

The Chasm of Climate Change: Patterns of Authoritarian Cooperation in International Climate Change Forums

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Abstract

Climate change has been a pressing yet understudied issue within international affairs due to its unique institutional features. Notably, authoritarian regimes have exhibited perplexing patterns of cooperation in international climate change forums. Existing literature and theoretical arguments fail to fully account for the distinct characteristics of climate change, including its large-scale externalities, weak enforcement mechanisms, and the inclusion of public goods. This study argues that authoritarian regimes are compelled to sign costly climate change agreements not only based on their political win-share, but also due to business ties among actors within the political sphere. To test this theory, the variables will be operationalized using the V-Party dataset, which provides metrics characterizing a country's political actors. Poisson regression models will be employed, considering the dependent variable as a count of the Nationally Determined Contributions (NDCs) that have been created, revised, or improved. This research carries significant policy implications, addressing the rise of global authoritarianism and offering insights to policymakers regarding cooperation trends with traditionally uncooperative regimes. Furthermore, it contributes to the limited literature on the causal effects of climate change in the field of International Relations research.

As the world globalizes, efforts to address focal issues have increasingly been undertaken in a multilateral forum. A rising focal topic has been the governance of human actions related to climate change. The United Nations have been the most active International Organization with regards to climate governance but the institutions they have created have led to some puzzling trends amongst specific regime types. Authoritarian governments have shown high levels of cooperation in this costly issue area despite extant literature speaking to the contrary. This puzzle of authoritarian climate change cooperation can first be understood by examining variations within these countries. In this paper, I will first explain the puzzle of Authoritarian regimes and climate change cooperation. Following the explanation of the puzzling trend, I will review the extant literature that relates to both authoritarian international cooperation and trends on climate change. Next, I will lay out my theory, hypothesis, and arguments. Following that, I will detail how I would go about carrying out this research. Lastly, I will discuss the contributions of this research and the potential implications that could be helpful for policymakers and stakeholders. In order to fully understand this puzzle, I will first give background information on the history of climate change governance.

The History of Climate Change Governance

Following the birth of the industrial revolution, the world began to see the effects of what human actions can have on the environment. Solutions on a grand scale failed to materialize until after the Bretton Woods convention spurred an expansion of the multilateral policy world. The UN established its Framework Convention on Climate Change in 1992 with a mandate to address rising average global temperatures as well as other anthropogenic externalities. The first major multilateral agreement was the Kyoto Protocol which resulted in proof that the world will take action on climate change. This was small in scale but the success of the Kyoto Protocol

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carried momentum into the 21st to address climate change. The most recent iteration of an agreement, the Paris Agreement, was signed by 197 parties in 2015. It carries a mandate to keep global warming to no more than 2 degrees Celsius in this century but has fewer mechanisms to ensure compliance.

Nationally Determined Contributions

This agreement did away with legally binding mechanisms and now requires countries to submit whitepapers outlining their national goals and efforts called National Determined Contributions (NDCs). These NDCs contain projected increases/decreases in emissions for a time frame of their choosing as well as how they intend to change various industries and systems. In order to create these, many states rely on epistemic communities and policymakers working together.

Amongst the member states, there are only four states that did not ratify the agreement as well as submit an NDC. This is puzzling because many of these regimes are highly authoritarian states which have many reasons to avoid not only these types of climate agreements but costly agreements in general. Many authoritarian regimes are contradicting extant literature by signing this agreement and revising and/or improving these documents. In order to make this puzzle clearer, I will go through some examples of authoritarian cooperation.

Authoritarian regimes are on the rise and their cooperation in climate governance is not understood yet. China, one of the world's most autocratic countries, has pledged immense reductions in GHG emissions by 2030 (65%). They have also updated their NDC to include a long-term strategy with improved goals. On the flip side, a close neighbor of theirs, Russia, has pledged a similar goal of 70% yet they have not updated these goals or plans since 2020. This pledge also seems disingenuous because as of 2022 they supplied the EU 27% of its oil and 47%

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of its coal. Other autocrats, like Qatar, choose to create NDC that has sub-par goals such as their pledge to only reduce GHGs by 25% by 2030. (Climate Watch 2023) The fact that authoritarian regimes are even choosing to enter these costly agreements is puzzling given that there are many theoretical predictions arguing against them entering costly agreements. Thus, we see a puzzling trend that also cannot be explained by the current literature.

Literature Review

The existing literature on why authoritarian regimes would enter costly agreements would argue that they should not enter costly agreements. There is a lot of existing theory that argues an authoritarian regime should not enter into these costly agreements. Given that authoritarian regimes are characterized by a lack of free and/or fair elections, leaders do not have to convey the will of the people to remain in power. (Gandhi and Lust-Okar, 2009) This is important because it allows for the two-level game of international politics to become really just one level. (Putnam 1988) Given that there are fewer/no audience costs that the leadership has to account for when making decisions, a state's policymakers can make decisions without worrying about public opinion being a factor. (Fearon 1995) This means that autocrats will be free from public pressure, such as environmental NGOs and interest groups as well as citizens who care about the planet's health. Without the public playing a role in guiding policy, the political elite is free to conduct policymaking in their best interest.

The extant literature provides explanations for how leaders will act when faced with a costly policy task. The ruling actor(s) of an autocratic regime will act in a manner that preserves their ruling position. (Ginsburg 2020) They are going to act in a rational and utilitarian manner in regard to not being ousted. Autocratic governments will also not be willing to give up sovereignty over an issue unless they are defacto compliant. (Hawkins 2008) Given the mandate

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of the Paris Agreement requiring more sustainable actions, this argument would not be able to explain the commitment of a large emissions exporter to a climate forum. Other works show that this effect is going to be slightly different as an autocrat becomes more extreme. Dictators will act in a self-preserving manner with respect to themselves and their loyal allies. (de Mesquita, Siverson, Smith, and Morrow 2003) Having more allies will open a leader up to more actors they must satisfy. (Vreeland 2009) This logic has been tested using the case of dictators entering the Convention Against Torture which I argue is not applicable to issues of public goods. Torture only affects the ruling regime whereas the costs of climate change are global negative externalities which is an explanation of why this framework will not apply to public goods that have shared utility and externalities.

Existing literature on determinants of why authoritarian regimes would enter into costly agreements is not applicable to the issue area of climate change governance because it has many unique institutional features. These features that I will next detail are the reasons why research is insufficient to address this issue area. The first institutional feature that makes this unique is its costs. While there are economic costs associated with addressing climate change, there are also societal, physical, and global externalities. The most visible cost of addressing or not addressing climate change costs is the investments required for change and the cost of inaction resulting from increased natural disasters. (NCD 2018) The policy requirements for cooperation in this area are also much higher than in other areas because it requires significant epistemic community cooperation to assist policymakers. (Bernauer 2008) In addition to these unique costs, the Paris Agreement, which I will analyze in this study, has no mechanism to enforce noncompliance with a proposed policy change. This is puzzling because, despite the high costs and zero ways to enforce the policies, countries are still creating national plans of action to address climate

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change. This puzzle is the most puzzling for authoritarian regimes as they have more reasons than other regimes not to enter into costly agreements with which they are not de facto compliant. Therefore, I ask the following question: why do authoritarian regimes enter into costly climate agreements?

Authoritarianism and Climate Change

From the previous literature, we know that prior explanations fall short in explaining why authoritarian regimes enter costly climate agreements. In the next section, I will lay out my theory that explains this puzzle. I will first define the actors and assumptions before going deeper into the theoretical framework.

I examine the patterns of cooperation by authoritarian regimes within the scope of the United Nations Framework Convention on Climate Change. Given that I am looking at authoritarian regimes, we can assume that the countries in my theory have elections that are characterized as either not free or not fair. This effect can vary significantly as some autocrats have completely closed political systems (dictatorships) where they are self-aware of their limited political actors and others create sham elections to control the optics of their society.

Selectorate Theory

I extend the selectorate theory and apply it to the case of international climate change cooperation. The selectorate theory has two major assumptions that are integral in explaining my theory. First, leaders will do whatever they can to keep their political careers alive; and second, these leaders rely on replaceable people to remain in power. The selectorate theory was developed to explain how a leader can politically “survive.” It defines the selectorate as the group of people in a country who can *potentially* exert political influence. These include registered voters, elite actors, and other political actors. (de Mesquita, Siverson, Smith, and Morrow, 2003) The winning coalition is defined by the actors who translate their potential

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influence into actual influence for a certain leader. For example, in a dictatorship, the winning coalition and the selectorate are the same because the same people who support the dictator are going to be the ones who he relies on to maintain their power. As you slide the autocratic scale towards the middle, we see regimes that have political systems but still no free or fair elections. For example, China has a lot of political actors in the country but many are simply pawns that will not threaten the survival of the leadership. Their elections are done by the National People's Congress (NPC) but the position is determined in advance by a vetting process controlled by the CCP. Furthermore, all 3,000 members of the NPC must be vetted by the CCP which means that the CCP basically controls the entire political sphere. (Freedom House 2022) The selectorate theory argues that when these regimes are politically closed (W/S large) leaders will rely on public goods to buy loyalty. Conversely, when the regime has a larger amount of political actors (W/S smaller) this theory posits that private goods will be used to buy loyalty. (de Mesquita, Siverson, Smith, and Morrow 2003) This is important because I argue that if a state's leadership must rely on public goods to buy loyalty and thus remain in power, they would have a greater incentive to govern and protect public goods. Public goods are items anyone can derive utility from using or having access to. Examples include public transportation, national defense, and most importantly environmental health such as water quality or climate stability. One example of using public goods provisions to buy loyalty occurs in Russia.

Russia has shown a strong increase in public goods provisions with the rise in their exportation of natural resources. Vladimir Putin has survived politically in Russia since 2000 and much of this can be credited to the social welfare provisions used to buy loyalty amongst the citizens. Russia has a large population but its winning coalition is small, as it is an oligarchic polity. (Polity2, 2022) As selectorate theory predicts, they use public good provisions in an

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attempt to gain loyalty. They have increased the expected life from birth (index used for measuring medical care) from 65 to 73 since the start of the 21st century as well as increasing their overall GDP. (The Berggrun Institute, 2022) This example leads me to argue that regimes that use public goods as a way to buy loyalty will have a greater incentive to govern and protect these public goods. These regimes, I argue, will have a tangible benefit related to protecting these public goods. Therefore, they would have a higher level of commitment to climate forums. This leads me to my first hypothesis:

H1: When an authoritarian regime has a larger win-share, it will have a higher level of cooperation in climate change forums.

Keeping in line with the assumptions that these regimes feature unique political actors, I argue that there is a monetary mechanism that can explain these regimes' cooperation within these costly forums.

Business Elites

The second variable that I theorize to have an effect on this is the influence of a state's business elites. Before going into the theoretical framework, I will go over some key assumptions and definitions relating to this framework.

The first assumption I make is that within this autocratic regime, there are actors who are using political activity to generate profits for their business. These I will refer to as 'business elites' and they can be seen more often in regimes with greater political actors. I also am going to assume that these business elites are rational and utilitarian such that they want to maximize profits regardless of externalities. I make this assumption because wealthier individuals are better able to withstand the effects of climate change and the related negative externalities. For example, if rainfall deviations cause food shortages, these actors will be able to dip into their

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immense wealth and better withstand these shocks. Given these assumptions, I will next outline my theoretical framework that involves these business elites.

I theorize that the number of business elites in a country will shape the political landscape when the state makes policies relating to international climate forums. I argue that more business elites in a political system will influence the political decision-making process. This occurs due to the self-interest of these business elites and the proclivity of business people to want to make money. These elites can exert political influence within an autocratic regime and can therefore influence potential policy decisions. I argue that if a country's NDC will affect a large number of business elites then they will exert their political influence to shut down the bill. The Russian oligarchy provides a good insight into how political influence can be shaped by business elites.

While the gas and oil industry in Russia is heavily controlled by the federal government, other industries that have the potential to be affected by “greener” domestic efforts are owned by elites with close ties to the Putin regime. For example, the automobile industry in Russia is characterized by 71% of profits going toward oligarchs. (Guriev and Rachinsky, 2005) This situation would not allow for “greener” policies to be implemented, such as a push for electric vehicles, as these politically liked business people would use their wealth to lobby against the policies. Contrary to the case of Russia, the aristocratic regime of Saudia Arabia serves as a useful case to show when fewer business elites lead to more climate policy commitments.

The Kingdom of Saudi Arabia, through its Public Investment Fund, has exerted major effort to reshape its society from an oil-dependent *rentier* state to a diversified and more sustainable society. They recognize that oil is not sustainable and they are smartly using their oil profits to invest in sustainable energy production. One example is this funds subsidization of the

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NEOM project which is attempting to build a completely self-sustaining “ecocity.” Relating to the political-business nexus in Saudi Arabia, there is major state consolidation. With his ascension to the throne in 2015, Crown Prince Mohammed bin Salman abolished over a dozen councils that were involved in strategic economic sectors and replaced them with an all-encompassing Council of Economic and Development Affairs. (Trudelle 2022) This made the crown prince the de-facto economic elite in Saudi Arabia.

In addition to these two examples, I argue that when there is a large coalition of business elites that have stakes in companies that would be affected by a “greener” policy, they will have no cooperation in the international climate forum. This leads me to my second proposed hypothesis:

H2: When an authoritarian regime has a large coalition of business elites with ties to unsustainable practices, there will be less cooperation with international climate forums.

In the next section, I will lay out the research design that I will use to operationalize my variables and conduct statistical analysis.

Research Design

In this next section, I will present my research design for testing why authoritarian regimes sign costly climate policies. I introduce my method for testing the following hypothesis: **(H1) When an authoritarian regime has a larger win-share, it will have a higher level of cooperation in climate change forums. ; (H2) When an authoritarian regime has a large coalition of business elites with ties to unsustainable practices, there will be less cooperation with international climate forums.** I will detail how I went about operationalizing my independent variables as well as how I built my dependent variable. I will also outline key

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features of the design such as the unit of analysis, my data collection methods, as well as the challenges of carrying out a study like this.

Scope and Parameters

Before we can begin discussing the design we have to define our unit of analysis and other parameters. I will be looking at every state's cooperation with the United Nations Framework Convention on Climate Change. Therefore, my unit of analysis is going to be countries with my sample being every country that is a member of the United Nations. The scope of this analysis is going to be limited to cooperation within the most recent and most focal multilateral climate framework, the Paris Agreement. Regarding my time frame, I wanted to select the period of time when this agreement was in action as well as the time beforehand when countries were internally debating the agreement. Therefore my timeframe will consist from 2015 until the present.

Dependent Variable

The main dependent variable for both of my hypotheses is going to capture a state's cooperation with the most recent and most focal international climate forum, the United Nations Framework Convention on Climate Change. First, I must define what I will assume cooperation to entail. My definition of cooperation has two elements to it: 1) communicating willingness to follow the mandate and 2) putting forth a good-faith effort to follow the mandate. In the case of the Paris Agreement, a state can do the following using the main feature of this agreement, Nationally Determined Contributions. These whitepapers referred to as NDCs consist of a state's "post-2020 climate actions" and states are required to "prepare, communicate, and maintain" these whitepapers on a five-year rolling basis. (UNFCCC, 2022) Some overachieving countries update and resubmit NDCs outside of this five-year deadline as well. I will use these NDCs to

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reflect a country sending a signal of commitment. This method can be used because the creation of these NDCs is a costly process. In addition to this notion, previous scholarship within this field argues that because nearly every country met the first deadline, one can also view increasing climate goals and/or submitting an updated NDC as a signal of commitment.

(Leinaweaver and Thomson, 2021) Older climate agreements also would not be sufficient as they are not on the scale of the Paris Agreement in addition to lacking a credible signaling mechanism like NDCs. Therefore, I will utilize the vast record keeping of the United Nations to create a count variable of how many times a country has either submitted, updated, or revised its NDC. I will obviously disregard the first NDC because of the reasons I have previously mentioned. This available data include the country name along with how many versions it has submitted. It will be easy for me to utilize this data to create a count variable indicating the degree of effort they put in. This data is on a 1-4 scale which will allow me to treat high cooperation as trending towards four and low cooperation as trending towards 0.

Independent Variables

To test my two hypotheses, I come up with a method for operationalizing each of my causal mechanisms. My first hypothesis argues that authoritarian regimes will be more active in international climate forums when there are more political elites because they will have a greater incentive to govern and protect public goods. I am going to use multiple variables to operationalize this. These variables come from the V-party dataset from the Varieties of Democracy project. (Varieties of Democracy Project 2020) These variables are useful to uncover the characteristics of a country's political system. The first IV will operationalize the method by which political leaders are elected. This will allow me to test for the win-share of a state. If the candidates are decided by the leadership then the selectorate and the winning coalition are the

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same and thus the win share is small. I will use the Candidate Nomination variable (“v2panom”) from the V-party dataset which will equal 0 when the party leader unilaterally decides which candidates will run for the party in a national legislative election. I will also operationalize other variables that could allow for analysis. I also will use their variable that represents where the “core” of the political party comes from. The dummy variables within this bunch of data that are of interest to me are the aristocracy and local elite dummies. The aristocracy dummy variable is important to include because if the core is mostly aristocracy we can assume that the polity runs through a hereditary system. The local elite variable is important because this is an identifier of a polity's inclusion of elites. These variables are going to be included in the first of my models which will be a Poisson regression run with my NDC outcome variable. If these are significant, I would expect the aristocracy variable to have a positive effect on the NDC count while the local elite variable would have a negative effect.

For my second hypothesis, I will create two models to operationalize my economic-related independent variables. The first model will measure to what extent politicians in a country have business ties. I use this to first test if there is a statistically significant relationship between political and business effects. I expect this to be a statistically significant and negative relationship. The way I will operationalize this is by using a novel dataset called “The Political Economy of Business-Government Connections” (2020) which is the creation of Sarah Bauerle Danzman and William Kindred Winecoff. This dataset is a massive extension of Faccio’s (2006) economic ties dataset that works in my favor for two reasons. The first is that it extends the dataset to include all countries in the world and the second is that it includes “politically exposed people” who are not in a formal political position but have political influence. This is important to me because I am looking at unconventional forms of polity that

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will not be picked up by just looking at official political members. The first metric I use from this dataset is a measure of legislative members who are connected to a firm within the country. The novel dataset will include this percentage for politically exposed personnel and also use data from public and *private* firms. This variable is going to be a continuous variable that will be used to run a Poisson regression on the DV. I expect the level of political connectedness to be positively correlated with the decreased number of my NDC count. I also expect that relevant industries will have a much higher effect than normal industries. I will operationalize this by weighting a country's political ties to the proportion of industries that would be affected by a moderately ambitious NDC. I will define these industries using the Clean Air Act in the USA as an example. This act defines “major emitters” as companies that expel more than 10 tons of pollutants or 25 tons of mixed sources of pollutants. (US EPA, 2013) This is going to be run using the same Poisson approach I use for the previous two models.

Controls

This study will also include several control variables to help account for alternative explanations to this question. The first and most important will be to account for the location of the country. Resources are not uniformly distributed across the planet which leaves certain states with more resources than others. I am going to have a control variable that accounts for the presence of multiple different highly coveted natural resources. These will include oil, gemstones, and other minerals. The study would also benefit from a control variable measuring per capita GDP. This would allow me to account for the economic differences between the countries that I test. Another major control will be the net amount of GHG (greenhouse gasses) that a country accounts for within a year's time frame. This will help me to control the explanation that de-facto compliant regimes will enter an agreement with no issues.

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Potential Challenges

I have already acknowledged that there will be major challenges with the data collection process for authoritarian regimes in general. The tightly controlled press is a feature of authoritarian countries that will restrict the information that comes out of these countries. Therefore, we have to rely on the official statements of the government which have an incentive to misrepresent their numbers. This is going to be more of a problem in authoritarian regimes that are more tightly controlled, though I do not think that this will be the case for all *personalist* regimes. There is another challenge for the data collection that affects the dependent variable. There is going to be less replicable data for countries that are members of the European Union as the UN codes the EU as a whole. (UN 2023) Another major empirical challenge that lowers the generalizability of this study is the need to remove a major outlier. There are three countries that have not signed the convention with the only significant polluter being the Islamic Republic of Iran. They have a conditional NDC that they claim will be put into action once Western sanctions are lifted. (UNFCCC, 2015) This is a significant issue because Iran accounts for ~2% of global greenhouse gas emissions.

Implications and Contributions

This research will contribute to the burdening literature on authoritarian law and climate change. The first contribution will be uncovering the pattern of authoritarian commitments to climate change. No research has been carried out that analyzes the cooperation levels of authoritarian regimes. There is a general lack of research that looks at the political side of climate change. This probably is due to the high level of skepticism and “climate deniers” that slowed down policy work on environmental policy. Relating to authoritarianism, the global rise in authoritarianism warrants more research on these regimes. This paper will be another

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contribution to insight into how authoritarian regimes view environmental issues. Another contribution will be to the debate on authoritarian vs. Democratic climate change. There is literature that argues for both sides' greater effectiveness in carrying out these climate change projects. While this research is thorough, it lacks insight into the share of countries that are partaking in these forums. Many scholars have debated the best regime to address this issue but there is preliminary research that needs to be carried out prior to these work's conclusions being validated. There are also many potential extensions to this research that could lead to more research.

This study lays the groundwork for other scholars to extend this research. With more insight into the commitments of these regimes in this issue area, there are implications that can lead to other studies. There are many implications if we find significant effects for my proposed hypothesis. First, if we find less cooperation amongst regimes with a higher/lower level of political consolidation we might better understand institutions with weak enforcement mechanisms. While this weak enforcement mechanism does not play much into my hypothesis, other authors can use the findings to conduct other studies. I would like to see this effect compared to other agreements with weak institutions to see if the effects change.

This research also has many policy contributions that are important to highlight. This provides the UN with information that could show current climate agreements are nothing more than window dressing. Besides that, the UN would benefit from seeing the patterns of cooperation within this institution because of its immense scope. They would also benefit from a framework that they can continue to use in the future to test levels of cooperation in this issue area. The trend of rising authoritarianism will make this framework more useful in the future. The UN would also benefit from this study of authoritarian cooperation within “low politics.”

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Given that they have and will continue to create multilateral forums, they will benefit from research that can provide any further insight into patterns relating to their forums.

Finally, this paper has many implications that policymakers can use to better address issues. Relating to H1, if the results find a significant relationship there will be interesting implications for NGOs. The implication of this would be that dictatorships are easier to convince to take action on climate change than other forms of authoritarian regimes. This implication would allow environmental NGOs to better target governments as well as provide targets to avoid. Relating to H2, there will be large implications for businesses and levels of investment in a country if there is a significant and positive relationship. These results would imply that business ties strongly affect cooperation and business interests are stronger than altruistic tendencies.

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