show that my main results hold when using alternative measures of personalism, such as the previous measure by Geddes et al. as well as the alternative continuous measure of personalism by Magaloni et al., which is based on regime age and turnover. As additional measures of institutionalization, I also use the executive constraints and competition measures from the Polity IV dataset in the robustness checks.

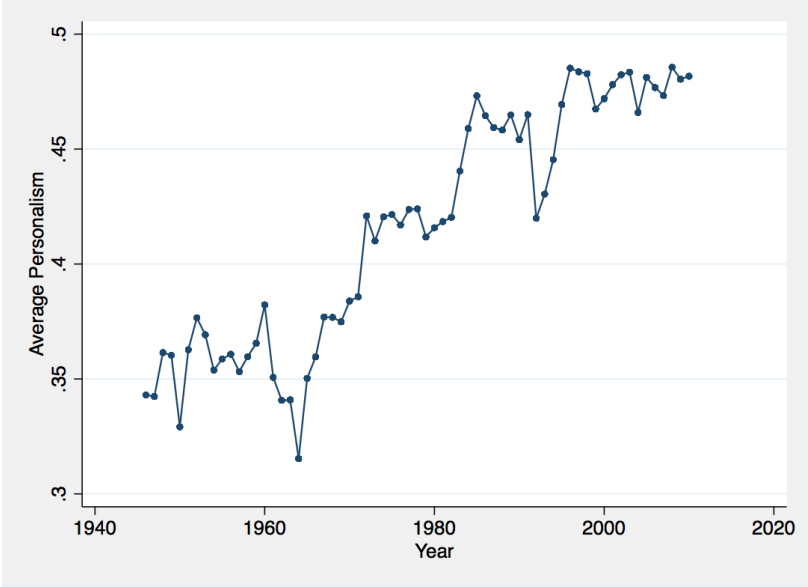

Figure 1: Mean personalism over time

Control variables

My analysis also includes a number of control variables, beginning with measures typically included in "gravity" models of trade. In particular, I control for (logged) distance between states as well as their contiguity, since closer proximity is a key determinant of entering into a trade agreement.[19] I also control for features of the economy of both dyad members: First, I include measures of logged GDP, GDP growth and GDP per capita.[20] Research has shown that economic size affects states' incentives to enter into trade agreements. Smaller markets have stronger incentives to seek out access to other markets. Similarly, changes in economic growth rates can influence PTA membership: states are likely to seek out new memberships in times when their economy is growing rather than during times of economic downturn.

In addition, I control for several political phenomena that could influence the ratification

[19] Data on contiguity from Correlates of War; distance between capital cities from Gleditsch and Ward (1999)

[20] GDP data from Penn World Tables v81

of trade agreements, including GATT/WTO membership,[21] a history of joint communism, and existing alliances between dyads, colonial relationships and interstate conflict. First, a shared history of communism could influence PTA membership in two directions: communist states sign fewer PTAs, but if both states were jointly communist, they may have developed closer trading relations and therefore could also be expected to enter into PTAs more frequently post-communism. Similarly, states with a prior colonial relationship and existing alliances are likely to have closer trade relations and consequently can be expected to enter into PTAs more frequently. On the other hand, countries with an existing interstate conflict should be less likely to enter into a PTA.[22] Furthermore, I also control for the availability of natural resource rents, since they may be a driver of trade policy. Generally, I suspect that nondemocratic states with higher resource rents will be more open to entering into a trade agreement.[23] The reason is that these regimes are less dependent on rents from tariffs and thus may be less likely to enter into coalitions with protectionist elites.

Lastly, I include time since the last PTA signed between dyads (also cubed and squared) to account for potential temporal dependence in the signing of PTAs. Since the effect of the above variables on trade agreement ratification may be somewhat delayed, I lag variables whenever appropriate. Summary statistics are reported in Table 3 below. Since the dependent variable is a dummy variable, I estimate PTA ratification using multinomial logit models with year fixed effects and dyad clustered standard errors. Model 3 additionally includes dyadic fixed effects; however, since several of the dyadic control variables, such as distance, are invariant and drop out under dyadic fixed effects, I do not include these in the other models. Consequently, I estimate the following model:

[21] Data from the World Trade Organization
[22] Conflict and alliance data from Correlates of War
[23] From World Development Indicators

PTA Entry = β_0 +β_1 Democracy + β_2 Personalism + β_3 GDP + β_4 GDP pc + β_5 GDP Growth + β_6 GATT/WTO membership + β_7 Communism + β_8 Alliance + β_9 Interstate Conflict + β_{10} Colonial Relationship + + β_{11} Time Since Last PTA + β_{12} Time Since Last PTA^2 β_{13} Time Since Last PTA^3 + ϵ

Variable	Obs	Mean	Std. Dev.	Min	Max
PTA	1,417,119	.0131711	.1140071	0	1
Democracy	1,400,657	.4183851	.4932942	0	1
Latent Personalism	1,417,119	.2020433	.2851964	0	1
Distance	1,417,119	8.223082	.7863683	1.609438	9.421168
Contiguity	1,349,717	.0325994	.1775858	0	1
GDP_i	1,288,720	10.37969	1.95252	4.86507	16.39523
GDP_j	1,277,030	10.06103	2.15618	4.797442	16.39523
$GDPpc_i$	1,291,406	8.291797	1.223639	4.888995	13.35702
$GDPpc_j$	1,279,598	8.345071	1.225468	4.888995	13.35702
$GDPgrowth_i$	1,257,680	4.123688	26.62648	-82.95917	2296.208
$GDPgrowth_j$	1,246,330	4.07409	26.10497	-82.95917	2296.208
GATT/WTO Membership	1,403,826	.4208983	.4937035	0	1
Joint Communism	1,404,234	.0868566	.2816249	0	1
Alliance	1,417,119	.0547364	.2274651	0	1
Armed Conflict	1,128,555	.0009862	.0313886	0	1
Colonial Relationship	1,298,130	.0139716	.1173731	0	1
Resource Rents	1,106,441	9.730205	14.10998	0	89.22044
Time Since Last PTA	1,417,119	20.66079	15.85668	1	71

Table 3: Summary Statistics

Results and Discussion

The results of the logit models are reported in Table 4. The first model is my baseline model. It includes the regime variables, gravity model variables, controls for temporal dependence, and year fixed effects. The latter are important in order to account for potential time trends - in this case, the likely possibility that both the level of personalism and the propensity to enter into trade agreements have independently changed over time. The second model adds a number of additional political control variables to the baseline model. In the third model, I include dyad fixed effects in addition to the time fixed effects. Dyad fixed effects are

not commonly included in gravity models, since several variables that are key to predicting trade agreements, such as contiguity and distance, do not vary within dyads and therefore will be canceled out. However, if the effects of regime type continue to hold up even in the presence of dyad fixed effects, this would speak to the strength of the relationship between regime type and PTA entry, and consequently I include dyad fixed effects in Model 3 only.

As Figure 3, which maps the odds ratios of the coefficient estimates, illustrates, the empirical results provide confirmation of *Hypothesis 1.* First, there is strong evidence that more personalized regimes are more likely to enter into a trade agreement compared to less personalized regimes The key independent variable, *Latent Personalism*, is positive and significant, meaning that regimes with a higher degree of personalism are more likely to enter into a trade agreement. To facilitate interpretation of the size of the substantive effect , Figure 2 below shows the predicted likelihood of PTA entry for different values of the personalism measure based on Model 1, holding constant other variables in the model. Entering into a trade agreement is a rare event. However, based on this model, the likelihood of entering into a PTA increases by about 50% moving from the lowest to highest values of personalism, with the total likelihood increasing from about 1.2% to 1.8%.

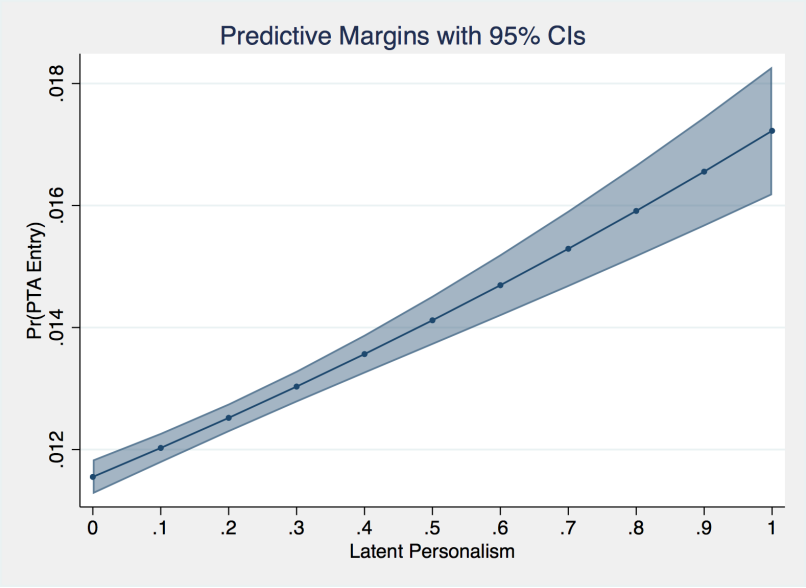

Figure 2: Predictive Margins (Based on Baseline Model 1)

The results also generally confirm expected effects of the control variables. Consistent with existing arguments about regime type and membership in trade agreements, democracy is associated with a higher likelihood of entry into a trade agreement. As gravity models would predict, closer dyads are generally more likely to enter into PTAs and PTA entry decreases for more distant countries. Similarly, wealthier dyads and those that share GATT/WTO membership are more likely to enter into a trade agreement. The more time has passed since a dyad entered into its last trade agreement, the less likely these states are to enter into another PTA.

In terms of the political control variables, formal alliances are associated with an increased likelihood of PTA entry, whereas military conflict decreases the chance of entry. Somewhat surprisingly, a previous colonial relationship decreases the likelihood of entering into a trade agreement, whereas a history of communism increases the chance of PTA entry. Finally, the effect of resource rents is mixed, with a negative and significant coefficient only in Model 3. As is to be expected, results for a number of coefficients in model 3 differ from the other models. For example, contrary to expectations, the effect of WTO membership on PTA entry becomes negative when including dyad fixed effects. This is likely because the model no longer includes important determinants of PTAs such as distance. However, both of the regime type effects, the positive effects of democracy and personalism on PTA entry, continue to hold when using dyad fixed effects. This provides further evidence in support of *Hypothesis 1*.

Types of Entry

The previous section showed that the likelihood of entering into a trade agreement increases with rising levels of personalism in a dictatorship. While I provide a detailed analysis of the content and depth of trade agreements signed by autocratic states in chapter 4, this section assesses whether more personalist autocracies have a particular preference for entering into new PTAs compared to existing PTAs. For this purpose, I code two new dummy variables,

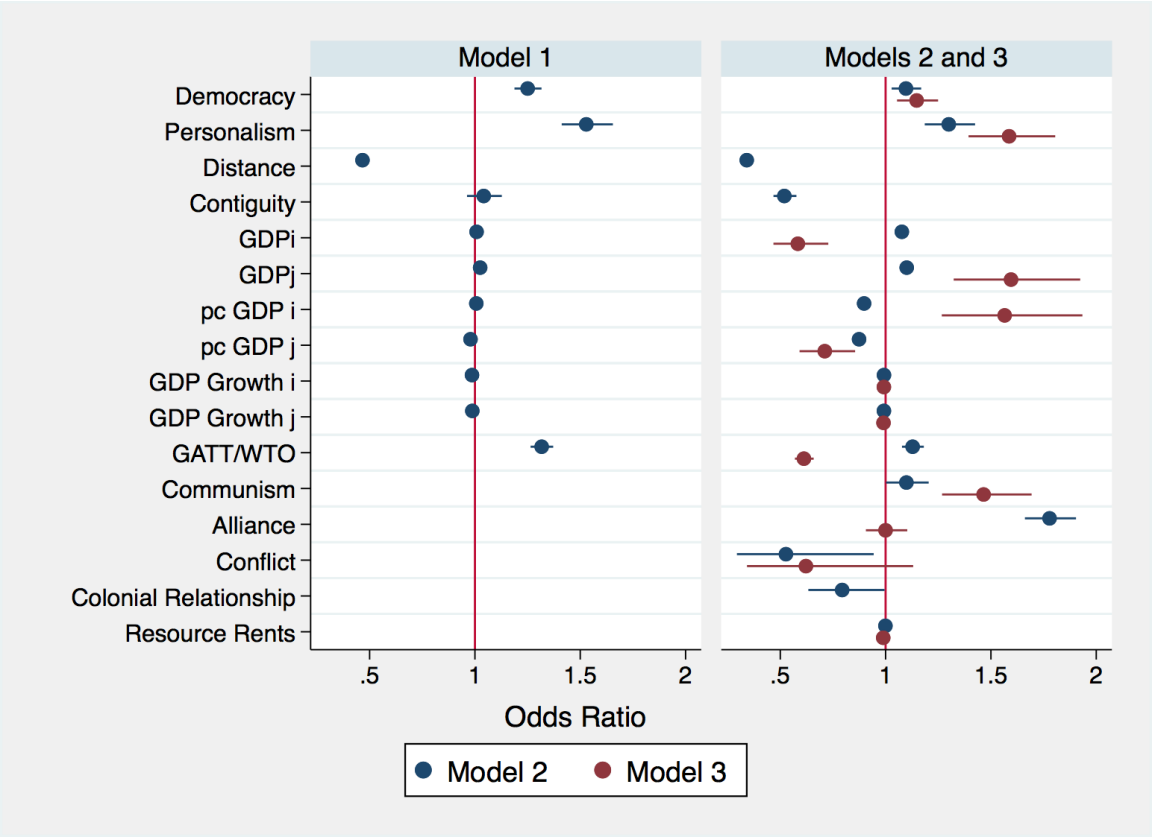

Figure 3: Main Models Coefficient Plot

Notes: Bars represent 95% confidence intervals. Year dummies and time since last PTA, time since last PTA squared and cubed not reported.

New Treaty and *Accession*. Figure 4 illustrates mean values for all three types of entry across different regimes. For the purposes of the graph, I show values for democracies and for autocratic regimes on opposite extremes of the personalism scale: states with personalism values of 0.9 or higher, and those with values 0.1 or lower. The graph suggests that highly personalist states enter into more PTAs overall and enter into new treaties more frequently compared to other states, but they accede to existing treaties less frequently.

To assess the likelihood of entry into either new or existing PTAs, I employ the same analysis as in the previous baseline Model 1 using textitNew Treaty and *Accession* as dependent variables. Interestingly, the results, which are shown in Table 5 and illustrated in Figure 5, show that the higher likelihood of PTA entry of personalist autocracies is specifically due to

	(1) Logit PTA Likelihood	(2) Logit PTA Likelihood	(3) Logit PTA Likelihood
Democracy	0.223***	0.092***	0.138***
	(0.026)	(0.033)	(0.043)
Latent personalism	0.424***	0.262***	0.461***
	(0.040)	(0.047)	(0.066)
(Log) Distance	-0.763***	-1.076***	
	(0.017)	(0.017)	
Contiguity	0.041	-0.655***	
	(0.040)	(0.053)	
(Log) GDP_i	0.008	0.074***	-0.539***
	(0.007)	(0.008)	(0.113)
(Log) GDP_j	0.024***	0.095***	0.467***
	(0.005)	(0.007)	(0.096)
pc GDP_i	0.007	-0.108***	0.448***
	(0.010)	(0.012)	(0.108)
pc GDP_j	-0.021**	-0.135***	-0.340***
	(0.009)	(0.010)	(0.094)
GDP $Growth_i$	-0.014***	-0.008***	-0.008***
	(0.001)	(0.001)	(0.001)
GDP $Growth_i$	-0.012***	-0.008***	-0.010***
	(0.001)	(0.001)	(0.001)
GATT/WTO	0.275***	0.121***	-0.491***
	(0.021)	(0.023)	(0.037)
Communism		0.094**	0.382***
		(0.047)	(0.074)
Alliance		0.576***	-0.000
		(0.035)	(0.050)
Armed Conflict		-0.641**	-0.476
		(0.297)	(0.305)
Resource Rents		-0.001	-0.011***
		(0.001)	(0.002)
Colonial Relationship		-0.231**	
		(0.115)	
Last PTA	-0.053***	-0.026***	
	(0.005)	(0.007)	
Last PTA^2	0.001**	0.001***	
	(0.000)	(0.000)	
Last PTA^3	0.000	-0.000***	
	(0.000)	(0.000)	
Constant	0.636***	3.836***	
	(0.202)	(0.208)	
Observations	1219501	805095	216374
Year Fixed Effects	Yes	Yes	Yes
Dyad Fixed Effects	No	No	Yes
Pseudo-R2	0.130	0.155	0.072
AIC	143392.936	103831.776	65474.269
BIC	144354.052	104748.075	66225.057

Table 4: Main Entry Models. Significance levels: ***>.01, **>0.05, *>.1

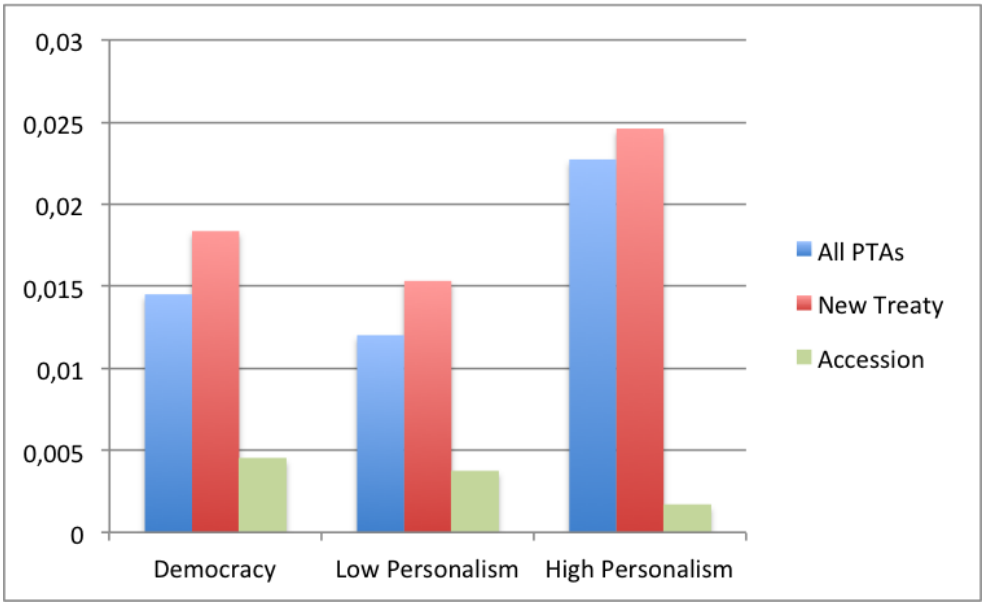

Figure 4: Mean values of entry types by regime

Note: High personalism defined as value of .9 or above. Low personalism defined as value of .1 or below

a preference for entering into new treaties. In contrast, more personalist states are actually less likely to accede to existing treaties compared to less personalist regimes and compared to democracies. As I argued in the previous chapter, dictatorships are strategic in their choice of PTA memberships. The more personalized a dictator is, the fewer constraints on policymaking. Highly personalist dictators are more likely to enter into trade agreements compared to less personalized autocratic governments because they are less constrained by their coalitions. It is interesting that highly personalist dictators would have a preference specifically for forming new treaties as opposed to joining existing treaties.

One potential alternative explanation of differing PTA memberships across regime types is that perhaps some states make less attractive cooperation partners than others. According to this alternative explanation, it may be that some states enter into fewer trade agreements because they have greater difficulties finding partners willing to sign agreements with them. Under this explanation, differences in PTA membership would be driven not by preferences of the autocracies themselves, but by preferences of their trade partners. For instance, it is

conceivable that some democracies are unwilling to enter into PTAs with states that commit severe human rights violations or that they perceive as unreliable and likely to violate treaty commitments.

While I cannot rule out that such considerations play a role in trade agreement formation, the empirical evidence provided in this chapter strongly suggests that autocracies themselves are driving PTA membership patterns. First, intuitively it seems that highly personalist states would make the least attractive cooperation partners. This is because these leaders have fewer domestic policymaking constraints and are therefore at greater liberty to violate treaty commitments. Since institutions tend to be underdeveloped in highly personalist states, these autocracies would also be particularly difficult to monitor. Finally, there is evidence that highly personalist dictators are the most likely to commit human rights violations.[24] As a result, if differences in PTA membership were driven not by the autocracies themselves, but by their potential cooperation partners, we would expect the likelihood of PTA membership to decrease with increasing personalism. However, the opposite is the case.

Secondly, the fact that highly personalist autocracies are less likely to join an existing treaty suggests that perhaps the "less attractive cooperation partner" mechanism is partly at play here. In other words, if states prefer not to cooperate with highly personalist regimes, we would indeed expect fewer accessions to existing treaties. However, this argument cannot explain why personalist autocracies would join so many new treaties. Instead, this empirical finding can only be explained by viewing autocrats as agents who make active choices about their trade commitments. In chapter 5, I will assess the dyadic implications of PTA membership in more detail, showing that autocracies in fact prefer to enter into PTAs with other nondemocratic states.

[24] See Vreeland (2008)

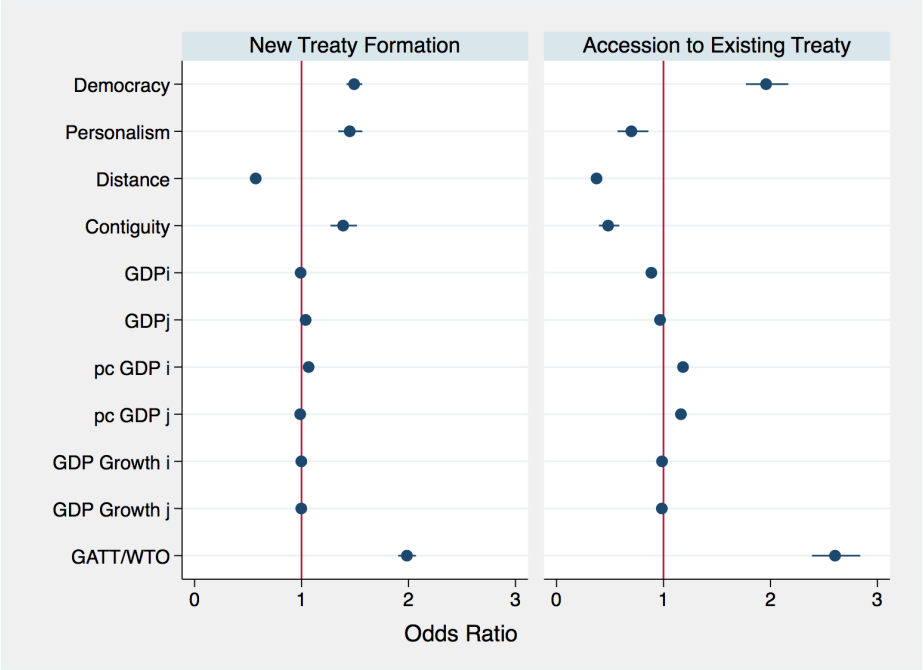

Figure 5: Likelihood of entry into new treaty and existing treaty

Robustness Checks

Alternative measures of regime characteristics

In this section, I show that my findings that personalist dictatorships enter into deeper trade agreements compared to non-personalist dictatorships for a wide range of measures of personalism continue to hold even when using a range of different measures of personalism. First, I rerun my analysis using the older regime typology by Geddes, Wright, and Frantz (2014), which divides autocratic regimes into personalist, monarchy, military, party-based, and hybrids. To simplify my analysis, I group all hybrid categories into an "other" regime category. Figure 6, taken from Geddes, Wright, and Frantz (2017), illustrates the relationship between the newer, latent personalism measure, and the older categorical measure. The graph shows that the relationship between latent personalism and personalist/party-based regimes has the expected direction. Party-based regimes generally have low levels of personalism, whereas personalist regimes tend to have high levels of personalism, which increase

	(1) New Treaty PTA Likelihood	(2) Accession PTA Likelihood
Democracy	0.400***	0.672***
	(0.025)	(0.051)
Latent Personalism	0.372***	-0.357***
	(0.039)	(0.105)
(Log) Distance	-0.559***	-0.983***
	(0.013)	(0.025)
Contiguity	0.328***	-0.729***
	(0.045)	(0.100)
(Log) GDP_i	-0.009	-0.120***
	(0.007)	(0.011)
(Log) GDP_j	0.038***	-0.033***
	(0.006)	(0.009)
pc GDP_i	0.064***	0.168***
	(0.011)	(0.017)
pc GDP_j	-0.012	0.151***
	(0.009)	(0.014)
GDP $Growth_i$	-0.002***	-0.014***
	(0.001)	(0.003)
GDP $Growth_j$	-0.002***	-0.016***
	(0.001)	(0.003)
GATT/WTO	0.686***	0.957***
	(0.021)	(0.044)
Last PTA	0.084***	0.072***
	(0.005)	(0.010)
Last PTA^2	-0.005***	-0.002***
	(0.000)	(0.000)
Last PTA^3	0.000***	0.000**
	(0.000)	(0.000)
Constant	-1.457***	-0.102
	(0.166)	(0.267)
Observations	1200551	721675
Pseudo-R2	0.204	0.324
AIC	155758.065	29914.956
BIC	156621.942	30431.976

Table 5: Likelihood of entry into new treaty and accession to existing treaty. Significance levels: ***>.01, **>0.05, *>.1

with the duration of the personalist regime. Monarchies appear to be more similar to party-based regimes, with lower levels of latent personalism. In contrast, the underlying level of personalism varies strongly within military regimes, with older military regimes having much higher levels of personalism than younger ones.

As a result, I expect personalist regimes to be more likely to enter into trade agreements

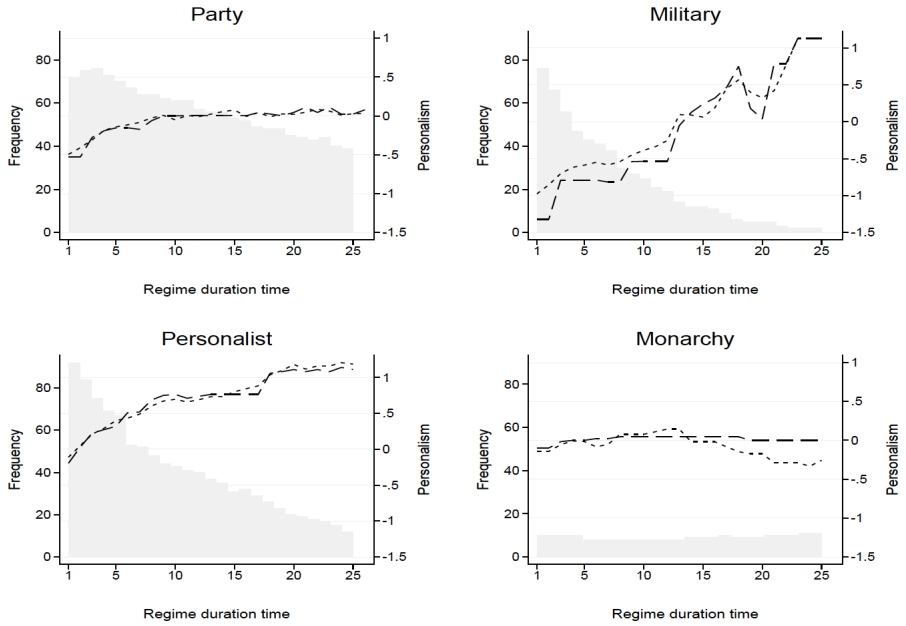

Figure 6: Source: Geddes, Wright, and Frantz 2017

than party-based regimes or monarchies. However, since my theoretical argument focuses on personalism, my theory makes no specific prediction about military regimes, which are the most diverse authoritarian sub-type in terms of their within-variation in personalism.

Secondly, Magaloni, Chu, and Min (2013) precede Geddes et al (2017) in their argument that personalism is a latent trait, which all nondemocratic states share to some extent and which should be measured by a continuous variable. Contrary to Geddes et al, however, their personalism variable is a Herfindahl index, which derives degree of personalism from the number of years that an individual executive leader has been the head of the regime as well as the age of the regime. E.g. "a regime led by only one person up through that year yields a personalism index of 1." This variable covers the years 1950 to 2012. Again, Models 3 and 4 illustrate that nondemocracies have a higher likelihood of entering into a trade agreement as the level of personalism increases.

In addition, Magaloni et al. also code another personalism variable that is based on the executive constraints variable (XCONST) from the Polity IV database. XONCST measures

the degree of constraints on the executive. Although personalism should be thought of as a multi-dimensional variable and this variable captures only one dimension of personalism, fewer constraints on the executive should nevertheless be indicative of a more personalist regime. Magaloni et al impute data for missing values of Xconst, and then group values into three categories: xconst values of 1 are coded as "highly personal", values of 2-4 are moderately personal, and values of 5-7 are "weakly/not personal". Contrary to the xconst variable, therefore, Higher values of Magaloni et al's version of xconst are associated with more personalist states. Consequently, I again expect a positive relationship between their xconst variable and the likelihood of PTA entry.

The three models in Table 6 use the same logit regression as for the latent personalism variable baseline model, substituting the three alternative personalism measures. Again, all three models suggest that more personalist dictatorships have a higher likelihood of entering into a trade agreement. First, Model 1 shows that that personalist regimes have a higher likelihood of entering into a trade agreement compared to monarchies and other types of regimes. The only exception is military regimes, which have the highest likelihood of entering into a trade agreement (military regimes have a higher likelihood of PTA entry than other. This is an interesting finding that my theory cannot fully explain. It is known that military officers often have close ties to economic elites and they may have their own unique preferences regarding trade liberalization and international cooperation. Therefore, it would be worth analyzing military regimes specifically in more detail in future research. In the first Model, personalist dictatorships are also more likely to enter into PTAs than democratic regimes, which is also somewhat surprising. However, this finding is not confirmed by the other models.

Similarly, using Magaloni et al's personalism measure, Model 2 again confirms that more personalist regimes have a higher likelihood of PTA entry. Finally, Model 3 shows that the likelihood of PTA entry increases for states with lower executive constraints.[25] The direction

[25] These results also hold up when using the original XCONST measure instead of Magaloni et al's version (not shown here).

of the coefficients on the other variables is generally consistent with the models in Table 4.

Additional Controls

As additional robustness checks, I include several further controls. First, I code a dummy variable that takes on a value of 1 for years in which a dyad has an existing nonreciprocal treaty. It is conceivable that some types of autocracy are more likely to enter into nonreciprocal treaties with developed economy and as a result have a lower chance of entering into a reciprocal trade agreement. These results are shown in the first model in Table 7. Secondly, I further analyze the impact of region-specific effects by including dummy variables for each region that take on a value of 1 if both states in a dyad are from that region. I code a separate dummy variable for dyads that cross regions. Regional effects are likely to play a role in PTA formation. However, I argue that regional effects interact with domestic political dynamics. As the first model in table 7 shows, the coefficient on my main variable of interest, the latent personalism measure, remains positive and statistically significant when including both regional controls and accounting for nonreciprocal trade agreements.

In addition, I also assess whether institutionalization is simply driven by the number of veto players. I include two different measures of veto players: first, the "Checks" measure from the DPI dataset, which measures the presence of checks and balances (Keefer 2012); and secondly, the polconiii measure from Henisz (2012), which is a variable ranging from 0 to 1, where 0 refers to a complete absence of veto players. Henisz defines veto player as the number of independent formal political institutions that can exercise veto power over policy choices. He requires veto points to be "both constitutionally effective and controlled by a party different from other branches." While conceptually plausible, veto player measures are somewhat less useful when analyzing nondemocratic states as compared to democracies. Although many modern nondemocracies have formal political institutions, oftentimes these institutions lack independence from the executive branch and thus cannot be considered veto players. On the other hand, players without formal political roles, such as certain family

members of dictators, may have de facto veto power over policy decisions. As a result, veto players are difficult to conceptualize and measure in nondemocratic states. In fact, most of the observations of polconiii for nondemocratic states take on a value of 0. Since the presence of more veto players should make entering into PTAs more difficult, consequently I would expect a negative coefficient for this variable. As the second and third models in Table 7 indicate, veto players are associated with a lower likelihood of PTA entry as expected. Nevertheless, the coefficient on personalism remains positive and statistically significant.

Monadic Models

Although my central argument could be interpreted as primarily monadic, my main models adopt a dyadic format, which has several advantages: first, the trade agreement literature adopts almost exclusively dyadic models, in part because of the wide acceptance of gravity models of trade. As such, assessing the role of regime type within a dyadic model allows for easier integration of my analysis into the wider literature on trade agreements. Dyadic models also allow us to control for for factors such as distance, contiguity, and joint political factors such as alliances between states. Since trade costs increase with distance between states, not taking into account a country's distance to other states, as monadic models do, could falsify expectations about their PTA memberships.

Secondly, dyadic factors can also affect regime type, since regimes tend to be clustered in space. Thus for instance, personalist dictatorships are likely to be located near other dictatorships. Including measures of distance and contiguity in my analysis allows me to control for the possibility the that personalist states do not enter into PTAs more frequently simply because they happen to be clustered in close proximity, whereas other types of autocracy may be more dispersed.

Thirdly, adopting a monadic format requires making difficult decisions about how to weight multilateral compared to bilateral agreements. For example, since states that more actively join PTAs may choose to enter into multiple PTAs in a given year (which happens

in about 20% of cases in which states entered into PTAs), a simple dummy variable measuring whether a state enters into any PTA in a given year would underestimate the overall likelihood of states to enter into PTAs. In addition, counting the absolute number of trade agreements may also lead to false conclusions about PTA membership, since some states may be more likely to sign bilateral treaties and other states may enter into fewer, multilateral agreements. My theory does not make specific predictions about multilateral or bilateral agreements. A better dependent variable for a monadic model, and one that is somewhat more analogous to dyadic models, would be a count variable that measures the number of states a country enters into a PTA with in year x. This reflects a more accurate measure of PTA entry.

Despite these potential advantages of dyadic models of trade agreements, as a robustness check I also construct a monadic model of PTA entry. As discussed above, dependent variable is *PTA Partners*, a count variable of the number of new PTA partners in a given year. Similar as in the dyadic model, I control for (log) GDP, GDP per capita, GATT/WTO membership, communism, as well as the time since the state entered into its last PTA (squared and cubed) to account for potential temporal dependence. Since it is not possible to account for factors such as distance to other states in a monadic model, I instead control for the log of trade openness, measured as(exports+imports)/GDP. As before, variables are lagged where appropriate.

Using count data, an OLS model would be biased. More appropriate would be to use a negative binomial or poisson model. Here, since the variance (37.77) of my dependent variable is much larger than its mean (1.75), a negative binomial model is more appropriate due to over-dispersion. However, I show my analysis for both types of model. Summarizing, the monadic model I use is:

PTA Partners = β_0 +β_1 Democracy + β_2 Nondemocratic Regime Type + β_3 GDP growth + β_4 GDP pc + β_5 Trade Openness + β_6 GATT/WTO membership + β_7 Communism + β_8 Other Institutional Variables + ϵ

The results of the monadic models are reported in Table 8 below. The results again mostly provide confirmation of Hypothesis 1. The first two models use a negative binomial regression with and without fixed effects. In these models, the latent personalism is positive and significant as expected. Model 5 shows the same analysis using a fixed effects Poisson model instead. In addition, the third and fourth models use the 2014 Geddes, Wright, and Frantz regime typology. Again using a negative binomial model, contrary to expectations, the regime type variables are not significant. However, this applies not only to the variation within autocracies, but to the democracy dummy variable as well. However, using a fixed effects Poisson model, I find that, as predicted, both personalist regimes and democratic states are more likely to enter into trade agreements. Overall, the findings of the monadic model are consistent with the earlier dyadic models and provide evidence that more personalist regimes have a higher likelihood of entering into a trade agreement using the latent personalism variable.

Conclusion

This chapter has provided empirical evidence for the hypothesis that the likelihood of entry into a trade agreement increases as the level of personalism within an autocracy rises. My findings suggest that autocrats are strategic about their trade commitments, and that domestic factors can play an important role in the decision whether to enter into a trade agreement. It is consequently important to disaggregate not only between regime types, but also within authoritarian states when analyzing trade agreement memberships.

In the following chapter, I will analyze how the propensity to enter into a trade agreement relates to the content of that agreement. I will show that although personalist states enter into PTAs more frequently, they also prefer to sign shallower agreements than other authoritarian states.

Dyadic Models: Other Personalism Measures	(1) Geddes Logit	(2) Magaloni et al. Logit	(3) XCONST Logit
Democracy Dummy	-0.086***	0.292***	0.402***
	(0.033)	(0.034)	(0.052)
Party Regime	-0.154***		
	(0.033)		
Military Regime	0.215***		
	(0.039)		
Monarchy	-0.458***		
	(0.058)		
Other Regime	-0.737***		
	(0.061)		
Magaloni Personalism		0.349***	
		(0.041)	
Magaloni Xconst			0.155***
			(0.021)
(Log) Distance	-0.801***	-0.759***	-0.758***
	(0.019)	(0.017)	(0.017)
Contiguity	-0.022	0.033	0.029
	(0.043)	(0.041)	(0.040)
(Log) GDP_i	0.016*	0.017**	0.015**
	(0.008)	(0.007)	(0.007)
(Log) GDP_j	0.033***	0.024***	0.024***
	(0.006)	(0.005)	(0.006)
pc GDP_i	0.014	-0.006	-0.016
	(0.013)	(0.010)	(0.010)
pc GDP_j	-0.029***	-0.023***	-0.024***
	(0.009)	(0.009)	(0.009)
GDP $growth_i$	-0.012***	-0.013***	-0.013***
	(0.001)	(0.001)	(0.001)
GDP $growth_j$	-0.013***	-0.013***	-0.013***
	(0.001)	(0.001)	(0.001)
GATT/WTO	0.249***	0.265***	0.282***
	(0.022)	(0.021)	(0.021)
Last PTA	-0.078***	-0.054***	-0.054***
	(0.006)	(0.005)	(0.005)
Last PTA^2	0.002***	0.001**	0.001**
	(0.000)	(0.000)	(0.000)
Last PTA^3	-0.000***	0.000	0.000
	(0.000)	(0.000)	(0.000)
Constant	1.206***	0.508**	0.561***
	(0.228)	(0.213)	(0.209)
Observations	1086029	1172103	1174139
Year Fixed Effects	Yes	Yes	Yes
Dyad Fixed Effects	No	No	No
Pseudo-R2	0.137	0.129	0.129
AIC	128368.834	140052.640	140158.296
BIC	129344.473	141010.585	141116.380

Table 6: Robustness Checks – Alternative Measures of Personalism

	(1) Nonreciprocal PTA	(2) Checks	(3) Polconiii
Democracy	0.242***	0.235***	0.186***
	(0.027)	(0.028)	(0.036)
Latent Personalism	0.327***	0.423***	0.311***
	(0.040)	(0.042)	(0.047)
Checks		-0.018***	
		(0.007)	
Henisz Veto points			-0.126*
			(0.076)
(Log) Distance)	-0.530***	-0.741***	-1.028***
	(0.016)	(0.015)	(0.028)
Contiguity	-0.132***	0.115***	-0.519***
	(0.038)	(0.039)	(0.055)
(Log) GDP_i	0.046***	0.021***	0.029***
	(0.007)	(0.007)	(0.008)
(Log) GDP_j	0.056***	0.056***	0.033***
	(0.006)	(0.005)	(0.007)
pc GDP_i	0.102***	0.003	-0.089***
	(0.011)	(0.010)	(0.014)
pc GDP_j	0.103***	-0.052***	-0.096***
	(0.010)	(0.008)	(0.011)
GDP $Growth_i$	-0.014***	-0.014***	-0.011***
	(0.001)	(0.001)	(0.001)
GDP $Growth_j$	-0.013***	-0.013***	-0.011***
	(0.001)	(0.001)	(0.001)
GATT/WTO	0.186***	0.192***	0.254***
	(0.021)	(0.020)	(0.025)
Nonreciprocal Treaty	-0.075**		
	(0.033)		
Last PTA	-0.033***	-0.035***	-0.059***
	(0.005)	(0.005)	(0.007)
Last PTA^2	0.001***	-0.000	0.002***
	(0.000)	(0.000)	(0.000)
Last PTA^3	-0.000	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
South Asia	0.981***		
	(0.111)		
MENA	0.485***		
	(0.081)		
Sub-Saharan Africa	1.090***		
	(0.063)		
Europe/Central Asia	0.813***		
	(0.084)		
Latin America & Carribean	1.171***		
	(0.075)		
North/Central America	0.463***		
	(0.072)		
Western Europe	0.117		
	(0.072)		
Cross-Regional	-0.717***		
	(0.060)		
Constant	-3.574***	0.739***	3.810***
	(0.199)	(0.196)	(0.286)
Observations	1219501	899915	999888
Year Fixed Effects	Yes	Yes	Yes
AIC	138562.321	125147.444	115341.329
BIC	139631.563	126095.959	116215.668

Table 7: Robustness Checks – Additional Controls

Monadic Models	(1) nbreg PTA No.	(2) nbreg PTA No.	(3) nbreg PTA No.	(4) nbreg PTA No.	(5) xtpoisson PTA No.	(6) xtpoisson PTA No.
Democracy	0.368***	0.190	0.068	0.251	0.236***	0.273***
	(0.121)	(0.217)	(0.125)	(0.233)	(0.036)	(0.042)
Latent Personalism	0.829***	0.590**			0.593***	
	(0.219)	(0.296)			(0.058)	
Geddes Personal			0.295*	0.237		0.244***
			(0.154)	(0.264)		(0.050)
Geddes Military			0.235	0.334		0.221***
			(0.197)	(0.227)		(0.049)
Geddes Monarchy			-0.166	-2.343**		-2.732***
			(0.217)	(1.089)		(0.402)
Geddes Other			0.191	-0.016		-0.321***
			(0.398)	(0.431)		(0.112)
(Log) GDP	0.044	-0.214	0.078**	-0.178	-0.221***	-0.197***
	(0.029)	(0.135)	(0.031)	(0.164)	(0.030)	(0.036)
pc GDP	0.000	0.000*	0.000	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(Log) Trade Openness	0.156**	0.031	0.169**	0.048	-0.130***	-0.078***
	(0.068)	(0.091)	(0.081)	(0.097)	(0.025)	(0.026)
GATT/WTO	0.080	0.440**	0.119	0.407**	0.214***	0.265***
	(0.113)	(0.201)	(0.116)	(0.185)	(0.039)	(0.041)
Communism	0.335	0.017	0.431	-0.045	0.622***	0.631***
	(0.286)	(0.525)	(0.291)	(0.505)	(0.080)	(0.080)
Time since last PTA	0.002	0.046	-0.005	0.053	0.053***	0.055***
	(0.028)	(0.030)	(0.038)	(0.038)	(0.007)	(0.008)
Time since last PTA^2	-0.001	-0.003*	-0.001	-0.002	-0.002***	-0.001
	(0.002)	(0.002)	(0.003)	(0.003)	(0.000)	(0.001)
Time since last PTA^3	0.000	0.000*	0.000	0.000	0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-0.636	-0.359	-0.791	-3.708		
	(0.508)	(1.979)	(0.596)	(2.367)		
lnalpha	2.003***	1.596***	1.962***	1.524***		
	(0.029)	(0.064)	(0.031)	(0.065)		
Observations	6260	6260	5368	5368	5316	5316
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes	Yes	Yes
Pseudo-R2	0.004	0.066	0.005	0.071		

Table 8: Robustness Checks – Monadic Models