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# The Politics of Trade Agreement Design: Revisiting the Depth-Flexibility Nexus

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## Abstract

Existing research indicates that different dimensions of the design of international institutions are interrelated. In particular, deep agreements have been shown to be more flexible. We make two contributions to this literature. On the one hand, we argue and empirically show that the positive relationship between depth and flexibility holds for preferential trade agreements (PTAs). On the other hand, we add two qualifications to the conventional wisdom about depth and flexibility going hand in hand. First, we argue that the positive relationship between depth and flexibility is weaker for democracies than for non-democracies. Second, when making deep agreements more flexible, countries also add strings to the use of the additional flexibility provisions. An original dataset on the design of 587 PTAs allows us to test our arguments. Both descriptive evidence and multivariate statistics support the theoretical expectations. The findings contribute to the literatures on the design of international institutions and the causes and consequences of PTAs.

**Key Words:** depth, flexibility, institutional design, international institutions, preferential trade agreements.

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# Introduction

Existing research on the design of international institutions shows that deep agreements tend to be more flexible than shallow ones (Downs et al. 1996; Rosendorff and Milner 2001; Kucik and Reinhardt 2008). We argue that this pattern also holds for preferential trade agreements (PTAs). Deep PTAs with many commitments, such as liberalizing services trade and protecting foreign direct investments and intellectual property rights, should also feature multiple flexibility measures that allow states to temporarily withdraw concessions. We also argue, however, that the relationship between depth and flexibility is more nuanced than existing scholarship recognizes. In particular, the positive relationship between depth and flexibility should be less pronounced for democracies than for non-democracies. Moreover, we expect countries to attach strings to the use of the flexibility provisions that they add to deep agreements.

We test these expectations on a new dataset on the design of 587 PTAs signed between 1945 and 2009 (Dür et al. 2014). Our dataset is very comprehensive both in terms of agreements covered and detail of the coding. It contains data on a substantially larger number of PTAs than existing datasets. Moreover, it includes a large number of items that allow us to measure the agreements' depth and flexibility, and the extent to which the use of flexibility tools is restricted. Relying on this dataset, we find support for our theoretical expectations. The findings are highly robust to changes in estimation method and the operationalization of variables.

We thus provide the first large-n study of the relationship between depth and flexibility with respect to PTAs. In focusing on PTAs, our study nicely complements the existing literature on the design of international economic institutions that so far has mainly focused on the World Trade Organization (WTO) and its forerunner the General Agreement on Tariffs and Trade (GATT) (Rosendorff 2005; Rosendorff and Milner 2001; Kucik and Reinhardt 2008; Pelc 2009). What sets PTAs apart from the GATT/WTO system is that in the latter, negotiations take place against the background of a more or less fixed institutional

structure, which in most cases leaves few elements up for discussion. In negotiating a PTA, by contrast, countries make many choices regarding institutional design at the same time. Applying the argument to the case of PTAs is also particularly attractive because evidence is accumulating that variation in PTA design matters for key economic outcomes such as trade flows and foreign direct investments.<sup>2</sup>

While we develop and test our argument for the case of PTAs, we also make a contribution to the broader literature on the design of international institutions (Koremenos et al. 2001). In particular, our study suggests that there are good reasons to believe that the depth-flexibility relationship is more nuanced than currently recognized also for international institutions other than PTAs. Both the argument about regime type and the concept of flexibility strings should travel to other institutional settings. We develop these broader implications of our article in the conclusion.

## The Relationship between Depth and Flexibility in PTAs

International agreements vary both in terms of depth of cooperation and flexibility. Depth can be understood as the extent to which an agreement constrains state behavior.<sup>3</sup> In the particular case of trade agreements, deep agreements liberalize trade more than shallow agreements. An important determinant of the depth of a trade agreement is average tariff cuts states are asked to undertake. Trade agreements, however, can also contribute to liberalizing trade relations between states by opening some services sectors to foreign competition or by allowing foreign companies to bid for tenders for government procurement contracts. Similarly, the protection of foreign direct investment can substantially enhance market access for exporters, as foreign investments can be a precondition for trade. A trade agreement can also go beyond protecting investments against arbitrary decisions and explicitly liberalize

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<sup>2</sup>For the effect of trade agreement design on trade flows, see Dür et al. 2014 and Egger and Nigai 2015; and for foreign direct investments, see Büthe and Milner 2014.

<sup>3</sup>This is similar to Downs et al. (1996, 383) who define depth as “the extent to which [an agreement] requires states to depart from what they would have done in its absence”.

foreign investments (World Trade Organization 2011).

Other behind-the-border obstacles that a deep trade agreement may remove are burdensome technical standards, sanitary or phytosanitary measures, inadequate protection of intellectual property rights, and competition rules that discriminate against foreign traders. Some PTAs, for example, foresee the mutual recognition of international product standards or the harmonization of technical regulations (Piermartini and Budetta 2009). This reduces transaction costs and increases market integration. The strengthening of intellectual property rights is also important for enabling exporters to pursue a long-term market penetration strategy. Absence of patent or trademark protection directly translates into less exports and less technology transfer in the case of investments directed at foreign markets (Maskus and Penubarti 1995). Finally, cooperation on competition policy is important to address unfair business behavior by state enterprises and private firms. Competition provisions thus facilitate exports and foreign investments. The depth of a trade agreement, therefore, is a function of tariff cuts and provisions concerning services, government procurement, investments, standards, intellectual property rights and competition.

Flexibility provisions are devices included in an agreement that allow states to anticipate and respond to domestic contingencies or to adjust their policies for other purposes without violating the terms of an agreement. They provide for legally accepted opt-outs without leading to a *de jure* breach of an agreement and encompass exit options, duration and renegotiation clauses, reservations, escape clauses, and withdrawal clauses (see, for example, Koremenos et al. 2001; Rosendorff and Milner 2001; Helfer 2005; Koremenos 2005; Neumayer 2007; Helfer 2013).

Special and general safeguard provisions, anti-dumping clauses, balance of payments (BoP) exceptions, and tariff overhang (namely a gap between applied and bound tariffs) are flexibility instruments that can often be found in trade agreements. The Treaty of Rome (1957), for example, allowed member states of the European Economic Community to suspend part of their liberalization in the case of BoP difficulties (Art. 109). Similarly, the

EU–South Korea PTA contains a special safeguard related to cars (Elsig and Dupont 2012). In addition, safety valves exist to address anti-competitive behavior by other states (excessive use of subsidies to boost exports) or by firms (dumping practices). These exist in the form of anti-dumping and countervailing duty provisions.

While depth and flexibility capture two distinct dimensions of institutional design, several studies have argued and/or shown that depth and flexibility are positively related (Rosendorff and Milner 2001; Kucik and Reinhardt 2008; Johns 2014). Two different causal pathways may explain this relationship. The first explanation is that flexibility may facilitate the negotiation of deeper agreements (Kucik and Reinhardt 2008). The argument is based on the assumption that states value the long-term benefits of cooperation, but also face short-term domestic pressure to violate an agreement, which varies over time. When the pressure is strong, governments have an incentive to violate agreements that do not contain flexibility provisions (Downs et al. 1996). Violation, in turn, may prompt retaliation, causing a breakdown of cooperation. States, therefore, only negotiate deep agreements if they can include flexibility in the agreement that ensures the long-term viability of cooperation.

Alternatively, deep agreements may lead to greater domestic demand for flexibility. The starting point of this argument is that international agreements have distributional effects. In the case of trade, agreements benefit exporters that gain from better foreign market access and multinational companies that (plan to) invest in partner countries. At the same time, they hurt import-competing interests that face greater import competition. Importantly, a trade agreement's distributional effects depend on its depth. Recent research shows that deeper agreements have a greater positive trade flow effect than shallow ones (Baier and Bergstrand 2007; Dür et al. 2014; Egger and Nigai 2015). They also encourage more foreign direct investments (Büthe and Milner 2014).

Given these distributional effects, deep agreements can be expected to receive support from exporters and multinational companies. At the same time, plans for a deep agreement should lead to particularly intensive lobbying from import-competing groups that demand

protection. The reason is that the number of economic sectors that potentially experience negative effects from a PTA increases together with the depth of an agreement. Service providers, for example, do not have to fear foreign competition if an agreement only liberalizes trade in goods. Similarly, sectors protected via discriminatory technical standards do not need to bother about tariff cuts, unless the trade agreement also includes a provision that harmonizes technical standards. If import-competitors are unable to block an agreement, they will push for a minimum objective, namely ensuring that the agreement is highly flexible. For them, flexibility provisions soften the impact of an agreement and serve as a form of protection (Grossman and Helpman 1994). In the face of strong lobbying by import-competitors, governments can be expected to make deep agreements flexible.

Both causal arguments thus lead to the expectation that depth and flexibility are positively related. So far, this relationship between depth and flexibility has mainly been tested for the case of trade agreements negotiated in the framework of the GATT/WTO. Kucik and Reinhardt (2008), for example, show that countries that have an anti-dumping instrument agree to lower tariff bindings upon entry into the GATT/WTO system (and sustain them as members) than other countries. In PTAs, we expect the causal mechanism to work in the other direction. PTA negotiators tend to resolve the question of depth first, and only then decide on the amount of flexibility included in the agreement. In fact, as soon as countries signal their intention to negotiate a PTA, they specify how ambitious the future agreement should be, long before specific flexibility provisions are negotiated. The causal link thus most probably goes from depth to flexibility. As in the empirical analysis below we do not test for the causal direction, we remain agnostic about the direction and simply posit a positive relationship between depth and flexibility:

**Hypothesis 1** *The deeper a PTA, the more flexible it is.*

For two reasons, we expect that the conventional wisdom that motivates Hypothesis 1 needs to be qualified. First, the relationship between depth and flexibility is conditional on regime type, because democracies rely more strongly on non-tariff barriers and trade remedies

for protection than non-democracies (Kono 2006). The reason is that in democracies, voters punish politicians that impose high tariffs, which is a transparent tax on consumers. So that they still can satisfy interest groups that demand protection, democratic governments rely on devices about which voters have little information, namely non-tariff barriers and trade remedies.

For the design of PTAs, this “optimal obfuscation” argument implies that democracies will include flexibility provisions even in shallow agreements, as they need them to respond to protectionist demands in a manner that avoids punishment by voters. In the absence of flexibility, they would be in breach of the agreement when, for example, imposing anti-dumping or countervailing duties. Non-democracies, by contrast, see little advantage from flexibility in shallow agreements. By definition, a shallow agreement does not hinder them selectively to use trade barriers to placate import competitors; and they do not need flexibility provisions for that purpose as they have no incentive to disguise their reliance on protectionism for reasons related to voters’ concerns.

As depth increases, we expect to see only a small increase in flexibility for democracies, which already include much flexibility in shallow agreements. The causal argument presented above about the relationship between depth and flexibility thus should mainly apply to non-democracies. They see their ability to respond to protectionist demands via traditional trade barriers restricted in deep agreements; and then add flexibility provisions to deep agreements that satisfy import-competing interests. Table 1 summarizes this argument. Importantly, we only expect the relationship between depth and flexibility to be conditional on regime type for flexibility measures that relate to non-tariff barriers. For flexibility measures related to tariffs (such as tariff cut phase-ins, as discussed below), we do not expect such a conditional relationship. Even if democracies are less likely to rely on tariffs for protectionist purposes, they have little to gain from a very rapid reduction of existing tariff rates. We thus hypothesize:

**Hypothesis 2** *The positive relationship between depth and flexibility is weaker for democ-*

Table 1: Regime type, depth and flexibility.

	Shallow	Deep
Democracies	Need flexibility to respond to protectionist demands	Need flexibility to respond to protectionist demands
Non-democracies	Less need for flexibility; protectionist demands are satisfied with other trade barriers	Need for flexibility, as ability to use other measures constrained

*racies than for non-democracies.*

Second, when governments add more flexibility to deep agreements, they are likely to attach strings to the use of these additional flexibility provisions. The causal logic underlying this qualification starts with the insight that flexibility poses risks for both governments and exporters alike. Countries may use flexibility to ease adjustment costs and thus reduce temporarily high costs of compliance. As this ensures the long-term viability of cooperation, this is the intended use of flexibility. Some countries, however, may abuse flexibility provisions that offer them some discretion to impose temporary trade barriers with the aim of giving rents to particular domestic constituencies. Overuse of the opt-outs, in turn, jeopardizes the overall benefits of the agreement (and its stability) in the long run. It may even nullify the benefits of market access. Exporters that value market access thus oppose lax rules on flexibility which would allow foreign governments or importers to demand too much protection (Kucik 2012, 98).

With the aim of avoiding abuse of flexibility provisions with a discretionary element, governments then have a strong incentive ex-ante to define limits to the use of flexibility instruments. They can be expected to agree on procedural constraints to control the application of escape tools as a sort of hand-tying approach. Various possibilities exist for restricting the use of flexibility measures. In terms of safeguards and anti-dumping, states may limit the duration of an anti-dumping duty, restrict the upper level of the trade remedy imposed, or make reference to the GATT/WTO legal framework that prescribes a number of procedural and substantive obligations that shield against abuse. In the case of the South

Korea-US negotiations, for example, the Korean car industry lobbied hard for changes in US trade remedy laws that would make the imposition of anti-dumping duties more difficult. As regards subsidies, treaties may push governments to decrease or eliminate them or demand active cooperation among authorities to address competition-related negative spill-overs. For instance the trade agreement between Japan and Switzerland foresees that while parties to the agreement can maintain high levels of domestic support, no export subsidies shall be introduced or maintained on agricultural products for which tariff liberalization has been agreed.<sup>4</sup> We call these measures “flexibility strings”.

The second qualification of the conventional wisdom that we derive from this reasoning is that countries will attach strings to the use of flexibility provisions. Governments will seek an optimal degree of flexibility that allows for temporary breach and adaptation if necessary, but that is restricted through a set of tools. We thus formulate the following hypothesis:

**Hypothesis 3** *PTAs that are more flexible contain more flexibility strings.*

Before empirically examining our hypotheses, we address two potential objections to our argument. On the one hand, some evidence suggests that governments do not start from scratch in designing PTAs, but rely on templates. Even if they do so, however, this should not affect our analysis, as the PTA template is likely to include all of the aspects of the design of a PTA that we capture in our hypotheses: depth, flexibility and flexibility strings. To the extent that copying takes place, we expect governments to copy provisions from all three areas, meaning that the postulated relationships should remain intact.

On the other hand, our discussion so far has ignored the fact that two or more countries contribute to the design of a PTA. In a highly asymmetric relationship, the larger country (e.g. the US) may not bother about including flexibility provisions into a formally deep agreement, if the smaller country (e.g. Oman) does not pose a threat for its import-competing sectors. The smaller country, in turn, may not have the power to insist on the inclusion of

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<sup>4</sup>In the WTO, export subsidies in agricultural products are generally still allowed under specific conditions. The abolition of these subsidies is part of the single negotiation package in the context of the current negotiations in the framework of the WTO.

the flexibility provisions or to resist the imposition of flexibility strings. In such a case, the postulated relationships between depth, flexibility and flexibility strings would disappear. Our expectation, however, is that import-competitors in a large country are concerned that the agreement could set a precedent, and thus defend the inclusion of flexibility provisions even in agreements with smaller trading partners. Although we think that power asymmetry should not affect our results, below we carry out an empirical test that directly tackles this issue.

## Operationalization and Descriptive Evidence

For the empirical analysis of the relationship between depth, flexibility and flexibility strings, we rely on an original dataset on the design of 587 PTAs signed between 1945 and 2009. The list of agreements contains 358 bilateral and 229 plurilateral agreements, and substantially goes beyond the list of agreements registered with the WTO (60 percent of them feature in the WTO list). It is the result of the integration of several existing lists (including those maintained by the Organization of American States' Foreign Trade Information System and the World Bank) and the systematic search of government web pages. The average agreement in the dataset is relatively young (no fewer than 73 percent of the agreements have been signed since 1990); was signed by developing countries (67 percent are of a South–South type); and is a full free trade agreement (60 percent of the dataset).

The agreements were manually coded for a total of eight market-access related sectors of cooperation that may be included in PTAs, encompassing goods, services, investments, intellectual property rights, competition, public procurement, standards, and trade remedies. For each of these sectors, a significant number of items were coded, meaning that we have about 100 data points for each agreement. To ensure the reliability of the data, all agreements were double-coded, and any differences between the two sets of data were then resolved.<sup>5</sup>

For nearly all variables, inter-rater agreement as measured by Cohen's kappa is higher

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<sup>5</sup>For more details, see Dür et al. 2013.

than 0.75. Moreover, cross-checks of the dataset against existing ones that partially overlap with it confirm the reliability of the data.<sup>6</sup> The large number of agreements coded and the level of detail included in the coding mean that this dataset offers a unique opportunity to test our argument. In the following, we discuss how we use this dataset to measure depth, flexibility and flexibility strings.

We use two different measures of depth below. On the one hand, we created an additive index of 48 items in our dataset (*Depth (index)*). We only included items in the index that theoretically are related to depth and weighted each item equally (the appendix contains a list of all of these items). While theoretically this measure can range from 0 to 48, in practice we observe values in the range from 0 to 40. On the other hand, we relied on item response analysis on the same set of variables to arrive at a measure of depth (*Depth (IR)*). Latent trait analysis is a technique that is similar to factor analysis, with the advantage that it is applicable to binary data (Bartholomew et al. 2011). The specific model that we apply, which is known as the Rasch model, assumes that all items capture one underlying latent dimension. The items, however, contribute more or less to this latent dimension (that is, they have more or less discriminatory power). Using this operationalization, provisions that are relatively rare contribute more to depth than provisions that are ubiquitous. After rescaling to remove negative values, this variable ranges from 0 to 3.3.

The two measures are highly correlated ( $r=0.94$ ). For both depth measures, we find that over time agreements have become deeper, with the trend towards deep agreements starting in the second half of the 1980s. We also observe that North-South agreements are substantially deeper than both North-North and South-South agreements in our dataset. North–North agreements are only slightly deeper than South–South agreements. The deepest agreements in the dataset are signed by the United States (for example, Australia–US and Colombia–US), Japan (for example, Japan–Switzerland) and the European Free Trade Association

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<sup>6</sup>For these other datasets, see the contributions in Estevadeordal et al. 2009, World Trade Organization 2011 and Kucik 2012. Estevadeordal et al. 2009 includes up to 70 agreements that also feature in the present dataset (varying depending on chapter). World Trade Organization 2011 analyzes the contents of 96 agreements. Kucik 2012 coded 323 of the agreements contained in our dataset.

(for example, European Free Trade Association–Colombia). On both measures of depth, 147 agreements score 0, including the African Common Market and a large number of Arab agreements. As these examples suggest, in contrast to Slapin and Gray (2014), in our dataset depth and the number of member states are not positively related.

We also rely on two measures of flexibility. On the one hand, we use a simple additive index of the presence or absence of four provisions in PTAs: a provision allowing for the suspension of tariff cuts in the case of balance of payments problems, a general safeguard provision, a provision allowing for the imposition of countervailing duties, and a provision allowing for the imposition of anti-dumping duties (*Escape flexibility*).<sup>7</sup> In the absence of these provisions, a country that suspends its tariff cuts or imposes antidumping and countervailing duties for goods covered by the agreement is in breach of the agreement.<sup>8</sup> These four provisions thus serve as escape clauses. The index can range from 0 to 4. In our dataset, 73 agreements score 0 and 260 agreements score 4 on this variable. Over time, we see an increasing number of agreements including several of these escape provisions.

On the other hand, PTAs may also introduce flexibility by allowing member states to postpone tariff reductions (Chase 2003). The more time states have to achieve the agreed tariff cuts, the more flexibility exists for import-competing groups to adjust to increased competition. We thus use the maximum (across all tariff categories) number of years that countries are given to achieve the liberalization of tariffs envisaged in the agreement as a second measure of flexibility (*Transitional flexibility*). Phase-out periods for tariff liberalization range between 0 years (all tariffs are liberalized at the date of entry into force of an agreement) and 25 years. We took the median for the member countries of a PTA if the transition periods vary across countries.<sup>9</sup> As this type of flexibility does not contain a

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<sup>7</sup>We also used item response analysis as described for depth above to combine these four items into a weighted index. The resulting variable is highly positively correlated with the additive index that we use ( $r_s = 0.90$ ).

<sup>8</sup>If an agreement is silent on the use of trade remedies, parties have a legitimate expectation that these mechanisms are not used, as they run counter to the main objective of an international agreement that foresees trade liberalization through tariff cuts.

<sup>9</sup>This is the case for 20 percent of agreements. If we take the mean or the minimum value in these cases, we obtain similar results (available upon request).

discretionary element, it does not require flexibility strings.

Following Hypothesis 1, flexibility should be positively related to depth. To examine this proposition, we show boxplots for *Escape flexibility* based on a recoded depth variable that ranges from 0 (very shallow) to 4 (very deep). The resulting graph (Figure 1) shows a strong positive relationship between the two variables. It also suggests that the relationship may not be linear, an issue that we take up below. In Figure 2, we show that the positive relationship between depth and flexibility also holds for our second measure of flexibility (*Transitional flexibility*). Again, we see a positive relationship between the two variables. As depth increases, transitional flexibility also increases. The figure shows that US agreements are not only deep, but several of them also feature very long transition periods. By contrast, the African Economic Community (1991) is a stark outlier in the sense that it is very shallow and has one of the longest transition periods in the dataset.

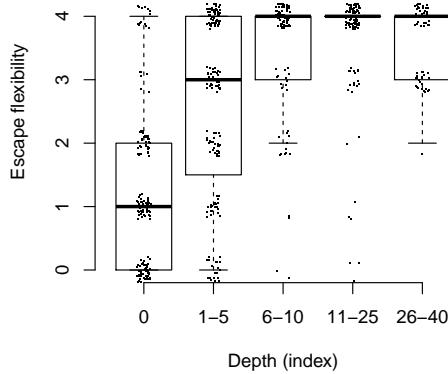


Figure 1: Depth versus escape flexibility.

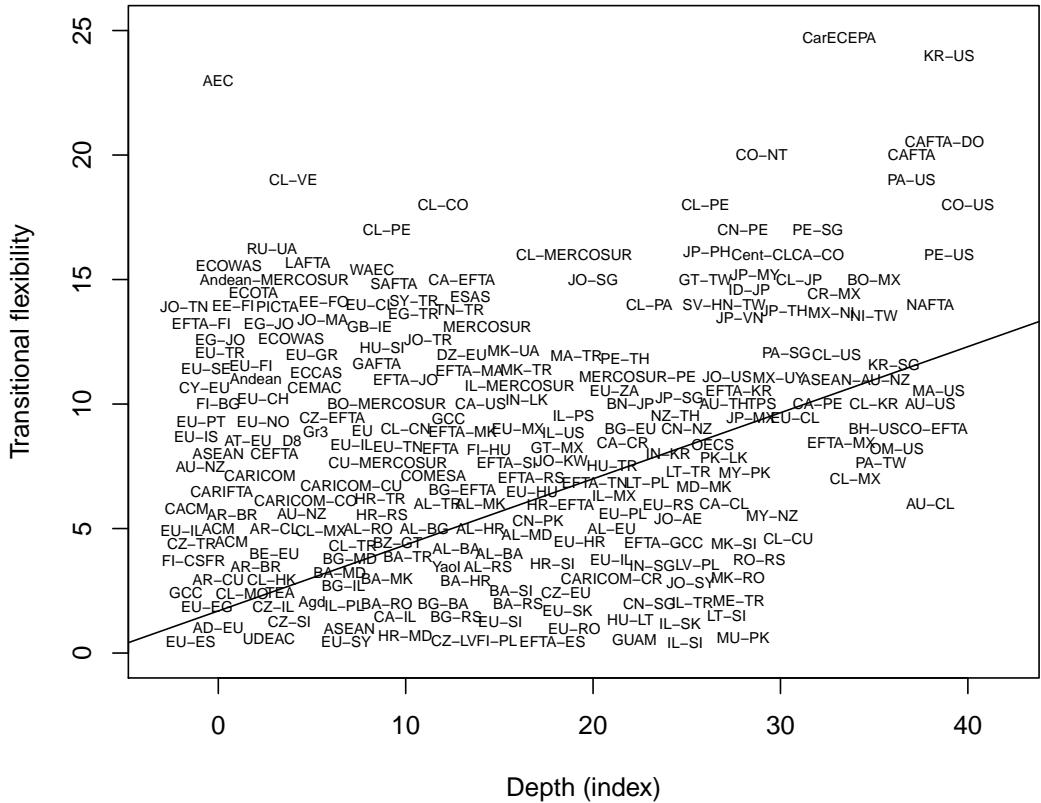


Figure 2: Depth versus transitional flexibility.

Hypothesis 2 suggests that the relationship between depth and flexibility is conditional on regime type (*Regime*). We rely on the Polity IV dataset to distinguish between democracies and non-democracies.<sup>10</sup> In line with the existing literature, we consider countries to be democracies if they have a Polity score of 6 or higher (Marshall et al. 2010; Poast and Urpelainen 2013).<sup>11</sup> We use the smallest of the Polity scores for all members as the value for the PTA, but we get the same results if we use the mean. Of the 587 agreements in our dataset, 285 (48.6 percent) were signed by democracies (we have missing values for 11 agreements). In a bivariate analysis, we find support for the conjecture put forward in Hypothesis 2. The mean value of *Escape flexibility* for shallow agreements (a value of

<sup>10</sup>Results do not change if we use other measures of democracy such as that of Cheibub et al. 2010.

<sup>11</sup>Our results are not sensitive to this particular threshold. We obtain similar results, which are available upon request, if we use 7 or 8 as the threshold.

*Depth (index)* of 10 or less) is 2.88 for democracies and only 1.95 for non-democracies. For deep agreements, the value increases to 3.57 for democracies and to 3.64 for non-democracies. Moving from a shallow to a deep agreement hence matters much more for non-democracies than for democracies.

Finally, Hypothesis 3 refers to constraints on flexibility. We operationalize this variable (*Flexibility strings*) using six items that capture limits with respect to the imposition of antidumping duties, the provision of subsidies, and the use of the safeguard provisions.<sup>12</sup> These capture provisions that impose WTO rules on the use of the antidumping instrument, the safeguard provision and the provision of subsidies, stipulate that the safeguard provision is only valid during the transition period, create a common policy on subsidies, and define a minimum dumping margin (the appendix contains more information on these items). The variable potentially ranges from 0 to 6, depending on the number of provisions included in a trade agreement that restrict the imposition of antidumping duties and the use of subsidies and the safeguard provisions. In practice, the variable ranges from 0 (195 agreements) to 5 (4 agreements).<sup>13</sup>

Figure 3 offers a first test of our argument concerning a relationship between flexibility and flexibility strings. The relationship between the two variables is positive as expected following Hypothesis 3. As escape flexibility increases, countries make its use more difficult. The relationship is slightly non-linear, however: at the maximum of escape flexibility, flexibility strings are less pronounced than when escape flexibility takes the value of three. As can be seen in the Appendix (Figure A-4), this non-linearity is driven by a decline in the number of WTO restrictions on safeguard provisions in highly flexible agreements. This drop is due to European agreements that *de facto* contain the same strings attached to the use of the safeguard clauses as the WTO, but without making an explicit reference to the WTO. We address the issue of non-linearity in the robustness checks below.

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<sup>12</sup>This variable partly overlaps with Kucik's (2012) operationalization of "rigidity". We also consider rules concerning subsidies, however, and use references to WTO rules as a short-cut to many of the constraints included in Kucik's measure.

<sup>13</sup>Again, this variable is highly correlated with one that relies on Item Response Analysis ( $r_s = 0.99$ ).

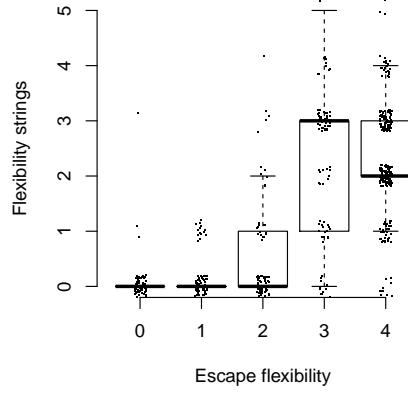


Figure 3: Escape flexibility versus flexibility strings.

## Revisiting the Relationship between Depth and Flexibility

Going beyond the descriptive evidence, we estimate multivariate regression models with flexibility and flexibility strings as dependent variables. For two reasons, we choose the PTA as the unit of analysis and thus consciously depart from previous PTA research that mainly used dyad-year (Mansfield and Milner 2012) or PTA-country-year (Kucik 2012) as unit of analysis. First, the design of a PTA does not vary across member countries in our dataset. By using dyad-year or PTA-country-year as units of analysis, therefore, we would multiply the values of our dependent variable in plurilateral agreements. Second, with the exception of a small number of regional agreements (in particular, the European Union), the design of PTAs does not vary over time in our dataset. By dropping the time dimension, therefore, we do not lose any information. In fact, using the PTA as the unit of analysis is a conservative choice to avoid inflating the number of observations and artificially reducing standard errors.

## Control Variables

In the following multivariate models, we include several control variables that allow us to deal with potentially confounding factors. Since our unit of analysis is the PTA, we take the minimum value of each continuous variable across member countries to capture the weakest link.<sup>14</sup> In terms of economic variables, we use total GDP (*GDP*) and GDP per capita (*GDPpc*) to capture the economic importance and income level of a country. Countries with relatively large markets and relatively rich countries may find it easier to design more rigid agreements. Moreover, we include the minimum value of trade flows (imports plus exports) among PTA members (*Trade*). Here, the effect could go both ways: more trade may mean that countries have an incentive to design more rigid agreements; but it could also mean that such PTAs have larger distributional effects, meaning that countries require more flexibility. As is common practice in the empirical trade literature, we take the log of this value.

We also add a variable that captures whether a country has recently undergone a transition from autocracy to democracy (*Democratization*). The expectation is that democratizing countries require more flexibility (and fewer strings) since they face high levels of uncertainty about future states of the world. This variable scores one if all member countries of a PTA have transitioned to democracy over the past ten years, with Polity IV as indicator.

We also add a dummy that scores one if all PTA members are also members of the WTO (*WTO*). WTO members tend to implement trade policies that differ from those of countries that are not members (Mansfield and Reinhardt 2003). They also have discretionary flexibility provisions upon which they can rely. The expectation thus is for WTO members to design more rigid agreements. Finally, we include the number of member countries of a PTA (*No. Members*), which has been hypothesized to be positively related to flexibility (Koremenos et al. 2001). Table 2 summarizes the descriptive statistics of the dependent and independent variables.

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<sup>14</sup>Our results are similar if we use the median or average across member countries. Results are available upon request.

Table 2: Descriptive statistics.

Variables	Mean	Std. Dev.	Min	Max
Escape flexibility	2.68	1.46	0	4
Transitional flexibility	3.44	5.04	0	25
Flexibility strings	1.53	1.35	0	5
Depth	8.13	10.03	0	40
GDP	21.30	1.81	14.13	27.39
GDPpc	8.41	0.99	5.07	10.64
Trade	2.96	2.70	0	11.98
Regime	1.55	7.14	-10	10
Regime dummy	0.49	0.50	0	1
Democratization	0.25	0.43	0	1
WTO	0.50	0.50	0	1
No. members	5.65	8.65	2	91

## Statistical Models

Since *Escape flexibility* and *Flexibility strings* are ordinal variables, we use ordered probit to estimate the models that include them as dependent variables.<sup>15</sup> We rely on zero-inflated negative binomial regression in the equations that have *Transitional flexibility* as dependent variable, since this is a count variable with a large number of zeros (about 50 percent of our observations score zero).<sup>16</sup> This estimation technique predicts first the existence of excess zeros using a logistic regression and then predicts the number of years until the end of the transition period using a negative binomial estimation. We include the same variables in the first and second stages.

## Findings

Table 3 shows the results of the baseline models. In models 1 and 2, we test Hypothesis 1 for both of our measures of flexibility. In model 3, we add an interaction term between depth and regime type to test Hypothesis 2. Models 4 and 5, finally, have *Flexibility strings*

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<sup>15</sup>Results, available upon request, are similar if we use multinomial logistic regression.

<sup>16</sup>The test of  $\alpha$  shows that a negative binomial model is more appropriate than a zero-inflated poisson model (except for Model A16). The Vuong test shows that a zero-inflated negative binomial model is preferred to an ordinary negative binomial regression.

as dependent variable, allowing us to test Hypothesis 3. In the latter two models, we keep *Depth* as control variable, to make sure that our results are not driven by the distinction between detailed and less detailed agreements. In Model 5, we drop PTAs that have a value of zero on *Escape flexibility*, since we cannot expect states to include flexibility strings in agreements with no discretionary flexibility.

Across all models, the findings are in line with our expectations.<sup>17</sup> Indeed, the coefficients of both *Depth* and *Escape Flexibility* are positive and statistically significant at the conventional level.<sup>18</sup> Thus, deeper PTA are more flexible. Similarly, more escape flexibility goes hand in hand with a greater number of flexibility strings, even after controlling for the depth of a PTA (Model 4). This latter finding is robust to dropping PTAs with no escape flexibility (Model 5).

To assess whether the relationship between depth and flexibility is conditional on regime type, figures 4 and 5 show the marginal effect of non-democracy and democracy on *Escape flexibility* for different values of *Depth*. We focus on the probability of including no flexibility provisions (Figure 4) and including the maximum number of escape clauses (Figure 5). The figures show, first, that for a given level of *Depth*, democracies tend to sign more flexible PTAs than non-democracies. Second, and in line with our second hypothesis, the effect of *Depth* on flexibility is larger for non-democracies than for democracies. Figure 4 shows that as *Depth* increases, the probability of including no flexibility into PTAs decreases substantially more for non-democracies than for democracies. Similarly, Figure 5 shows that as *Depth* increases, the probability of making a PTA highly flexible increases substantially more for non-democracies than for democracies (when moving from 0 to 20, we see an increase of 40% for non-democracies and 20% for democracies). The positive correlation between depth and flexibility is thus contingent on domestic institutions, as presented in Table 1.

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<sup>17</sup>In all models, we lose some observations because some of our control variables have incomplete coverage. Our results are not sensitive to dropping control variables with missing observations.

<sup>18</sup>For model 2, we only show the coefficients of the second equation. In the first equation, as expected, *Depth* and *Trade* are negative predictors of the probability of having zero tariff transition. The other variables are not statistically significant.

Table 3: Baseline models.

Covariates	(1) Escape	(2) Transitional	(3) Escape	(4) Strings	(5) Strings
Depth	0.05*** (0.01)	0.02*** (0.003)	0.07*** (0.01)	0.06*** (0.01)	0.06*** (0.01)
Escape flexibility				0.71*** (0.05)	0.73*** (0.06)
Regime	0.04*** (0.01)	0.01* (0.007)		-0.01 (0.01)	-0.01 (0.01)
Regime dummy			0.77*** (0.14)		
Depth × Regime			-0.04*** (0.01)		
GDP	-0.02 (0.04)	-0.05 (0.04)	-0.02 (0.04)	0.17*** (0.05)	0.16*** (0.05)
GDPpc	0.06 (0.07)	-0.17*** (0.05)	0.05 (0.07)	-0.04 (0.07)	0.002 (0.07)
Trade	-0.07** (0.03)	0.06*** (0.02)	-0.07*** (0.03)	-0.05** (0.02)	-0.06** (0.03)
Democratization	-0.07 (0.12)	-0.21** (0.11)	-0.06 (0.12)	-0.28** (0.13)	-0.30*** (0.13)
WTO	0.04 (0.11)	-0.10 (0.10)	0.04 (0.11)	0.40*** (0.12)	0.44*** (0.12)
No. members	-0.0005 (0.01)	-0.01 (0.01)	-0.004 (0.01)	-0.002 (0.01)	-0.002 (0.01)
Cut1	-0.96 (0.89)		-0.83 (0.88)	4.86*** (0.99)	5.14*** (1.03)
Cut2	-0.42 (0.89)		-0.29 (0.88)	5.71*** (1.00)	6.00*** (1.04)
Cut3	0.09 (0.88)		0.22 (0.88)	6.70*** (1.01)	7.02*** (1.05)
Cut4	0.61 (0.89)		0.74 (0.88)	8.32*** (1.02)	8.63*** (1.07)
Cut5				9.60*** (1.04)	9.91*** (1.09)
Constant		4.17*** (0.71)			
Test of $\alpha$		61.38***			
Vuong test		9.04***			
Nonzero Obs.		208			
Zero Obs.		263			
Observations	559	471	559	543	482

Models 1, 2, 4, and 5 are ordered probit. Model 3 is a zero-inflated negative binomial model.

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

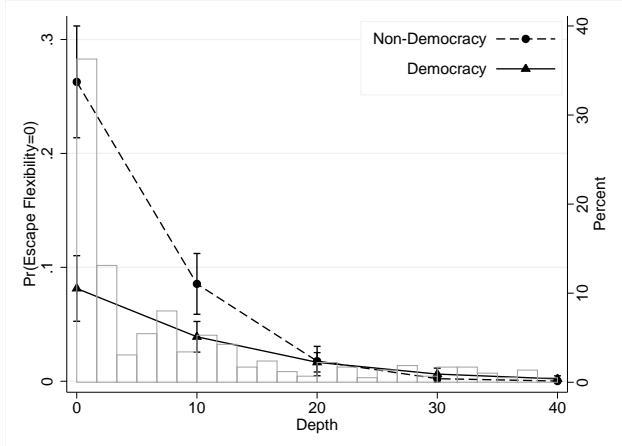


Figure 4: The effect of *Depth* on the probability of *Escape flexibility* equalling zero for democracy and autocracy.

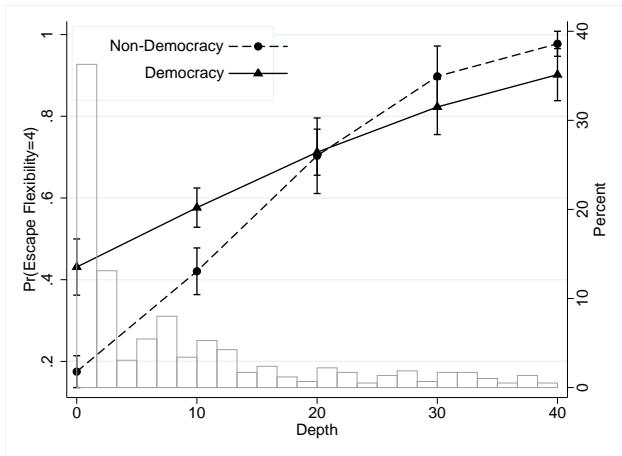


Figure 5: The effect of *Depth* on the probability of *Escape flexibility* equalling four for democracy and autocracy.

Table 4: Predictions for the effect of *Depth* on *Escape flexibility* (Model 1).

Value	Min → Max	CI
0	-0.16	[-0.20, -0.12]
1	-0.16	[-0.19, -0.12]
2	-0.17	[-0.22, -0.13]
3	-0.14	[-0.18, -0.10]
4	0.63	[0.52, 0.71]

Table 5: Predictions for the effect of *Escape flexibility* on *Flexibility strings* (Model 4).

Value	Min → Max	CI
0	-0.83	[-0.89, -0.75]
1	0.06	[0.01, 0.10]
2	0.34	[0.28, 0.39]
3	0.40	[0.34, 0.45]
4	0.04	[0.02, 0.06]
5	0.002	[0.0002, 0.01]

In Table 4, we summarize the magnitude of the substantive effects of Model 1. Moving *Depth* from its minimum to its maximum value increases by 63 [52, 71] percent the probability of having the highest value of *Escape Flexibility*, that is, four. The results of Model 2 indicate that moving *Depth* from its minimum to its maximum value increases the tariff transition period by 8 [6, 10] years. The transition period increases by 3 [2, 4] years if *Depth* moves from a standard deviation below the mean to a standard deviation above the mean.

In Table 5, we summarize the magnitude of the substantive effects of Model 4. Moving *Escape Flexibility* from its minimum to its maximum value decreases by 83 [-89, -75] percent the probability of having the lowest value of *Flexibility Strings*, that is, zero. Similarly, moving *Escape Flexibility* from its minimum to its maximum value increases by 40 [34, 45] percent the probability of observing a value of 3 on *Flexibility Strings*.<sup>19</sup>

The results for the control variables also are largely in line with our expectations. Large

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<sup>19</sup>In our dataset, very few PTAs have values that are equal to 4 or 5.

countries sign agreements that contain more flexibility strings. Rich countries have shorter transition periods than poor ones. Equally, democratization is negatively correlated and WTO membership is positively correlated with the number of flexibility strings. Of the coefficients that are statistically significant, only the negative sign for the coefficient for *Democratization* in model 2 is surprising. Contrary to our expectation, democratizing countries sign agreements with a shorter transition period. The reason here may be that these countries use PTAs as a commitment device, and thus want these agreements to take effect as soon as possible (Liu and Ornelas 2014). As expected, the effect of *Trade* on flexibility is ambiguous. Paired with the descriptive evidence provided above, these models thus offer encouraging support for our hypotheses.

## Robustness Checks

We perform several tests to check the robustness of our findings. First, we replace the indicators of depth, escape flexibility, and flexibility strings obtained by summing provisions with the indicators of depth, escape flexibility, and flexibility strings that rely on item response analysis (see the discussion above). Doing so does not change our results (see Table A1 in the supplementary file available on ScholarOne). Second, Figures 1 and 3 indicate that the relationships between the relevant variables may be non-linear. To address this issue, we recode *Depth* so that it scores one for values between one and five, two for values between six and ten, and so on. Then, we include each value as a dummy on the right-hand side of a model (leaving *Depth*=0 as baseline) in which *Escape Flexibility* is the dependent variable. The model does indeed offer some evidence of non-linearity (Table A2). The effect of very high values of *Depth*, namely between 36 and 40, is lower than that of values of *Depth* between 31 and 35 (the difference is statistically significant with  $p<0.1$ ). Nevertheless, and importantly, the effect of very deep agreements remains positive, as expected in Hypothesis 1. Similarly, we include dummies of each value of *Escape Flexibility* in a model in which

*Flexibility Strings* is the dependent variable. The results show that the positive effect of *Escape Flexibility* on *Flexibility Strings* is larger when *Escape Flexibility* is equal to three than when it is equal to two (the difference is statistically significant at  $p<0.01$ ). Again, however, the model confirms our key expectation of a positive relationship between *Escape Flexibility* and *Flexibility Strings*. We also exclude these PTAs that have a value of zero in our Depth variable (147 observations in our dataset). Even in this case, the main results remain unchanged (see models A8, A9, and A10 in the supplementary file).

Third, as suggested above, power asymmetry could affect the relationship between depth, flexibility, and flexibility strings. If a large country such as the US does not fear competition from a small country, import-competitors in the former only have weak incentives to lobby for the inclusion of flexibility provisions in a PTA. At the same time, the large country could impose flexibility strings on the small country. To test this counter-argument, we split our sample into North–South PTAs, and North–North and South–South PTAs. Should the aforementioned objection hold, *Depth* should not be statistically significant in the sub-sample of North–South PTAs. Table A3 (in the supplementary file), however, shows that this is not the case. *Depth* remains positive and statistically significant in these models. In fact, there is no statistically significant difference between the coefficients in the two sub-samples.

Fourth, we use Kucik’s (2012) data to operationalize *Escape flexibility* and *Flexibility strings* and re-run our main models. The operationalization of *Escape flexibility* is the same as we use above; to measure *Flexibility strings*, we rely on Kucik’s (2012) measure of rigidity.<sup>20</sup> Table A4 and Figures A11 and A12 in the supplementary file show that our main results hold even using this different dataset, which includes only half the number of observations that we have in our dataset.

Finally, we include a variable counting the years since the signing of the first PTA in our dataset, that is, since 1948. This variable accounts for the possibility that a time trend could drive our results, as both flexibility and depth increase over time. It allays concerns

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<sup>20</sup>Since this measure of *Flexibility strings* ranges from 0 to 15, we estimate the model relying on ordinary least squares regression. The results are similar if we use an ordered probit model.

that a third variable, not included in our model, which also increases over time, causes the growth in both depth and flexibility that we capture. Table A5, however, shows that our main results are unchanged even after including this trend variable.<sup>21</sup>

## Conclusion

Based on an original dataset on the design of 587 PTAs, we have found that two qualifications apply to the conventional understanding of the depth-flexibility nexus in the design of international institutions. On the one hand, while on average deep trade agreements tend to be more flexible than shallow ones, this relationship is less pronounced for democracies than for non-democracies. Our explanation for this is that democracies rely more heavily on non-tariff barriers and other forms of contingent protection, such as trade remedies, than autocracies (Kono 2006). On the other hand, while deep PTAs contain more flexibility, states restrict the additional, discretionary flexibility with flexibility strings.

Our findings contribute in several important ways to the literature on the design of international institutions (e.g. Koremenos et al. 2001). First, our finding that the relationship between depth and flexibility is moderated by members' regime type shows that the determinants of institutional design are more complex than was recognized in earlier work. Domestic institutions play an important, but so far over-looked, role in conditioning the relationship between different dimensions of the design of international treaties. Second, the concept of flexibility strings that we introduce illustrates how governments can deal with time-inconsistency problems. Governments have strong incentives to ensure that flexibility does not threaten the stability of deep agreements. Flexibility strings allow countries to maintain predictability even when engaging in deep cooperation. Finally, we add an analysis of PTAs to the literature on the design of international institutions that so far has mainly focused on a few prominent international organizations (but see Baccini 2010; Kucik 2012).

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<sup>21</sup>The results are similar if we include the square and cube of the time-trend variable (Carter and Signorino 2010). Since the three variables are highly correlated ( $\rho > .95$ ), we prefer to include only one time-trend variable.

Our empirical focus has the advantage that in the negotiations for PTAs, all aspects of design are up for discussion. This makes PTAs a particularly interesting case for an analysis of how different dimensions of design are interrelated.

We also speak to the broader literature on PTAs (Manger 2009; Baccini and Dür 2012; Mansfield and Milner 2012). Whereas for some time the quantitative PTA literature treated all PTAs as equal, more recently authors have started to pay attention to how diverse such agreements are in terms of design. Explaining this variation should help better identify the reasons for signing PTAs, as states' motivations to form PTAs may also affect the design of PTAs. Our findings regarding the relationship between depth and flexibility should also make future research on the consequences of PTAs cautious about testing the effects of one of these two dimensions without also considering the other.

Future research could look in more detail at which aspects of depth are correlated with greater flexibility. While we have used aggregate measures of depth and flexibility, our dataset allows for a more fine-grained analysis of this relationship. A further extension of our work would be to see whether our findings hold for agreements other than PTAs. We formulated the argument about why the depth–flexibility relationship is moderated by regime type with specific reference to the trade field. Nevertheless, democracy may also create complexity in other policy areas (Kono 2006); a similar conditional effect could then be expected for environmental or security agreements. Such research would shed further light on our finding that the relationship between depth and flexibility is more nuanced than might be expected based on the prevailing scholarship.

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## Supplementary file

This is the supplementary file for Baccini, Dür and Elsig (2014) The Politics of Trade Agreement Design: Revisiting the Depth-Flexibility Nexus, *International Studies Quarterly*.

## Operationalizing depth

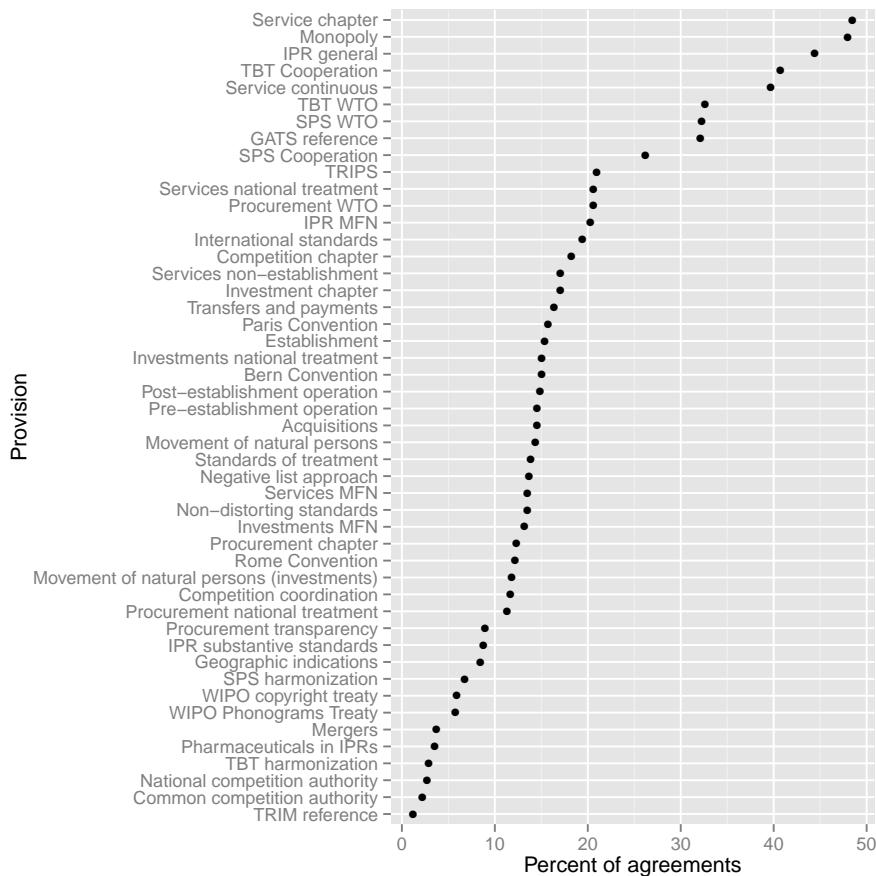


Figure A-1: The items included in *Depth*.

## Services

[Service chapter] Does the agreement contain a reference to the liberalization of trade in services?

[GATS reference] Does the agreement contain a reference to the General Agreement on Trade in Services (GATS)?

[MFN treatment] Does the agreement contain an MFN clause for services?

[Negative list approach] Does the agreement foresee a negative list approach to services liberalization?

**[Services national treatment]** Does the agreement contain a national treatment clause for services?

**[Services non-establishment]** Does the agreement grant the right of non-establishment for service provision (that is, does it allow the provision of services without local presence)?

**[Movement of natural persons]** Does the agreement allow the movement of natural persons in the provision of services?

**[Service continuous]** Does the agreement contain a review provision for the services provisions?

## Investments

**[Investment chapter]** Does the agreement contain substantive investment provisions?

**[Standards of treatment]** Does the agreement contain provisions that grant compensation to investors in case of strife and/or expropriation?

**[TRIM reference]** Does the agreement contain a reference to the WTO agreement on trade-related investment measures?

**[Pre-establishment operation]** Does the agreement contain non-discrimination provisions in relation to pre-establishment operations?

**[Establishment]** Does the agreement contain non-discrimination provisions in relation to establishment (e.g. greenfield investments)?

**[Post-establishment operation]** Does the agreement contain non-discrimination provisions in relation to post-establishment operation (e.g. the free movement of capital and resale)?

**[Mergers]** Does the agreement contain non-discrimination provisions in relation to acquisition (e.g. mergers)?

**[Investments MFN]** Does the agreement grant MFN treatment on investments?

**[Investments national treatment]** Does the agreement grant national treatment on investments?

**[Transfers and payments]** Does the agreement mention specific restrictions regarding transfers and payments?

**[Movement of natural persons (investments)]** Does the agreement mention restrictions related to the temporary movement of business or natural persons?

## Intellectual Property Rights

**[IPR general]** Does the treaty contain a provision on intellectual property rights (IPRs)?

**[IPR MFN]** Does the treaty contain an MFN provision for IPRs?

**[Rome Convention]** Does the treaty contain specific deadlines for acceding to the Rome Convention?

**[Paris Convention]** Does the treaty contain specific deadlines for acceding to the Paris Convention?

**[Bern Convention]** Does the agreement contain specific deadlines for acceding to the Bern Convention?

**[TRIPS]** Does the agreement mention the TRIPS agreement?

**[WIPO Copyright Treaty]** Does the agreement contain specific deadlines for acceding to the World Intellectual Property Organization (WIPO) copyright treaty?

**[WIPO Phonograms Treaty]** Does the agreement contain specific deadlines for acceding to the WIPO Phonograms treaty?

**[IPR substantive standards]** Does the agreement contain specific provisions in relation to substantive standards of protection?

**[Pharmaceuticals in IPRs]** Does the agreement contain references to pharmaceuticals?

**[Geographic indications]** Does the agreement contain references to geographical indications?

## Public Procurement

**[Procurement chapter]** Does the agreement contain substantive provisions on public procurement?

**[Procurement national treatment]** Does the agreement guarantee national treatment with respect to public procurement?

**[Procurement transparency]** Does the chapter on public procurement include a transparency provision?

**[Procurement WTO]** Does the agreement contain a reference to the WTO/GATT procurement agreements?

## Technical Barriers to Trade

**[TBT WTO]** Does the agreement contain a reference to the WTO Agreement on technical barriers to trade (TBTs) (the GATT standards code)?

**[TBT cooperation]** Does the agreement call for cooperation and/or information exchange on TBTs?

**[Non-distorting standards]** Does the agreement contain a requirement for standards to be least trade-distorting?

**[International standards]** Does the agreement encourage the use of international standards?

**[SPS cooperation]** Does the agreement contain provisions calling for information exchange and technical cooperation on sanitary and phytosanitary (SPS) measures?

**[SPS WTO]** Does the agreement contain a reference to the WTO SPS agreement?

**[TBT harmonization]** Does the agreement contain provisions that stipulate the harmonization of standards?

**[SPS harmonization]** Does the agreement contain provisions that stipulate the harmonization of SPS provisions?

## Competition

**[Competition chapter]** Does the agreement contain a competition chapter?

**[National competition authority]** Does the agreement contain a provision stipulating the establishment of a national competition authority?

**[Competition coordination]** Does the agreement contain a provision stipulating coordination among national authorities?

**[Common competition authority]** Does the agreement contain a provision stipulating the creation of a common authority/institution on competition?

**[Monopoly]** Does the agreement contain a provision on monopolies and cartels?

**[Acquisitions]** Does the agreement contain a provision on mergers and acquisitions?

## Operationalizing escape flexibility and flexibility strings

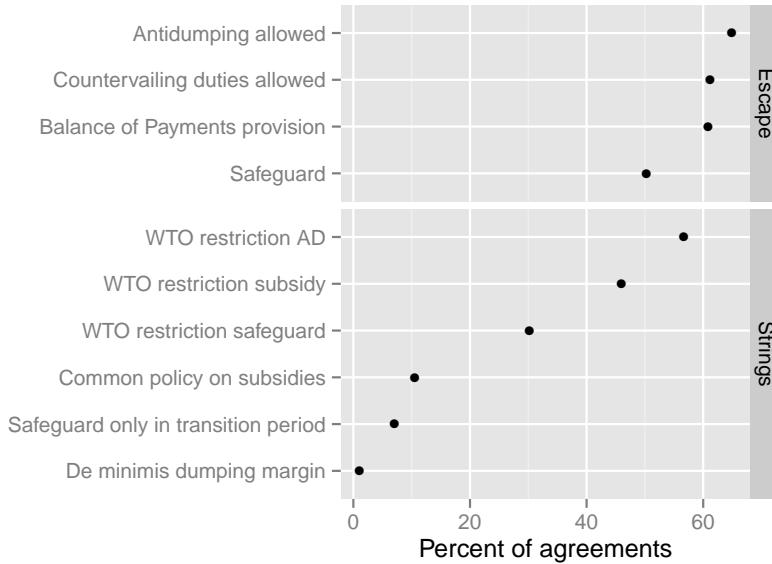


Figure A-2: The items included in *Escape flexibility* and *Flexibility strings*.

### Escape flexibility

[AD allowed:] Does the agreement allow anti-dumping with specific provisions?

[CV allowed:] Does the agreement mention the use of countervailing duties?

[Safeguard:] Does the agreement foresee special safeguard provisions?

[BOP provision:] Does the agreement include BOP provisions?

### Flexibility strings

[WTO restriction AD:] Does the agreement make a reference to GATT/WTO anti-dumping provisions?

[WTO restriction subsidy:] Does the agreement make a reference to GATT/WTO subsidy provisions?

[WTO restriction safeguard:] Does the agreement make a reference to GATT/WTO safeguard provisions?

[Common policy on subsidies:] Does the agreement foresee a common policy of parties on subsidies?

[Safeguard only in transition period:] Does the agreement allow parties to use safeguard measures only during the transition period?

[De minimis dumping margin:] Does the agreement foresee a de minimis dumping margin (or dumped volume) that differs from the GATT/WTO?

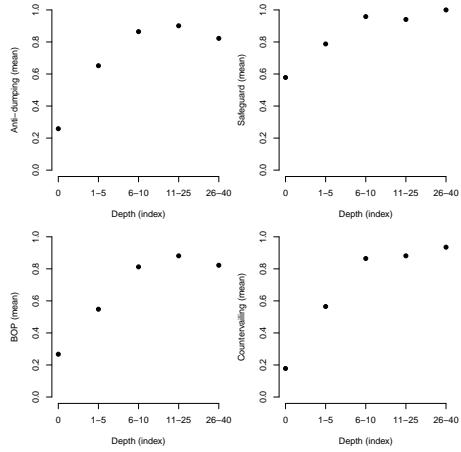


Figure A-3: *Depth* and the items included in *Escape flexibility*.

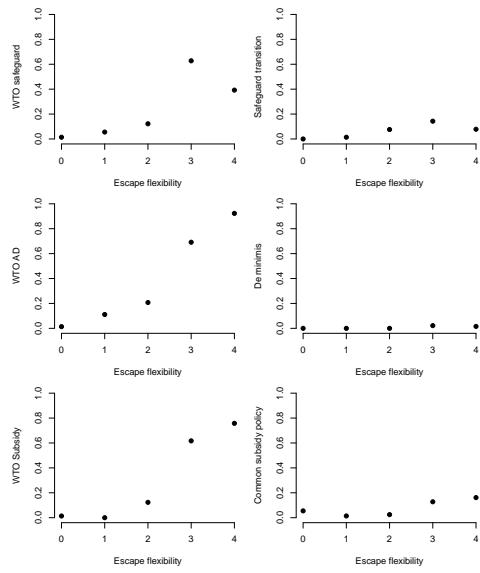


Figure A-4: *Escape flexibility* and the items included in *Flexibility strings*.

## Results from robustness checks

Table A-1: Models with variables operationalized using item response analysis (Models A1, A3, and A5 are OLS regressions. Models A2 and A4 are ZINB.).

VARIABLES	(A1) EscapeFlexibilityFA	(A2) TransitionalFlex	(A3) EscapeFlexibilityFA	(A4) TransitionalFlex	(A5) FlexibilityStringsFA
DepthFA	0.28*** (0.03)	0.18*** (0.04)	0.36*** (0.05)	0.13** (0.06)	0.45*** (0.03)
EscapeFlexibilityFA					0.27*** (0.03)
Regime Dummy			0.28*** (0.06)	0.02 (0.11)	
Regime Dummy * DepthFA			-0.14** (0.06)	0.11 (0.08)	
GDP	-0.04* (0.02)	-0.06 (0.04)	-0.05* (0.02)	-0.07* (0.04)	0.06*** (0.02)
GDPpc	0.07** (0.04)	-0.18*** (0.05)	0.08** (0.04)	-0.13** (0.05)	-0.00 (0.03)
Trade	-0.04*** (0.01)	0.07*** (0.02)	-0.04*** (0.01)	0.08*** (0.02)	-0.02** (0.01)
Regime	0.02*** (0.00)	0.01* (0.01)			-0.00 (0.00)
GATTWTO	-0.06 (0.06)	-0.09 (0.11)	-0.05 (0.06)	-0.02 (0.11)	0.18*** (0.05)
NoMembers	-0.00 (0.00)	0.01 (0.01)	-0.00 (0.00)	0.01 (0.01)	-0.01** (0.00)
Democratization	0.04 (0.06)	-0.26** (0.11)	0.05 (0.06)	-0.22** (0.11)	-0.16*** (0.05)
Constant	0.28 (0.47)	4.40*** (0.74)	0.25 (0.47)	4.22*** (0.74)	-1.08*** (0.37)
Alpha		-1.86*** (0.20)		-1.86*** (0.20)	
Vuong		8.84***		8.61***	
Non zero obs.		208		208	
Zero obs.		263		263	
Observations	565	471	565	471	565
R-squared	0.26		0.26		0.61

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A-2: Non-linearity and dropping shallow PTAs.

Variables	(A6)	(A7)	(A8)	(A9)	(A10)
	EscapeFlexibility	FlexibilityString	EscapeFlexibility	EscapeFlexibility	TransitionalFlex
1.Depth	1.00*** (0.13)				
2.Depth	1.91*** (0.17)				
3.Depth	2.25*** (0.23)				
4.Depth	1.86*** (0.31)				
5.Depth	1.32*** (0.30)				
6.Depth	1.84*** (0.27)				
7.Depth	2.02*** (0.30)				
8.Depth	1.33*** (0.35)				
Depth		0.06*** (0.01)	0.03*** (0.01)	0.05*** (0.01)	0.02*** (0.00)
1.EscapeFlexibility		0.53 (0.33)			
2.EscapeFlexibility		1.19*** (0.31)			
3.EscapeFlexibility		2.56*** (0.31)			
4.EscapeFlexibility		2.77*** (0.30)			
Regime Dummy				0.82*** (0.19)	
Regime Dummy * Depth				-0.04*** (0.01)	
GDP	0.02 (0.05)	0.16*** (0.05)	-0.03 (0.06)	-0.02 (0.06)	-0.05 (0.04)
GDPpc	0.07 (0.07)	-0.04 (0.07)	0.14* (0.08)	0.11 (0.08)	-0.14** (0.06)
Trade	-0.05* (0.03)	-0.06** (0.03)	-0.05* (0.03)	-0.05* (0.03)	0.06*** (0.02)
Regime	0.03*** (0.01)	-0.00 (0.01)	0.04*** (0.01)		0.01 (0.01)
GATTWTO	-0.03 (0.12)	0.36*** (0.12)	-0.08 (0.14)	-0.08 (0.14)	-0.07 (0.11)
NoMembers	-0.004 (0.01)	0.0004 (0.01)	-0.01 (0.01)	-0.01** (0.01)	0.002 (0.01)
Democratization	-0.30** (0.13)	-0.26* (0.13)	-0.30** (0.15)	-0.28* (0.15)	-0.18 (0.11)
cut1	0.27 (0.92)	4.76*** (1.02)	-1.07 (1.12)	-0.97 (1.11)	
cut2	0.89 (0.92)	5.64*** (1.03)	-0.64 (1.12)	-0.55 (1.11)	
cut3	1.51 (0.92)	6.65*** (1.03)	-0.13 (1.12)	-0.02 (1.11)	
cut4	2.11** (0.92)	8.25*** (1.05)	0.53 (1.12)	0.64 (1.11)	
cut5		9.52*** (1.07)			
Constant				3.87*** (0.79)	
Alpha				-0.30**	
Vuong				8.38***	
Non zero obs.				178	
Zero obs.				169	
Observations	559	543	422	422	347

Standard errors in parentheses: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A-3: Power asymmetry.

Variables	(A11) N-N&S-S PTAs EscapeFlexibility	(A12) N-S PTAs EscapeFlexibility	(A13) N-N&S-S PTAs EscapeFlexibility	(A14) N-S PTAs EscapeFlexibility	(A15) N-N&S-S PTAs TransitionalFlex	(A16) N-S PTAs TransitionalFlex	(A17) N-N&S-S PTAs FlexibilityStrings	(A18) N-S PTAs FlexibilityStrings
Depth	0.06*** (0.01)	0.04*** (0.01)	0.22*** (0.03)	0.04*** (0.02)	0.02*** (0.01)	0.02*** (0.00)	0.07*** (0.01)	0.05*** (0.01)
EscapeFlexility							0.69*** (0.06)	0.76*** (0.13)
Regime Dummy			1.02*** (0.17)	0.47 (0.37)				
Regime Dumy * Depth			-0.18*** (0.03)	-0.01 (0.02)				
GDP	-0.09* (0.05)	0.18* (0.11)	-0.13** (0.05)	0.19* (0.11)	0.04 (0.05)	-0.19*** (0.04)	0.07 (0.06)	0.42*** (0.10)
GDPpc	0.04 (0.08)	-0.01 (0.14)	0.10 (0.08)	-0.02 (0.15)	-0.16** (0.07)	-0.12** (0.05)	-0.04 (0.09)	0.08 (0.14)
Trade	0.003 (0.03)	-0.21*** (0.05)	0.0003 (0.03)	-0.22*** (0.05)	0.02 (0.03)	0.09*** (0.02)	-0.01 (0.03)	-0.13*** (0.05)
GATTWTO	0.06 (0.13)	0.05 (0.26)	-0.05 (0.13)	0.07 (0.26)	-0.05 (0.12)	-0.27** (0.13)	0.45*** (0.14)	0.32 (0.23)
NoMembers	-0.004 (0.01)	-0.005 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.03*** (0.01)	-0.01 (0.01)	-0.02 (0.01)	0.01 (0.02)
Democratization	-0.04 (0.13)	0.13 (0.72)	0.00 (0.13)	0.10 (0.73)	-0.23* (0.12)	0.07 (0.24)	-0.42*** (0.15)	0.84 (0.63)
Regime	0.04*** (0.01)	0.03* (0.02)			0.02 (0.01)	0.02** (0.01)	-0.02 (0.01)	0.01 (0.01)
cut1	-2.27** (1.01)	1.02 (2.32)	-2.27** (1.01)	1.48 (2.33)			2.69** (1.18)	11.21*** (2.23)
cut2	-1.77* (1.01)	2.16 (2.30)	-1.74* (1.01)	2.64 (2.32)			3.46*** (1.18)	12.42*** (2.26)
cut3	-1.26 (1.00)	2.75 (2.31)	-1.19 (1.01)	3.22 (2.32)			4.52*** (1.19)	13.36*** (2.29)
cut4	-0.74 (1.00)	3.36 (2.31)	-0.64 (1.01)	3.83 (2.33)			6.26*** (1.20)	15.00*** (2.34)
cut5							7.68*** (1.24)	16.26*** (2.36)
Constant					2.13*** (1.00)	6.78*** (2.34)		
Alpha					-1.86*** (0.24)			
Vuong					7.63***	6.64***		
Non zero obs.					147	66		
Zero obs.					206	73		
Observations	413	146	413	146	353	139	397	146

Standard errors in parentheses: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A-4: Relying on data from Kucik (2012).

VARIABLES	(A19) Ordered Probit EscapeFlexibility (Kucik)	(A20) Ordered Probit EscapeFlexibility (Kucik)	(A21) OLS FlexibilityString (Kucik)	(A22) OLS FlexibilityString (Kucik)
Depth	0.09*** (0.01)	0.10*** (0.01)	0.08*** (0.02)	0.06*** (0.02)
EscapeFlexibility (Kucik)			3.07*** (0.13)	3.60*** (0.17)
Regime Dummy		1.07*** (0.25)		
Regime Dummy * Depth		-0.03 (0.02)		
GDP	0.01 (0.07)	-0.02 (0.07)	0.26** (0.11)	0.22* (0.12)
GDPpc	-0.03 (0.11)	-0.07 (0.11)	0.19 (0.17)	0.22 (0.18)
Trade	-0.05 (0.04)	-0.03 (0.04)	-0.04 (0.06)	-0.03 (0.06)
GATTWTO	0.58*** (0.18)	0.61*** (0.18)	0.42 (0.29)	0.42 (0.29)
NoMembers	0.00 (0.01)	0.00 (0.01)	0.00 (0.02)	0.01 (0.02)
Democratization	-0.18 (0.18)	-0.15 (0.18)	-0.81*** (0.29)	-0.87*** (0.30)
Regime	0.06*** (0.01)		-0.02 (0.02)	-0.01 (0.02)
cut1	-1.11 (1.43)	-1.49 (1.45)		
cut2	-0.53 (1.43)	-0.91 (1.44)		
cut3	0.04 (1.43)	-0.32 (1.44)		
cut4	1.86 (1.43)	1.52 (1.44)		
Constant			-7.97*** (2.34)	-9.16*** (2.47)
Observations	272	272	271	250
R-squared			0.86	0.83

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A-5: Including a time trend variable.

VARIABLES	(A23)	(A24)	(A25)	(A26)	(A27)
	Escape Flexibility	Transitional Flex	Escape Flexibility	Transitional Flex	FlexibilityString
Depth	0.04*** (0.01)	0.02*** (0.00)	0.06*** (0.01)	0.02*** (0.01)	0.04*** (0.01)
EscapeFlexibility					0.70*** (0.06)
Regime Dummy			0.67*** (0.14)	-0.25 (0.19)	
Regime Dummy * Depth			-0.03*** (0.01)	0.01 (0.01)	
GDP	-0.04 (0.04)	-0.04 (0.04)	-0.05 (0.04)	-0.04 (0.04)	0.10** (0.05)
GDPpc	0.10 (0.07)	-0.18*** (0.05)	0.10 (0.07)	-0.17*** (0.05)	0.13 (0.08)
Trade	-0.06** (0.03)	0.06*** (0.02)	-0.06** (0.03)	0.06*** (0.02)	-0.04 (0.03)
GATTWTO	0.01 (0.11)	-0.11 (0.10)	0.00 (0.11)	-0.11 (0.10)	0.48*** (0.12)
NoMembers	0.0004 (0.01)	0.01 (0.01)	-0.003 (0.01)	0.01 (0.01)	0.004 (0.01)
Democratization	-0.15 (0.12)	-0.18* (0.11)	-0.13 (0.12)	-0.17 (0.11)	-0.43*** (0.14)
Regime	0.04*** (0.01)	0.01** (0.01)		0.02* (0.01)	-0.01 (0.01)
Time Trend	0.02*** (0.00)	-0.01** (0.00)	0.02*** (0.00)	-0.01** (0.00)	0.04*** (0.01)
cut1	-0.39 (0.90)		-0.30 (0.89)		6.64*** (1.07)
cut2	0.17 (0.90)		0.26 (0.89)		7.58*** (1.08)
cut3	0.69 (0.90)		0.79 (0.89)		8.72*** (1.09)
cut4	1.23 (0.90)		1.32 (0.89)		10.37*** (1.11)
cut5					11.62*** (1.13)
Constant		-2.02*** (0.21)		-2.04*** (0.22)	
Observations	559	471	559	471	482

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

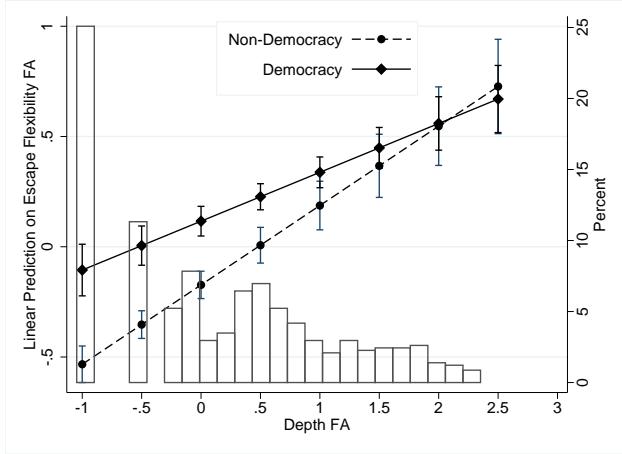


Figure A-5: The effect of *DepthFA* on *Escape flexibility FA* for democracy and autocracy (Model A1).

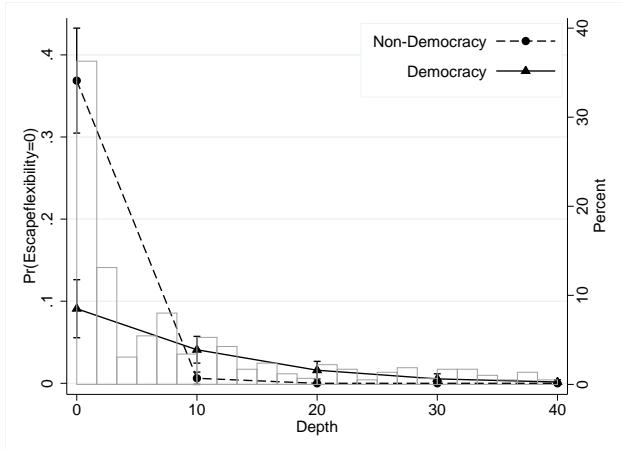


Figure A-6: N-N & S-S: The effect of *Depth* on the probability of *Escape flexibility* equalling zero for democracy and autocracy (Model A3).

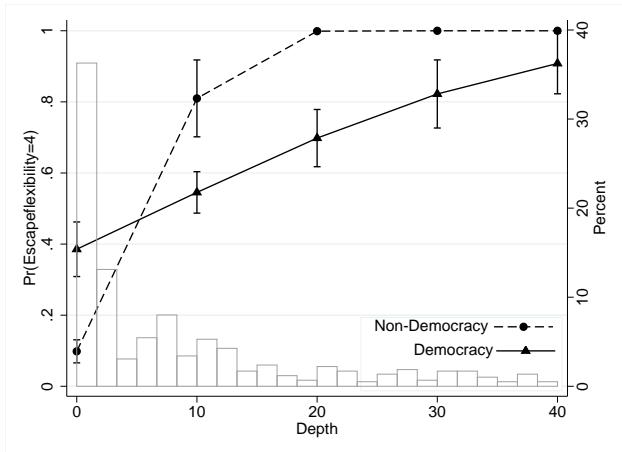


Figure A-7: N-N & S-S: The effect of *Depth* on the probability of *Escape flexibility* equalling four for democracy and autocracy (Model A3).

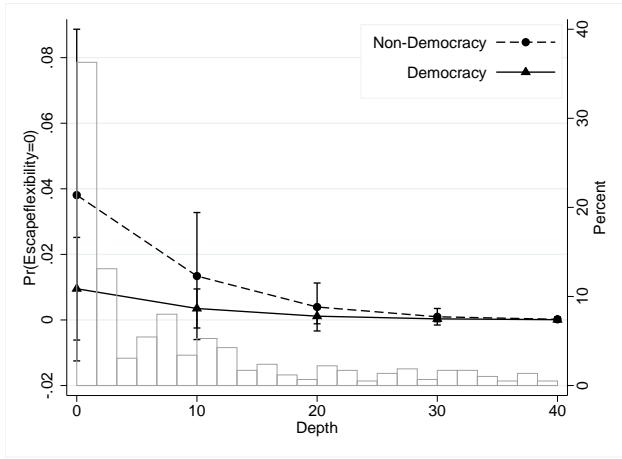


Figure A-8: N-S: The effect of *Depth* on the probability of *Escape flexibility* equalling zero for democracy and autocracy (Model A3).

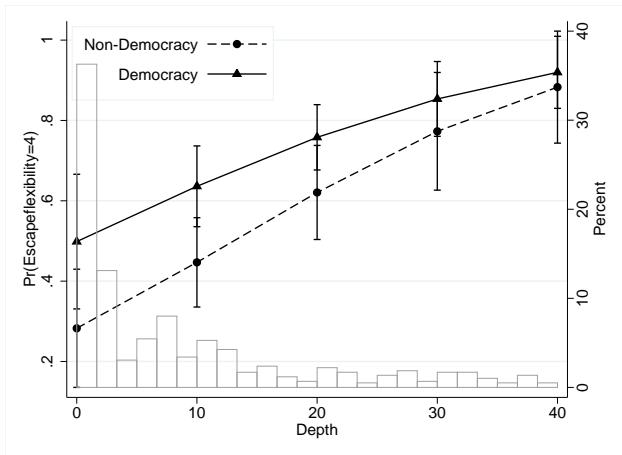


Figure A-9: N-S: The effect of *Depth* on the probability of *Escape flexibility* equalling four for democracy and autocracy (Model A3).

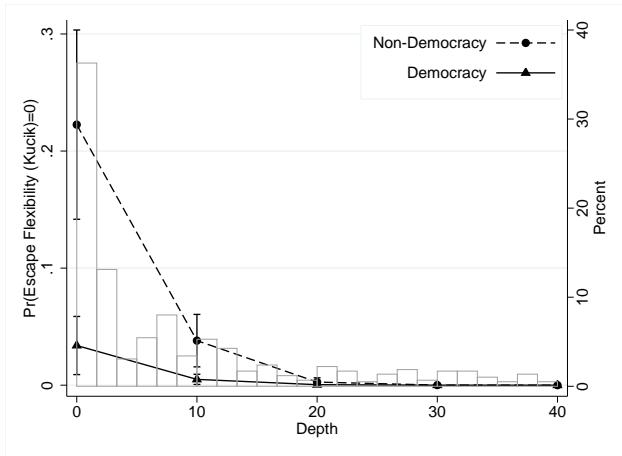


Figure A-10: The effect of *Depth* on the probability of *Escape flexibility (Kucik)* equalling zero for democracy and autocracy (Model A4).

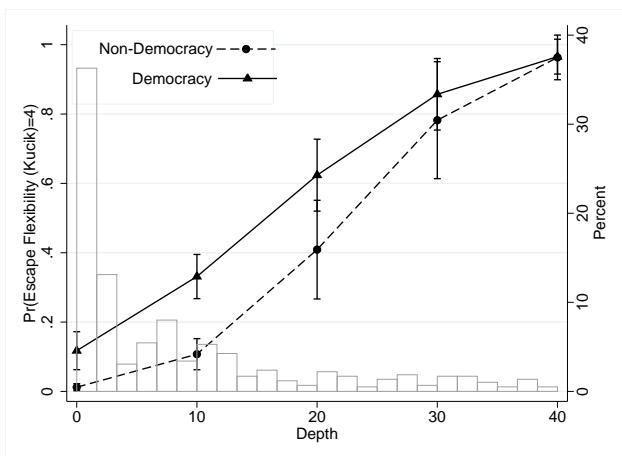


Figure A-11: The effect of *Depth* on the probability of *Escape flexibility (Kucik)* equalling four for democracy and autocracy (Model A4).