Why and When will Leaders of Developing Country Negotiate South-North Preferential Trade Agreements?

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In 1994, South Africa took an opportunity to negotiate a preferential trade agreement with its most important economic partner in history, the European Union (EU). The same year also featured the victory of Mandela and the African National Congress (ANC) from the first universal suffrage elections. However, this new government was measured as one of the most extremely unstable and insecure ones. Interestingly, the ANC demonstrated a dramatic shift in relation to the policy stance on privatization. It had consistently opposed the competitor's economic initiative of privatization and deregulation, and advocated a state-led developmental plan and even threaten renationalization of privatized assets (**???**). Such opposition to privatization evaporated when Mandela and the ANC won the election. Mandela's government wanted to conduct substantial privatization and other neoliberal economic reforms to restore the collapsing economies, but the reason of the government's dramatic shift in the economic strategy remained unknown. This new government's initiatives were strongly opposed by the other influential domestic political players. Mandela immediately approached to the EU to start the process of Preferential Trade Agreement negotiation. After five years of negotiations, the preferential trade agreement with the EU helped South Africa to undergo its transitioning economies smoothly.

South Africa's experience is a successful case for developing countries to pursue its reform-oriented trade strategy in the negotiation of PTAs with the major trade powers. Economic reforms usually provoke controversy and organized opposition domestically, so often the ability of leaders to implement such liberal economic reforms is limited (Baccini and Urpelainen 2014). Preferential trade agreements provide member governments with a mandate to make policy changes, as such they entail high political

costs. Recognizing the preferential trade agreement with provisions of economic reforms is a binding commitment that imposes policy reforms and entails political costs, some leaders in the developing countries chose to negotiate it with the major liberal trade powers, while some did not. My research question is: Why and when will leaders in the developing countries negotiate South-North preferential trade agreements with provisions of economic reforms?

This paper is interested in explaining what motivates a leader from the developing countries to negotiate this particular deep and demanding international treaty. Why is this an important question? One reason is the popularity of this type of preferential trade agreement. The bilateral preferential trade agreement is a rapidly growing international institution that governs economic markets of the member states. Leaders are more interested in building bilateral trade agreements because it is easier to realize both parties' initiatives to achieve agreements when the participants are limited during the negotiations. South-North and South-South agreements are also growing: from the 1990s onward, they comprise two-thirds of the total PTAs in force (Organization 2011). In addition, PTA tends to have deeper integration, a trend especially prominent in the South-North PTA. They tend to go beyond tariff reductions but include provisions on regulatory policy areas such as foreign investment, intellectual property rights and human rights issues. This paper focuses on the PTA with the provisions on the competition policy as a stringent requirement imposed on contracting countries to ensure the structural reforms. The provision includes but is not limited to the privatization of the state-owned firms and regulation on monopolies and cartels. In other words, these PTAs are designed to change the domestic economic structures and reset the rules of the game for the contracting states who have not met the standards yet. This specific type of South-North PTAs this paper focuses on is one of the most costly and deepest ones because it requires the states to change their policies, conduct structural economic reforms and open its domestic markets for competition.

This paper also intends to focus only on the leaders from the South and their rationales of initiating a negotiation with the North. I assume the leaders from the developing countries are fully aware of the costs of complying with these international agreements, yet they still choose to do so. The power imbalances between the contracting parties are particularly stark in the South-North PTAs negotiations, reflecting the different potential costs for them. Developing countries make a larger concession to play the rules of the game mainly set by the major liberal players. In other words, when

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they approach these major powers to negotiate a PTA, they more or less anticipate they have chosen the deepest PTAs by design. Existing research tends to downplay this perspective, and neglect how international institutions enter leaders' political calculus differently. Yet, this is an important issue because leaders' choices reflect their motives of negotiating a PTA at a specific time. It can help us getting closer to contribute to a broader research debate: when leaders commit to the international agreement, is it because the agreement change their behaviours or they were planning to do so anyway before the commitment? The South-North PTA negotiation that encompasses the power imbalances between the two negotiating parties illuminates why leaders commit to international agreement in general. Leaders from the South make a larger concession to play the rules of the game set by the North, so the leaders have chosen the most costly game by design. By studying the choices leaders make, we get a step closer to understand their motives.

Context and Rationale

Preferential trade agreements (hereafter PTAs) are binding international treaties that help states to foster trade and economic integration among member-states. Current literature on the preferential trade agreement mainly focuses on the effects of this institution. Questions centre around whether the PTAs increase trade volumes among member-states and their impacts on the overall trade flows in the multilateral trade system (Bagwell and Staiger 1998). Put simply, scholars examine to what extent the PTAs have achieved their desired economic purposes: lowering tariffs, facilitating trade and increasing the welfare of the states in the long term. In addition to studying the consequences of the PTAs, emerging political economy literature has offered explanations for why states form the PTAs. Earlier years, the focus is the macroeconomic and macropolitical factors that explain the proliferation of the PTAs, including the lack of the progress in the multilateral trade regime and the spillover effect of regionalism (Baldwin 2012; Rodrik 1992; Mansfield and Reinhardt 2003).

One trend of the current literature on the PTA focuses on the effects, others on the cause, which is the theme that this paper speaks to. Recent studies zoom into the domestic factors within the states to explain this trend. While there is no shortage of explanations on why governments form PTAs, scholars also tend to treat the

PTAs as a unitary concept (Dür, Baccini, and Elsig 2014). They overlook the design differences of the PTAs, which imply different degrees of policy changes embedded in these international agreements. Few studies reach beyond trade liberalization to examine the role of the PTA in policy reform. Perhaps the most important exception is Baccini and Urpelainen (2014), who argue PTA can help developing countries to implement economic reforms, leaning more on examining the effect of the PTA. Picking up on this approach, this article argues the leaders' commitments to such costly agreement reflect their political purposes. Leaders have political objectives to commit to the deep PTAs with the expectation to conduct economic reforms after they face political challenge. The political motivation of PTA negotiation is currently understudied; yet, to understand when and why a leader of developing countries commits to the preferential trade agreement with the provision of economic reform is important because economic reforms will have immense consequences for the citizens of that country and beyond. The key question, the cause of economic reforms, yet, remains open.

To explain why leaders sign trade agreements, the existing theoretical framework only focuses on the following domestic actors: median voters, interest groups or private sectors. This article is in line with the argument proposed by Mansfield and Milner (2012): "government sign PTAs for domestic political reason" (p. 23). They offer one potential explanation: the regime type. Democratic countries are more likely to join a PTA than nondemocratic countries because these governments can send a positive signal of their liberal trade policies commitments to the median voters (Mansfield and Milner 2012; Mansfield, Milner, and Rosendorff 2002). New leaders in democratizing countries tend to negotiate the PTA to lock in economic reforms to avoid autocratic reversals (Baccini and Urpelainen 2014). To understand why a government negotiates the PTAs with other government, scholars also focus on the interest groups who benefit from the expanding market promised by the PTAs. The pro-free trade beneficiary groups lobby the incumbent governments to sign such a trade agreement to serve their political objectives (Grossman and Helpman 1995). On the other hand, trade policy affects groups in society differently. Some private sectors benefit from the protectionist policy. Over time, they will expand too much, create rents and inefficiencies to distort the economy. Governments make international commitments in the free trade international agreements to tie their hands to avoid making an excessive concession to interest groups in the expectation of protection and subsidies in the future (R. W. Staiger and Tabellini 1999). These arguments capture the interaction between a government and its domestic

audiences: median voters, interest groups or private sectors. Within these frameworks, leaders generally use the international trade agreements to signal the domestic audiences of their welfare-enhancing economic policy. I argue it is deficient to see their motivation as economically driven only. I find a key player is missing: the opposition. What is overlooked is that leaders negotiate PTAs after they experience political crisis. To advance the literature on understanding the cause of PTA formation, this paper focuses on the strategic interactions between the leader and the opposition.

My argument is, leader negotiates PTAs after political crisis to punish the opponents' past transgression. PTA negotiation is a deliberate choice that a leader makes to commit to the binding and stringent policy reforms to rearrange the domestic power structures.

Theory

Economic reform as a political strategy

I argue PTA negotiation with the stringent provision of economic reform is a tactic a leader uses to reduce the strength of opposition after he survives a political crisis. To understand why this argument holds, I first lay out the basic set-up in a non-crisis circumstance: a leader offers rents to exchange for the opposition's support. This arrangement does not prevent a political crisis, which can happen at any time. The opposition group attempts to depose the leader, but this group fails. The leader survives the shock to security, so now he has two tactics to punish the defectors: further repressing or retracting loyalty rents. Economic reform is a powerful tactic to rearrange the power bases of the elites, so it serves as a punishment to the defectors.

Let us start with the basic setup. Leaders' most fundamental interest is survival. They inherently want powerful and stable leadership. Leaders have two instruments to accumulate power: repression and loyalty (Wintrobe 1998). Repression means a leader restricts individuals' rights to criticize against the government or use severe sanctions to punish the organized opposition to the government, including imprisonment, execution, and torture. Loyalty means a leader can accumulate the political loyalty of elites by means of the distribution of rent. Political rent is the price a leader pays to buy off the loyalty of the opposition to exchange for political stability. Certain economic

policies create rents for elites that serve as the bases of supports. Heavy subsidies to State-Owned Enterprises (SOEs) and import-substituting industrialists, and political project of the government are some examples of policies of loyalty. The continuing loyalty of elites is critical to leaders' survival.

Opponents compete for power. Some have independent power to consider certain types of legislation; some can form political parties to compete in office formally, and some may share covert power bases with interest groups in society. Because a leader's power is not absolute, opposition may defect and overthrow the incumbent government from time to time. Their ultimate goal is to subvert the rule of the current leader. They can choose to form a coalition with the leader or pose a threatening demand to the current regime.

In non-crisis circumstances, leader and opposition already have mutual signalling and commitment problems. To reward the loyalty of the opposition, a leader could promise to implement certain policies that the opposition benefit. One example is the government's subsidies to the SOEs or some public financed projects that create rents for the opposition. The opposition, benefiting from such an arrangement, offers support for the regime in return. However, what guarantee does each party have that the other party will live up to their commitment? Leaders could potentially see the risks of increasing power of the opposition who benefit from collecting political rents, so they could stop appeasing the opposition but start torturing them. The opposition may also promise loyalty to the leader on the surface, but they could take part in an assassination plot as soon as the ruler shows his weaknesses. In sum, the so-called Dictator's Dilemma always exists: "the greater the dictator's power, the more reason he or she has to be afraid" (Wintrobe 1998, 22). Stated differently, a leader never really knows how popular he is and when the promised support stops being delivered. No matter how stable a regime may look, an upheaval may occur any time (Kuran 1991).

The theoretical story begins with the post-crisis circumstances: a shock to security occurs and the leader survive the shocks. We can conceptualize shock to security as "the [threatening] demands on a regime by opposition groups" (Regan and Henderson 2002, 122). A shock to security occurs when opponents pose threatening demands. The opponents' abrupt demands can take various forms, such as strikes, protest demonstrations, riots, guerrillas and civil war. The ruler will perceive the abrupt demands as an open challenge from the opposition and associate them with defecting

from the promised loyalty. In this study, a *shock to security* occurs when opponents pose threatening demands to challenge the current regime, which leads to political instability.

The story focuses on what leaders behave in the post-crisis situation. What is the leader's response after the opposition defect and pose threatening demands? The most intuitive response is the leader will punishes them. If the costs of reneging are high, the frequencies of defection are expected to drop. Scholars mainly focus on the violent forms of political repression as the leader's main response to deter opposition: political repression. I argue a different tactic a leader can use, a non-violent form of punishment: economic reform. This adds more nuances to the instrument of a leader uses in the loyalty side: he can retract the promised loyalty to rearrange the power bases.

One common route a leader takes is to torture or murder the opponents. I argue repression is only one of the tactics a leader can use to punish the defectors. A leader who survives a shock may not have the capacity to kill all the revolutionary leaders and the conspirators in the organized opposition groups as he wishes. Even if he has the capacity to do so, all the opposition today will become his potential threats in the future, so it is not feasible to kill all of them. Therefore, repression is one of the tactics that a leader uses; however, it may be not the wisest one.

I argue, another powerful tactic of punishment is economic reform. This strategy withdraws the promised payoffs and limits the rent-seeking opportunities for the opposition today and tomorrow. Economic reforms, i.e., the privatization of state-owned enterprises and the open and fair competition for the government-funded project can effectively cut off the power sources of the opposition. Prior to the crisis, all the opposition somehow benefit from the rent. After the crisis, it is time for the leader to rethink his pre-crisis rent distribution. Now, economic reforms come at the expense of the interest groups who previously privileged from the political rents. Economic reforms can cut off the power bases of the elites who previously privileged from the political rent. The structural changes of economies also make the opposition's future accumulation of rents and power harder. I Economic reform is a powerful tactic to punish the defectors.

Why negotiating a PTA with major liberal powers?

Suppose a leader perceives economic reform as a tool to punish the opposition and announces his decision to conduct an economic reform domestically without a PTA negotiation. Earlier on, we have discussed the commitment problem among the leader and opposition is acuter in autocracies and immature democracies. The domestic opposition are skeptical about the leader's credibility and capacity to implement such a policy. Especially after the shock to security, a leader needs time to restore the status quo ante yet strong enough to implement the reform unilaterally. Failure to implement economic reform will not only by no means serve as a punishment to the opposition and deter future dissent, but also diminishes the credibility of leaders' future policy changes.

PTAs with major liberal powers mitigates the commitment problem highlighted above. The negotiation of PTA sends a credible signal to the foreign investors that economic reforms will be more likely to be enforced. Recall, PTAs are binding international agreement: governments cannot constantly violate or arbitrarily pull out of the agreements without retaliation. PTAs by design have some coercive mechanisms of influence to make the costs of defection higher than the costs of conformity. In plain words, the expected values of the preferential trade agreements are conditional on the implementation of economic reforms. If leaders fail to implement the provisions, they will pay costs. Therefore, leaders in the developing countries approach to those in the developed countries to negotiate a stringent PTA implies that leaders have anticipated complying the provisions of economic reforms. PTA negotiation sends a credible signal of leaders' commitments to the reforms.

PTAs negotiation also sends a strong signal to the opposition to reveal the leader's capacity to conduct such reform after the negotiation. While a leader's announcement of economic reforms will probably induce backfiring by the opposition, the successful negotiation of PTA signals that the power of the current leader is strong. The leader has probably recovered from the previous crisis and has the capacity to conduct the reform. This can reduce the possibilities that the opposition overthrow the leader again after their previous failed attempt. Hence, PTA increases the chance of opposition's cooperation with the reform.

Now let us turn to explain why PTAs can help leaders to implement economic

reforms. The PTAs are expected to increase trade volumes and the flow of foreign direct investment, and hence increase tax revenues. As a result, the leader has more resources at their disposal, furthering their hold on power to recover from the shock to security. The promising trade benefits also expect to increase national income. Leaders can claim credit for the improvement in welfare, so the citizens' loyalty to the leadership will be higher. The opposition, who mainly lose from the liberalized economic reforms, can be pacified by the values of the PTAs. Now with the PTA, a leader can use the increased trade revenues as a side payment to compensate the loyal opponents. Alternatively, leaders can further hit the disloyal opponents by deeper reforms in certain economic sectors. With the PTA, a leader not only uses economic reforms to target the disloyal opponents, but also reestablishes a coalition with loyal opponents to consolidate his power.

Summary

The puzzle to explain is what motivates a leader in the developing country to negotiate one of the most costly and stringent trade agreements with the developed country. One of the most important features of these PTAs is the provision of economic reforms, whose implementation will ignite domestic opposition. My argument, in brief, is the following: a leader strategically negotiates a PTA when he is insecure. I argue after a leader is hit by a shock to security, he can choose economic reforms to punish the disloyal opposition responsible for the outbreak. Leaders are more likely to implement economic reform when the PTAs negotiation is in place. The PTAs with major economic powers send positive signals to mitigate commitment problem that a leader has, and offers material benefits to facilitate the reforms. This argument has a main empirical implication that can be used to test its validity in the next section. My prediction is: Negative shocks to a leader's security increase the probability of PTA negotiations.

Research Design

My research design compares the likelihoods of leaders with shocks to security and those without shocks to negotiate the South-North PTAs. The hypothetical treatment in this study is *shock to security*. I defined two types of shocks to security. Before

getting into a shock, here I use two indices to measure the security of a leader:

1) a leader's security before he starts his tenure at time *0* depending on his relation to the past leader (or not); and,

2) the security of the regime when the leader holds office at time *t*.

At time *0*, regime type matters. An authoritarian leader is coded as secure at time 0 when he is politically affiliated and from the same ruling coalition with his previous leader. Otherwise, he is insecure at time 0. Note that in democracies, a leader's relation to his past is irrelevant; hence, all the democratic leader is assumed as a secure leader before he serves in the office.

The security of the regime over time *t* measures the vulnerability of the regime to collapse in any given year. I use political effectiveness score in the state fragility index to measure the political secureness of a regime to capture the dimensions of political opposition, citizen's confidence in the political process, political violence of a regime etc. The index ranges from 0 to 3, 0 means the most secure, and 3 means insecure. I recoded the regime's security as binary variable: those with score 0 in political securenss are coded secure, otherwise insecure.

Here I develop two types of shocks to security:

Type 1: a leader who is secure at time *0* becomes insecure immediately onward at time *1*. Substantively, it means a leader starts his tenure in an unstable and contested environment in which the leader is highly constrained by the opposition.

Type 2: a leader experiences a shock to security during his tenure at time *t*. The political crisis captured in such a shock to security can be a result of threats from the fractionalized ruling coalition, popular uprisings, or even the actual use of force.

The unit of analysis is a leader. The data set covers 286 leaders in 62 developing countries in the period 1995 to 2015. Note that at least one of the leaders in these developing countries negotiated one PTA with the provision of competition policy with a developed country at some point during this period. The data set excludes leaders in the liberal democracies (V-Dem's Electoral Democracy Index above 0.75) where the rule of law and constraints on the executives are respected most of the time. In a regime as such, leadership change is routine and institutionalized. Therefore, there are lower risks for leaders losing power and hence lower incentives for leaders to use binding trade

agreements for political survival. Note that under mature democratic regimes, all but the most extreme form of opposition will be channeled into the formal institutions of government, in which dissents of opposition can hardly dampen the political stability or cause a shock to security. In such democratic regimes, not only shocks to security rarely happen but also leader turnovers are generally institutionalized and peaceful. Leaders' reactions to such threats may also be institutionalized. Therefore, I limit the scope of this study in only autocratic and semi-democratic developing countries. Furthermore, it removes leaders whose tenure is less than one year, in such case they have no time to pursue any substantial policy changes given the short amount of time in office.

The *dependent variable* is a binary one. If a leader in the developing country has ever negotiated a South-North PTA with the provisions of economic reforms during his tenure, then this event happened, coded as 1, otherwise 0. A leader may negotiate a couple of PTAs, but only the first one will be only counted. In this data set, a majority of the PTAs have been put into force, while some of them were still in the negotiation process. Here I focus on when leaders starts negotiation rather than the year of signatory because there may be leadership change between the years that a leader negotiates a PTA while another leader ratifies it.

The *independent variable* is the hypothesized treatment of shock to security. If a leader experienced either or both types of shocks to security, he is considered treated.

I completely aware that the treatment assignment is not random in an observational study, so I used a matching design on balancing the following observed *covariates* so that the treatment and control group are comparable. The covariates in this study are qualities of democratic or autocratic authority measured by V-Dem's Electoral Democracy Index, GDP per capita measured by World Bank, human rights conditions measured by Political Terror Scale, and the length of uninterrupted regime duration up to a leader starts his tenure. The covariates by definition are variables measured prior to treatment assignment and unaffected by the hypothesized treatment. Therefore, I only concern about all of these indices of the covariates for each leader in the same year when he starts his tenure at time 1. I selected these covariates because these have impacts on whether a unit gets treated or not in an observational study. In order to assemble the randomization in an experiment, I matched the samples on the covariates above.

I also include two confounding variables in my model. The first one is leader's

tenure. A leader's tenure is a confounder because the longer a leader holds office, the probability of engaging in the PTA negotiation may be higher, and the risks of being exposed to the shock to security is higher. The second control variable is economic recession. In a period when a country experiences poor economic performance, a leader in the developing country perceives the potential economic benefits of the PTA with the South can help the economy to recover. Also, this regime may be more likely to experience negative shock when the economy declines. Therefore, a country's economic growth is an important confounder for both the explanatory and outcome variables.

Shocks to Security and PTA Negotiations: Results

The data set originally covers 406 leaders in the developing countries across regime types between 1995 to 2015. It excludes leaders in the liberal democracies (V-Dem's Electoral Democracy Index above 0.75) where a more demanding notion of democracy that the rule of law and constraints on the executives are respected. The rationale of PTA as a result of power consolidation, as argued, does not apply to stable and consolidated democracies. Furthermore, it removes leaders whose tenure is less than one year, in such case they have no time to pursue any substantial policy changes given the short amount of time in office. Currently, the data set covers 293 leaders in 61 developing countries from 1995 to 2015.

Table 0.1:   Percentages of Leaders being Treated and those Trated Having an Event

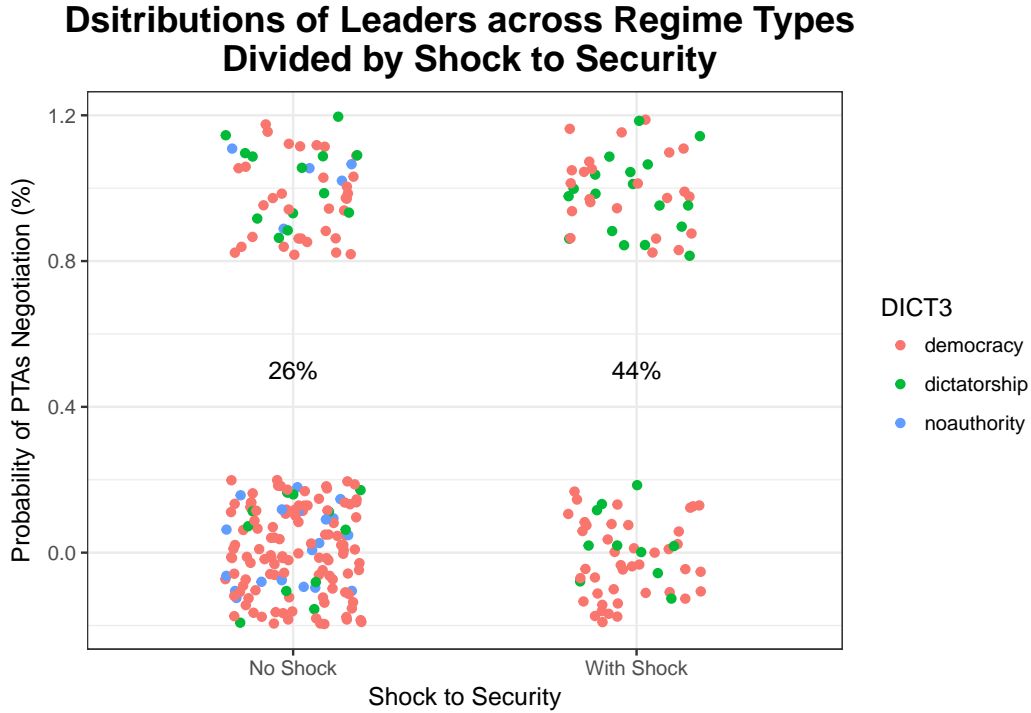|	All Regime Types	Democracies	Nondemocracies
Percentages of leaders being treated (%)	32.52	31.10	36.36
Percentages of those treated negotiated a PTA (%)	44.09	35.38	64.29

Table 0.1 shows there are 93 events out of 286 total observations. Across regime types, 32.52% of the leaders have experienced shocks to security. Among leaders across regimes, 44.09% of those who have experienced a shock to security have chosen to negotiate a PTA with a developed country at some point in their tenure. 26.42% of those who have not experienced a shock to security have negotiated a South-North PTA. Now, let us look at the relative frequency distribution divided by regime types. In non-democracies, 64.29% of leaders have experienced an insecure shock, while 31.1% in democracies have experienced one at some point during the time of their tenures. Among leaders in non-democracies regimes, 36.73% of those who have experienced a shock to security negotiated a South-North PTA. In contrast, only 31.1% of those who have experienced a shock to security in democracies negotiated one.

When estimating causal effects using observational data, it is desirable to replicate a randomized experiment as closely as possible by obtaining treated and control groups

Table 0.2:   Test Balance on Covariates before and after Matching

	Z=0	Z=1	adj.diff	std.diff	z		Z=0	Z=1	adj.diff	std.diff	z	
Democracy Index	0.4322	0.3405	-0.0918	-0.5124	-3.954	***	0.3372	0.3472	0.0100	0.0559	0.3432	
GDP per capita	6,292.7957	4,458.3435	-1,834.4523	-0.2492	-1.964	*	7,006.2627	5,297.5109	-1,708.7519	-0.2321	-1.0831	
PTS Score	2.8147	2.9300	0.1153	0.1286	1.019		2.9790	2.9798	0.0007	0.0008	0.0054	
Duration of Democracy	12.3834	7.4624	-4.9211	-0.4785	-3.705	***	6.7211	8.6492	1.9282	0.1875	1.2647	
Duration of Autocracy	3.5855	6.4516	2.8661	0.2666	2.099	*	11.4569	7.4825	-3.9744	-0.3697	-2.1103	*
Political Effectiveness Score	0.7254	1.6667	0.9413	1.4182	9.364	***	1.0387	1.0967	0.0580	0.0874	1.4350	

Table 0.3:   Test Balance before and after Matching

	chisquare	df	p.value
Pre-Matching	95.34	6	0.00
Post-Matching	5.05	6	0.54

with similar covariate distributions. This goal can often be achieving balances between the original treated and control groups, thereby reducing bias due to the covariates. Before matching, we can see the estimated propensity scores, the fitted probabilities of being treated given five covariates, are substantially different. This suggests those leaders who have experienced a shock to security are different from those who have not in terms of regime type, human rights conditions, regime duration, GDP per capita. After full matching using Rank-Based Mahalanobis distance (Rosenbaum 2010), the treated and control groups are balanced on the covariates. For example, in Table 0.2, before matching, treated units and control units differ by 0.9 baseline political effective score on average, and the differences have statistical significance. After matching, treated units and control units differ by about 0.06 baseline political effectiveness score on average (or differ by about 0.08 standard differences in baseline baseline political effectiveness score). In sum, Table 0.3 demonstrates the two groups are now comparable.

Table 0.4: Ordinary Linear Squared Regression Model (After Full Matching): Results

	Dependent variable:
	Preferential Trade Agreement Negotation Rate
Constant	0.049
	(0.154)
Shock to Security	0.152*
	(0.090)
Economic Recession	−0.026
	(0.068)
Mean Tenure	0.036***
	(0.006)
Observations	228
R^2	0.318
Adjusted R^2	0.180
Residual Std. Error	0.426
F Statistic	2.316***

Note:	*p<0.1; **p<0.05; ***p<0.01
	Automatic reporting p-values, need to be replaced with Fishers' Null

Treatment Effects on Leaders After Matching
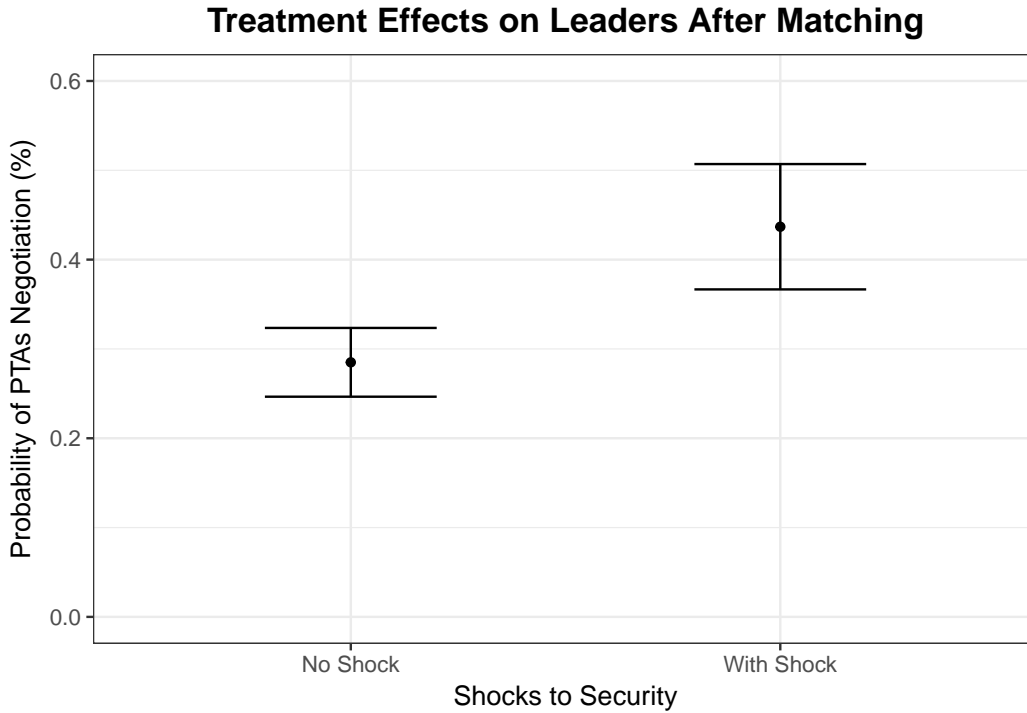
So far, I have created a hypothetical treatment, a shock to the leader's security, so leaders experienced such a shock are in treatment group, and those who did not are in control group. Because it is observational data, I use a statistical technique to balance

the two groups so leaders being matched on the covariates are not too different in the treatment and control group. Then, I use an OLS model to estimate the probability that a leader in developing country engages in PTA at a given time during his tenure. The model is:

$$Y = \beta_0 + \beta_1 * ShocktoSecurity + \beta_2 * EconomicRecession + \beta_3 * Leaders'Tenures + \epsilon$$

My hypothesis is empirically supported. When leaders experience a political crisis, they are more likely to negotiate a South-North preferential trade agreement with the provision of economic reforms. Holding leaders' mean tenure constant, after matching on five observed covariates, when there is no economic recession, those leaders who have experienced shocks to security on average have 15.1799% higher probability to negotiate a PTA than those without such treatment. Consistent with our theoretical argument, shock to security is correlated with higher PTA negotiation. Taking into account the data are clustered by country, I replaced the classical standard errors in the OLS by the clustered robust standard errors.

The control variables do not contain any major surprise. When leaders hold office longer, they have high chances of negotiating a preferential trade agreement because it may be on the agenda, or he is more likely to be exposed to a political crisis. Interestingly, the magnitude of my second confounder, economic decline, is negligible. As mentioned, current literature focuses on the economic effect of the PTA. In a period when a country experiences poor economic performance, a leader in the South see the potential economic benefits of the PTA with the North can help the economy to recover. This goes against the notion that countries are more likely to ratify a PTA during hard economic times (Mansfield and Milner 2018). This is not the case when shock of security is taken into account in this model. Therefore, political crisis may explain a leader's decision to enter into PTA more than an economic crisis.

Conclusion

Why and when will leaders in developing country negotiate South-North Preferential Trade Agreements? The answer is simple and intuitive: after leaders in developing country experience a negative shock that creates political instability, they are more

likely to negotiate a PTA with the provision of economic reforms with the expectation to cut off the power sources of the disloyal opposition. Economic reform, hence, is a tactic for leader to punish the opposition and a toolkit to consolidate power in the regime. I have used original data on measuring security of leaders in developing countries between 1995 and 2015 to examine whether developing country leaders are more likely to negotiate a PTA in their tenures when they experience a political shock. I argue leaders in developing country approach the major liberal trade powers to negotiate a PTA with the provision of economic reform, so they have chosen the deepest PTAs by design. This is a strategic choice that leader makes with an objective to punish the opposition who defect from the promised support and pose the threatening demands.

Appendix

Statistical Inferences: Permutation test

P-value tells us how likely I can get the observed treatment effect from my experiment under the no treatment effect null hypothesis. Here, in this study, the hypothetical experiment is that countries are "randomly assigned" to experience a shock to security (*treatment group*) or not experience one (*control group*). The worrisome is the Fisher's sharp null hypothesis: there is a possibility of no effect for all the units in this hypothetical experiment. Instead, I just observe the differences in means by chance. My null hypothesis is there is no treatment effect between the treated and control groups for each unit.

Sampling distribution under null hypothesis and Observed Statistic

N = 10000   Bandwidth = 0.009491

18
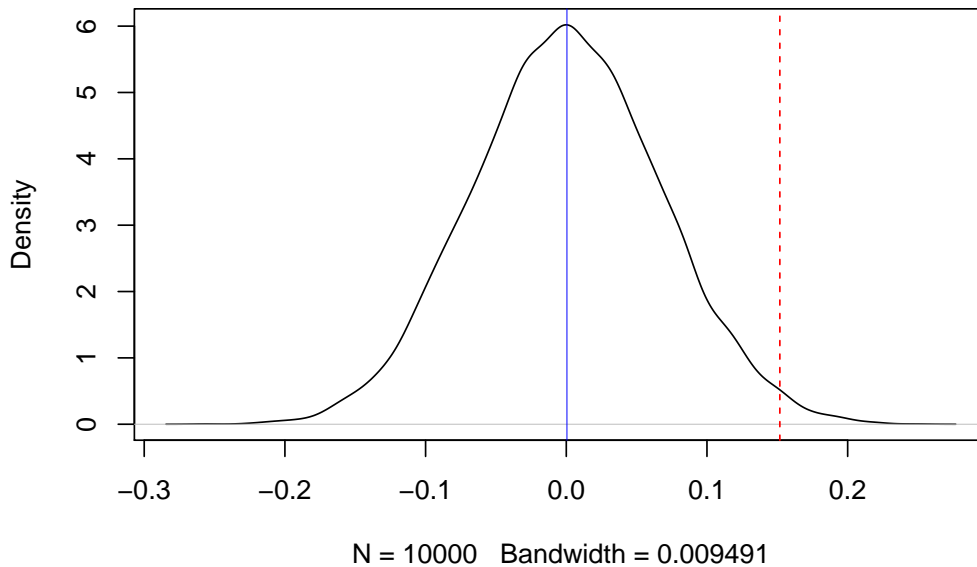
P−value distribution with Permutation in 100−times simulation
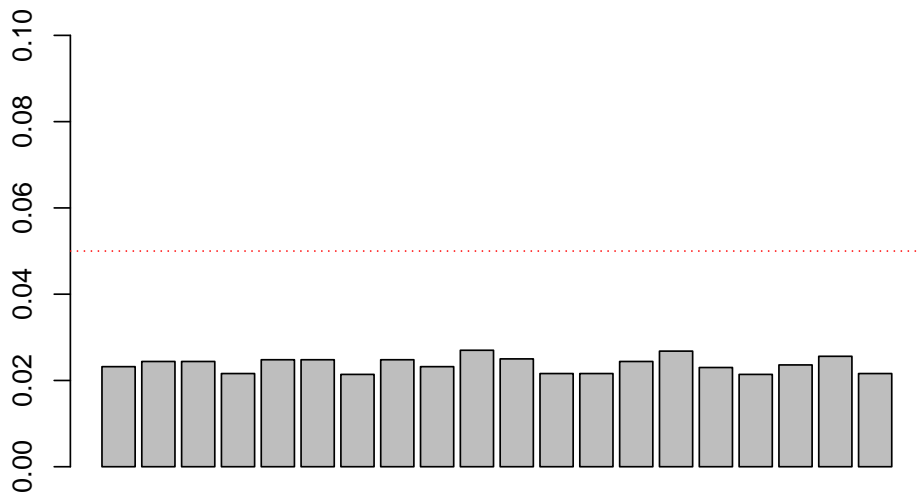
     The p-value here is the probability that value as extreme or more extreme will be observed under the null hypothesis. This probability gives me the information that I may not have much evidence to against the null effect hypothesis, which is the difference between the observed treatment effect and the effect under the null hypothesis is not due to chance. In this test, we observe we have 2.4% (less than 1 in 50 replications of the no effect experiment) to produce the values as large as or greater than the differences-in-means (treatment effect 15.1799%). That suggests by using the computer power as if I were to replicate the experiments for 10000 times, the probabilities of observing effects while in fact there is no relationship between the variables are less than 0.05 in both settings.

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