

Unifying Comparative and International Theories of Energy Transitions around Credibility*

Alexander F. Gazmararian
Princeton University[†]

Dustin Tingley
Harvard University[‡]

March 13, 2024

Abstract

Why are some countries more successful at advancing the clean energy transition than others? Existing studies focus primarily on industrialized democracies and frame domestic and international explanations against each other. Instead, we develop a unifying framework around the idea of credibility to explain clean energy transition outcomes in developed and developing countries and shed light on the prospects for future reform efforts. We elucidate the credibility challenges reformers confront and point to new directions for the comparative and international study of energy transitions necessary to respond to the climate crisis.

Word Count: 11,890

Keywords: climate politics; political economy; credibility; clean energy transition; decarbonization

*This project builds on our recent book, *Uncertain Futures: How to Unlock the Climate Impasse* (Cambridge University Press). The book's acknowledgments can be cross-applied here. Thanks to Felipe Balcazar for comments. Thanks also to audiences at the 2023 APSA and Yale University for helpful feedback. We are grateful for Bob Keohane's work encouraging scholars to think about climate politics through a comparative lens via his Balzan Award and the Center for Advanced Study in the Behavioral Sciences, which supported some of Tingley's earlier work in this space, and the Niehaus Center for Globalization and Governance, which supported some of Gazmararian's earlier research.

[†]PhD Candidate, Department of Politics, Princeton University. Email: agazmararian@princeton.edu. Web: www.alexgaz.org

[‡]Professor, Department of Government, Harvard University. Email: dtingley@g.harvard.edu. Web: www.dustintingley.org

Countries must quickly transition away from fossil fuel-based economies to avoid the worst impacts of global warming (IPCC, 2022). The technologies already exist to begin the clean energy transition (Davis et al., 2018), but politics stand in the way. Governments seeking to combat the climate crisis face stiff political obstacles (Busby, 2008; Harrison and Sundstrom, 2007; Stokes, 2020). An essential task for political scientists is to develop theories explaining the conditions that enable or impede the green transition.

Previously, theories of climate politics have framed international and domestic explanations against each other (Aklin and Mildemberger, 2020; Colgan, Green, and Hale, 2021). Scholars inspired by models of global public goods provision saw free riding on the emissions reductions of other countries as a fundamental constraint, which implied international solutions including reciprocal cooperation, trade sanctions, and information provision (Barrett, 2003; Keohane and Victor, 2016; Nordhaus, 2015; Ostrom, 1990; Victor, 2011).

Yet, motivated by the emergence of climate policy action despite stalled international progress, political scientists have reoriented their focus to domestic distributive conflict as the primary obstacle to the energy transition (Aklin and Mildemberger, 2020; Breetz, Mildemberger, and Stokes, 2018; Colgan, Green, and Hale, 2021; Ross, 2024). These studies have focused mainly on industrialized democracies, documenting the influential role of such factors as business and labor coalitions (Mildemberger, 2020), the strength of green interest groups (Aklin and Urpelainen, 2013; Meckling, 2011), and institutional arrangements (Finnegan, 2022b; Harrison and Sundstrom, 2007, 2010).

We establish a framework unified around credibility that brings together domestic and international factors. We consider credibility in a strategic sense, defined by beliefs about whether the government will follow through on its promises which depends on preferences and information (Gazmararian and Tingley, 2023; Kydland and Prescott, 1977; Rodrik, 1989b), and in a structural sense, defined as the ability of green investments to create local benefits such as jobs and tax revenue.

Credibility helps explain when countries are able to solve three barriers to the green

transition: providing investment and compensation, creating allies, and training workers. First, compensation of and investments in communities, workers, and firms may be necessary to diffuse their opposition and ensure a “just” transition (Finnegan et al., 2023; Green and Gambhir, 2020; Meckling and Nahm, 2022), but the lack of credibility could lead to hold ups (Gazmararian and Tingley, 2023; Jacobs and Matthews, 2017; Patashnik, 2014). Second, broadening the reform coalition through new green investments is one strategy to build political support (Aklin and Urpelainen, 2013; Meckling et al., 2022), but uncertainty and local opposition could stall green projects. Third, the clean energy transition needs a trained workforce, but lack of government commitment to green investments or perceived benefits from these projects could discourage individuals from training for these careers (Gazmararian and Tingley, 2023).

Building on this prior work, the primary contribution of this paper is to bring together three factors that vary across countries and affect their ability to create credibility needed to address the challenges of providing compensation, creating allies, and training workers: institutions, state capacity, and international constraints. We review previous scholarship and develop new ideas about how these factors affect the credibility of government commitments and local economic opportunities from green investments.

To preview, we consider *domestic institutions*, such as business-state relations (Meckling et al., 2022; Mildemberger, 2020), labor market policies (Stroud et al., 2014; Thelen, 2004), electoral rules (Finnegan, 2022b), procedures affecting transparency (Holmstrom, 1979), and informal institutions governing common pool resources (Ostrom, 1990). We identify how these institutional features vary across countries and affect credibility.

Second, countries differ in their *state capacity*, which can affect the ability of governments to implement complex laws necessary to orchestrate the energy transition (Hochstetler, 2020; Meckling and Nahm, 2018a; Skocpol, 1985). This matters for commitments to firms making investments in green energy and communities receiving compensation. If firms, communities, and individuals do not think the government is capable of delivering on its promises, they

will be more likely to resist reforms.

Lastly, *international constraints* will shape the political bargains that can be made in developing countries. Many low-income countries lack the resources needed for decarbonization, so international transfers from the Global North to the South are vital (Gaikwad, Genovese, and Tingley, 2023; Landis and Bernauer, 2012). An insight from models of international relations as a two-level game is that domestic commitment problems can also spill into the international arena (Milner, 1997; Putnam, 1988), so the inability of a donor country to build a climate finance coalition complicates the energy transition in developing nations.

Countries also vary in their industrial capabilities, which affects the strategies reformers have available, such as their ability to create local jobs that broaden coalitions and create community buy-in for projects. Developing countries will also find economic opportunities and obstacles depending on their position in global supply chains. This affects their access to input for the clean energy transition and their ability to create local benefits from new green projects.

These three factors—institutions, state capacity, and international constraints—cover much ground, but that is because the clean energy transition is unlike economic transformations before it in both its scope and urgency. Fossil fuels permeate our economic systems so pervasively that the changes required by governments, firms, and consumers can be challenging to appreciate (Unruh, 2000). We hope that by unifying our explanations around credibility, the framework remains parsimonious and allows researchers to incorporate knowledge about societal group preferences to derive testable hypotheses.

We conclude by sketching a research agenda anchored around the concept of credibility. Our framework aims to productively bring together international and domestic explanations rather than pitting them against each other. In doing so, take up the call from Aklin and Mildemberger (2020) to study international considerations beyond free riding and from Cao et al. (2014) to take seriously both domestic and international factors. Credibility offers a

helpful starting point to understand the comparative politics of the energy transition.

Existing Clean Energy Transition Explanations

Experiences in industrialized democracies inform most theories of the energy transition.¹ Some of these ideas we will later recast to show the role they play in making credible commitments. We aim to situate the credibility framework that we introduce next, showing how it complements and advances existing ideas.²

A prominent approach begins by identifying climate change as a collective action problem, which implies that international free-riding is a critical barrier (Barrett, 2003; Keohane and Victor, 2016; Nordhaus, 2015; Ostrom, 2009; Victor, 2011). Thus, to the extent that countries can solve free-riding, the clean energy transition should be more likely to succeed.

Yet, others point to the ability of reformers to navigate domestic distributive conflicts as providing more explanatory leverage than free-riding fears (Aklin and Mildenerger, 2020). There have also been efforts to bridge the focus on incentives to free ride by emphasizing how these domestic and international factors could be considered within the same model (Gazmararian and Milner, 2023; Kennard and Schnakenberg, 2023).

Whereas international theories emphasize free-riding, comparative politics explanations point to a diverse set of factors: the role of business-state relations (Meckling et al., 2022; Mildenerger, 2020); insulation from electoral systems (Finnegan, 2022a,b; Finnegan et al., 2023; Garrett, 1993); the availability of social safety nets (Kono, 2020; MacNeil, 2016); the incentives created by democratic institutions (Bayer and Urpelainen, 2016; Bernauer, 2013); historical legacies (Lipsy and Schipper, 2013); the capacity of states to implement reforms (Guy, Shears, and Meckling, 2023; Meckling and Nahm, 2018a,b, 2022); energy market shocks (Aklin and Urpelainen, 2013, 2018); and the way reformers sequence policies

¹The concept of success is broad. Given the size of the needed transition, durability is a key component of success. When discussing future research directions, we disaggregate success for tractability.

²Our focus is on the politics of political reform, which is related to but distinct from efforts to explain how climate politics evolve in response to global warming (Colgan, Green, and Hale, 2021; Gazmararian and Milner, 2023).

(Meckling et al., 2015; Pahle et al., 2018).

There are also rich contextual accounts of the energy transition in industrialized democracies such as Germany (Laird and Stefes, 2009; Oei, Brauers, and Herpich, 2020), Australia (MacNeil and Beauman, 2022; Shields and Campbell, 2021), Norway (Normann, 2015), and Ireland (Banerjee and Schuitema, 2022). Yet, the energy transition must occur worldwide, so scholars need theories to explain why some decarbonization efforts are more successful than others. We cannot automatically port over theories from developed countries without first investigating whether they are applicable in developing nations.

Decarbonizing the Developing World

We argue that many energy transition challenges developed countries confront also exist in developing nations. Consider compensation for fossil fuel workers and communities. Research on the preferences of coal communities in the US and India reveals a similar set of concerns over jobs and local investment (Busby et al., 2021; Gaikwad, Genovese, and Tingley, 2022; Gazmararian, 2024). The politics of a “just” transition reoccurs in case studies of coal phase-outs and energy poverty in countries such as China, India, Turkey, Kenya, the Philippines, Colombia, Indonesia, and South Africa (Jakob and Steckel, 2022; Jermain et al., 2022; Mey et al., 2019; Urpelainen, Aklin, and Bayer, 2018).

Many focus on China and India, given the size of their economies, populations, and growth trajectories (Aklin, Cheng, and Urpelainen, 2021; Busby and Shidore, 2021; Gong, 2024; Tan et al., 2021). As in developed countries, transmission infrastructure for renewable energy is a significant issue for China (Davidson et al., 2016). Similar to strategies proposed for high-income countries (Bergquist, Mildemberger, and Stokes, 2020), India and China have used policy bundling strategies to pursue mitigation (Harrison and Kostka, 2014).

Indonesia has received less attention despite its population growth, energy access challenges, and diverse resource mix. Still, some scholars have examined coal transitions in In-

Indonesia in comparison to Vietnam and Colombia (Gao et al., 2021; Ordonez et al., 2021; Yuliani, 2017). Chelminski (2022) contrasts the effectiveness of finance for geothermal projects in Indonesia and the Philippines. Elliott and Setyowati (2020) highlight how inequality in Indonesia exacerbates just transition efforts.

Some large-N research has explored the determinants of successful decarbonization. Recent work considers variation in gasoline taxes and whether institutions and leadership explain cross-national differences (Mahdavi, Martinez-Alvarez, and Ross, 2022; Martinez-Alvarez et al., 2022a). Others explore mitigation policy adoption in response to natural disasters (Gazmararian and Milner, 2023; Peterson, 2021; Rowan, 2022).

Studies in developing countries also highlight the role of elites. For example, Bayulgen (2022) finds that elite competition and opportunistic behavior in Turkey are the most important for understanding why energy reforms succeed. Reviewing this book, Aclin (2023, p. 763) remarks, “...our models may fit Denmark and Germany quite well, but they do not necessarily travel very far beyond them.” This underscores the need for theories informed by experiences in developing countries.

Some research identifies commonalities across developed and developing countries. Several studies document community opposition to renewable energy projects in South America, a phenomenon also observed in the US and Europe. (Dunlap, 2019; Hochstetler and Tranjan, 2016; Vallejos-Romero et al., 2020).

While much theory-building has taken inspiration from industrialized democracies, there is a growing body of scholarship from developed contexts that points to consequential similarities and differences. Scholars need a unifying framework so clean energy transition outcomes can be compared systematically across countries.

Defining the Problem: Three Puzzles

The clean energy transition will require communities, workers, and firms to leap into an uncertain future. Communities and regions reliant on tax revenue and employment from industries that produce fossil fuels face economic disruption but also possibilities from green investments. Workers in carbon-intensive industries must contemplate the prospect of training and transitioning to new careers, possibly with less pay and fewer benefits. Firms producing and using fossil fuels face threats to their business models, while others are unsure of whether government commitments to support the green economy will last beyond a single election cycle. Developed and developing countries both face these challenges.

We orient our framework around three puzzles about the energy transition that credibility helps to illuminate.³ Why have communities, workers, and firms often resisted compensation that could otherwise diffuse opposition to the clean energy transition? Why do efforts to create allies by giving firms an economic stake in the green economy often struggle? Why do green workforce shortages persist despite the growing demand for skilled labor?

We argue that credibility helps to explain these puzzles. There are two relevant dimensions of credibility: commitment problems and local economic opportunity. First, the policies necessary for the transition to clean energy, such as compensation and subsidies, face commitment problems. Laws implemented today can be unwound in the future as political and economic circumstances change, altering leaders' incentives to keep their commitments (Brunner, Flachsland, and Marschinski, 2012; Kydland and Prescott, 1977; Ulph and Ulph, 2013). Credible commitment problems can arise from time inconsistency and incomplete information (Rodrik, 1989a).⁴

Second, communities must accept new green projects, and a common argument in their favor is the creation of local economic opportunities. Our second dimension of credibility

³See Samii (2023) on the value of problem-oriented research.

⁴While commitment problems are distinct from trust, the concept of trustworthiness is still relevant for understanding how people think about the government's promises (Anderson, 2017; Levi, 1998; Levi and Stoker, 2000).

is structural rather than strategic, capturing the extent to which investments create local economic benefits. Industries differ in terms of factors like their labor and capital intensity, skills required, and ease of taxation, all of which affect the benefits green projects create for communities. Relevant benefits include local job creation, the durability of these jobs, and tax revenue implications. Investments that make communities as good or better off than they were before provide for greater local economic opportunities and, thus, should be more likely to receive public support.

To the extent countries can make credible commitments or the economics of green industries are favorable to create local benefits, there should be more progress made in the clean energy transition. Next, we explore factors that differ across high-, middle-, and low-income countries that affect these strategic and structural dimensions of credibility.

Credibility as a Unifying Framework

We identify three ways countries vary in their ability to create credibility: institutions, state capacity, and international constraints. Within each, we describe how nations differ in their ability to make credible commitments and generate local economic opportunities. These factors are interrelated. Components of state capacity, for instance, can be thought of as institutions. We hold them apart for analytical clarity, but our proposed research agenda suggests that scholars should study how these factors act as complements or substitutes.

Analyses should also consider the preferences of political actors, which shape their incentives to support policies or create institutions that facilitate the energy transition. Indeed, a challenge reformers face is how to develop policies and institutions that are incentive compatible for so many actors. If reforms are not self-enforcing, the lack of a third party to ensure these policies will not be reversed creates significant barriers to the energy transition, giving rise to inefficient policies (Acemoglu, 2003; Fearon, 2011).

A starting point for analysis is to derive the policy preferences of political actors, which

could be done by assessing how climate policies affect their income, assets, and wealth. This may vary with how policies distribute costs across consumers and firms, the available technology, and exposure to the impacts of global warming (Sprinz and Vaahtoranta, 1994). Electoral institutions, business-state relations, and international constraints then moderate how these preferences translate into outcomes.

Institutions

The rules, procedures, and norms that constrain interactions—institutions—influence the strategies of energy transition proponents (North, 1990; Patashnik, 2000, 2014). Institutions matter most when interest groups or voters have conflicting preferences or there is uncertainty about the future. We identify four institutional features that vary across countries and affect the ability of governments to make credible commitments and create local economic opportunities: business-state relations, labor market arrangements, electoral rules, and the transparency of decision-making and economic information.⁵

Each of these institutional features raises unique aspects of credibility challenges that energy transition advocates confront. For example, business-state relations help with credible commitments to compensate fossil fuel workers and their communities, as well as to create certainty for firms making green investments. Institutions that affect the transparency of economic outcomes, such as reporting requirements for job creation, relate to local economic opportunity. Business-state relations and transparency are both institutional features, but they address distinct aspects of credibility and apply more to specific actors.

We focus on these four institutional features because they directly affect credibility, whereas other institutions could have only indirect effects. For example, veto points and federalism allow political actors to block policy changes, reinforcing the status quo, but they also could explain why reforms endure because they are harder to unwind (Bayulgen and Ladewig, 2017; Busby, 2008; Fiorino, 2018; Laird and Stefes, 2009; Vogel, 1993).

⁵Guy, Shears, and Meckling (2023) also describe climate governance institutions as they pertain to agenda setting, policy formulation, and policy implementation.

Business-State Relations

Interest group contestation shapes the climate policies adopted by governments and their implementation (Colgan, Green, and Hale, 2021; Genovese, 2019; Kennard, 2021; Meckling, 2011; Stokes, 2020; You, 2017). When interest groups have conflicting preferences over the clean energy transition, which is almost always the case, the nature of business-state relations can moderate whose voice has the most influence in the policymaking processes (Mildenberger, 2020).

In particular, the extent to which relations between interest groups and the government are pluralist or corporatist can affect the ability of the state to make credible commitments. Pluralist systems are those where many autonomous groups are vying for influence with a less direct role in the government's decision-making. By contrast, corporatist systems are those with more centralized associations representing business and labor interests, which play a more direct role in the policymaking process (Dahl, 1961; Martin and Swank, 2012).

Countries with more corporatist systems should be able to make more credible commitments for several reasons. First, when groups have long-term access to policymaking, they should be less worried about political reversals because they have greater leverage to block attempts to unwind reforms (Meckling et al., 2022). Second, corporatist institutions have more frequent interactions between the government and societal groups, which allows for the development of reputations and creates a shadow of the future, enhancing the prospects for cooperation (Axelrod, 1984).

Business-state relations are most relevant for compensation and investments. First, workers and firms in carbon-intensive industries that stand to lose from the green transition could acquiesce to a climate bargain if provided credible compensation (Gazmararian, 2024; Gazmararian and Tingley, 2023; Meckling et al., 2022; Meckling and Nahm, 2022). In countries with pluralist institutions, there could be greater concern about whether the government will uphold its compensatory bargain. This is especially the case for the most carbon-intensive firms that fear their bargaining power will evaporate in the future, which gives rise to hold-up

problems (Dixit and Londregan, 1995; Williamson, 1989).

Still, even with institutions facilitating commitments, workers may be concerned about whether the level of compensation provided will be sufficient. The history of labor transitions in response to technological shocks and globalization is replete with examples where governments simply do not provide enough compensation in the first place. Unions in the past have demonstrated awareness of this fact, and a recognition that the government only has incentives to provide just enough compensation to win their support, which may not be the necessary level of assistance to make workers whole (Trubowitz, 2024).

Corporatist institutions can also facilitate credible commitments to support green investments, which are another relevant aspect of the clean energy transition. When firms know they will have policymaking influence in the future, they should be less worried about political or economic circumstances changing and unwinding policies supporting green investments. Indeed, when there is uncertainty about government policy, clean energy investment lags (Blyth et al., 2007; Bosetti and Victor, 2011; Fabrizio, 2013; Noailly, Nowzohour, and Heuvel, 2022).

Credible commitments to support green investments could also spill over to affect communities' views about the benefits of clean energy projects. For example, if there is less risk of political pendulum swings, green projects could be seen as more likely to last. However, this does not mean that the benefits go to local workers and expand the tax base; corporatist institutions affect credibility not through local economic opportunity but through credible commitments of compensation and investment.

The concepts of corporatism and pluralism have been mainly applied to industrialized democracies in the climate politics literature (Finnegan, 2022b; Finnegan et al., 2023; Martin and Swank, 2012; Meckling et al., 2022; Meckling and Nahm, 2018b; Mildemberger, 2020). Still, there is some research showing how these institutions are relevant in developing countries (Hutchful, 2019; Nyang'oro, 2019; Pretorius, 1996). For example, Hochstetler and Kostka (2015) show how variation in business-state arrangements across China and Brazil

affected the pace of solar and wind development.

Labor Market Institutions

Countries differ in their labor market institutions (Thelen, 2004). Labor market institutions refer to the available government programs for skills and workforce development. Vocational training at community colleges is a prominent example. While there has been much focus on high-income industrialized countries, there exists substantial variation in labor market institutions across the developing world (Betcherman, 2012).

Labor market arrangements have implications not only for the technical feasibility of the energy transition but also for whether communities witness local job creation as a consequence of new green investments. There needs to be a trained local workforce if the green energy transition is to create local economic opportunities where community members receive jobs as opposed to outside crews of laborers.

Most countries' workforces lag behind in clean energy skills. Markets might eventually adjust if a shortage increases wages. Still, IRENA (2021, p. 3) concluded that the green transition requires more vocational training. One study of 32 countries, including developing nations, concluded that the energy transition: "cannot take place if the skills demanded by new jobs are not available in the labour market" (Strietska-Ilina and Mahmud, 2019, p. 25).

In places with more robust labor market institutions, it should be easier to create local economic opportunities in new green industries. A corollary is that there should be less local resistance in the places where there is a skilled labor pool that could benefit from the projects being built in their area.

The problems that labor market institutions have to address differ cross-nationally. In fossil fuel-rich industrialized countries, the "re-skilling" aspect of the energy transition looms large for workers in carbon-intensive industries (Gazmararian and Tingley, 2023; Lim, Aklin, and Frank, 2023; Tomer, Kane, and George, 2021). In developing countries with fossil fuel endowments, like India and Indonesia, similar institutions are also relevant.

Differences in demands for labor market institutions could emerge depending on the mobility of workers, which varies across and within countries. In the US, workers have exhibited remarkably low mobility after economic shocks (Autor, Dorn, and Hanson, 2013). Part of this may be due to place-based attachments (Gaikwad, Genovese, and Tingley, 2022; Gazmararian, 2023, 2024). These attachments also exist in developing countries, but other fossil fuel regions may have workers with greater mobility and different social arrangements. For example, Blankenship et al. (2022) find that distance to a new job was not a deterrent for citizens in a coal-producing region of India.

The risk of “brain drain” complicates the politics of labor market institutions in developing countries (Docquier and Rapoport, 2012). Training might equip people with skills to earn more money abroad. So, creating institutions that encourage workers to develop skills for green industries does not guarantee that a local supply of labor will emerge. The effectiveness of labor market institutions in developing contexts may also depend on incentives for workers to stay.

Elections

The rules governing whether and how states hold elections affect the ability of governments to make credible commitments. As with business-state relations, electoral institutions affect the first dimension of credibility: government commitments, which matter for the compensation of fossil fuel communities and the creation of a predictable investment climate for firms hoping to benefit from the transition.

Electoral institutions also shape the incentives of leaders to invest in long-term reforms (Jacobs, 2011, 2016). This matters for climate policy, which may engender electoral opposition by raising costs for consumers, creating job loss in fossil fuel areas, and disrupting communities with green projects (Colantone et al., 2023; Gazmararian, 2023; Stokes, 2016; Voeten, 2024). Even in places that could benefit, such as areas with new investment in electric vehicles, there has been backlash from voters (Gazmararian and Krashinsky, 2023).

These electoral risks may undermine the credibility of promises to compensate workers and firms harmed by the energy transition or to sustain incentives for green energy projects. A future leader, or even the very same politician behind a reform reform, may roll back the law to stay in office.

Scholars should study variations in electoral institutions to understand when commitments are more likely to be credible. For example, research suggests that institutional arrangements like proportional representation (PR) systems can affect the time horizons of leaders (Finnegan, 2020, 2022a,b; Lockwood, 2021).⁶ PR systems where multiple parties form coalition governments could make promises to groups represented by a party in the coalition more credible (Iversen and Soskice, 2006).

However, one should not overstate the insulating effect of electoral institutions. Leaders appear to have little ability to influence the level of fossil fuel taxation (Martinez-Alvarez et al., 2022b), so it is uncertain that even if leaders faced different electoral rules, they could implement more ambitious policies. This may be because leaders face obstacles from interest groups or do not support the clean energy transition. There are also instances when ruling parties could be more vulnerable to defeat in PR systems because small shifts in support can have consequences for coalitions, more so than in majoritarian systems when the dominant party has a solid advantage.

Beyond electoral rules, whether states hold elections in the first place affects the government's ability to make credible commitments. There is a long tradition of studying the linkage between democracy and environmental outcomes (Bättig and Bernauer, 2009; von Stein, 2020). Democracy could also encourage firms to make green investments by providing legal recourse if the government attempts to expropriate investments. Indeed, Aklin (2021) shows how democracies with strong property rights are more successful at developing off-grid renewable power.

Regime type also matters for the credibility of government commitments to sustain re-

⁶PR systems also matter for the creation of green parties, which could affect climate policymaking (Conevska and Mutlu, 2023; Harrison and Sundstrom, 2010).

forms. Democracies may make more credible commitments because leaders face accountability if they break promises (Fearon, 1994, 1997).⁷ What this implies for the energy transition is contingent on the preferences of citizens, which might be opposed to climate mitigation and also change in the future. Institutions that create opportunities for accountability or costly signals help explain when leaders' promises to sustain reforms last, thereby facilitating the energy transition.

Transparency

Laws that affect the transparency of political processes and economic outcomes will also influence governments' ability to make credible commitments and convince communities of local benefits from green investment.⁸ This idea builds on a principal-agent model where greater information about the agent's actions constrains its incentives to shirk responsibilities. The logic is that by shining a light on an organization, the threat of accountability can lead firms and leaders to behave in the public's interest (Alt, 2019; Heald, 2006; Holmstrom, 1979).

Transparency matters for the energy transition because of its consequences for perceptions of local economic opportunity. The green transition will require that companies make significant, new investments in uncertain industries. National and subnational governments often provide tax credits to attract businesses and claim credit for the ensuing jobs (Jensen and Malesky, 2018; Jensen and Thrall, 2021).

However, without transparency, it can be challenging to determine if companies deliver on their commitments. One study shows how transparency provisions in the US around the hiring of local workers enhanced perceptions that the green transition will create local economic opportunities (Gazmararian and Tingley, 2023, ch. 8). Still, accountability is not

⁷Features of autocratic systems also enable them to make credible commitments (Fang and Owen, 2011; Gandhi and Lust-Okar, 2009; Weiss, 2013).

⁸This paper focuses on transparency in the context of local economic development. Transparency could also complement other commitment devices by helping to define what constitutes a broken promise and identify infractions.

automatic even when there is sunlight, so enforcement is vital to understand (Alt, 2019; Bartik, 2019; Hood and Heald, 2006; Thrall and Jensen, 2022).

To the extent countries have institutions providing for more transparency, they may have more success in the clean energy transition. However, the effect could go both ways. If transparency reveals information that shows green projects not delivering local benefits, in the short run, it could dampen public support for these projects. Sometimes, the lack of transparency could mask the costs of policies (Arnold, 1990; Kono, 2006).

Informal Institutions

Informal institutions that provide public goods vary across and within countries (Helmke and Levitsky, 2004). Beyond top-down state regulations and decentralized market approaches, an insight from Ostrom (1990) is that groups can also govern common pool resources. To the extent there are local institutions that facilitate trust, reciprocity, and sanctioning, local political and non-governmental actors may be able to make progress on the clean energy transition. These ground-up approaches to renewable energy development hold great promise to build out lean energy and implement climate policies (Gazmararian and Tingley, 2024; Korppoo, Stensdal, and Korsnes, 2020).

Informal institutions could affect local economic opportunity by influencing whether new energy developments deliver local benefits. Consider electric power generation. There is a functional need for communities to have electricity. Communities and states can take different approaches to how they provide electric power, with varied implications for access to clean, affordable energy. Distributed renewable energy, for example, may provide one pathway for communities to receive more benefits from power generation. The ability of communities to invest in off-grid energy depends on informal institutions and formal institutions like electoral rules and property rights (Aklin, 2021). These intersections show how institutions do not operate in isolation.

Informal institutions may also be crucial in places with fledgling formal institutions. In

developing countries, informal institutions are often the base over which formal institutions rest. So, understanding variation in informal institutions may also speak to when formal institutions can help reduce credible commitment problems.

State Capacity

State capacity refers to the government's ability to implement policies, which depends on whether it can raise revenue and overcome opposition from societal groups (Alik-Lagrange et al., 2021; Berwick and Christia, 2018). Scholars of state capacity break it into dimensions, such as control over coercive power, bureaucratic capacity, and extractive capacity to raise revenue (Cingolani, 2013; Migdal, 1988). Some research in developing country contexts brings together state capacity and climate politics (Meckling and Nahm, 2018a, 2022).⁹

At the most basic level, bureaucracies must have funding to implement clean energy transition programs. This means resources to monitor program implementation to avoid interest group capture. This also entails funds for investments in infrastructure for electricity transmission and workforce development programs. Such resources are more abundant in high-income countries, but this is not always the case in middle-and low-income countries. Governments vary in their capacity to raise revenue (Levi, 1988), which serves as a constraint on the ability of governments to implement policies.

Property Rights

The ability of states to enforce property rights is one mechanism through which state capacity affects credibility. In developed countries, property rights can often be taken for granted, whereas in places with less secure property rights, firms could be reluctant to invest in green projects. Outright expropriation is rare today but occurs in subtle ways like unequal regulations or intellectual property theft. Green investments are not very distinct from other capital expenditures in countries without the ability to enforce property rights. Studies find

⁹Authoritarian regimes also vary in state capacity with implications for environmental outcomes (Ward, Cao, and Mukherjee, 2014).

that the perceived effectiveness of institutions to enforce property rights can lead firms to make more significant investments (Frye, 2004). Similar arguments extend to investments in innovation (Weiss, 1998).

Property rights concerns could loom larger for fossil fuels, given their point-source extraction. Still, many green energy projects involve specific assets that can give rise to hold-up problems (Williamson, 1989). With burgeoning needs for inputs like batteries, wind turbines, and solar panels that are located in developing countries, expropriation risks could exacerbate credibility concerns in these markets. Fossil fuel companies have decades of experience with protecting themselves from expropriation risks, having built up finances and connections with governments. This capacity might take time for renewable energy firms.

Bureaucratic Capacity

The ability of the government to implement goals despite opposition from societal groups is crucial for the institutionalization of reforms (Skocpol, 1985; Skocpol and Finegold, 1982).¹⁰ This may be less of an issue in developed than developing countries, where the former have clearly defined and capable bureaucracies that can implement laws even if there are fights over implementation (Stokes, 2020; You, 2017).

The challenges are greater in developing countries with fewer resources to build effective bureaucracies and some with legacies of clientelistic politics. Indeed, there is considerable variation in the establishment and resources of environmental ministries (Aklin and Urpelainen, 2014). Low bureaucratic capacity can create credible commitment problems because energy transition policies are less likely to be enforced. The lack of staff to roll out, monitor, and improve just transition policies, for example, would undermine expectations by communities, workers, and firms.

The lack of bureaucratic autonomy can be particularly salient (Cingolani, Thomsson, and De Crombrughe, 2015). Special interests and competing bureaucratic units can obstruct

¹⁰Miller (2000) argues that bureaucracies credibly reduce particularistic rent-seeking that can undermine public good provision.

policy implementation. In South Africa, a common complaint has been that administrative units responsible for renewable energy generation and transmission have little autonomy and are overseen by units with an interest in coal.¹¹ Evans (1995) argues that a combination of bureaucracies that are autonomous yet embedded in ways to connect with industrial sectors of the economy facilitates development. This embedded autonomy could, for example, bolster firm-level confidence—including international firms—in making investments in clean energy. Variation in bureaucratic autonomy across countries, as a facet of bureaucratic capacity, is a promising avenue of study.

International Constraints

International forces shape the ability of governments to make credible commitments and create local economic opportunities in three ways. First, countries vary in their reliance on international finance and global value chains to manufacture the components necessary for the clean energy transition, which affects their ability to fulfill promises to invest in green energy and create local benefits from projects. Second, domestic commitment problems in Global North countries can spill over to freeze funds needed to finance the energy transition in the Global South. In turn, this can undermine the ability of developing countries to make credible commitments to firms that they will be able to support the clean energy transition. Third, international regimes and organizations affect the resources available to developing countries and the information environment, which influences the credibility of commitments by altering expectations of accountability for broken promises.

Industrial Capabilities

Countries differ in their industrial capacity, so some nations are better able to create local economic opportunities in the green transition than others. Countries that lack industrial capabilities are more reliant on global markets for capital, technology, and labor. The supply

¹¹Author interviews, March 2023.

chains for producing components, like batteries for electric vehicles, are long, complex, and evolving. Some countries might have access to rare earth minerals but lack the capacity for refinement or final assembly. Others may need inputs but have experience with manufacturing large equipment like wind turbines. Industrial capacity varies with the government's ability to intervene, natural resource endowments, industrial legacies, and position in global value chains (Cingolani, 2013; Nahm, 2017).

Industrial capacity and resource endowments are already shaping the strategies of governments with respect to the clean energy transition (Lebdioui, 2022). Chile has announced plans to nationalize its lithium mining industry, which can be viewed as a move to create local economic opportunities. There are efforts like South Africa's "Localisation Support Fund" to secure the domestic manufacturing capability for the parts used in electricity transmission. These examples show how developing countries are working to benefit from the energy transition. Still, South Africa imported almost \$2.5 billion in solar panels during the first half of 2023, so local industrialization initiatives continue to face barriers (Gaylor Montmasson-Clair, 2023).

There is tension between strategies to create local benefits like nationalization and efforts to create a stable investment environment. Multinational corporations might hesitate to invest in a country if they anticipate nationalization. Yet, these MNCs possess the technology, experience, and capital needed for the projects called for by the energy transition. Solutions to one credibility challenge, local economic opportunity, could complicate the ability of the government to credibly commit to respect property rights.

International Climate Finance

The availability of international climate finance matters for the viability of green projects in developing countries (Landis and Bernauer, 2012). Without these resources, government policies to promote the energy transition may lack credibility because promised investments cannot be fulfilled due to capital constraints.

Global North countries lag behind their pledged climate finance commitments (Timperley, 2021). Domestic politics in donor countries contribute to this impasse. Leaders pledge climate finance, but domestic opponents hold back funding (Gaikwad, Genovese, and Tingley, 2023). The inability of donor countries to build domestic constituencies around climate finance undermines the credibility of their promises of aid. These commitment problems, in turn, spill over to undermine the credibility of energy transition policies in the developing world.

These commitment problems are not insurmountable. Countries could structure their climate aid in ways to enhance its credibility. For example, Gaikwad, Genovese, and Tingley (2023) show that climate finance that involves donor country firms working in partnership with recipient country actors could build public support in the donor country, potentially making commitments more credible.

Furthermore, some developed countries are beginning to adopt policies that penalize imports based on their carbon footprint. These trade policies, in turn, put pressure on developing countries to decarbonize and even adopt their own carbon pricing schemes. Critics of these policies note that developed countries have failed to deliver on climate finance promises and further argue that these policies unduly penalize developing countries that did not create the climate problem. Ingles, Sun, and Tingley (2024) considers the European Union's Carbon Border Adjustment Mechanism and how money raised from the policy (or funds sourced elsewhere) could facilitate technology transfer and build government capacity in developing countries to adopt their own carbon pricing systems. As with the discussion of the design of climate finance, the funding mechanism from border adjustment revenue could leverage similar arrangements involving partnerships between European firms and developing country partners.

International Organizations

International organizations also influence credibility through trade regimes, development banks, and information provision. First, the international trade regime is coming under pressure as countries pursue green industrial policies that subsidize domestic industries but potentially run afoul of global trade rules. Policies to create local benefits from the energy transition and lock-in support by expanding the green coalition could run up against foreign policy priorities in the trade realm. Policymakers designed these same trade agreements so that countries could credibly commit to open trade despite domestic opposition (Maggi and Rodriguez-Clare, 2007). Now, energy transition policies to enhance credibility at home clash with institutions to strengthen commitments abroad. How countries navigate these trade-offs will depend on factors such as their reliance on global trade.

International organizations, such as development banks, also play a role in financing the energy transition in developing countries. When these organizations make capital available, it could facilitate the ability of governments to credibly commit to providing a stable investment environment. For example, the World Bank has financed green energy projects in developing countries, while it has withdrawn aid for fossil fuel-intensive projects (O'Brien-Udry, 2023). Development banks still face enforcement challenges, and geopolitical relationships can undermine the credibility of threats of aid withdraw (Stone, 2012; Vreeland, 2003).

International organizations also provide information, which could promote transparency that enhances the credibility of government commitments to the energy transition (Florini, 2007; Grigorescu, 2003; Keohane, 1984). As described above, transparency makes it easier to monitor whether promises are being carried out, which allows for sanctions by the domestic public or international audiences when leaders break commitments. Variations over time in the availability and types of information provided by international organizations could moderate the ability of governments to commit credibly to carrying out green policies.

A Credibility-Centered Research Agenda

Institutions, state capacity, and international constraints open new lines of inquiry into the ability of governments to create credibility and its subsequent consequences for the success of the clean energy transition. Researchers could examine these factors independently. They could also explore potential complementarities and substitutabilities. For example, a country may have pluralist business-state relations but also strong bureaucratic capacity and property rights that offset challenges arising from fragmented, conflicting interest groups.

While we discuss success as an overall outcome, scholars will need to break the energy transition into its component parts to make analyses tractable. One relevant outcome is renewable energy deployment. For example, Aklin (2021) shows how governments that can better solve commitment problems have deployed more renewable energy. Extensions of this study could explore how other mechanisms for enhancing credibility could affect renewable energy development.

Different ways of operationalizing renewable energy deployment will also be valuable. The share of green electricity generated is one valuable metric. Another is the time it takes to permit and build new projects. Economic outcomes like the share of local jobs created from green projects would help to understand variation in local economic opportunity.

Researchers should also study how credibility affects the passage of climate laws. Here, too, there is value in further disaggregation. Business-state relations might be more important for compensation policies, while electoral institutions might be more salient for climate policies that affect consumers. Measuring policymaking is challenging, but there are existing sources scholars can leverage, like the Grantham Institute's Climate Change Laws of the World and newly collected data on gasoline taxes and subsidies (Ross, Hazlett, and Mahdavi, 2017). The research question at hand should inform the measurement decision.

Public opinion about the energy transition is also central (Egan and Mullin, 2017; Gazmararian, Mildemberger, and Tingley, 2023). Not only should researchers document citizen perceptions of benefits from green investments and the credibility of government commit-

ments, but they should also examine how these attitudes change. Attitude change in response to policy implementation could shape the durability of coalitions supporting the clean energy transition (Campbell, 2012). The role of public opinion differs across electoral contexts; in some places, elites are more relevant to analyze (Bayulgen, 2022).

Researchers should also examine causal mechanisms linking institutions, state capacity, and international constraints to the beliefs of leaders, firms, and citizens. Scholars should document how different political actors think about credibility and its effects on their behavior. This ground-up approach has been fruitfully employed to reveal obstacles and opportunities in the clean energy transition in the US (Cha et al., 2021; Gazmararian and Tingley, 2023; Raimi and Whitlock, 2023), and should be extended beyond the American setting.

Cross-national and sub-national variation in laws that enhance the transparency of green investments is another productive target of inquiry. Measurement will be a challenge because while there are measures of how transparent governments are with respect to the disclosure of economic data, we are unaware of similar indices for investment transparency. However, one could envision applying the same methodology in Hollyer, Rosendorff, and Vreeland (2014) to proxy for transparency regarding investments.

Future research could also study other economic transformations to glean insights into the clean energy transition. There are imperfect analogues from inside and outside of industrialized countries such as agricultural modernization or trade liberalization. Scholars should identify similarities and differences between these analogs and the clean energy transition.

Conclusion

The transition from a fossil fuel-based economy to a carbon-neutral one confronts formidable political barriers. The most carbon-intensive firms face an existential crisis if the clean energy transition accelerates, which leads them to hold up reforms so that they can profit from business as usual (Colgan, Green, and Hale, 2021). The costs of the clean energy transition

for firms, consumers, and communities could prevent ambitious policy in the first place due to anticipated electoral backlash and tempt leaders to renege on commitments. This political uncertainty can also lead firms to under-invest in clean energy.

We show how the concept of credibility can be extended to developing countries while unifying comparative and international relations climate politics scholarship. Our efforts build on the idea that credible commitment problems are central to the energy transition (Brunner, Flachsland, and Marschinski, 2012; Gazmararian and Tingley, 2023; Hovi, Sprinz, and Underdal, 2009), and political reforms in general (Jacobs and Matthews, 2017; Patashnik, 2014; Rodrik, 1989a). We provide an analytical framework that clarifies the incentives of leaders, firms, and citizens, which can help to understand opposition to the clean energy transition and identify strategies to build support.

Our framework invites new lines of research to explain cross-national and sub-national variation in clean energy transition success. Decarbonization is a complicated problem that cannot be reduced to credibility entirely, although it helps to clarify the issue. Our aim is not to displace other approaches to thinking about climate politics but to provide a foundation upon which to theorize additional factors that affect the clean energy transition beyond our focus on strategic and material constraints, such as ideas and norms.

This paper shows that leaders, firms, and citizens face considerable uncertainty in the clean energy transition, which raises the question about whether it is even possible to create policies that can compensate for the risks introduced by climate reforms. In other words, how large of a premium do reforms need to provide to political actors for them to support decarbonization, and are these options within the possibilities frontier? And even if such bargains are possible, would governments be willing to implement them in the first place? As we make clear, these constraints are even tighter in developing countries that lack state capacity, hence their need for international climate finance, which itself faces credible commitment problems. Still, some countries have made progress in fighting climate change, which suggests that such bargains are within the possibilities frontier. So, it is a valuable

exercise for scholars to consider the constraints reformers face and how they affect political outcomes.

Credibility should also be instructive for the politics of sustainability more broadly. The management of water resources, for example, confronts a related set of constraints. As in the energy transition, societal groups such as agricultural firms and citizens have conflicting preferences over who gets to use water. Agreements to share resources, including side payments, face credible commitment problems as new governments might renege on old agreements or environmental circumstances might change. Just as there is uncertainty about transitional assistance for coal communities, transfers to provide compensation to refrain from water consumption, like in the American Southwest, face similar problems.

By centering credibility, our framework brings together domestic and international explanations of climate politics. While there has been a debate over whether domestic distributive politics or international collective action is the more productive lens to understand the clean energy transition, we highlight how there are international concerns beyond free-riding, such as climate finance, that are salient in developing countries. To understand the opportunities and challenges that the Global North and South face in combating the climate crisis requires accounting for the interaction of credibility with domestic and international politics.

References

- Acemoglu, Daron (2003). “Why Not a Political Coase Theorem? Social Conflict, Commitment, and Politics.” *Journal of Comparative Economics* 31.4, 620–652.
- Aklin, Michaël (2021). “The Off-Grid Catch-22: Effective Institutions as a Prerequisite for the Global Deployment of Distributed Renewable Power.” *Energy Research & Social Science* 72, 101830.
- (2023). “Twisting in the Wind: The Politics of Tepid Transitions to Renewable Energy. By Oksan Bayulgen. Ann Arbor: University of Michigan Press, 2022.” *Perspectives on Politics* 21.2, 763–764.
- Aklin, Michaël, Chao-Yo Cheng, and Johannes Urpelainen (2021). “Inequality in Policy Implementation: Caste and Electrification in Rural India.” *Journal of Public Policy* 41.2, 331–359.
- Aklin, Michaël and Matto Mildemberger (2020). “Prisoners of the Wrong Dilemma: Why Distributive Conflict, Not Collective Action, Characterizes the Politics of Climate Change.” *Global Environmental Politics* 20.4, 4–27.
- Aklin, Michaël and Johannes Urpelainen (2013). “Political Competition, Path Dependence, and the Strategy of Sustainable Energy Transitions.” *American Journal of Political Science* 57.3, 643–658.
- (2014). “The Global Spread of Environmental Ministries: Domestic-International Interactions.” *International Studies Quarterly* 58.4, 764–780.
- (2018). *Renewables: The Politics of a Global Energy Transition*. MIT Press.
- Alik-Lagrange, Arthur, Sarah K Dreier, Milli Lake, and Alesha Porisky (2021). “Social protection and state-society relations in environments of low and uneven state capacity.” *Annual Review of Political Science* 24, 151–174.
- Alt, James (2019). “Twenty Years of Transparency Research.” *Public Sector Economics* 43.1, 5–13.
- Anderson, John E (2017). “Trust in government and willingness to pay taxes in transition countries.” *Comparative Economic Studies* 59.1, 1–22.
- Arnold, R. Douglas (1990). *The Logic of Congressional Action*. Yale University Press.
- Autor, David, David Dorn, and Gordon Hanson (2013). “The China Syndrome: Local Labor Market Effects of Import Competition in the United States.” *American Economic Review* 103.6, 2121–2168.

- Axelrod, Robert (1984). *The Evolution of Cooperation*. Basic Books.
- Banerjee, Aparajita and Geertje Schuitema (2022). “How Just Are Just Transition Plans? Perceptions of Decarbonisation and Low-Carbon Energy Transitions among Peat Workers in Ireland.” *Energy Research & Social Science* 88, 102616.
- Barrett, Scott (2003). *Environment and Statecraft: The Strategy of Environmental Treaty-Making*. Oxford University Press.
- Bartik, Timothy J. (2019). *Making Sense Of Incentives: Taming Business Incentives to Promote Prosperity*. Upjohn Institute.
- Bättig, Michèle and Thomas Bernauer (2009). “National Institutions and Global Public Goods: Are Democracies More Cooperative in Climate Change Policy?” *International Organization* 63.2, 281–308.
- Bayer, Patrick and Johannes Urpelainen (2016). “It Is All about Political Incentives: Democracy and the Renewable Feed-in Tariff.” *Journal of Politics* 78.2, 603–619.
- Bayulgen, Oksan (2022). *Twisting in the Wind: The Politics of Tepid Transitions to Renewable Energy*. University of Michigan Press.
- Bayulgen, Oksan and Jeffrey W Ladewig (2017). “Vetoing the Future: Political Constraints and Renewable Energy.” *Environmental Politics* 26.1, 49–70.
- Bergquist, Parrish, Matto Mildemberger, and Leah Stokes (2020). “Combining Climate, Economic, and Social Policy Builds Public Support for Climate Action in the US.” *Environmental Research Letters* 15.054019.
- Bernauer, Thomas (2013). “Climate Change Politics.” *Annual Review of Political Science* 16.1, 421–448.
- Berwick, Elissa and Fotini Christia (2018). “State capacity redux: Integrating classical and experimental contributions to an enduring debate.” *Annual Review of Political Science* 21, 71–91.
- Betcherman, Gordon (2012). “Labor market institutions: A review of the literature.” *World Bank Policy Research Working Paper* 6276.
- Blankenship, Brian, Michaël Aklin, Johannes Urpelainen, and Vagisha Nandan (2022). “Jobs for a Just Transition: Evidence on Coal Job Preferences from India.” *Energy Policy* 165, 112910.
- Blyth, William et al. (2007). “Investment Risks Under Uncertain Climate Change Policy.” *Energy Policy* 35.11, 5766–5773.

- Bosetti, Valentina and David G Victor (2011). “Politics and Economics of Second-Best Regulation of Greenhouse Gases: The Importance of Regulatory Credibility.” *The Energy Journal* 32.1.
- Breetz, Hanna, Matto Mildenerger, and Leah Stokes (2018). “The Political Logics of Clean Energy Transitions.” *Business and Politics* 20.4, 492–522.
- Brunner, Steffen, Christian Flachslan, and Robert Marschinski (2012). “Credible Commitment in Carbon Policy.” *Climate Policy* 12.2, 255–271.
- Busby, Joshua (2008). “Overcoming Political Barriers to Energy Reform.” In: *A Strategy for American Power*. Ed. by Sharon Burke et al.
- Busby, Joshua, Sarang Shidore, Johannes Urpelainan, and Morgan Bazilian (2021). “The case for US cooperation with India on a just transition away from coal.” *Brookings Institute*.
- Busby, Joshua W and Sarang Shidore (2021). “Solar federalism: What explains the variation in solar capacity additions by India’s states?” *Energy Research & Social Science* 71, 101815.
- Campbell, Andrea Louise (2012). “Policy Makes Mass Politics.” *Annual Review of Political Science* 15.1, 333–351.
- Cao, Xun, Helen V Milner, Aseem Prakash, and Hugh Ward (2014). “Research frontiers in comparative and international environmental politics: an introduction.” *Comparative Political Studies* 47.3, 291–308.
- Cha, J. Mijin, Vivian Price, Dimitris Stevis, Todd Vachon, and Maria Brescia-Weiler (2021). *Workers and Communities in Transition: A Report of the Just Transition Listening Project*. Just Transition Listening Project.
- Chelminski, Kathryn (2022). “Climate Finance Effectiveness: A Comparative Analysis of Geothermal Development in Indonesia and the Philippines.” *The Journal of Environment & Development* 31.2, 139–167.
- Cingolani, Luciana (2013). “The State of State Capacity: A Review of Concepts, Evidence and Measures.”
- Cingolani, Luciana, Kaj Thomsson, and Denis De Crombrughe (2015). “Minding Weber more than ever? The impacts of state capacity and bureaucratic autonomy on development goals.” *World Development* 72, 191–207.
- Colantone, Italo, Livio Di Lonardo, Yotam Margalit, and Marco Percoco (2023). “The Political Consequences of Green Policies: Evidence from Italy.” *American Political Science Review*, 1–19.

- Colgan, Jeff, Jessica Green, and Thomas Hale (2021). “Asset Revaluation and the Existential Politics of Climate Change.” *International Organization* 75.2, 586–610.
- Conevska, Aleksandra and Can Mutlu (2023). “Do Green Parties Matter for the Environment? How Single-issue Parties Shape Policy in Their Issue Area.” Unpublished Manuscript.
- Dahl, Robert A. (1961). *Who Governs? Democracy and Power in an American City*. New Haven, CT: Yale University Press.
- Davidson, Michael R, Da Zhang, Weiming Xiong, Xiliang Zhang, and Valerie J Karplus (2016). “Modelling the potential for wind energy integration on China’s coal-heavy electricity grid.” *Nature Energy* 1.7, 1–7.
- Davis, Steven J. et al. (2018). “Net-Zero Emissions Energy Systems.” *Science* 360.6396, eaas9793.
- Dixit, Avinash and John Londregan (1995). “Redistributive Politics and Economic Efficiency.” *American Political Science Review* 89.4, 856–866.
- Docquier, Frédéric and Hillel Rapoport (2012). “Globalization, brain drain, and development.” *Journal of Economic Literature* 50.3, 681–730.
- Dunlap, Alexander (2019). *Renewing destruction: Wind energy development, conflict and resistance in a Latin American context*. Rowman & Littlefield.
- Egan, Patrick and Megan Mullin (2017). “Climate Change: US Public Opinion.” *Annual Review of Political Science* 20.1, 209–227.
- Elliott, Lorraine and Abidah B Setyowati (2020). “Toward a socially just transition to low carbon development: The case of Indonesia.” *Asian Affairs* 51.4, 875–894.
- Evans, Peter B (1995). *Embedded autonomy: States and industrial transformation*. Princeton University Press.
- Fabrizio, Kira (2013). “The Effect of Regulatory Uncertainty on Investment: Evidence from Renewable Energy Generation.” *Journal of Law, Economics, & Organization* 29.4, 765–798.
- Fang, Songying and Erica Owen (2011). “International Institutions and Credible Commitment of Non-Democracies.” *The Review of International Organizations* 6.2, 141–162.
- Fearon, James (1994). “Domestic Political Audiences and the Escalation of International Disputes.” *American Political Science Review* 88.3, 577–592.

- Fearon, James (1997). “Signaling Foreign Policy Interests.” *Journal of Conflict Resolution* 41.1, 68–90.
- Fearon, James D. (2011). “Self-Enforcing Democracy.” *The Quarterly Journal of Economics* 126.4, 1661–1708.
- Finnegan, Jared (2020). “Varieties of De-Carbonization? Comparative Political Economy and Climate Change.” *Socio-Economic Review* 18.1, 257–294.
- (2022a). “Changing Prices in a Changing Climate: Electoral Competition and Fossil Fuel Taxation.” *Comparative Political Studies*, 00104140221141853.
- (2022b). “Institutions, Climate Change, and the Foundations of Long-Term Policymaking.” *Comparative Political Studies* 55.7, 1198–1235.
- Finnegan, Jared, Phillip Y Lipsky, Jonas Meckling, and Florence Metz (2023). “The Institutional Sources of Economic Transformation: Insulation and Compensation in the Politics of Energy Transitions.” Unpublished Manuscript.
- Fiorino, Daniel J (2018). *A good life on a finite earth: the political economy of green growth*. Oxford University Press.
- Florini, Ann, ed. (2007). *The Right to Know: Transparency for an Open World*. Columbia University Press.
- Frye, Timothy (2004). “Credible Commitment and Property Rights: Evidence from Russia.” *American Political Science Review* 98.3, 453–466.
- Gaikwad, Nikhar, Federica Genovese, and Dustin Tingley (2022). “Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World’s Two Largest Democracies.” *American Political Science Review* 116.4, 1165–1183.
- (2023). “Climate Action from Abroad: Assessing Mass Support for Cross-Border Climate Compensation.”
- Gandhi, Jennifer and Ellen Lust-Okar (2009). “Elections Under Authoritarianism.” *Annual Review of Political Science* 12.1, 403–422.
- Gao, Xue, Michael Davidson, Joshua Busby, Christine Shearer, and Joshua Eisenman (2021). “The Challenges of Coal Phaseout: Coal Plant Development and Foreign Finance in Indonesia and Vietnam.” *Global Environmental Politics* 21.4, 110–133.
- Garrett, Geoffrey (1993). “The Politics of Structural Change: Swedish Social Democracy and Thatcherism in Comparative Perspective.” *Comparative Political Studies* 25.4, 521–547.

- Gaylor Montmasson-Clair (2023). *Tweet*. URL: <https://bit.ly/3qHIIhq>.
- Gazmararian, Alexander F. (2023). “Sources of Partisan Change: Evidence from the Shale Gas Shock in American Coal Country.” SSRN.
- (2024). “Fossil Fuel Communities Support Climate Policy Coupled with Coupled with Just Transition Assistance.” *Energy Policy* 184, 113880.
- Gazmararian, Alexander F. and Lewis Krashinsky (2023). “Driving Labor Apart: Climate Policy Backlash in the American Auto Corridor.” Unpublished Manuscript.
- Gazmararian, Alexander F., Matto Mildenerger, and Dustin Tingley (2023). “Public Opinion Foundations of the Clean Energy Transition.” Unpublished Manuscript.
- Gazmararian, Alexander F. and Helen V. Milner (2023). “Political Cleavages and Changing Exposure to Global Warming.” Unpublished Manuscript.
- Gazmararian, Alexander F. and Dustin Tingley (2023). *Uncertain Futures: How to Unlock the Climate Impasse*. Cambridge University Press.
- (2024). “Reimagining Net Metering: A Polycentric Model for Equitable Solar Adoption in the United States.” *Energy Research & Social Science* 108, 103374.
- Genovese, Federica (2019). “Sectors, Pollution, and Trade: How Industrial Interests Shape Domestic Positions on Global Climate Agreements.” *International Studies Quarterly* 63.4, 819–836.
- Gong, Weila (2024). “Climate Leadership in Chinese Cities.” Unpublished Manuscript.
- Green, Fergus and Ajay Gambhir (2020). “Transitional Assistance Policies for Just, Equitable and Smooth Low-Carbon Transitions: Who, What and How?” *Climate Policy* 20.8, 902–921.
- Grigorescu, Alexandru (2003). “International Organizations and Government Transparency: Linking the International and Domestic Realms.” *International Studies Quarterly* 47.4, 643–667.
- Guy, Johnathan, Esther Shears, and Jonas Meckling (2023). “National Models of Climate Governance among Major Emitters.” *Nature Climate Change* 13.2 (2), 189–195.
- Harrison, Kathryn and Lisa Sundstrom (2007). “The Comparative Politics of Climate Change.” *Global Environmental Politics* 7.4, 1–18.
- (2010). “Introduction: Global Commons, Domestic Decisions.” In: *Global Commons, Domestic Decisions*. Ed. by Kathryn Harrison and Lisa Sundstrom. MIT Press, 1–22.

- Harrison, Tom and Genia Kostka (2014). “Balancing priorities, aligning interests: developing mitigation capacity in China and India.” *Comparative Political Studies* 47.3, 450–480.
- Heald, David (2006). “Varieties of Transparency.” In: *Transparency: The key to better governance?* Ed. by Christopher Hood and David Heald. Oxford University Press, 25–46.
- Helmke, Gretchen and Steven Levitsky (2004). “Informal institutions and comparative politics: A research agenda.” *Perspectives on politics* 2.4, 725–740.
- Hochstetler, Kathryn (2020). *Political Economies of Energy Transition: Wind and Solar Power in Brazil and South Africa*. Cambridge University Press.
- Hochstetler, Kathryn and Genia Kostka (2015). “Wind and Solar Power in Brazil and China: Interests, State–Business Relations, and Policy Outcomes.” *Global Environmental Politics* 15.3, 74–94.
- Hochstetler, Kathryn and J. Ricardo Tranjan (2016). “Environment and Consultation in the Brazilian Democratic Developmental State.” *Comparative Politics* 48.4, 497–516.
- Hollyer, James, B. Peter Rosendorff, and James Raymond Vreeland (2014). “Measuring Transparency.” *Political Analysis* 22.4, 413–434.
- Holmstrom, Bengt (1979). “Moral Hazard and Observability.” *The Bell Journal of Economics* 10.1, 74.
- Hood, Christopher and David Heald (2006). *Transparency: The Key to Better Governance?* British Academy.
- Hovi, Jon, Detlef Sprinz, and Arild Underdal (2009). “Implementing Long-Term Climate Policy: Time Inconsistency, Domestic Politics, International Anarchy.” *Global Environmental Politics* 9.3, 20–39.
- Hutchful, Eboe (2019). “The limits of corporatism as a concept and model.” In: *Corporatism In Africa*. Routledge, 17–44.
- Ingles, Tayla, Rochelle Sun, and Dustin Tingley (2024). “Border Adjustment Mechanisms, Domestic Institutional Capacity, and Cross-border Climate Transition Support.” *working paper*.
- IPCC (2022). “Summary for Policymakers.” In: *Climate Change 2022: Mitigation of Climate Change*. Cambridge University Press.
- IRENA (2021). *Renewable Energy and Jobs: Annual Review 2021*. International Renewable Energy Agency.

- Iversen, Torben and David Soskice (2006). “Electoral Institutions and the Politics of Coalitions: Why Some Democracies Redistribute More Than Others.” *American Political Science Review* 100.2, 165–181.
- Jacobs, Alan (2011). *Governing for the Long Term: Democracy and the Politics of Investment*. Cambridge University Press.
- (2016). “Policy Making for the Long Term in Advanced Democracies.” *Annual Review of Political Science* 19.1, 433–454.
- Jacobs, Alan and J. Scott Matthews (2017). “Policy Attitudes in Institutional Context: Rules, Uncertainty, and the Mass Politics of Public Investment.” *American Journal of Political Science* 61.1, 194–207.
- Jakob, Michael and Jan C Steckel (2022). *The Political Economy of Coal: Obstacles to Clean Energy Transitions*. Routledge.
- Jensen, Nathan M. and Edmund Malesky (2018). *Incentives to Pander: How Politicians Use Corporate Welfare for Political Gain*. Cambridge University Press.
- Jensen, Nathan M. and Calvin Thrall (2021). “Who’s Afraid of Sunlight? Explaining Opposition to Transparency in Economic Development.” *Business and Politics* 23.4, 474–491.
- Jermain, David O, Z Justin Ren, Scott B Foster, Raymond C Pilcher, and Eugene J Berardi (2022). “Coal in the 21st century: Integrating policy with practice for just transitions.” *The Electricity Journal* 35.10, 107220.
- Kennard, Amanda (2021). “My Brother’s Keeper: Other-regarding Preferences and Concern for Global Climate Change.” *Review of International Organizations* 16.2, 345–376.
- Kennard, Amanda and Keith Schnakenberg (2023). “Global Climate Policy and Collective Action: A Comment.” *Global Environmental Politics* 23.1.
- Keohane, Robert and David Victor (2016). “Cooperation and Discord in Global Climate Policy.” *Nature Climate Change* 6.6 (6), 570–575.
- Keohane, Robert O. (1984). *After Hegemony*. Princeton University Press.
- Kono, Daniel (2020). “Compensating for the Climate: Unemployment Insurance and Climate Change Votes.” *Political Studies* 68.1, 167–186.
- Kono, Daniel Y. (2006). “Optimal Obfuscation: Democracy and Trade Policy Transparency.” *American Political Science Review* 100.3, 369–384.

- Korppoo, Anna, Iselin Stensdal, and Marius Korsnes (2020). *Informal institutions in policy implementation: Comparing low carbon policies in China and Russia*. Edward Elgar Publishing.
- Kydland, Finn and Edward Prescott (1977). “Rules Rather than Discretion: The Inconsistency of Optimal Plans.” *Journal of Political Economy* 85.3, 473–491.
- Laird, Frank and Christoph Stefes (2009). “The Diverging paths of German and United States Policies for Renewable Energy.” *Energy Policy* 37.7, 2619–2629.
- Landis, Florian and Thomas Bernauer (2012). “Transfer Payments in Global Climate Policy.” *Nature Climate Change* 2.8 (8), 628–633.
- Lebdoui, Amir (2022). *How Global Decarbonisation Can Turn into an Industrial Development Opportunity in Africa*. APRI. URL: <https://bit.ly/3MwL2ji> (visited on 08/19/2023).
- Levi, Margaret (1988). *Of rule and revenue*. Univ of California Press.
- (1998). “A State of Trust.” In: *Trust and governance*. Ed. by Valerie Braithwaite and Margaret Levi. Russell Sage Foundation New York, 77–101.
- Levi, Margaret and Laura Stoker (2000). “Political Trust and Trustworthiness.” *Annual Review of Political Science* 3.1, 475–507.
- Lim, Junghyun, Michaël Aklin, and Morgan R. Frank (2023). “Location Is a Major Barrier for Transferring US Fossil Fuel Employment to Green Jobs.” *Nature Communications* 14.1 (1), 5711.
- Lipsy, Phillip Y. and Lee Schipper (2013). “Energy Efficiency in the Japanese Transport Sector.” *Energy Policy* 56, 248–258.
- Lockwood, Matthew (2021). “Routes to Credible Climate Commitment: The UK and Denmark Compared.” *Climate Policy* 21.9, 1234–1247.
- MacNeil, Robert (2016). “Death and Environmental Taxes: Why Market Environmentalism Fails in Liberal Market Economies.” *Global Environmental Politics* 16.1, 21–37.
- MacNeil, Robert and Madeleine Beaman (2022). “Understanding Resistance to Just Transition Ideas in Australian Coal Communities.” *Environmental Innovation and Societal Transitions* 43, 118–126.
- Maggi, Giovanni and Andres Rodriguez-Clare (2007). “A Political-Economy Theory of Trade Agreements.” *American Economic Review* 97.4, 1374–1406.

- Mahdavi, Paasha, Cesar B Martinez-Alvarez, and Michael L Ross (2022). “Why do governments tax or subsidize fossil fuels?” *The Journal of Politics* 84.4, 2123–2139.
- Martin, Cathie Jo and Duane Swank (2012). *The Political Construction of Business Interests: Coordination, Growth, and Equality*. Cambridge University Press.
- Martinez-Alvarez, Cesar B, Chad Hazlett, Paasha Mahdavi, and Michael L Ross (2022a). “Political leadership has limited impact on fossil fuel taxes and subsidies.” *Proceedings of the National Academy of Sciences* 119.47, e2208024119.
- Martinez-Alvarez, Cesar B., Chad Hazlett, Paasha Mahdavi, and Michael Ross (2022b). “Political Leadership Has Limited Impact on Fossil Fuel Taxes and Subsidies.” *Proceedings of the National Academy of Sciences* 119.47, e2208024119.
- Meckling, Jonas (2011). *Carbon Coalitions: Business, Climate Politics, and the Rise of Emissions Trading*. MIT Press.
- Meckling, Jonas, Nina Kelsey, Eric Biber, and John Zysman (2015). “Winning Coalitions for Climate Policy.” *Science* 349.6253, 1170–1171.
- Meckling, Jonas, Phillip Y. Lipsky, Jared J. Finnegan, and Florence Metz (2022). “Why Nations Lead or Lag in Energy Transitions.” *Science* 378.6615, 31–33.
- Meckling, Jonas and Jonas Nahm (2018a). “The Power of Process: State Capacity and Climate Policy.” *Governance* 31.4, 741–757.
- (2018b). “When Do States Disrupt Industries? Electric Cars and the Politics of Innovation.” *Review of International Political Economy* 25.4, 505–529.
- (2022). “Strategic State Capacity: How States Counter Opposition to Climate Policy.” *Comparative Political Studies* 55.3, 493–523.
- Mey, Franziska et al. (2019). “Case Studies from Transition Processes in Coal Dependent Communities.” *Greenpeace*.
- Migdal, Joel S (1988). *Strong societies and weak states: state-society relations and state capabilities in the Third World*. Princeton University Press.
- Mildenberger, Matto (2020). *Carbon Captured: How Business and Labor Control Climate Politics*. MIT Press.
- Miller, Gary (2000). “Above politics: Credible commitment and efficiency in the design of public agencies.” *Journal of Public Administration Research and Theory* 10.2, 289–328.

- Milner, Helen V. (1997). *Interests, Institutions, and Information: Domestic Politics and International Relations*. Princeton University Press.
- Nahm, Jonas (2017). “Renewable Futures and Industrial Legacies: Wind and Solar Sectors in China, Germany, and the United States.” *Business and Politics* 19.1, 68–106.
- Noailly, Joelle, Laura Nowzohour, and Matthias van den Heuvel (2022). *Does Environmental Policy Uncertainty Hinder Investments Towards a Low-Carbon Economy?* w30361. NBER.
- Nordhaus, William (2015). “Climate Clubs: Overcoming Free-Riding in International Climate Policy.” *American Economic Review* 105.4, 1339–1370.
- Normann, Håkon E (2015). “The role of politics in sustainable transitions: The rise and decline of offshore wind in Norway.” *Environmental Innovation and Societal Transitions* 15, 180–193.
- North, Douglass (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Nyang’oro, Julius E (2019). *Corporatism in Africa: comparative analysis and practice*. Routledge.
- O’Brien-Udry, Cleo (2023). “Aid Withdrawal: Theory and Evidence from International Climate Politics.” Unpublished Manuscript.
- Oei, Pao-Yu, Hanna Brauers, and Philipp Herpich (2020). “Lessons from Germany’s Hard Coal Mining Phase-Out: Policies and Transition from 1950 to 2018.” *Climate Policy* 20.8, 963–979.
- Ordonez, Jose Antonio, Michael Jakob, Jan Christoph Steckel, and Anna Fünfgeld (2021). “Coal, Power and Coal-Powered Politics in Indonesia.” *Environmental Science & Policy* 123, 44–57.
- Ostrom, Elinor (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.
- (2009). *A Polycentric Approach for Coping with Climate Change*. The World Bank.
- Pahle, Michael et al. (2018). “Sequencing to Ratchet up Climate Policy Stringency.” *Nature Climate Change* 8.10, 861–867.
- Patashnik, Eric (2000). *Putting Trust in the US budget: Federal Trust Funds and the Politics of Commitment*. Cambridge University Press.

- Patashnik, Eric (2014). *Reforms at Risk*. Princeton University Press.
- Peterson, Lauri (2021). “Silver Lining to Extreme Weather Events? Democracy and Climate Change Mitigation.” *Global Environmental Politics* 21.1, 23–53.
- Pretorius, Louwrens (1996). “Relations between state, capital and labour in South Africa: towards corporatism?” *Journal of Theoretical Politics* 8.2, 255–281.
- Putnam, Robert D (1988). “Diplomacy and Domestic Politics: The Logic of Two-Level Games.” *International Organization* 42.3, 427–460.
- Raimi, Daniel and Zachary Whitlock (2023). *Can Federal Efforts Help Build Economic Resilience in New Mexico’s Oil and Gas Communities?* Resources for the Future.
- Rodrik, Dani (1989a). “Promises, Promises: Credible Policy Reform Via Signalling.” *The Economic Journal* 99.397, 756–772.
- (1989b). “Promises, Promises: Credible Policy Reform via Signalling.” *The Economic Journal* 99.397, 756–772.
- Ross, Michael (2024). “The New Political Economy of Climate Change.” Unpublished Manuscript.
- Ross, Michael, Chad Hazlett, and Paasha Mahdavi (2017). “Global Progress and Backsliding on Gasoline Taxes and Subsidies.” *Nature Energy* 2.1, 16201.
- Rowan, Sam (2022). “Extreme Weather and Climate Policy.” *Environmental Politics* 0.0, 1–24.
- Samii, Cyrus (2023). “Methodologies for “Political Science as Problem Solving”.” Unpublished Manuscript. New York University.
- Shields, Tony and Rod Campbell (2021). *We Can Work It Out: Could Germany’s Multi-Stakeholder Approach Help Move Australia Out of Coal-Fired Power?* The Australia Institute.
- Skocpol, Theda (1985). “Bringing the State Back In: Strategies of Analysis in Current Research.” In: *Bringing the State Back In*. Ed. by Peter Evans, Dietrich Rueschemeyer, and Theda Skocpol. Cambridge University Press, 3–38.
- Skocpol, Theda and Kenneth Finegold (1982). “State Capacity and Economic Intervention in the Early New Deal.” *Political Science Quarterly* 97.2, 255–278.
- Sprinz, Detlef and Tapani Vahtoranta (1994). “The Interest-Based Explanation of International Environmental Policy.” *International Organization* 48.1, 77–105.

- Stokes, Leah (2016). “Electoral Backlash against Climate Policy: A Natural Experiment on Retrospective Voting and Local Resistance to Public Policy.” *American Journal of Political Science* 60.4, 958–974.
- (2020). *Short Circuiting Policy: Interest Groups and the Battle Over Clean Energy and Climate Policy in the American States*. Oxford University Press.
- Stone, Randall (2012). *Lending Credibility: The International Monetary Fund and the Post-Communist Transition*. Princeton University Press.
- Strietska-Ilina, O and Tahmina Mahmud (2019). *Skills for a greener future: a global view*.
- Stroud, Dean, Peter Fairbrother, Claire Evans, and Joanne Blake (2014). “Skill Development in the Transition to a ‘Green Economy’: A ‘Varieties of Capitalism’ Analysis.” *The Economic and Labour Relations Review* 25.1, 10–27.
- Tan, Hao, Elizabeth Thurbon, Sung-Young Kim, and John A Mathews (2021). “Overcoming incumbent resistance to the clean energy shift: How local governments act as change agents in coal power station closures in China.” *Energy Policy* 149, 112058.
- Thelen, Kathleen Ann (2004). *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan*. Cambridge University Press.
- Thrall, Calvin and Nathan M. Jensen (2022). “Does Transparency Improve Public Policy? Evidence from a Tax Incentive Transparency Initiative.” Unpublished Manuscript.
- Timperley, Jocelyn (2021). “The Broken \$100-Billion Promise of Climate Finance — and How to Fix It.” *Nature* 598.7881, 400–402.
- Tomer, Adie, Joseph Kane, and Caroline George (2021). *How Renewable Energy Jobs Can Uplift Fossil Fuel Communities and Remake Climate Politics*. Brookings.
- Trubowitz, Alexander (2024). “Contesting Compensation: Union Responses to Technological Change in Britain and West Germany.” Unpublished Manuscript.
- Ulph, Alistair and David Ulph (2013). “Optimal Climate Change Policies when Governments Cannot Commit.” *Environmental and Resource Economics* 56.2, 161–176.
- Unruh, Gregory C (2000). “Understanding Carbon Lock-In.” *Energy Policy* 28.12, 817–830.
- Urpelainen, Johannes, Michaël Aklin, and Patrick Bayer (2018). *Escaping the Energy Poverty Trap: When and How Governments Power the Lives of the Poor*.

- Vallejos-Romero, Arturo, Minerva Cordoves-Sánchez, Pedro Jacobi, and Antonio Aledo (2020). “In transitions we trust? Understanding citizen, business, and public sector opposition to wind energy and hydropower in Chile.” *Energy Research & Social Science* 67, 101508.
- Victor, David (2011). *Global Warming Gridlock*. Cambridge University Press.
- Voeten, Erik (2024). “The Energy Transition and Support for the Radical Right: Evidence from the Netherlands.” *Comparative Political Studies*.
- Vogel, David (1993). “Representing Diffuse Interests in Environmental Policymaking.” In: *Do Institutions Matter?* Ed. by R. Kent Weaver and Bert Rockman. Brookings Institution Press, 237–271.
- Von Stein, Jana (2020). “Democracy, Autocracy, and Everything in Between: How Domestic Institutions Affect Environmental Protection.” *British Journal of Political Science*, 1–19.
- Vreeland, James Raymond (2003). *The IMF and Economic Development*. Cambridge University Press.
- Ward, Hugh, Xun Cao, and Bumba Mukherjee (2014). “State Capacity and the Environmental Investment Gap in Authoritarian States.” *Comparative Political Studies* 47.3, 309–343.
- Weiss, Jessica Chen (2013). “Authoritarian Signaling, Mass Audiences, and Nationalist Protest in China.” *International Organization* 67.1, 1–35.
- Weiss, Linda (1998). *The myth of the powerless state*. Cornell University Press.
- Williamson, Oliver (1989). “Transaction Cost Economics.” *Handbook of Industrial Organization* 1, 135–182.
- You, Hye Young (2017). “Ex Post Lobbying.” *Journal of Politics* 79.4, 1162–1176.
- Yuliani, Dewi (2017). “Is Feed-in-Tariff Policy Effective for Increasing Deployment of Renewable Energy in Indonesia?” In: *The Political Economy of Clean Energy Transitions*. Ed. by Douglas Arent, Channing Arndt, Mackay Miller, Finn Tarp, and Owen Zinaman. Oxford University Press.