‘Bringing Back Golden Bangladesh’: Decentered Regulation and the Political Economy of Water Pollution

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Abstract

This thesis examines the relationships between state, market, and society in shaping the political economy of water pollution regulation in Bangladesh, as well as the consequences of these relationships for the distribution of regulatory power. In Bangladesh, where severe industrial water pollution is a feature of daily life for millions, actors navigate intersecting processes that have become institutionalized over the past five decades since independence. As a country striving toward middle-income status after an era of instability, Bangladesh navigates a surge in its ready-made garments' industry; the rising influence of transnational private governance programs; civil society discontentment; and judicial authorization of public interest litigation. The thesis extends Julia Black's decentered approach (2001) to analysis in a way that is underexplored in the political economy literature. This thesis uses a qualitative methodology drawing on 140 semi-structured interviews using NVivo to organize and code; review of legal and policy documents; and statistical analysis of water pollution penalties from the Department of Environment.

I argue that regulatory power relations are distributed, contested, and pursued by contending actors and institutions, which are often examined in silos in the prevailing literature. I argue for conceiving of non-compliance as normalized, resulting from the Department of Environment's retreatist approach and compelling antiregulatory state-market linkages. I further develop the concept of enforcement styles by considering varying levels of formalism, coercion, autonomy, and capacity dimensions through fines for polluters, and show penalties to be a contested arena for resistance, negotiation, and discretion. Further, I extend a political-strategic framework by applying the concepts of autonomy, fragmentation, and the public-private distinction to a historical analysis of how Bangladesh's national government, private sector, and transnational private regulatory interests' interface. Taken together, this intertwined decentered regulation-political economy approach positions regulation as dynamic and embedded in social relations, contributing to new understandings of the mechanisms by which regulatory power is exerted.

"If I have seen further, it is by standing on the shoulders of giants."
- Sir Isaac Newton

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"To believe in progress does not mean
believing that any progress has yet been made.
That would be no real act of belief."
- Franz Kafka

Chapter 1 – Introduction

1.1 Framing the research

Bengali script emblazoned in white paint on a bridge traversing the Buriganga River, a major artery of the waterways forming the historic lifeblood of the Bangladeshi economy, translates to: 'If the river lives, the country will live–and bring back golden Bangladesh.'[1] Yet, this bridge crosses one of the most polluted rivers in a country now synonymous with the environmental devastation accompanying rapid industrial development in the global South.[2,3] The concept of 'golden Bangladesh' is deeply ingrained in national consciousness; the country's anthem, *Amar Sonar Bangla,* or 'our golden Bangladesh', was adopted during the war for liberation from Pakistan in 1971.[4] Bangladesh is often referred to as the land of rivers,[5] its physical and cultural geography characterized by hundreds of waterways and the seasonal rhythms of monsoon cycles. Riverbank dwellings are home to millions of people who share terrain with thousands of water-intensive industrial units that discharge hazardous chemicals into waterways with innumerable consequences and little repercussion. While good water quality is widely recognized as essential to human health, thriving ecosystems, and economic development, the pollution resulting from production practices in global value chains concentrated in the global South is considered an expected 'externality' (Carrascal Incera et al. 2017). Government, civil society, and private sector efforts to address extensive pollution in Bangladesh have yielded limited impact, with stretches of rivers declared 'biologically dead' by the Department of Environment in 2010 (Uddin & Jeong 2021).[6]

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[1] The precise origins of who painted the slogan on the bridge and for what reason are unknown. Bangladeshi colleagues suggested that the phrase is a government slogan, but this could not be confirmed. See first photo in Appendix III.

[2] While recognizing that such terms can be limiting, I refer to 'developing countries', 'industrializing countries' or 'the global South' in my thesis to refer to low-income or rising middle-income, non-Organization for Economic Co-operation and Development (OECD) member countries. By contrast, most OECD members are high-income countries with a high Human Development Index; these nations are regarded as developed and industrialized. I acknowledge that the tremendous social, cultural, political, economic, and institutional diversity among such countries is often homogenized using these terms. I use these words for brevity; taking up the problematization of these terms is beyond the scope of this work.

[3] On 'most polluted river', see Ahmad et al. (2010); Hasan et al. (2019); Rahman & Al Bakri (2010); Sarkar et al. (2015); Sayed Ahammed et al. (2016); and World Bank WRG (2015).

[4] Drawn from Amar Shonar Bangla ('My Golden Bengal') by Rabindranath Tagore, a noted Bengali poet. 'Golden' is thought to refer to 'treasured' in some readings of the poem.

[5] Among other prominent references, 'land of rivers' is the Bangladesh Tourism Board's slogan (2022).

[6] See also Ali Khan (2010).

Chapter 1

Three concerns chiefly animate this research. First, Bangladesh does not stand alone in the struggle to reconcile economic development, environmental protection, and societal welfare. At once exceptional, heralded as a 'paradox', 'surprise', and 'miracle' (Blair 2020; Asadullah & Chakravorty 2019; ESID 2017)[7] in its quest for development, Bangladesh is also emblematic of commonplace struggles to balance the enticing promises of economic liberalization with environmental health. Fifty years ago, a brutal war for independence crushed the nascent economy; overwhelming poverty inspired the memorable, if misquoted, derogatory label 'basket case.'[8] Now, as a parliamentary democracy of 164 million people, a larger population than either Japan or Mexico, Bangladesh is an antihero in the annals of development lore. Since achieving independence from Pakistan, the young country has defied expectations by attaining stunning export-led economic growth and improvements in quality of life for millions of people, increasing per capita income fourfold, reducing poverty by half, and achieving many precursors to the Sustainable Development Goals, known as the Millennium Development Goals (Hassan & Raihan 2018, 96).

However, severe environmental degradation and related human health consequences threaten to overshadow these achievements despite national laws regulating environmental pollution pre-dating independence, increasing civil society demands for redress, and proliferating private-sector environmental programs targeting factory behavior. Therefore, the second concern of this thesis is understanding the political economic underpinnings of polluted rivers, particularly due to the consequences of pollution for vulnerable people (Hoque et al. 2021). This research is driven by the tension exemplified by aspirations to 'bring back golden Bangladesh' and the normalization of pollution and regulatory non-compliance in light of globalization's influence on power relations between national governments, civil society groups, and private sector actors (Graz & Nölke 2012).

This thesis puts forth decentered regulation, the concept that the content and function of regulation is informed and influenced by non-state actors, as the basis of its analytical framework. In literatures foregrounding a state-led approach to regulation, interconnected state, market, and society relationships are not well recognized (Black 2001; Lange & Haines 2015). In contrast, from the decentered perspective, regulation is defined as "the sustained and focused attempt to alter the behavior of others according to defined standards or purposes with the intention of

[7] Others (Hussain 2012) have noted that fewer scholars from *within* Bangladesh use the language of 'miracle' to describe the country.

[8] Foreign Relations of the United States, 1969–1976 Volume XI, South Asia Crisis, 1971, Document 235 (Minutes of Washington Special Actions Group Meeting 1). National Archives, Nixon Presidential Materials, NSC Files, NSC Institutional Files (H-Files), Box H–115, WSAG Minutes, Originals, 1971. The meeting was held in the White House Situation Room (1971).

producing broadly identified outcome(s), which may involve mechanisms of standard setting, information gathering, and behavior modification" (Black 2002, 20). A decentered approach addresses dichotomies in regulation scholarship that may be framed as occurring between "state and market, citizens and consumers, social movements and transnational corporations" (Lange & Haines 2015, 3). The decentered framing acknowledges that the state is acted upon as it acts on others; here, the state is not the center of analysis, and is not located at the top of a conceptual hierarchy (Black 2002, 20). From this standpoint, I examine the variable roles and capacities of state, market, and society in pursuing, adopting, resisting, and influencing the direction of environmental regulation.

The third concern taken up in this thesis is the limited representation of the global South in the literature on regulation and corresponding inattentiveness to the role of transnational private governance in shaping the political economy of environmental regulation. Current approaches risk generalizing from a base narrowly representative of industrialized economies or reliant on notions of Weberian bureaucracies (Weber 1921/2013). These approaches have also influenced a default view of state-led regulation and view of water pollution as a temporary externality.[9] Rather than aligning with a single body of regulatory theory, the decentered framework and political economic analysis developed in this thesis develops a view that there are many sources of influence in regulatory processes (Kagan 1994). Broad agreement in the literature that "politics matters" (Haines 2011, 229; Short 2019) is complemented by growing discussion pointing to how political and economic power interfaces with enforcement and compliance patterns (Marques & Eberlein 2021; Perez 2011; Vogel 2008). This thesis is interested in advancing a critical perspective that speaks to the ways that political economic conditions create contingencies interacting "with other drivers of regulatory outcomes" (Short 2019, 18; Green 2018). From the vantage point of Dhaka, where widespread water pollution is a decades-long feature of everyday life for millions of people, I examine the emergence of decentered regulation in water-intensive export-oriented industries–specifically garments and leather tanneries–with significant political and economic influence. This research is animated by an interest in advancing political economic analysis by examining how regulatory power is distributed within the structural-institutional context informing the interactions of state, market, and society spheres.

[9] Short (2019, 8) notes this as a tendency to "take political conditions" such as "autonomous bureaucracies for granted."

1.1.1 Seeing environmental regulation from the global South

Pollution generated from industries linked to global supply chains is concentrated in producer countries of the global South (Kozluk & Timiliotis 2016).[10] Yet the interface of Southern institutions and actors with analogues in the global North is rarely discussed in relation to environmental regulation, with the assumption that Southern governments are passive and do not have the capacity to support or block environmental initiatives (Peña 2014; Marques & Eberlein 2021). Influential approaches seeking to explain this circumstance are based on a range of theories, from political control of agents by principals (Huber & McCarty 2004) to capture of regulatory agencies by producers (Bernstein 1955; Peltzman 1989). But many of these accounts fall short of examining the underpinnings of "*chronic* shortfalls" in environmental regulation; to do so requires taking stock of the "structures of social relations in a political economy" (Yeager 1991, ix). This thesis aims to offer a new vantage point on regulation from the perspective of the global South by exploring how domestic political economic dynamics, including civil society-led legal action and interventions by industry associations, reconfigure transnational regulatory expectations on the ground.

Defining pollution takes on technical and social dimensions. Technical aspects may relate to specific chemical, biological, and physical parameters, while the social policy perspective is "*not whether to allow pollution, but how much pollution to allow*" (Hawkins 1984, 10 – emphasis in the original; Ackerman 1974; Yeager 1991). Rather than view pollution as reducible to market failure, this thesis approaches water pollution as indicative of unsustainable patterns of production and consumption, as well as patterns of exploitation characterizing globalized transnational supply chains (Bromley 2007; Vatn & Bromley 1997). While industries in the global South, particularly garments, are widely credited with creating economic opportunities and pulling millions of people out of poverty, state and industry pursuit of this approach to growth also creates risks and burdens for workers and those living in proximity to waste and wastewater (Ahmed et al. 2014; Langdrigan et al. 2018). This perspective invites reflection on the mutability of economic progress and the limits of regulatory change to re-distribute power across markets, states, and societies.

As the capital and locus of much of Bangladesh's industrial growth, Dhaka is a megacity home to some 22 million souls. The population living in *basti,* or slums, is growing around 7

[10] This hotly debated phenomenon is described as the 'pollution haven hypothesis' which suggests that industrialized countries, facing increasing costs of regulation, will seek least-cost options in less developed and less regulated countries. See Cole (2004). For indication, Lawrence Summers wrote the following during his tenure as President of the World Bank, in a memo dated December 12, 1991 (in Swaney 1994): "I think the economic logic behind dumping a load of toxic waste in the lowest-wage country is impeccable and we should face up to that... I've always thought that countries in Africa are vastly under polluted; their air quality is probably vastly inefficiently low compared to Los Angeles. ... Just between you and me, shouldn't the World Bank be encouraging more migration of the dirty industries to the Least Developed Countries?"

percent annually–double the average urban rate (World Bank 2018). This means that in the past 20 years, the number of people living in Dhaka has doubled; it is now distinguished by one of the highest population densities on earth and regularly tops 'most polluted places' lists as the water, soil, and air absorb the repercussions of industrial expansion and no adequate corresponding infrastructure (Dewan & Corner 2013).[11] To illustrate, Bangladesh moved up to position 162 in the 2020 Environmental Performance Index (EPI) Index, compared with being second to last of 180 countries, only ahead of Burundi, in 2014. Six interconnected river systems–Turag and Tongi Khal in the north, Balu and Sitalakhya in the east, and the Buriganga and Dhaleshwari in the southwest–traverse the city, supporting trade and transportation. Each day, these rivers receive an estimated 1.2 million m^3 of untreated human waste, enough to overflow New York's Empire State building.[12] This is attributable to the only sewerage treatment plant in the city operating at one-third its capacity and 80 percent of dwellings remaining unconnected to a sanitation network (DWASA 2019). Further contamination of river water comes from agriculture (Whitehead 2018) and pharmaceutical industries (Wilkinson et al. 2022). Additionally, about 60,000m^3 of industrial effluent from nine major industrial clusters enters the rivers daily (Hoque et al. 2021).

These many sources of pollution contaminate drinking water, water used for household purposes including bathing, and water for agricultural production (Landrigan et al. 2018; Sagris & Abbott 2015). This combination of uses for water means that pollution poses a severe threat to human health for populations reliant on the rivers for their livelihoods (Vörösmarty et al. 2010; Hoque et al. 2021). Documented health impacts are strongly related to industrial pollutants, with significant contamination of heavy metals in surface water, vegetables (Rahman et al. 2017), and fisheries (Ahmed *et al.* 2016; Rashid et al. 2017) adjacent to industrial clusters. For the 600,000 residents of Kamrangirchar, the largest slum in Dhaka, who have primarily generated income from tanneries and related industries, occupational and environmental exposure to toxic heavy metals contribute to high disease burden (Muralidhar et al. 2017). This exposure is a risk factor for these groups, as heavy metals are considered carcinogenic or mutagenic depending on dose and exposure duration (Ali et al. 2019).[13] Socially and economically marginalized and vulnerable groups, in Bangladesh and elsewhere, are disproportionately impacted by river water pollution from their occupations and co-location of riverine dwellings with industrial clusters (Chakraborty & Basu 2019; Morandeira et al. 2019).

[11] For instance, Bangladesh was number five of ten on the Blacksmith Institute's (now known as Pure Earth) 2013 'most polluted places on earth' list.
[12] The 102 floors reach 1,454 feet in height, encompassing 37 million ft^3 of volume. or about 1,047,723 m^3.
[13] For example, analysis of hair and nail samples of leather factory workers and residents in Hazaribagh, the former center of leather tanning in Dhaka, showed significantly higher chromium concentrations compared with a non-exposed control group (Hasan et al. 2019).

Though variation in the monsoon season reduces the measurements of pollutants through dilution, rivers remain measurably polluted year-round (Rahman & Al Bakri 2010; Whitehead et al. 2018). Surface water quality is marked by dissolved oxygen near zero, very high biological oxygen demand (BOD) and chemical oxygen demand (COD), accompanied by high concentrations of pathogens, heavy metals, and organic pollutants (Whitehead et al. 2019; Islam et al. 2015; General Economics Division 2015). The significant quantity and characteristics of water discharge for the industries of focus are worth noting. A report by the UK-based services firm Arup (2015) for the World Bank 2030 Water Resources Group found that the average water consumption for a garment factory in Bangladesh is estimated around 250 to 300 liters of water per kilogram of fabric produced, compared with a global benchmark of 100 liters of water per kilogram.[14] Effluent water from garment factories is characterized by a high temperature, wide range of pH values from very basic to extremely acidic, and contains by-products or direct releases of chemicals used in the textile dyeing and production process.[15] Together, high volumes of textile and leather tannery wastewater pose risks to the physical, chemical and biological properties of rivers and other aquatic environments (Nergis et al. 2009; Hossain et al. 2018).

Laws regulating water pollution in the territory of present-day Bangladesh date back to the East Pakistan Factories Act (1965), which required that "effective arrangements shall be made in every factory for the disposal of wastes and effluents due to the manufacturing process carried on therein." Waves of economic liberalization and industrial expansion in the 1980s and 1990s corresponded with a major uptick in pollution levels. Following the development of domestic environmental legal advocacy groups and uptake of public interest litigation, the creation of new environmental laws established that each industrial unit would be required to build its own effluent treatment plant (ETP) and apply for an environmental clearance certificate.[16] The Department of Environment (DoE) also gained legal authority to take administrative action, including levying fines against polluters (Section 8, ECA 1995).

However, simultaneously with the development of these new institutional arrangements, elite settlements consisting of "broad compromises among previously warring elite factions, resulting in political stability" (Burton & Higley 1987, 295) came to characterize state-market relations in Bangladesh. Here, neoliberal globalization is not a generic backdrop; the conditions it generates informs structures of economic opportunity and political voice, as well as the variable

[14] The discrepancy may be explained by low factory uptake of improved technology due to high purchase and operating costs, as well as low costs of and abundance of water supply (World Bank 2017).
[15] These include caustic soda, Glauber salt, ammonia, sulfide, and lead (Islam et al. 2012). The World Bank (2014) identified 72 toxic chemicals unique to the textiles industry.
[16] Operating without an 'environmental clearance certificate' would be equivalent in other jurisdictions to operating without an environmental permit issued by the regulator for controlling environmental impacts of the installation.

nature of state, market, and society connection to sources of regulatory pressures and constraints. Importantly, a substantial portion of Bangladesh's industrial expansion is due to the ascendance of one sector: exported ready-made garments, which are mass-produced textiles feeding into the 'fast fashion' industry. As industries moved out of the global North and shifted to the global South, undervalued labor and a lax regulatory environment attracted global brands to Dhaka-based factories en masse (Feldman & Hossain 2019). In the late 1970s, the garment sector was worth $69,000; by 2002, exports were worth $4.5 billion; by 2019, exports were estimated at $33 billion (BGMEA 2021). Ready-made garments accounted for 86 percent of Bangladesh's foreign export earnings and four million jobs in 2019; the next largest export sector–leather–is just a fraction of this, valued between $90-300 million and some 850,000 indirect jobs (Khan 2014, 117). This extremely high share of total exports is rare in history; by comparison, Vietnam–the fastest growing garment exporter in the 21st century–had its share of apparel exports fall from 12.7 percent to 11.3 percent in 2019 (Kathuria 2021).

In other words, Bangladesh relies heavily on a single sector to drive its economic stability and growth. The character of the political and elite settlement means that embittered political divides, particularly between two main parties–the Awami League and the Bangladesh National Party (BNP)–have coalesced agreement around 'pro-owner' rather than 'pro-worker' lines (Hassan & Raihan 2018; Hossain 2017; see also Chapter 6, this volume). This led the government, regardless of party allegiance, to pursue a path of economic development policies to support garment firms and leather tanneries to compete in globalized markets (Pritchett et al. 2018, 247). As Bangladesh shifted from authoritarianism to competitive clientelism to single-party dominance since elections in 2014, political viability became intimately tied to state strategies for economic development to bolster human development goals (Hasan & Raihan 2017; Turnheim et al. 2015). Now, as Bangladesh is poised to become the first nation to 'graduate' from least developed country (LDC) to middle income country (MIC) status by meeting the criteria for economic and human development targets established by the United Nations, the party currently in power has firmly staked its legacy on the continued success of the garment industry while simultaneously seeking to bolster the leather sector following the protracted relocation process. Though the government has attempted to drive diversification by identifying other 'thrust' sectors, it maintains its target to reach garment exports valued at $50 billion by 2030, from a baseline of half that in 2015 (General Economics Division 2022).

Without change to address water pollution, achieving this 2030 target risks a Pyrrhic victory at the expense of the environment and vulnerable people. In many ways, this struggle with the social consequences of pollution is the quintessential experience of industrial development and

growth (Greenstone & Hanna 2014). As a result of single-sector growth, the general political and economic basis for non-compliance is widely acknowledged. The domestic press has long covered the political power and influence of the Bangladesh apparel and leather tannery industries.[17] As international news coverage expanded after the Rana Plaza factory collapse, the *New York Times* (Yardley 2013) wrote that "pollution is rising, not falling, experts say, largely because of the political and economic power of industry… textile and garment factories, a mainstay of the economy and a crucial source of employment, have the most clout. When the environment ministry appointed a tough-minded official who levied fines against textile and dyeing factories, complaining owners eventually forced his transfer." Challenging this dynamic, a landmark High Court verdict established 'legal personhood' for all rivers in Bangladesh in 2019, resulting in a series of directives that established new disclosure rules. Following the release of a national government-approved list of identified 'river grabbers'[18], the chair of the National River Conservation Commission (NRCC) observed that "influential people like politicians, businessmen and musclemen have mostly occupied the river land in collaboration with government officials" (Kamol 2019). Yet the regulatory implications of changing power relations between factory owners, domestic business associations, retailer representatives, private governance actors, elected politicians, bureaucrats, the judiciary, and members of civil society groups are little understood.

This is due, at least in part, to the fact that garment factories and leather tanneries are inscrutable, resist easy categorization, and do not all behave the same. Evidence points to variation in compliance based on a firm's ability to influence regulatory implementation (Yeager 1991), linkages with international firms (Amengual & Distelhorst 2019), or firm size, age, and frequency of inspection (Gupta et al. 2019). Variation in 'enforcement styles' (McAllister 2008) may further influence attitudes toward compliance. Factories have varied access to resources and face different pressures, which constrain or enable the choices they make. As a result, there are disparities in barriers to achieving environmental improvements between the small number of high performers, mid-size manufacturers, and an indeterminate number of producers operating in the regulatory shadows, subcontracting or mainly supplying to the domestic market (Baumann-Pauly et al. 2015). However, while some high-performing factories seek international certifications for sustainable

[17] On June 1, 2009, the *Daily Star,* Bangladesh's largest English-language daily newspaper, formally launched a media campaign called *Nodi Banchao Dhaka Banchao* ("Save the Rivers, Save Dhaka"). A November 2016 article in the *Daily Star* by journalist Tawfique Ali became the basis of the 2019 High Court verdict granting 'legal personhood' to all Bangaldeshi rivers. See also Haque (2022) and Kamol (2019). This level of press involvement is exceptional considering that 'freedom on the press' in Bangladesh ranks 123 out of 140 in the World Economic Forum's 2019-20 Global Competitiveness Report, indicating extremely low freedom.

[18] A term used to indicate an individual who has illegally occupied riverine land without obtaining required permits from government authorities.

and energy-efficient building design,[19] the same factories also may opt to invest in 'uninspectability' (Gupta et al. 2019; Heyes 1994) – efforts to "change operations or employ idle capacity in order to 'pass' onsite inspections" (Linder & McBride 1984, 339). Apparel retailers, non-governmental organizations (NGOs), and donor institution-led environmental sustainability efforts and certification programs have proliferated while attempting to address the variable observance of domestic environmental regulation. Participation in programs such as the International Finance Corporation's Partnership for Cleaner Textiles (PACT) have become a sign of seriousness of commitment to address environmental risks. But awareness of these programs and ability to access participation also varies; for instance, factory owners with existing international connections, education, and command of English[20] may have more access to opportunities to participate in these programs.

Regardless of awareness and ability, low margins of return are consistent across the garment and tannery industries (Kabir et al. 2019). Under these conditions, the constraints facing the majority of factory owners are untenable with the demands of achieving a sustainable transition in industry practices. Defending current water use and disposal practices, apparel factory and tannery owners argue that even for top performers, buyers in the global North do not increase the prices they pay for the products they source, and that the incentives and access to finance from the government are inadequate to support systemic improvements.[21] In other words, while expectations regarding sustainable production practices from retailers and consumers in the global North have changed, the low level of resources made available to support sustainable transitions have not. The bearing of these issues on compliance and enforcement, and the pathways for private governance initiatives to effectuate change, stand to benefit from closer examination.

To summarize, situating this thesis from within the global South aims to address durable themes including the societal, environmental, and ecological constraints on growth. It seeks to speak to the struggles and consequences faced by global South countries with unbalanced trade and economic relations with the global North. The rest of this chapter discusses the background and rationale of this research, research objectives, and overview of the chapters to come. The next section outlines the impetus for this research: the contradictions and conflicts presented by the

[19] Leadership in Energy and Environmental Design (LEED) is a program operated by the US Green Building Council and the most widely applied 'green' building rating system globally to provide a common framework for efficiency and sustainability (Afrah & Rani 2017).

[20] The national language of Bangladesh, Bengali (Bangla), is spoken by some 98 percent of people in the country, and the language medium in the vast majority of state-provided education is Bengali (Imam 2007). Compared with Malaysia, India, or Sri Lanka, the uptake of English in Bangladesh remains constrained to the echelons of upper-middle class with access to higher education; English study is a "symbol of socio-intellectual elitism and prestige" (Chowdhury & Kabir 2014).

[21] As discussed in interviews; these remarks are further taken up in Chapters 4-6.

environmental regulatory relations between state, market, and society. Then I sketch out the aims and research inquiries alongside the intended contributions that the thesis makes to the study of regulation and political economy. The introduction concludes with a summary of subsequent chapters.

1.2 Background and rationale

In his 1991 book, *The New Politics of Pollution*, Albert Weale considered questions of social values, industrial organization, and intractable environmental problems. He argued that "environmental problems are complex and they are now present on a scale and in a form that dwarfs previous experience of legislation and policy making. There is no reason to believe that the political institutions of modern liberal democracy are capable of responding quickly and effectively to these problems" (Weale 1992, 31). Grappling with similar questions three decades later, the choice to undertake this investigation is rooted in my commitment to producing knowledge in service of advancing the understanding of pervasive environmental and social problems. Values of social justice and environmental protection have energized and sustained my efforts, while the requirements of rigorous academic methods and theory have guided my inquiry. As an undergraduate student, political economy as an approach to understand problems came to define my ethos as a researcher. My masters' studies and further readings of A.O. Hirschman, Amartya Sen, Theda Skocpol, Karl Polanyi, and Elinor Ostrom refined my understanding of and approach to political economic analysis. Through this process of reading, questioning, and deep engagement 'in the field' – in Bolivia, Mexico, South Africa, China, and, for this thesis, Bangladesh – drew my attention to the similarities and variations in how different organizing forces contest, adopt, or repurpose global norms in particular geographic contexts.

Methodologically and analytically, this thesis is influenced by the second and third generation of political economy researchers. Hudson and Leftwich (2014, 6) characterize 'three generations' of political economy analyses whereby 'first generation' scholarship in the 1990s examined issues of good governance from a "technical, administrative, managerial, capacity-building and…public sector management perspective." 'Second generation' approaches emphasized historical, structural, institutional and political elements, while the 'third generation' focused on the 'economics of politics' to examine the way that incentives shape behavior or outcomes (Carothers & de Gramont 2011; Hudson & Leftwich 2014). Whereas earlier forms of political economy analysis focused on structure, institutions, and agency, this thesis seeks to integrate analysis of power with how the interactions between agents and their structural-institutional context inform the conditions for the political economy of pollution regulation. Based

on my readings of political economy, I approached this thesis under the premise that a qualitative-led research approach to state, market, and society relations could support nuanced analysis of widespread environmental regulation problems.[22]

1.2.1 State, market, and society

Three terms are used throughout this thesis: state, society, and market.[23] Each of these is an abstraction of complex institutions and actors. These terms – 'state', 'society', and 'market' – are used to distinguish, broadly, state actors and institutions which have a direct legal mandate from a national government (including administrative bodies in the European Union and international organizations founded by treaty) and those which do not. In some readings, 'market' actors are grouped with 'society', reducing the categories into either 'state' or 'non-state' and excluding 'market' as its own area.[24] While such distinctions may make sense in other research, in this thesis, disaggregating groups to state, market, and society by their underlying organizational principles, motives, or normative legal foundation benefitted the analysis of the political economy of environmental regulation.

Importantly, the decentered approach recognizes that the areas of state, market, and society are connected and overlap (Black 2008). These areas are also not internally homogenous categories. As such, the use of these ordering principles may be understood less as clean distinctions, but rather as an analytical choice to clarify intermediary roles, interconnections, and strategic linkages in the geographic focus area of Bangladesh within the wider context of neoliberal globalization. Yet, while neoliberalism shapes state, society, and market relations, it is not a totalizing account of the world. A political economy approach to decentered regulation provides a framework to explore each grouping's different enabling conditions, conditions for participation, resources, internal logics, norms, lines of cleavage, and relationship to the other. Indeed, the line that separates public from private governance is not fixed; as explained by Strange's (1996, 94) study on the diffusion of power, one may see a continuum between state and non-state authority, "whose relation to governments [may be] variable or ambiguous."[25] In

[22] For example, early in Joseph Stiglitz's career, the American economist spent a formative period in Kenya documenting phenomena that contravened standard economic theory (Stiglitz 2001). These first-hand investigations led to path-breaking theoretical development on asymmetric information, for which he later received the Nobel Memorial Prize in Economics in 2001. Following observations made in Thailand, economist W. Arthur Lewis of Saint Lucia developed the 'Lewis model' which discarded the neoclassical assumption that the quantity of labor is fixed (Lewis 1954). In a similar vein, German political economist Albert O. Hirschman (1972)–a peripatetic practitioner-academic–observed the failure of rail transport in Nigeria when facing competition from the trucking industry. This experience provided crucial insights for the basis of his book, *Exit, Voice and Loyalty* (1972), which challenged received wisdom that competition could cure all ills (Fox 2012).

[23] Sometimes styled as community, market, and bureaucracy (Koehler et al. 2018; Streeck & Schmitter 1985).

[24] Other studies further separate groups into 'associations' or 'networks' (Streeck & Schmitter 1985; Rose 1999).

[25] See also Graz & Nölke (2012).

the most general terms of Skocpol's (1985) structuralist account, states are "administrative and coercive organizations… that are potentially autonomous from (though conditioned by) socioeconomic interests and structures." States are characterized by political settlements, the "balance or distribution of power between contending social groups and social classes upon which any state is based" (Di John & Putzel 2009, 4; Pritchett et al. 2018). In this thesis, the nation-state system and capitalist economic system are not reducible to the other; therefore, the autonomy of states means that they maintain relations with socioeconomic structures but do not solely pursue the interests of the dominant class (Skocpol 1985). Further, the 'state' is not a homogenous entity; various areas of the state apparatus may move in different policy directions with varied priorities.

In this view, there is a separation of states from the profit-making activities of markets (Yeager 1991).[26] 'Markets' have been narrowly defined in neoclassical economics as constituted by "competition between economic actors as well as demand and supply equilibria" (Lange & Haines 2015, 8; Abolafia 2013). This thesis draws on Polanyian-inspired (1944/2001) economic sociology, which attends to the ways that "regulation by social actors stabilizes and thus prevents the failure of markets" (Lange & Haines 2015, 8; Abolafia 2013).[27] This reading of the agency of the social sphere may be juxtaposed with the economic view of regulation guided by an 'invisible hand' of the market (Smith 1759). Social norms dialectically inform market-led, or 'self-regulatory', practices (Lange & Haines 2015; Vogel 2008).[28]

Seeing societal actors as both embedded in and shaping power relations supports analysis of the way that a social sphere may operate with interests and resources apart from the workings of the government and the private sector, and engage in struggles against or with state authorities, industries, and communities. Donors, flooding into Bangladesh after a famine brought on by a cyclone in the aftermath of the independence war, have motivated the growth of civil society or NGOs. However, this thesis understands civil society as 'actually existing', not an idealized realm construed by donors or NGOs (Mercer 2002). This approach challenges Gramsci's (1971) conception, which views civil society as an arena for manufacturing consent for the state (Amoore & Langley 2004). The representations of social spheres in Bangladesh shows how civil

[26] See Streeck & Schmitter (1985) on private interest governments.
[27] Polanyi "does not draw a clear dividing line between economic and social interests" (Lange & Haines 2015, 11) which presents an analytical challenge taken up in *Regulatory Transformations: Rethinking Economy-Society Interactions*. (2015) Ed. Bettina Lange, Fiona Haines and Dania Thomas. London: Hart Publishing. 1–28. Bloomsbury Collections.
[28] In this way, the approach does not make a "clear-cut distinction between employees of the corporation and civil society actors outside it" (Lange & Haines 2015, 21). Indeed, as posited by Lange and Haines (2017, 3), "civil society is more important for the regulation of social and economic risks posed by and for business activity than sometimes recognized in the regulation literature."

society actors in Bangladesh may pose challenges to state and market, while simultaneously being marginalized by the state-market linkages and the relative inability for a primary means of redress – public interest litigation – to yield substantial change in enforcement practices.

Distinguishing 'market', 'society', and 'state' enables analysis of a wider range of norms, mechanisms, and content of social relationships through which agency is asserted (Parker 2008). By doing so, this thesis aims to explore what conditions support or subvert environmental regulation, and the relative capacity of state, market, and society spheres to shape or change norms in Bangladesh. Together, the use of decentered regulation and political economy guides analysis of the intersection of these three spheres. Throughout, a dialectical relationship between state, market, and society is assumed, whereby social conflict generally underlies regulation rather than a pluralist view of consensus (Yeager 1991). This approach forms an analytical base from which to examine the nature of relations between these spheres, how these relations influence the underlying logic, substance, and procedural aspects of regulation, and under what conditions state, market, and society move toward resolving tensions posed by opposing positions.

1.2.2 The private governance of environmental regulation in Bangladesh

Thirty years ago, Welsh academic Raymond Williams (Williams 1983, 238) called for more writing to trace "occluded relationships"–including the "vast transnational economic pressures, the labor and commodity dynamics" (Nixon 2011, 45)–that invisibly shape local realities. In Bangladesh, regulatory non-compliance and water pollution are intimately tied to occluded relationships of poverty, power, and development. Wages in Bangladesh are some of the lowest in the world: 32 cents an hour, or about $95 a month (Mina & Kamal 2019). This means a worker may make less in a month than the retail price of a single shirt that they made with their hands. The reluctance or inability of an individual or collective of brands and retailers to structurally address pollution in their supply chains shifts points to the influence of neoliberal globalization and economic models on company and shareholder behavior (Lebaron & Lister 2015; Anner 2020). While there are different ways to see this issue, at the core is a tension between garment retailers wanting to incur the lowest production costs and offer the lowest price to consumers to compete in developed markets, while simultaneously seeking to avoid (or at least avoid the *appearance* of) complicity in worker exploitation or environmental degradation in developing countries. In response, many retailers based in the global North have established private governance initiatives including voluntary codes of conduct, certificates of environmental quality in production, and other approaches to 'self-regulation' (Drebes 2014).

To some extent, retailers and brands sourcing from Bangladesh ignored civil society groups regarding both labor and environmental concerns. Then the deadliest garment factory disaster and largest structural failure in modern history occurred.[29] On April 24, 2013, some 3,122 workers entered their place of employment in Dhaka: an eight-story building called Rana Plaza, named for owner Sohel Rana, which provided space to commercial entities as well as to five garment factories. Designed as a commercial estate, the construction was not intended to support the heavy, vibrating equipment used in the mass manufacture of garments. Though shops and a bank on the first floor closed when deep cracks became visible in the I, the garment factories forced workers to come in (BBC 2013). The building's collapse killed 1,132 people and left nearly 2,000 more injured or maimed. This was not an isolated, exceptional tragedy, but rather years in the making; fires and building collapse haunt the industry.[30] Just five months earlier in the outskirts of Dhaka, 117 people died and at least 200 were injured when a circuit shorted at Tazreen Fashions; fire extinguishers failed to operate, and a factory manager had locked the exit doors (Theuws et al. 2013).[31] At this point, NGOs attempted to enlist retailers sourcing from Tazreen, like Walmart, into a legally binding agreement to improve factory safety. Only two joined.[32] The subsequent collapse of Rana Plaza became a symbol of an uncomfortable truth in global garment supply chains: brands from the global North were forewarned, and had done little to prevent acute risks and loss of life.

The scale of human loss resu"ting'from the Rana Plaza collapse marked a distinct *before* and *after*. Though industrial disasters have continued since, a notable change in consumer awareness and firm attention to labor issues in their sourcing practices followed the disaster (Bair 2020). Donor institutions and retailers poured at least $300 million USD into Bangladesh, and more than 200 global firms signed onto a legally binding pact called the Accord on Fire and Building Safety in Bangladesh ('the Accord'). The policy architects of the Accord set out to conduct audits of supplier factories, vowing to blacklist those that did not make changes (Petrie & Hoque 2014; Ahlquist & Mosley 2021). The Japan International Cooperation Agency put forward $20 million in funding to renovate factories; the International Finance Corporation, $40 million (Mina & Kamal 2019).

[29] 'Non-deliberate' failure (Rahman & Yadlapalli 2021).
[30] Including in 2005, the nine-story Spectrum garment factory collapsed in Dhaka following the explosion of a boiler on the ground floor, killing 64 workers and injuring 80 more. In Gazipur, north Dhaka, in July 2017 in a garment factory, killing 13 people. Many more residential and industrial issues occur outside of garment factories. A few examples: The Nimtoli explosion in June 2010 killed 124 in a residential apartment building. A fire at a cigarette packaging factory in Tongi, North Dhaka in September 2016 killed 31 people.
[31] See also coverage from News24 (2012) and BDnews24 (2012).
[32] The two that joined were PVH Corp. of the USA and Tchibo of Germany.

Chapter 1

As labor and environmental audits have gained further momentum following draft European Union legislation in February 2022[33] requiring supply chain due diligence, understanding the mechanisms of private governance programs and their interface with civil society and states in the global South takes on new importance. This is because excluded from a streamlined narrative of callous factory owners, negligent brands, and weak government are the structural aspects of the private governance of sustainability. Once 'blacklisted' by international retailers, factories do not gain access to the resources or market signals needed to motivate an amendment in practices or upgrade decrepit infrastructure. Though ostensibly excluded from supplying to certain retailers, these factories may instead resort to subcontracting (Amengual et al. 2020, Baumann-Pauly et al. 2015) or pivot to supplying to less regulated international markets. This allows polluting behavior to continue. Further, the reliability of audits is imperfect; TÜV Rheinland, a Germany-based technical services firm that conducts factory audits, reported finding a garment manufacturer in the Rana Plaza complex to be safe and with "strong construction quality" just months before the collapse (Hengeveld 2020). In actuality, as shown in Figure 1, the building was not as safe as described; the top three floors were illegally added on, and workers had no mechanism to report problems (Jacoby 2018). These issues point to concerns with relying on private governance for factories seeking to earn certifications indicating their performance to consumers and to governments in the global North.

Deleted: Figure 1

[33] https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1145

Chapter 1

Figure 1: A photo from the collapse of the eight-story Rana Plaza factory in Dhaka, Bangladesh, with rescue workers at the site (Abir Abdullah/European Pressphoto Agency)

Unlike the shock and spectacle of violations of labor protections evidenced by the Rana Plaza collapse, the 'slow violence' of "unfolding environmental catastrophes" (Nixon 2011, 2) has received less attention from studies of regulation. Compared with the extensive research on labor-related governance, the literature on environmental regulation in the global South is limited. With this in mind, this thesis examines how regulatory power is relationally produced across and within state, market, and society in the global South. In economics or political science, developing a study without a formal, testable model may yield little serviceability. But with a more expansive political economy perspective, this thesis grapples with Beck's perceptive observation that "pollution follows the poor" (1999, 5) in my pursuit of understanding the character of regulatory relationships. This orientation toward 'studying up'–examining power, influence, and affluence (Nader 1972)–took me to riverine communities in Dhaka, industry forums in the Netherlands and India, and corporate boardrooms in the United Kingdom. By developing the decentered regulation concept, this thesis aims to bring light to occluded relationships through an analysis of the political economy of environmental regulation in Bangladesh.

1.3 Research questions and objectives

Several features make environmental regulation a significant problem worthy of substantive political economic analysis from the second and third generation approach. These features also generate new opportunities for conceptual and theoretical development from the perspective of

decentered regulation. First, compliance with and enforcement of environmental regulations is a Sisyphean task for all states and economic sectors, not just in developing countries (Amengual 2016). Environmental regulations apply to a large number of firms with different characteristics; have both legal and technical attributes; and their enforcement often involves negotiation and contestation by competing parties, at various levels of authority and influence (Coslovsky et al. 2011). Second, environmental regulation often comes into tension with economic development objectives. By examining the way that states, markets, and societies approach a regulatory problem, we may gain new insights into the relations and conditions influencing the regulatory capacity of each sphere. Last, because states, markets, and societies respond to different regulatory problems in uneven ways, there is significant variation in how states that lack features considered necessary for state capacity, such as strong Weberian bureaucracies, may achieve desired outcomes of regulations to improve environmental quality (Amengual 2016).

This thesis takes up the task of examining the regulatory dynamics and the distribution of power between state, market, and society, including the contested transnational norms relationally produced through the channels of global production as they interact with domestic contexts. This research entailed examining the relations of state, market, and society in the political economy of water pollution regulation. Using interviews, critical review of key documents, and exploratory analysis of penalty data from the Bangladesh Department of Environment (DoE), this thesis explores the emergence of 'normalized non-compliance' with domestic and international environmental regulations. Three interrelated lines of inquiry are explored:

- How do actors and institutions across civil society, national government bodies, and the private sector shape regulatory responses to water pollution?
- How do state regulatory agencies and private sector actors shape their relationship with one another?
- How do civil society actors negotiate access to regulatory power?

These lines of inquiry connect with the empirical chapters of this thesis. **Chapter 4** responds to the first and third questions by developing the application of a decentered approach to the relationships between actors across state, market, and society spheres, with particular attention to the political economy of regulation with private governance approaches. As the evolving role of civil society suggests, non-compliance is not normalized in the sense of being unchallenged. Rather, non-compliance is embedded in institutional structures of legitimacy and has gained acceptance by various actors as a cost of economic growth. The second line of inquiry is explored in **Chapter 5**, which concerns how domestic regulatory agencies have responded as the pace of

industrialization and urbanization has increased and pollution continues to rise. By examining the emergence of the regulatory style of the Department of Environment in relation to the behavior of polluting firms, this chapter responds to calls for scholarly attention to be paid to how governments in the global South interface with transnational private governance. The findings speak to the limitations of society to drive change when domestic regulatory agencies operate in a retreatist enforcement style. Advancing the theme of domestic-international interface, **Chapter 6** responds to the second and third questions. It connects transnational private governance to the experience of the Bangladesh leather tannery industry and considers how the state interacts with the political-economic concerns of the industries driving economic growth, and to understand how regulatory power is exercised, distributed, and subverted in the tannery industry reform process.

Collectively, these lines of inquiry facilitate an examination of the competing interests, contradictions, and nature of contestation in the regulatory roles positioned between state, market, and society. The underlying rationale is to build a case for applying the decentered approach to understand environmental regulation in **Chapter 4;** to test the approach with monetary penalty data from the Department of Environment and elaborate the decentered concept in relation to enforcement style in **Chapter 5;** and to expand the application in **Chapter 6** with a case study of the political interface of private governance with the leather tannery industry in Bangladesh. By putting the political economy of environmental regulation at the center of this thesis, I hope to use the experiences of Bangladesh as a window into other contexts where struggles to manage the tradeoffs of economy and environment take place along similar lines. These are contexts in which the regulatory relationships generated between state, market, and society cannot be isolated from the often invisible forces of globalization. By pursuing these lines of inquiry, this thesis aims to makes these forces visible and therefore more accountable. From this standpoint, the thesis aims to build toward a decentered approach to the study of the political economy of pollution regulation.

1.4 Thesis outline

This thesis comprises seven chapters: an introduction, a literature review, a review of the methodology, three empirical chapters, and a conclusion. **Chapter 1**, *Introduction,* has established the aims of the thesis and how understanding the nature of conflict underpinning changing relations between state, market, and society in pollution regulation motivates the research. The project of **Chapter 2,** *Relationally conceptualizing political economy and decentered regulation in the global South*, is to establish the gaps in the literature and the intended contributions of the thesis. First, I introduce the landscape of the regulatory literature, focusing on economic and political science

perspectives and a brief historical overview. Then, I offer a critical overview of the political economy and decentered regulation literature. I argue that political economy, brought into conversation with the aspects of decentered regulation developed by Black (2001) (complexity, fragmentation, autonomy, interdependency, and the collapse of the public-private distinction), provides a framework to analyze environmental regulation in Bangladesh. I conclude with a comparative regional perspective.

Chapter 3, *Methodology,* discusses my approach to research design. I explain my engagement with critical realism to guide my study of power, structure, and agency. I introduce the primary research methods: interviews and related processing; exploratory analysis of the Bangladesh Department of Environment penalty data; and document analysis. The chapter closes with a reflection on my approach to ethical issues and the limitations of the research. Over the course of the chapter, I consider how my positionality informs my research approach.

Chapter 4, *Normalized non-compliance: Insights from a decentered view of water pollution regulation in Bangladesh,* examines how the interactions of state, market, and society influence the emergence of decentered environmental regulation of water pollution in Bangladesh. Despite government mandated requirements for industrial wastewater treatment, mounting directives from clothing brands sourcing from Bangladeshi factories, and increasing civil society engagement, the abundance of water as an economically unrestricted industrial input contributes to severe consequences for river water quality. Drawing on 108 interviews conducted from November 2017 to November 2021, the paper finds non-compliance is normalized as it becomes embedded in structures of legitimacy and gains tacit acceptance among political elites and government agencies. In particular, the limited capacity of state and society actors to influence the direction of regulation is a defining feature of the political economy of environmental regulation in Bangladesh. At the same time, variability in a firm's ability and willingness to comply suggests that more stringent regulation alone will not drive improved compliance. Though diffuse in their scope and prevalence, private governance approaches to respond to regulatory shortcomings face sharp limitations in effectively detecting, reporting, and correcting environmental problems. By shifting the focus of regulatory analysis from the state to interactions of a wider range of actors, norms, and institutions through which regulatory power is asserted and contested, the chapter advances approaches to understand environmental challenges as private governance takes up a more prominent role in weak states.

Chapter 5, *Regulation and resistance: Water pollution penalties in Bangladesh*, utilizes the decentered approach and the concept of 'enforcement styles' to understand how regulators have responded as the pace of industrialization and urbanization increases and pollution rises. The

chapter analyzes 1699 cases of water pollution-related fines levied from 2010 to 2019 from the Bangladesh Department of Environment. These data are considered in relation to key policy documents, as well as 57 semi-structured interviews with policy makers, civil society groups, and factory owners and managers. By linking penalty data with the political economy and legal context, this chapter considers three findings: despite increases in the number of industrial units and higher concentrations of river pollution, penalty frequency and amounts have largely stayed the same over the past decade; the penalty amounts established by the Environmental Conservation Act (1995) are not consistently applied; and certain industries are more likely than others to seek waivers through appeals while being less likely to pay the entire fine. These findings point to a 28retreatist enforcement style, generating new insights into the application of penalties and how they are contested by regulated entities.

The insights of Chapters 4 and 5 set the stage for **Chapter 6,** *Linkages, fragmentation, and autonomy: Private environmental governance in Bangladeshi leather tanneries.* Transnational private environmental governance initiatives are a common response to address 'governance gaps' related to environmental sustainability in global value chains. Building on the case of water pollution from the leather tannery industry in Bangladesh, this chapter draws upon historical analysis and 76 interviews conducted between 2017 and 2021 to analyze the confluence of private governance and domestic political economy from a decentered perspective. This chapter argues that private governance emerged from the roots of independence-era state-led growth strategies, leading to the initial formation of domestic state-market linkages. Subsequently, politicized antipathy and the marginalization of civil society in the tannery reform process illustrated the fragmentation of knowledge and power and the autonomy of actors. As contestations over the distribution of power changed over time, the high degree of autonomy of tannery owners enabled them to pursue contravening actions in the reform process. It finds that while the state may initially repurpose and then seek to adopt private governance initiatives, domestic private sector actors may reject and ultimately obstruct regulatory change. The chapter aims to extend a political-strategic analysis of the relations shaping private governance since Bangladeshi independence. It illustrates the agency of states and non-state actors in the global South in mediating transnational private governance on the ground.

Chapter 7, *Conclusion,* summarizes the contributions of the thesis. To begin, I reflect on the direction of regulation since the onset of the Covid-19 pandemic and the end of my fieldwork in March 2020. I trace the 2019 'rights of rivers' verdict of the Bangladesh High Court and the intersection of private governance programs and regulatory pressures on exporting factories. Building from these two areas, the next section reviews the contributions of the thesis research to

conceptual, empirical, and policy-related areas. The subsequent section assesses the implications of the research for factories, state policy, regulatory agencies, and civil society. The last section concludes with ideas for future research to analyze environmental regulation.

1.4.1 A note on thesis format

This thesis follows the 'journal' format of an Oxford DPhil submission rather than the 'book' format. This entailed writing the empirical chapters as three separate articles to submit to peer reviewed academic journals. Each of these chapters is intended to be able to stand alone; therefore, each contains a literature review and methods section. These chapters are knit together with the bookend chapters of an introduction, overarching literature review, methodology, and conclusion. As a result, certain literatures and themes (e.g., decentered regulation) are repeated in each core chapter. To improve readability and consistency, I amended the use of 'paper' and 'article' in the journal submission version to using 'chapters.' I also amended spelling conventions to American English. At the time of submission, Chapter 4 is under review with *Regulation & Governance,* Chapter 5 is under review with *Law & Policy*, and Chapter 6 is under review with *Development & Change.* Chapter 5 was co-authored with Dr. Nabil Haque and Professor Robert Hope; a co-author statement is included at the end of this chapter.

1.4.2 A note on thesis funding

This document is an output from the REACH programme funded by UK Aid from the UK Foreign, Commonwealth and Development Office (FCDO) for the benefit of developing countries (Program Code 201880). However, the views expressed and information contained in it are not necessarily those of or endorsed by FCDO, which can accept no responsibility for such views or information or for any reliance placed on them.

"The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else."

- John Maynard Keynes

Chapter 2 – Literature review: Relationally conceptualizing political economy and decentered regulation in the global South

2.1 Introduction

This thesis seeks to understand the relationship between state, market, and society in shaping Bangladesh's political economy of water pollution regulation, and the consequences of these relationships for the distribution of regulatory power. This chapter establishes the conceptual contours of this discussion.[34] The aim of this chapter is to position the thesis within the literature on political economy and regulation. The review comprises three main sections. The first section discusses scholarship on regulation, with a focus on the economics and political science literatures. As the building blocks of the political economy literature, economics and political science are essential to justify the basis for points of departure and continuity throughout the arguments developed in the thesis. This section also incorporates a decadal analysis of regulatory scholarship from the 1980s to present to briefly historicize the emergence of key ideas. The section argues that the separation of economics and political science approaches to regulation may be beneficially counterbalanced by plural and polycentric regulatory analysis via the adoption of a political economy perspective. Following this, the second section introduces the political economy and decentered regulation literature. This section addresses the connection between these two areas, and how and why they are conceptually woven together throughout the empirical chapters of the thesis. The third section offers a comparative perspective, primarily with other South and Southeast Asian nations, on Bangladesh's political economy. This section argues that while scholarship on environmental regulation in Bangladesh is limited, broader lessons may be gleaned by a comparative perspective. The review concludes by connecting these pieces to develop the approach of future chapters' arguments on the interface of state, market, and society in relation to industrial water pollution regulation in Bangladesh.

The criteria for inclusion in this review was to contribute toward building the case for entwining political economy and decentered regulation to better understand how regulatory power works at the interstices of state, market, and society. By critically assessing the literature for areas calling for further exploration, this review chapter establishes the basis for the theoretical and

[34] Each chapter also contains a literature review more closely reflecting the content of the chapter. Therefore, to avoid repetition, this review will focus on addressing broader debates in the literature, limitations in current understandings of regulation and political economy, and opportunities for contribution.

empirical contributions of the thesis. The review aims to explain the reasoning for disassembling 'regulation' into its constituent relations between structures and actors, including civil society, government, and the private sector. The empirical chapters will develop the decentered regulation concept to explore how these relations are characterized by a range of dynamics, including cooptation, conflict, and subversion (Marques & Eberlein 2021). By doing so, the thesis examines the distribution of regulatory power among state, market, and society to offer insight on the occluded relationships underpinning transnational production and globalized supply chains as discussed in in the Chapter 1 introduction (Nixon 2011; Williams 1983).

2.2 Regulatory theory and concepts: Economics and political science perspectives

Economics and political science scholarship established intellectual precedent for present discussion on the roles of state, market, and society in environmental regulation. A central organizing principle from these disciplines, against which the decentered approach to regulation developed in this thesis is juxtaposed, became the separation of *the economy* from *politics*. This separation mirrored the early 20th century disciplinary shift in economics, which came to be defined by its dominant methods–"rational choice under cover of methodological individualism" (Bromley 2007, 676)–rather than its subject of inquiry. As economics came to focus on rational choice models, efficiency, and incentives (Mazzucato 2011; Nordhaus 2021; Raworth 2017), political science oriented around interest groups, power, political parties, and government institutions (Leftwich 2004). The arising explanatory differences in how regulation works and how it is to be analyzed has yielded significant consequences and influenced the decision to pursue a political economy approach in this thesis.

This section outlines the foundational economics and political science scholarship in relation to regulation. It begins by introducing the economics worldview of regulation with a focus on the central theme of 'failure' to analyze pollution. It then turns to the political science and politics literatures to discuss public interest theory and capture theory, as well as political control and state capacity. Subsequently, the section briefly overviews the literature to historically contextualize these approaches in decadal timescales from the 1980s to present. It concludes by summarizing the main gaps in the literature and intended areas for contribution.

2.2.1 Pollution as an externality: An economics worldview

Notably, the demarcation between *economics* and *politics* gave rise to a worldview of regulation as government interference in the separate workings of the economy (Bromley 2006; Bromley 1990;

Cooter & Rappoport 1984).[35] In continuity with this view of the separation of economics and politics, definitions of regulation – though taking on a variety of meanings in different contexts – were united by this common thread. A widely applied definition is from the (OECD 1997): "the full range of legal instruments by which governing institutions, at all levels of government, impose obligations or constraints on private sector behavior. Constitutions, parliamentary laws, subordinate legislation, decrees, orders, norms, licenses, plans, codes and even some forms of administrative guidance can all be considered as 'regulation.'"[36] This approach to the meaning of regulation has significantly shaped two defining principles of economics – regulatory failure and market failure – and related analysis of regulatory power.

Within this economics-oriented context, groupings of literature included economics, political science, and critical theory (Adams & Tower 1994; Short 2019).[37] An economic approach, derived from (Stigler 1970), viewed regulation as a market 'good' provided when there is demand, whereby industry as a dominant group will demand regulation if there is a threat of external competition (Posner 1974).[38] From an economic standpoint, a distinguishing feature of the problem of water pollution then is that the economic institutions responsible for balancing costs and returns via the "interaction of market forces in a private enterprise system do not perform this function satisfactorily" (Kneese & Bower 2011, 3) for issues such as wastewater treatment. As a result, when deciding how to manage wastewater, industries do not account for the costs "imposed by effluent discharge upon downstream water users or the value of other uses of the water that may be foreclosed upon by its action" without regulation (Kneese & Bower 2011, 2). The economics-based justification for responses to this problem stems from a diagnosis of regulatory failure or market failure (Ebner 2019; Yeager 1991).

[35] Bromley (2006) argues, "Nowhere has this demarcationist program been more seriously pursued than in environmental economics."

[36] This definition, appearing in the "Recommendation of the Council of the OECD on Improving the Quality of Government Regulation, OCDE/GD(95)95, Note 1; OECD, The OECD Report on Regulatory Reform: Synthesis, (Paris, 1997)", has become a widely cited definition of regulation in government and policy documents including the US EPA Guide for Industrial Waste Management (1999) and US EPA ISO 14000 Resource Directory (1997); the governments of Canada (Regulatory Affairs Guide, Assessing Regulatory Alternatives (Ontario, 1994, 63) and Australia (Productivity Commission, Office of Regulatory Review, A Guide to Regulation, 2nd ed, Canberra, 1999) also adopt a similar definition.

[37] There are other approaches to categorizing areas of the literature; Breyer (1982) identifies 'interest group theory' as positing that regulations are 'goods' sold by government in return for votes of benefitting groups. This theory usefully directs attention to the political dimensions of regulatory processes but tends to "overlook the extent to which nonpolitical factors influence the content of regulations" (Breyer 1982, 388). Alternatively, 'bureaucratic theories' (closely aligned with 'the political science' area as presented here) of regulatory behavior, emerging in the 1970s from sociologists and political scientists, seek to use formal models to explain the creation of regulatory programs and to predict outcomes (McKenzie & Macaulay 1980).

[38] For a broader sample of the global North canon on economic justifications for regulation, see Kahn (1970), Posner (1969), Stigler (1971), and McKie (1970).

Chapter 2

While considerable debate remains regarding the nature of regulatory (also called 'government') failure, it carries significance in theory and in practice for institutional responses to pollution. Regulatory failures may be explained on the basis of (1) inappropriate regulatory design (instrument failure); (2) insufficient government knowledge to identify the cause of the problem, design appropriate solutions, or identify non-compliance (information failure); (3) inadequate implementation of the regulation (implementation failure); or (4) regulated entities that are insufficiently motivated to comply, while the regulators are not inclined to regulate in the public interest (institutional failure, or capture theory) (Donadelli & Heijden 2022).

Discussions of market failure usually comprise four phenomena, sometimes co-occurring: externalities, public goods, common property resources, and monopolies (Randall 1983). Arising from this predominant perspective is that choices made by an institution (called "the market") produce outcomes, such as chemical discharge into rivers, that impose undesirable costs on others (Bromley 2007). The classical rationale for regulating externalities is for government intervention to guide industries to adopt pollution-limiting practices if they are socially expensive (Dahlman 1979).[39] Objections to the classical rationale are covered elsewhere in the literature, particularly the Coase theorem which posits that government involvement is only efficient to enforce property rights (Eskeland & Jimenez 1992). These 'externalities' represent a failure if the benefits of correcting the harm exceed the costs of addressing the status quo institutional arrangement that produced the externality (Bator 1958; Coase 1960; Demsetz 1967). Based on this premise, economists would consider the existing institutional arrangement to be more 'socially optimal' or 'efficient'; communities experiencing the harms imposed by the externality are deemed a Pareto irrelevant externality (Medema 2020).[40]

A range of regulatory instruments are devised based on these ideas, falling into two general categories: indirect and direct. As outlined in Table 1, 'indirect' public finance instruments traditionally include taxes, pricing, and subsidies which may be compared with 'direct' regulatory

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[39] The example offered here by Breyer (1982, 23) is a company that can produce sugar through Method A or Method B. Method A costs 9 cents per unit of production but produces the undesirable externality of thick black smoke. Method B costs 10 cents per unit of production, and no smoke. Breyer suggests that a profit maximizing factory owner would select Method A, though B should be chosen because its total social costs are lower. In the event the public which prefers Method B is unable to directly negotiate with the company, government intervention via regulation would be required.

[40] A Pareto *efficiency* is when resources cannot be reallocated to make an individual better off without making at least one individual worse off. A Pareto *relevant* externality exists when an activity may be modified to make a party better off without making the acting party worse off; conversely, a Pareto *irrelevant* externality exists when e activity cannot be modified in a way to make a damaged party better off without making the acting party worse off – in other worse, one party's benefit (or profit) may be harmed by the other's actions in the aggregate. No change could result in a Pareto improvement. This concept became the basis of contemporary economic theory, influencing theoretical structures including from Coase (1960) and subsequent policy conclusions. However, by ignoring transaction costs, the Coasean model became incapable of generating Pareto-relevant externalities (Buchanan & Stubblebine 1962; Dahlman 1979).

instruments used to control pollution. These interventions may be further categorized as (a) command and control (CAC) measures that regulate activities through government designated constraints, (b) market-based incentives (MBIs) that affect the incentives of private agents, and (c) government spending on enforcement or clean-up (Kathuria 2006). By definition, CAC occurs when a government authority prescribes environmental quality standards to be complied with (the command); non-compliance with these standards entails a penalty or sanction (the control).

Table 1: General taxonomy of instruments for pollution control (Eskeland & Jimenez 1992, 146)

Policy type	*Direct instrument*	*Indirect instrument*
Market-based incentive	Effluent charges, tradeable permits, deposit refund system	Input/output taxes and subsidies, subsidies and abatement inputs
Command and control measures	Emissions regulations (source specific, non-transferable quota)	Regulation of equipment, processes, inputs, and outputs
Government regulation	Regulatory agency expenditure for cleanup, waste disposal, treatment, and enforcement	Development of clean technologies

However, there is a significant practical problem for regulators creating and administering any such pollution control standards: to make regulations simple and uniformly applicable, or particularized to individual areas, firms, or pollutants? Administrative burdens favor the former, while technical and economic considerations tend to support the latter (Breyer 1982). 'Particularized' and 'non-particularized' are terms used by Breyer (1982, 263) to describe the "major dilemma" for regulators – whether to create and administer antipollution standards as simple and widely applicable, or specific standards that are tailored to individual pollutants or firms. Though not always referred to as 'particularized' and 'non-particularized', this phenomenon is a generally identified problem with regulatory standard setting in the literature. Yet, the literature points to three reasons why uniform standards are widely understood to be impractical. First, the relationship between a gallon of discharge and a given amount of damage is complex, depending on environmental conditions including temperature variation, seasonality, pre-existing water quality, and synergistic effects (Eskeland & Jimenez 1992). Therefore, limiting emissions based on a fixed standard amount would produce different outcomes depending on initial factors. Second, effluent control technology is generally characterized by incremental rising costs (Gunningham 2009; Kneese & Bower 2011). Third, the cost of removing a given quantity of effluent varies considerably based on the nature of the source. The combination of these considerations makes a uniform emission standard for water-using industries to be inefficient and suboptimal. As a result, standards that may begin as simple and non-particular often become complex and particular over time (Breyer 1982). These dilemmas

will appear again in the discussion in Chapter 5 regarding the application of penalties for water pollution violations.

The foundational concert of externalities as a form of failure and corresponding regulatory instruments are widely accepted. Standard economic theory on the causes and responses to pollution regards it as an externality, an unintended by-product of economic activity (Baumol & Oates 1988; Mishan 1971). The resulting responses would often then be based on one of two traditions: a Pigouvian incentive or Coasean bargain. Yet, an ongoing Pigouvian-Coasean controversy suggests that the debate is not settled (Slaev 2017; Papandreou 1994), and arguments suggests that these approaches to achieving economically efficient management of water quality were not designed to *systematically* address the social costs and returns from the use of water resources (Kneese & Bower 2011, v).[41] Further, it appears that the traditional economic approach rests on defining an 'internal' structure of an economic system versus a disconnected 'external' world. This view of the separation of internal-external holds that there are no relationships between what is defined as internal and what becomes regarded as external. Vatn and Bromley (1997, 136) disagree, arguing that in fact there is "*interdependency* between a 'polluter' and a 'victim," and that "it is impossible to technically isolate the action of one from the action of the other."

As further elaborated upon by Vatn and Bromley (1997), the logic of externalities falters on three grounds when applied to the systemic problem of pollution: individual rationality, atomization, and structural market processes. First, the view of externalities as incidental "finds no role in the currently accepted world of rational choice among self-interest maximizing agents. In economics…there can be no 'unintended' action by rational agents" (Vatn & Bromley 1997, 147). In other words, without assigning motivation to the cause, cost shifting will occur under common assumptions about economic agents' objectives.[42] In a profit maximizing market, cost shifting is rational behavior; under these conditions, regulatory 'instruments' are largely ill-suited in a model of individually optimizing agents (Kapp 1971). Second, the 'atomization' or fragmentation of market structures ensures externalities (Bromley 1990, 60).[43] Under a market economy model, the atomization of markets and economic actors, whereby a large number of

[41] Delving into the Pigouvian-Coasean debate is outside the scope of this review and the thesis; I raise it here to indicate the limitations of the concept of market failure and, specifically, the view of regarding persistent water pollution as an externality.

[42] As Kapp (1971, xiii) writes, "A system of decision-making operating in accordance with the principle of investment for profit cannot be expected to proceed in any way other than by trying to reduce its costs whenever possible and by ignoring those losses that can be shifted to third persons or to society at large."

[43] As Bromley (1991, 60) further explains: "The individualization of the world - its atomization really - is argued to be the very best means of individuals to be made better off and, by simple aggregation, for the collection of all individuals (call it society) to be better off. Now, if externalities arise at the boundary of decision units, and if theory and policy celebrate and sanctify atomization, then theory and policy would seem to advocate the maximization of decision units and, *ipso facto,* the number of boundaries across which costs might travel."

small buyers and sellers do not occupy a majority, drives more externalities and higher costs associated with an increasing number of transactions. Neoclassical-leaning economists would argue that addressing these externalities is inefficient on the basis that if benefits of correcting the externality exceeded the costs, the market would fix the externality (Lehmann 2012). However, since the very structure of market economies causes externalities and transaction costs, the concern for efficiency "is caught up in a severe circularity" (Vatn & Bromley 1997, 146). Third, building from the individual rationality and atomization problems, the competitive dynamics of a market economy and the "evolving domain of externalities... goes beyond the one of intended cost shifting" (Vatn & Bromley 1997, 148), cutting to the very heart of conditions of globalized market economies. For instance, for the mass production of garments and leather goods in transnational supply chains, growth of the sector implies an increase in material inputs as a feature of the system. In essence, as a consequence of growth in these sectors, the corresponding increase of volume of inputs, such as chemical compounds used in dyes, then pos\ risks to the environment if pollution is not concurrently addressed. Such systemic issues associated with globalization and capitalism mean that growth in such sectors of the economy would induce externalities as a consequence of growth (Lehmann 2012).

These critiques of the concept of failure and 'pollution as externality' are foundational to the arguments developed across the empirical chapters of this thesis. Predominant diagnoses of externalities and failure do not sufficiently account for the systemic nature or the political dimensions of regulation. As a result, these approaches risk undermining and misdirecting possible solutions to the problems posed by public goods, and the methodological individualism extended by the externality concept artificially separates 'internal' and 'external.' Economics-based views provide "a target for those who tend to overrate… the capacities of individualistic markets, giving them an unnecessary advantage in debate" (Randall 1983, 141). Vatn and Bromley (1997, emphasis added) argue that externalities are indeed "not an instance of *market* failure, but of *model* failure." 'Externality' is meant to define a "temporary disequilibria indistinguishable from any other form of inefficiency which results from failure to realize potential gains from trade" (Randall 1983, 140). Considering these issues, regarding persistent water pollution as an 'externality' is found wanting. In sum, the current problem diagnosis and policy solutions posed by a solely economics-based view of regulation are ill-equipped to make sense of persistent pollution. Indeed, the separation of environmental issues from other areas of public policy, based on an assumption that pollution problems could be addressed by extending existing policy instruments incrementally, meant that 'the environment' became a peripheral addition to other concerns (Weale 1992).

2.2.2 A politics and political science approach to regulation

This section offers a critical overview of the main areas of argument within political science approaches to regulation: first, public interest theory and capture theory, and second, state capacity and political control. In contrast to economics-based approaches, politics is widely understood to "matter" in regulatory enforcement and compliance (Haines 2011, 229) for scholars from a political science or socio-legal studies orientation. Hawkins (1984, 9) introduced a foundational study of UK environmental inspectors, observing that "regulatory agencies must operate in a political environment, for regulation is intended to preserve the sometimes fragile balance between the interests of economic activity on the one hand and the public welfare on the other. Agencies are extremely sensitive to their political environment." Similarly, Kagan (1994, 399) noted the range of variation in enforcement styles and the influence of politics, writing "Regulation is a political process. It emerges from political demands and political struggles, and is shaped by competing political ideas and theories."[44] However, this broad consensus of the importance of politics in regulation may mask the significant variation in the mechanisms by which politics and political power influences regulatory outcomes, and explanations of variation in regulatory enforcement and compliance within the same economic sector or a given geography (Short 2019).

In comparison with economic theory, though the distinctions are not always tidy, political science-oriented theories of regulation are largely rooted in *public interest theory* or *capture theory* (also called private interest theory). The public interest theory of regulation is based on two arguments – that markets are prone to fail, and regulation is costless (Djankov et al. 2002; Laffont & Tirole 1991; Meier 1991; Peltzman 1989; Pigou 1920; Posner 1974)[45] The primary concepts of public interest justifications are that regulation serves to protect and benefit the public, and that economic regulation should be imposed when markets fail because regulation can compensate for imperfect competition and externalities (den Hertog 2010).[46] This 'public interest' view is alternatively treated as positive theory or as normative analysis (Hantke-Domas 2003). Public interest justifications for social regulation, which include environmental laws, are based in two types of market failure, tracing back to Pigou (1920): *asymmetrical information* and *externalities*. There are two types of information asymmetries: *adverse selection* and *moral hazard* (Klein et al. 2016). Industries may have

[44] Critiquing the separation of politics and economics does not support a 'politics-as-market' understanding. This approach views the political process as a conventional economic market whereby the electoral system "aggregates the preferences of individual rational actors" and governance entails "reelection-maximizing legislators selling benefits to interest groups in exchange for campaign contributions or blocs of votes" (Issacharoff & Pildes 1998).

[45] Posner was among the first to remark on the two premises of the public interest theory: (a) that markets were prone to fail if left alone and (b) that the transaction cost of government regulation was zero, finding that "market imperfection justified regulation without any cost" (Hantke-Domas 2003, 181).

[46] Though Carpenter (2010) observed that the term 'public interest theory' "is much more commonly used by capture and rent-seeking theorists" and "'public interest' is less a body of theory and more a descriptive label used by critics of an earlier era's scholarship."

better knowledge of their operational environment, such as its technology, supply costs, or demand for products and services than the government or service users. Tirole (2012) characterizes this asymmetry as adverse selection. The actions of an industry affect cost and demand through management of production capacity, quality control, and risk management, described as moral hazard. Reducing asymmetries in information is seen as essential for regulators, and data collection or benchmarking individual industry performance against similar sized companies may lead to change; yet, governments often lack reliable data for effective monitoring (Klein et al. 2016; Tirole 2012, 2017).[47]

In contrast, capture theory–as an extension from public choice theory–suggests that regulated entities are insufficiently motivated to comply, while regulatory programs are used to benefit the industries they are intended to regulate (Bernstein 1955; Petlzman 1976; Laffont 2012; Laffont & Tirole 1991; Posner 1974; Stigler 1971).[48] This theory has sustained significant influence, including as a commonly applied approach to explain regulatory failure in developing countries (Hepburn 2010). As such, capture occupies a central place in academic understandings and policy debates of the 'defects' of regulatory government (Croley 2008, 50). Capture theory formalized "the notion that regulatory agencies are captured by producers" (Bernstein 1955, 138; Peltzman 1989). Over time, capture theory has come to represent "the essential idea that policymakers are for sale, and that regulatory policy is largely purchased by those most interested and able to buy it" (Carpenter & Moss 2014, 9). The concept of capture reflects the durability of economic theory in regulatory scholarship, crossing over to political science and political economy analyses (Croley 2008).

This work on capture offered important contributions based on an expanded interpretation of how incentives in environmental regulation may function in developing countries. However, the use of capture also encounters limitations. Critiques of capture range from flawed accounts of interest group formation, incomplete explanations of why interest groups participate in regulatory decision-making, oversimplification of the functioning of regulatory institutions, or reliance on a weak evidentiary base (Novak 2013; Posner 1974).[49] For instance, capture theory has

[47] For further reading on 'information' see Ackerman et al. (1974) *The Uncertain Search for Environmental Quality.*
[48] It should be noted that these theories do not, of course, fall along perfectly disciplinary lines; Marver Bernstein, for instance, was a professor of politics at Georgetown who wrote the influential book *Regulating Business by Independent Commission* (1955) which laid the foundation for regulatory capture theory. Others, including Strange (1996), Laffont and Tirole (1991), and Stigler (1971) are economists by training.
[49] In the memorable words of Posner (1974, 12): "Espoused by an odd mixture of welfare state liberals, muckrakers, Marxists, and free-market economists, this theory holds that regulation is supplied in response to the demands of interest groups struggling among themselves to maximize the incomes of their members…They do not tell us why some interests are effectively represented in the political process and others not, or under what conditions interest groups succeed or fail in obtaining favorable legislation." See also Yeager (1991, 38).

little to say regarding how forms of regulatory power, control, or benefits are exercised, distributed, and challenged within and between institutions and actors (Coslovsky et al. 2011; Croley 2008).

Yet, lacking comprehensive alternative explanations, capture remains resilient in its application to explain regulatory failure. For example, Estache and Wren-Lewis (2009) build on Laffont (2003, 2005) to examine regulatory dynamics common across developing countries. Though they note that "traditional regulatory theory relied on by policymakers was not suitable for the institutional context of developing countries" (Estache & Wren-Lewis 2009, 729) they further extend the model of capture. This approach reflects a wider view of capture theory as consistent with reducing reliance on 'traditional' regulatory theory; when setting "a course for future inquiry on regulatory enforcement in industrializing countries," (McAllister et al. 2010, 3) note that many studies refer "to the theories and concepts… used to study regulatory enforcement in OECD countries." However, in charting the reorientation of regulatory research and shifting away from OECD countries, the authors still propose "to study how implementation is affected by capture-prone governance settings" (McAllister et al. 2010, 2). Rather than seek to confirm or challenge capture theory, the empirical chapters of this thesis regard capture as one of several possible influences on regulatory dynamics. For example, Chapter 4 on the emergence of normalized non-compliance aims to contribute to the literature by developing the decentered approach in contrast with other views on regulatory failure. Chapter 5 on pollution penalties will also contrast capture with 'enforcement styles' (Kagan 1994). This approach seeks to build on other work that aims to nuance the monolithic view of capture, such as Hellman et al. (2003) who distinguish between 'influential' firms, those that influence rules without private payments to public officials, and 'captor' firms, those that make private payments to public officials to affect the rules of the game.[50]

Within the political science and politics-oriented literature, two primary standpoints for analysis emerge: *state capacity* and *political control* (Acemoglu et al. 2015; Amengual 2016; Marques & Eberlein 2021).[51] Both literatures use an underlying concept of a Weberian 'ideal-type' bureaucracy characterized by four main elements (Gerth & Mills 1948). First, state bureaucracy is seen as meritocratic, meaning that officials are recruited by competitive exams and have a prescribed minimum level of education. Second, state officials have long-term prospects for career advancement and are protected from arbitrary firing. Third, officials are dedicated employees of the state, without outside employment that may conflict with their official duties. This implies that

[50] See also Carpenter and Moss (2014) on the operationalizing of the concept of capture.
[51] This section is, compared with the economic theories section, brief to avoid repetition; these areas are also discussed in Chapter 4 on normalized non-compliance.

office holding is not the source of personal rents.[52] Fourth, bureaucracies are governed by abstract, rational, and hierarchical rules that "reinforce vertical relations and make subordinates respond to the instructions of their superiors" (Amengual 2016, 25). These elements of an ideal-type bureaucracy are imagined to insulate agents from political interference.

Building from this, the state capacity literature contrasts strong, autonomous states with weak, fractured states (Mann 1993; Acemoglu & Robinson 2001; Acemoglu & Robinson 2000; Acemoglu et al. 2015). The central argument in this literature is that the quality of the 'strong' state determines regulatory outcomes. Many accounts of failures of environmental protection focus on the absence of capable regulators; from this approach, successful regulation is characterized by capable Weberian bureaucracies and the types of strategies they adopt (Evans 1995; Piore & Schrank 2008; Pires 2011; Schrank 2009). For example, Estache and Wren-Lewis (2009) characterize four institutional limitations dominating regulatory outcomes: regulatory capacity, accountability, commitment, and fiscal efficiency. Drawing from public utilities examples, the theme of limited state capacity to implement policy is tied closely to a lack of resources due to limited government revenue as an intentional strategy to undermine the agency in favor of economic activity. While limitations on state capacity are a widely acknowledged factor inhibiting successful regulation, a state capacity view alone risks too narrow an interpretation. For instance, it neglects "pockets of effectiveness" (McDonnell 2020) within bureaucracies able to successfully carry out specific tasks. As argued in Amengual (2016, 2019), by expecting variation in state action to be solely determined by the quality of the state regulator, this literature treats strong bureaucracies as a pre-condition to realize regulatory goals. The implication of this condition is that solutions are linked to making state bureaucracies closer to a global North-oriented Weberian ideal (Berliner et al. 2015). As a result, opportunities for improvement within existing structures may be deemed impossible.

Alternatively, the political control literature focuses on which groups gain power and become 'principals' that direct state 'agents' in bureaucracies (Arrow 1985; Maggetti & Papadopoulos 2016). This approach examines the "extent to which elected political principals influence the decisions of unelected agents in the bureaucracy" (Short 2019, 4). This echoes the 'political support' basis of capture theory, which emphasizes the need of a regulatory agency to sustain political support (Downs 1967 in Yeager 1991, 38). For instance, Berliner et al. (2015, 6) argue "even if the state has the capacity to enforce rules, enforcement may not occur when those

[52] Rent-seeking behavior is characterized by bureaucrats soliciting and extracting bribes or "rents" for personal or institutional gain by applying legal but discretionary authority for awarding legitimate or illegitimate benefits to clients. Personal rents, or individual corruption, is one form of rent seeking behavior. This will be further discussed in section 2.3.3 below.

in power stand to gain from violations of the rules." Furthermore, recognition of the increasing number of institutions and actors involved in regulation has altered the proposed principal-agent relationship "to one that is increasingly collaborative, interconnected through networks of actors, and built upon the sharing of information related to the internal operation of the firm" (Koliba et al. 2010, 45; Mills & Koliba 2015; Carrigan & Coglianese 2011). While principal-agent theory provides testable propositions, the condition of bureaucratic coherence is less applicable in developing countries with state-market structures marked by the personalized application of rules and the significant influence of power exercised outside of formal channels (McKenzie & Macaulay 1980).[53] In this context, political environments are "composed of diverse audiences, including elected officials, clientele groups, the media, policy experts, and ordinary citizens" (Carpenter & Krause 2012). Based on this view, principal–agent-based accounts are limited in their conceptualization because they do not account for the "fragmentation, complexity and interdependences" that characterize regulatory agencies in the global South (Maggetti & Papadopoulos 2018).

Both the state capacity and political control approaches face limitations because of their reliance on internal coherence associated with Weberian bureaucracies and their narrow focus on the state and formal state authority as the arbiter of regulatory power. Additionally, understandings are underdeveloped of how political economic dynamics or the relationships of actors influence regulation in places with imperfect bureaucracies. By omitting from analysis or homogenizing politicized states with imperfect bureaucracies, this literature excludes a host of norms, actors, and mechanisms, and does not identify ways that various non-state actors may still exert regulatory power with and through markets and society to achieve their goals. Finally, both state capacity and political control fail to account for the possible role that society may play in regulation. In sum, this literature offers limited guidance to understand states that do not meet criteria for Weberian-style bureaucratic coherence.

Departing from notions of capture or control, the concept of *enforcement styles* creates a distinct approach to examine how enforcement officials respond to and shape their environment (Bardach & Kagan 1982; Kagan 1994; McAllister 2010; May & Winter 2011; May & Winter 2009).[54] Kagan (1978, 97) established an initial "typology of styles" of rule application including legalism, retreatism, and unauthorized discretion. This work foreshadowed the term 'enforcement style,'

[53] 'Personalized' or informal here means that relationships drive the application of rules, as compared with the formal, 'impersonal' application of a rule.

[54] In a similar vein, Yeager (1991, 24) described this period as giving rise to a 'dialectical structuralism perspective' whereby "purported legal solutions to regulatory problems produce unintended, contradictory consequences. The underlying sources of inequality and poverty largely remain." He argues that "Law *emerges* through conflict in historically situated contexts of systemic forces and constraints."

first appearing in Bardach and Kagan's 'Going by the Book' (1982/2002, 52) in which they note that "[s]trict legal provisions and rights to protection are difficult to remove, and enforcement styles, once structured by law, are slow to change."[55] Hawkins (1983) further laid foundations for contrasting two 'strategies' of enforcement, compliance, and sanctioning. These ideas were further refined in the edited volume by Hawkins and Thomas (1984) with the chapter 'Enforcement Styles' describing 'legalistic' and 'conciliatory' styles as well as the limitations of these constructs (Shover et al. 1986, 122). Here, the authors comment on capacity constraints, noting that insufficient personnel, budget, and information may encourage agencies to adopt "negotiated compliance strategies" (Shover et al. 1984, 15). Developing themes of formality and coercion in the "enforcement taxonomy," Braithwaite et al. (1987, 342) categorize agencies along two dimensions: one of the degree of punitiveness or coercion of a state regulatory agency, and one of the extent to which agencies approach the regulated entity as formally rule-bound or with informal flexibility. Ayres and Braithwaite (1992, 20) then examine how legalistic and conciliatory approaches may be "mutually operative and complementary." May and Winter (2000, 147) suggest that "enforcement style is best depicted by two dimensions comprising (1) the degree of formalism, and (2) the degree of coercion in inspectors' dealings with regulated parties." Baldwin and Black (2008) further illustrate 'ideal-type' interactions–legality, solidarity, self-interest, authority, and judgement–between regulators and the regulated.

Table 2 summarizes the main dimensions of enforcement style as formalism, coercion, autonomy, and capacity (Braithwaite et al. 1987; Ayers & Braithwaite 1992; May & Winter 2000). Formalism implies the strict adherence of regulators to detailed requirements, and ranges from a rigid interpretation of the letter of the law to a more open, discerning application of regulations. Coercion entails the willingness of a regulatory to impose legal sanctions on identified violators. Coercion ranges from a more accommodating, friendly approach of regulators to a threatening, punitive application of enforcement abilities. Autonomy is taken to mean the susceptibility of a regulator to external influence. McAllister (2008) portrays autonomy as having two poles: mission-dominated, where internal regulatory priorities predominate, and client-dominated, whereby external pressures impact the extent to which regulators observe regulatory priorities. Until more recently, the concept of capacity has not been central in discussions of comparative regulatory institutions. Capacity, initially framed as 'inactive/active or unresponsive/responsive' by Kagan

[55] Though Bardach and Kagan (1982/2002, 57) do not develop the term further, they examine the legal underpinnings of enforcement styles, arguing that "The law has been deliberately structured to prevent capture, to program inspectors to apply regulations strictly, to pressure enforcement officials to apply formal penalties to violations, and to adopt a more legalistic and deterrence-oriented stance."

(1994), is the ability of an agency to implement regulations. The degree of capacity is also tied to resource availability, including sufficient personnel and funding to carry out regulatory tasks.

Table 2: Dimensions of Enforcement Style (adapted from McAllister 2008)

Dimension	**Description**	**Spectrum of Ideal Types**
Degree of Formalism	How flexibly regulators apply rules	Rule-bound, rigid ↔ Flexible, particularistic
Degree of Coercion	How regulators react to identified violations	Threatening, punitive ↔ Friendly, helpful
Degree of Autonomy	Extent to which regulatory goals are influenced by regulated entities	Mission-dominated ↔ Client-dominated
Degree of Capacity	How much effort regulators make to identify violations	Energetic, proactive ↔ Restrained, passive

Synthesizing the literature on enforcement styles, Table 3 develops another way to view the typology of styles and dimensions. A legalistic enforcement style is characterized by high degrees of formalism, coercion, autonomy, capacity of enforcement officials. Perfunctory styles suggest that while formalism and coercion may be high, autonomy and capacity are low. This pattern is most often seen when regulators are 'going through the motions' (May & Winter 2002). A 'flexible' style, also called 'adaptive' enforcement (Hawkins 1984), alternatively exhibits situational judgement on the part of enforcement officials, whereby no discernable pattern of the dimensions is regularly exhibited. A conciliatory style exhibits low degrees of formalism and coercion but higher relative degrees of autonomy and capacity (Shover et al. 1986). Last, a retreatist style points to low degrees across all dimensions. Braithwaite et al. (2007) label the retreatist style as 'strong-on-paper' but 'weak-in-practice' as characteristic of 'regulatory ritualism.' Exceptions to this typology appear in the literature; Winter and May (2000), for instance, point out that the degree of formalism and coercion may not always go hand in hand. Chapter 4 further takes up enforcement styles in relation to the emergence of normalized non-compliance, while Chapter 5 analyses the enforcement style of Bangladesh's environment regulatory agency's application of penalties to polluting factories.

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Table 3: Enforcement style and dimensions

		Dimensions			
		Formalism	Coercion	Autonomy	Capacity
Agency Enforcement Styles	Legalistic	High	High	High	High
	Perfunctory	High	High	Low	Low
	Flexible	Situational	Situational	Situational	Situational
	Conciliatory	Low	Low	High	High
	Retreatist	Low	Low	Low	Low

Several elements of the literature on comparative regulatory study remain underexplored, particularly in relation to environmental regulation. This includes why enforcement styles vary and what the role of regulated entities is in mutually shaping the evident styles; the varied forces shaping regulatory responses on the part of inspectors; the relationship between enforcement style and compliance; and other effects including the degree of conflict or cooperation between state regulatory agencies and regulates industries. Each of the identified styles and their dimensions are in want of further conceptual clarification and observational study.

In summary, political science and the study of politics shifts focus on *political* power and its effects to the study of regulation. What *"unites* political analysts is a concern with the provenance, forms, distribution, use, control, consequences and analysis of political power" (Leftwich 2004, 34; Short 2019). Public interest theory and capture theory debates, and state capacity and political control approaches, provide useful starting points from which this thesis aims to build. These approaches also illuminate opportunities for new inroads to be developed. For instance, seeing regulatory enforcement as an "intrinsically political endeavor," Coslovsky et al. (2010, 1) argue that the 'subpolitics' of regulatory enforcement occur when both regulators and regulated entities reshape their interests and their operating environment. Recognition of this mutual reshaping has guided the approach of this thesis to how state regulators, societal organizations, and private authorities dynamically interact (Cashore et al. 2021; Marques & Eberlein 2021).

2.2.3 Historical context

Historical context clarifies the discussed theories related to the origin, functions, and role of regulation and regulatory institutions (Drahos 2017; Drazen 2002).[56] Scholars of regulation in the

[56] This section does not purport to be exhaustive in tracing the contours of debates in scholarship and policy, nor does it parse the differences held between American and European approaches and schools of thought. The review skews American-centric; other schools may have contributed to or featured in the debates of the day but the

1970s recognized a shift in American political culture, marked by "widely shared desires, sentiments and values" reflecting a "diffused disaffection with…government" and a "deep cynicism about government institutions" (Derthick & Quirk 1985, 35). Scholarship on free competition and critiques of regulation (Averch & Johnson 1962; Meyer et al. 1959; Caves 1962) entered the policy discussion as academics took up influential policy roles throughout the 1970s, and foundations and institutes used these academics' findings in their policy recommendations to alter public policy (Derthick & Quirk 1985). These critiques were initially limited to *economic* regulation, which sought to address market relations; *social* regulations were viewed as separate from the politics of 'pro-competitive' economic deregulation.[57] Political science had limited interest in economic regulation until the end of the 1980s. Consequentially, the political science field did not develop specific frameworks to study regulation; economic regulation in political science was viewed from the vantage point of general theories of political decision-making or public policy choices (Buchanan & Tullock 1975; Downs 1957) or bureaucratic politics (Niskanen 1971). By comparison, economists focused on two main regulatory research questions: the "role of affected [industrial] interests in [the design of] regulatory policy and administration" and the extent to which "regulatory administration balances the public interest against regulated interests" (Christensen 2011). Public interest theory and capture theory were the primary answers of economists to these questions between the post-war period and the end of the 1980s (Benoît 2019).

However, the deregulatory spirit soon expanded to social regulation related to the "negative effects of production relations on consumers, workers, communities, and the general environment" (Yeager 1991, 24). Environmental deregulation became both a policy choice and a political symbol synonymous with conservative political and social ideology in the US and the UK about limiting the role of government in both society and market, with consequences for limiting public policy approaches to managing pollution. Simultaneously, this era was marked by increasing recognition of the influence of numerous actors on the behavior "of regulated groups in a variety of complex and subtle ways" (Rees 1988, 7). Shortcomings with public interest theory and capture theory were examined by Laffont and Tirole (1991) and Tirole (1986) by assessing the methodological limitations of these models associated with neglecting informational asymmetries and the "supply side" (e.g. regulatory and political institutions). Scholars from the global North took increasing note of the different structures of states, markets, and societies in the global South,

dominance and pervasive influence of these American scholars – as evidenced by their centrality in undergraduate textbooks the world over – points to their enduring legacies.

[57] U.S. President Ronald Reagan clarified the distinction within three weeks of his election, "We have no intention of dismantling the regulatory agencies, especially those necessary to protect [the] environment and to ensure the public health and safety" (*Congressional Quarterly Almanac*, Vol. 37, 1981, 18E).

and the influence these differences had on political-economic reforms and social organization (Migdal 1988).

In the 1990s and 2000s, further elaboration on alternative regulatory approaches was based on recognition that neither command and control (CAC) nor the free market satisfactorily addressed increasingly severe environmental problems (Gunningham & Sinclair 2017). Indeed, CAC represented a particular form of state power: legal rules backed by criminal sanctions. On this basis, CAC built on four general assumptions. First, that regulation is a *unilateral approach* whereby government delivers 'instructions' through laws and policies. Second, that there exists a *linear progression* from policy formation to implementation and enforcement. Third, an assumed degree of *internal coherence*, characterized by hierarchical and meritocratic state bureaucracy. Last, the theoretical foundations of regulatory scholarship, generated by a subset of global North academic and policy institutions from privileged epistemic positions, may be *equally applied* to make sense of regulatory phenomena in developing countries (White 2002, Kaplinsky & Farooki 2010). However, these assumptions posit "a particular role for the state" by assuming that the state has the "capacity to command and control, to be the only commander and controller, and to be potentially effective in commanding and controlling" (Black 2001, 106). In this way, CAC regulation was more of a 'caricature' than reality (Black 2001; Baldwin 1998), particularly in developing countries without the requisite institutional, financial, legal, and political conditions to 'command' and 'control' regulations.

While CAC failed to hold in practice as few states in the global South fit these assumptions, concepts including responsive regulation (Ayers & Braithwaite 1992) and smart regulation (Gunningham et al. 1998) took shape, diverging from views of regulation as principally rule-based (Ogus 2004). These accounts sought to apply game-theoretic approaches with mathematical models of strategic interactions among rational agents to examine a "model of regulatory capture in which firms lobby to win the hearts and minds of agencies" (Ayres & Braithwaite 1992, 6; Scholz 1984). Additionally, during this period, scholarship on the 'regulatory state' (Majone 2007) was "characterised by an emphasis on the privatised provision of public services, the prominence of regulatory agencies separate from political ministerial decision making and from providers of services,46 and formalised contractual arrangements" (Lodge 2016, 2).

During the 2000s to 2010s, the expansion of multidisciplinary influences and further work in the global South continued to expand the available conceptual tools to study regulation at the intersection of economics, politics, and law (Laffont 2012; García et al. 2009; McAllister et al.

2010).[58] After generations of insistence on the separation of state and market spheres, these increasing interventions argued that regulation "creates the very possibility of marketplaces" (Carpenter 2009, 269). Black's work on decentered regulation (2001) built on these earlier contributions, informing the concept of 'really responsive regulation' (Baldwin & Black 2008, 35; Baldwin & Black 2010), which emphasized "the need to deal with networks and 'decentered' regulatory regimes. In decentered regimes, regulatory functions would be carried out by a wide range of institutional types and instruments." Further work on the concept of enforcement styles by McAllister et al. (2010) in Brazil, China, and Indonesia, for example, extended the earlier work of Bardach and Kagan (1982) and Kagan (1994), among others. This departure posed the question of how regulation "can be developed in polycentric regulatory regimes, including those where the roles of policy making, information gathering, and enforcement are constructed" across different organizations, "particularly where they cross different jurisdictional boundaries" (Baldwin & Black 2007, 45; Parker 2008). Some economics literature also advanced questions regarding polycentricity, with Ostrom (2009, 409) encouraging scholars to see beyond a "dichotomous world" which, she cautioned, risked ossifying 'state' and 'market' as separate spheres.

From the 2010s to present, recognition of multiple non-state actors' involvement in regulation and political economy-inspired analysis further developed. As argued by Talesh et al. (2015, 2), "Increased involvement, delegation and deference to non-state actors is probably the most important change to the regulatory state in the past three decades." This recognition of the role of non-state actors challenged the view of neutral markets and rational actors operating independently of social and political spheres. Changing geopolitical relationships, new patterns of South-South trade, and a shrinking role for traditional Western donor institutions has shifted the balance of power between the global North and South (Kaplinsky & Farooki 2010). Scholars from political economy, legal geography, and socio-legal studies have contributed to new analysis of these changes (Barkan 2011; Braverman et al. 2014). Scholarship attending to the role of society (Hutchens 2013; Lange & Haines 2015; Lange 2013) and politics and political economy (Short 2019; Marques & Eberlein 2021) contributed to shaping novel approaches to the study of the interaction of private entities with societal actors and public authorities. Overall, plural and polycentric approaches to regulation have strengthened over time (Parker 2008). The key insights from these shifts as applied in this thesis are: (1) the increasing empirical study of theorized phenomena; (2) recognizing society as a key player in regulation; (3) specifying how and why state,

[58] Until this point, inter- and trans-disciplinary scholarship was limited, perhaps due to the way that enforced siloes in academic practice and discourse largely restricted uptake.

market, and society dynamics take shape and change over time; and (4) assessing the consequences of these changes for the distribution of regulatory power.

2.2.4 Summary: Beyond dichotomous economics and political science approaches to regulation

In sum, predominant economics and political science-based analyses largely inherit the limitations of the mainstream literature, generating a Scylla and Charybdis choice for scholars. From an economics standpoint, the dynamics of externalities – cost shifting, atomization, and the competitive dynamics of a market economy – mean that, under current conditions, pollution will increase over time as natural resource-based economic activity and competition intensify. Other understandings of economics approaches provide a baseline from which to reconsider the deeper drivers of pollution and responsive policy tools. From the politics and political science literature, public interest theory and capture theory, as well as the state capacity and political control literatures, developed foundational understanding of how states and political actors interact. Yet, among the most serious limitations of these disciplinary lines of analysis is their view of markets as neutral and independent of social relations, rather than as laden with power (Hutchens 2013). Furthermore, by neglecting crucial relationships between state, society, and market, the economics literature may misdiagnose the problem of pollution as one of externality, and the political science literature risks generalizing to non-Weberian regulatory contexts (Evans 1995). These gaps generate opportunities for new contributions at the intersection of politics and economics, to draw from the strengths of each analytical approach.

By acknowledging the limitations of these approaches, this thesis may then analyze the issues with tools and institutions designed to address pollution as an externality, premised on an unhelpful demarcation between economics and politics. Once pollution is understood as "inherent in the market form of economic governance", then it may be better addressed "by the institutional structure of the economic system" (Johnston 2012, 22). As discussed in Chapter 1 introduction, in the context of Bangladesh, diverging from the path established by economics and political science while retaining the lessons of those disciplines allows for deeper engagement with the often inscrutable forces of globalization. The choice to diverge is driven by a need to make visible the occluded relationships that exert influence in a way that shapes reality experienced by people living adjacent to polluted rivers or operating leather tanneries. On this basis, political economy-oriented scholarship on regulation is well-positioned to facilitate analysis of the impact of informality and personalized relationships, regulatory power relations, and capacity for change, discussed in the next section. By noting the limitations of traditional economics and politics literature, political economy scholarship may gain sharper understandings of expressions of regulatory power in the global South.

2.3 Political economy and decentered regulation

The question 'why regulate?' is usually answered in terms of correcting market failures, with limited consideration of distributional aims or other concerns (Black 2002). Yet increasingly, as the paradigm shifts away from viewing regulation as governments intervening in the market, other goals including advancing environmental protection, poverty reduction, or other social justice aims may gain traction. To address the limitations of the bifurcation in economics and political science approaches to regulation, a political economy approach is developed in this thesis. A political economy perspective foregrounds analysis of the enabling conditions, resources, norms, and social relations influencing the distribution of regulatory power. By viewing regulation this way, a new lens on Black's decentered regulation (2001, 2002) concept may be explored by explicitly foregrounding the intersecting relations of state, market, and society.

This section will first introduce the broad literature on political economy. It will explain points of continuity and departure of political economy from politics and economics. It will then focus on explaining decentered regulation. The section introduces key analytical connections between political economy and decentered regulation, and themes cross cutting the discussion of state, market, and society in this thesis: linkages, institutions, and private governance. The third and final section outlines offers a comparative regional perspective of Bangladesh. This section argues that while scholarship on environmental regulation in Bangladesh is limited, broader lessons may be gleaned in comparative perspective.

2.3.1 Overview of political economy: Defining boundaries and considering the structure-agency debate

Tracing the emergence of the field, from Smith (1759) to Ricardo (1817) to Marx to Polanyi (1944) to Hirschman (1972), shifts in political economy analysis may be identified over time. Compared with political science or economics, political economy is concerned with the interaction of political *and* economic processes; the distribution of power and resources between groups, institutions, and individuals; and the "processes that create, sustain, and transform" these interactions and patterns of distribution over time (Collinson 2014, 3). Neoclassical economics tends to reduce human agency to utility-maximizing behavior, which restricts the scope of understanding the social implications of economic action. Under a neoclassical view, the concept of society dissolves; the human bonds of society are dispensable. A consequence of this view is a constrained focus on formal political settings at the expense of a more expansive understanding of the informal, personalized relationships common at the interface of private sector entities, state regulatory agency officials, and societal organizations (Datta et al. 2014; Khan 2012; Lewis & Hossain 2019). By contrast, political economy draws attention to the contestation and negotiation between interest

groups with competing claims to rights and resources, as with political science (Ostrom 1996). Compared with the neoclassical focus on rational choice, 'economy' in political economics is about the study of economic relations as constituted and experienced in reality. Political economy views the social relations that constitute economic interactions as contextual.

The different schools of thought in political economy widen the analytical aperture to include a range of informality and formality regarding both economic and political dimensions. For instance, bringing deeper analysis of both formal and informal political settlements[59] into political economy allows for an expanded interpretation of the distribution of power between contending social groups or classes (Di John & Putzel 2009). This shift is important when examining Bangladesh, a weak state characterized by the 'personalized' application of rules (Selim 2018; Pritchett et al. 2018). Drazen (2002) argues that all political economic systems may be understood in reference to the same model, made of three building blocks: political actors, their interests and objectives, and the political mechanisms and constraints in place. But the relative emphasis placed on any one of these elements distinguishes each of the 'three generations' of political economy analysis, as discussed in the introduction chapter (Hudson & Leftwich 2014). In short, the three primary concerns of political economy generally may be summarized as 'interests, institutions, and incentives' (Hudson & Leftwich 2014).

The main areas within political economy may be broadly categorized as comparative, environmental, and international development (Payne 2006).[60] To characterize the bounds of inquiry, this thesis sits at the intersection of environment and international development. Political economy provides a useful approach to analysis, both from a theoretical and applied perspective. Political economy-driven 'power analysis' is now used by a number of country development agencies, such as Sweden's Sida (2013); other government agencies use the 'thinking and working politically' approach, also underpinned by political economy analysis (USAID 2018). Illustrative of the application of the range of political economy-based analytical tools, the institution formerly known as UK Department for International Development (2009) wrote a series of guiding questions related to a political economy power analysis. These questions are indicative of the thesis

[59] The term 'political settlement' refers to "the balance or distribution of power between contending social groups and social classes, on which any state is based" (Di John & Putzel 2009, 4).

[60] Payne (2006, 6): *Comparative political economy* focuses on regulation and the policy regimes and institutional patterns which characterize alternative models of capitalism. *The political economy of the environment* focuses on sustainability and the question of which social and economic institutions are needed to reproduce existing patterns of social and economic life in the long run. *The political economy of development* focuses on inequality and the many structures and processes of the world system that produce distributional outcomes characterized by uneven development and wide variations in the wealth and poverty of particular regions, sectors, classes and states. *International political economy* focuses on the thesis of globalization, the claim that there is a quickening pace towards the creation of a global economy and global culture, seeking to clarify both its extent and its impact, and the shape of the changing world order which is emerging through both specific events and long-term trends.

approach to inquiry in Chapters 4, 5, and 6, and explained further in the methodology chapter, including:

- Roles and responsibilities: Who are the key stakeholders in the sector of focus? What are the formal/informal roles and mandates of different players? What is the balance between central/local authorities in provision of services?
- Ownership structure and financing: What is the balance between public and private ownership? How is the sector financed (e.g., public-private partnerships, user fees, taxes, donor support)?
- Historical legacy: What is the history of the sector, including previous reform initiatives? How does this influence current stakeholder perceptions?
- Corruption or rent-seeking behavior: Is there significant corruption and rent-seeking in the sector? Where is this most prevalent (e.g., at point of service delivery, procurement, allocation of jobs)? Who benefits most from this? How is patronage being used?
- Ideologies and values: What are the dominant ideologies and values which shape views around the sector? To what extent may these serve to constrain change?
- Decision-making: How are decisions made within the sector? Who is party to these decision-making processes?
- Implementation: Once made, are decisions implemented? Where are the key bottlenecks in the system? Is failure to implement due to lack of capacity or other political economy reasons?
- Power relations: To what extent is power vested in the hands of specific individuals/groups? How do different interest groups outside government (e.g., private sector, NGOs, consumer groups, the media) seek to influence policy?
- Capacity for change: Who are likely to be the "winners" or "losers" from reforms? Are there any key reform champions within the sector? Who is likely to resist reforms and why? Are there "second-best" reforms which might overcome this opposition?'

While there is general agreement in the field about the kinds of questions to ask, contemporary debates in the field cover a wide range. An important ongoing debate in the study of political economy relevant for this thesis is the relative role of *structure* as an explanatory variable versus emphasis on the role of *agents*. While structural explanations look to the "broad features in the social, economic and political structures of a society", agency explanations are "inclined to focus on the role of agents – individuals or even parties – in shaping political change" (Leftwich 2004, 23). Structural factors identified as primary determinants may include conflict between social classes, patterns of urbanization, or the level of industrialization; agency leans toward explanatory

weight accorded to the role of "particular individuals at particular times in particular places" (Leftwich 2004, 23). As discussed in the introduction chapter section 1.1.1, the early 'generations' of political economy analysis focused on the relative roles of structure, institutions, and agency (Payne 2006). A more recent approach considers both structure *and* agency, noting that structures cannot '*do* things' – rather, "individual agents or actors *do*" as individuals or in groups, and usually *through* institutions (Hudson & Leftwich 2014, 36). This thesis approaches the *relationship* between structures and agents as the analytical focus, recognizing that agents "act within a particular structural context of constraint and opportunity" (Hay 2002, 128). As a result, the thesis aims to consider how the relationship between agents and their structural-institutional context informs the political economy of pollution regulation.

2.3.2 Decentered regulation

Julia Black, a scholar of law with a focus on the nature, dynamics, and legitimacy of regulatory regimes, developed the concept of decentered regulation in a 2001 paper and in a closely related 2002 paper. The decentered regulation concept finds synergy with political economy, though Black's works do not engage explicitly with political economy as a field or approach to analysis. This section will introduce the constituent elements of decentered regulation and explain the intertwining of decentered regulation and political economy as developed in the thesis.

Definitions shape interpretation (Leftwich 2004); Black (2002, 20) defined regulation as "the sustained and focused attempt to alter the behavior of others according to defined standards or purposes with the intention of producing broadly identified outcome(s), which may involve mechanisms of standard setting, information gathering, and behavior modification." This approach sets the tenor of argument along three dimensions. First, the definition indicates *intentionality* which bars overly inclusive approaches to regulation that include all of social control (Smith 2002). Second, the core aspect of regulation is about *altering* or *influencing* behavior; this relational conception means that among state, market, and society, no one entity has complete authority across a regulatory 'spaces' or 'spheres', and these different influences do not have a pre-determined hierarchy (Parker 2008). Under the decentered view of regulation, the state and associated state-based laws are 'decentered' as networks, associations, or other affiliations between nongovernment organizations, businesses, and others take on more influential regulatory roles. Third, difficult questions arise with the acknowledgement that not all exercises of power come from the state, and not all power effects are intentional (Grabosky 1995; Graz & Nölke 2012). The recognition of power as a diffuse concept then requires clarification, and Black's definition builds

on an argument of intentionality that effectively avoids the overly "deterministic tendencies of Foucauldian conceptions of governmentality" (Smith 2002, 45).[61]

A decentered approach aims to address problems associated with too limited or too expansive an approach to the boundaries of what constitutes regulation. Over-inclusion or over-exclusion in defining regulation risks creating blind spots to the influence of multiple spheres on the enforcement of and compliance with regulation. Building from the definition she sets out, Black outlines the core notions of decentered regulation as complexity, fragmentation, autonomy, interdependency, and the collapse of the public-private distinction. Black poses these aspects as a "different diagnosis of regulatory failure" (Black 2001, 106) based on, and giving rise to, the "dynamics, complexity and diversity of economic and social life, and in the inherent ungovernability of social actors, systems and networks" (Black 2002, 8).[62] To briefly characterize each element, explored at length in Chapter 4:

- **Complexity** entails both causal complexity and complexity of interactions between actors. This approach stands in contrast to the reduction of complexity in the economics literature, which simplifies widespread problems as 'governable' and therefore 'regulatable' (Demeritt 2011). By reducing complexity through standardization, the literature often supports a view of regulation as unilateral and unidirectional, flowing outward from the state to the market (Dechezleprêtre & Sato 2020).
- **Fragmentation of knowledge and of the exercise of power and control:** *Fragmentation of knowledge and information* is a departure from the familiar construction of 'information asymmetry.' *Fragmentation of control* underscores that the state does not have a monopoly on the exercise of regulatory power; rather, power in multiple forms is distributed among several social actors. Other spheres of regulation are equally important as the formal ordering of the state for forming the 'rules of the game' (Black 2001).
- **Autonomy and ungovernability of actors and systems**: It is not just *state* autonomy and *state* capacity under consideration, but also the autonomy and capacity of society and market actors. Autonomy entails acknowledging the variety of explanatory factors needed to offer a more contextualized analysis of what leads an actor to respond to regulation

[61] Smith's (2002, 45) further discussion of Black usefully points out that decentered regulation is "not over sanguine about the chances of implementing successful participation, deliberation or accountability, pointing out that it may be difficult to get these processes started or that no one may wish to use them. But the inclusion of intention in the definition of regulation at least leaves open debate about these values and accompanying procedures as an ideal. It may be that like consent the values are often more presumed than real, but the Black definition at least preserves the possibility of dialogue about what they could or should be."

[62] Each of these aspects are taken up in greater detail in Chapter 4; Chapter 5 brings decentered regulation into conversation with the concept of 'enforcement styles', and Chapter 6 discusses the public-private divide, fragmentation, and autonomy in the relationship of regulation and private governance.

in a certain way in a given industry (Maxfield & Schneider 1997). In other words, regulation may or may not induce changes in behavior and could lead to unintended outcomes. Further, the *degree* of autonomy may range from low to high (McAllister et al. 2010) across each sphere, which consists of various groups that may pursue different and sometimes conflicting interests and policies, and may be responsive to different pressures or incentives. Therefore, the regulatory approach may need to vary depending on the changing attitude of regulated entities toward enforcement and compliance (Baldwin 1995; Kagan & Scholz 1984).

- **Interaction and interdependency**: Regulatory power is diffused through a web without a definite center (Stoddart 2007) and this distribution of regulatory power creates interdependent relationships. Regulation is 'co-produced' by multiple actors across state, market, and society (Black 2001; Ostrom 1996).[63] Interdependencies influence the ability of regulators by shaping access to information and operational support from non-state groups via linkages (Amengual 2014; O'Rourke 2004) described in the next section 2.3.3.
- **Collapse of the public-private distinction:** The public-private distinction may be interpreted as a demarcation between the sphere of the 'public' authority of the state and the relations between 'private' individuals in the market (Squires 2018).[64] Seen as critical to upholding a legal science that would separate law from politics, this distinction is constructed as a necessity for analyses relating to maintaining social institutions and conducting regulation, alternately referring to the legal regimes (public law versus private law) and the legal status of actors involved (differentiating between private bodies) (Blank & Rosen-Zvi 2014; Shamir 2014; Turkel 1988). The decentered recognition of the collapse of this distinction shifts analysis to restructures the apparent boundaries of 'formal' and 'informal' regulatory authority. When formal governmental rules are neglected or if rule of law is treated flexibly, linkages take on more significance in influencing regulatory outcomes (Black 2002; Braithwaite & Drahos 2000).

These elements–complexity, fragmentation, autonomy, interaction/interdependency, and the collapse of the public-private distinction–may be integrated into to political economy study to focus regulatory analysis. These elements draw from an array of social, economic, political, and

[63] Coproduction was conceived as an alternative approach for the delivery of public services through joint action by citizens and public sector entities where resources are shared (Ostrom 1996).
[64] There are a number of other ways of understanding the distinction; see Lucy (2013) identification of five ways of distinguishing public and private: public law v. private law; matters of general concern v. matters of individual concern; public goods v. private goods; realm of the state v. realm beyond or free from the state; public realm of politics, law, and the market v. private realm of family, the household, and intimacy.

legal theory, while not strictly adhering to a specific framework or being beholden by disciplinary tradition. Most strikingly, Black fluidly pulls from a range of traditions and ways of thinking in order to deepen ongoing debate and discussion about the boundary between power and social control (Wrong 1995; Morriss 2002).

The decentered understanding of regulation and political economy each also address gaps in one another. For example, whereas political economy has explicit concern for historical legacy, the approach of decentered regulation as discussed by Black (2002) and carried forward by others such as (Van Rooij 2010; van Rooij et al. 2016) does not. Chapter 6 will illustrate why understanding the historical context is critical to assess ongoing struggles with tannery reform efforts and why private governance became entrenched in Bangladesh's political economy. Therefore, the value placed on historical analysis by a political economy approach adds a new dimension to the otherwise agnostic approach of Black (2002) toward historical factors. Further, Black's approach implicitly reflects a 'legal universalism' whereas political economy from an international development and environmental angle is deeply concerned with place-specific features. Last, the approach Black takes to proposing 'elements' of decentered regulation leaves ample room for further development. For instance, where Black proposes 'autonomy' as a broad trait of actors in a regulatory system, the political economy approach developed in Chapter 6 seeks to qualify autonomy by extending the concept into dimensions of 'high' autonomy, as exhibited by leather tannery owners and 'low' autonomy, as evidenced by the retreatist enforcement style of the Bangladesh DoE. Similarly, the elements of decentered regulation generate specific signposts to focus the otherwise broad scope of political economy analysis in a particular regulatory setting.

Revisiting the earlier political economy section's discussion on structure and agency, the decentered regulation and political economy approach in this thesis draws on the perspectives from social theory and institutional economics. Whereas traditional political economy analysis focuses on institutions, structure, and agency, the decentered regulation approach of this thesis also seeks to integrate consideration of the *interactions* between agents and their structural-institutional context. This interaction across state, market, and society spheres creates the conditions for the political economy of environmental regulation, and the "social formation" of political economy may be best understood within and between other sectors in "mutually constitutive relationships" (Byres 1977, 259). This argument contrasts with traditional political economy analysis, which often rests on a one-dimensional approach to power (Lukes 1974), as exemplified by Weber's reflection that power is "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance" (1965, 152). In this view, a decision or action is at odds between two or more agents, where power is a resource that

an individual or group has and can "wield against" others (Weber 2013). Such a perspective represents a direct and visible power, as compared with institutional power or ideological power (Morriss 2002; Carstensen & Schmidt 2015).

In other words, by interweaving political economy and decentered regulation, the thesis builds a case to pursue this approach to advance understanding of regulatory power, not as separated across state-market-society or by economic *or* politics, but foremost as occurring through the interstices of these relations. Connecting this dialogue between political economy and decentered regulation across the empirical chapters, Chapter 4 examines each element of decentered regulation in further detail in relation to the specific political economic context of Bangladesh's garment industry. It builds from Black's 2001 paper while extending the concepts into empirical application. Chapter 5 then focuses on decentered regulation in relation to the concept of 'enforcement styles' to examine the application of monetary penalties by the Department of Environment. Chapter 6 assesses the collapse of the public-private distinction via the formation of state-market linkages, fragmentation of knowledge and power, and the autonomy of actors in relation to Bangladesh's leather tannery industry.

2.3.3 State, market, and society in the decentered approach: Institutions, linkages, and private governance in political economy analysis

This section will examine the literature on institutions and the concept of linkages, as well as the implications of linkages for rent seeking behavior. As with the term 'regulation', theorists such as (Hodgson 2016) point out that as analysis of institutions spreads across disciplines, its use needs conceptual clarification. The distinctions between organizations, rules, norms, and strategies and collective action from Ostrom (1990) and the new institutional economics of North (1990) provide foundations for this thesis. However, the North definition of institution is understood as *external constraints* influencing individuals. North posits that institutions are formed by actors, but does not see them as also *forming* actors, reflecting an individualist, agency-oriented perspective (North 1990; Vatn 2005). In contrast, a social constructivist position argues that institutions are not only constraints, but also influence the individual, including the values that individuals hold (Vatn 2018).[65]

Two approaches, social theory and institutional economics, provide different perspectives on the definition of institution most appropriate to analyze water pollution regulation in the

[65] Despite this difference in theoretical orientation, North's contributions to how institutions and their organizational structures influence economic and societal outcomes is applicable for this research. North's theory of institutions, particularly institutional transaction cost theory, is taken up by scholars of water institutions. Saleth and Dinar (2004) further build upon North's expansion of non-economic factors by including performance and transaction cost impacts of institutional linkages to interpret the ways that different factors affect processes of change.

context of this thesis. Social theory analyzes the 'networks of interest' with "regional, national, and international dimensions", assessing "how flows of power operate in a multiscalar fashion" (Ekers & Loftus 2008, 703). Sociological approaches frame institutions as structured patterns of behavior or relationships, accepted as a fundamental part of a culture (Foucault 1980). Social theory encourages thinking "through the many ways in which power is consolidated in institutions normally considered outside of the state" (Ekers & Loftus 2008, 703). Understandings of the ways that "power works to consolidate hegemony for particular groups" while "legitimacy... remains anchored in governmental institutions" may be inspired by a Gramscian view that power is not just 'held' but rather is "productive, in the sense of materialising reiterated norms" (Ekers & Loftus 2008, 703; Barnett & Duvall 2005; Gill 2011). Based on this approach to analyzing power relations, only assessing either state, or market, or society is not sufficient; rather, regulatory analysis should consider each sphere as well as the content and context of their interaction.

Institutional economics draws distinctions between institutions, organizations, conventions, and rules (Hodgson 2006). This clarification suggests that the term 'institution' should refer to rules, including soft law and unwritten rules, whereas the term 'organization' is used to refer to bodies that develop and evolve and implement rules (Searle 2010). The introduction of the Institutional Analysis and Development framework by Ostrom (2011) defined institutions by rules ("shared prescriptions that are mutually understood and predictably enforced in particular situations by agents responsible for monitoring conduct and imposing sanctions"); norms ("shared prescriptions that tend to be enforced by the participants themselves through internally and externally imposed costs and inducements"); and strategies ("regularized plans that individuals make within the structure of incentives produced by rules, norms, and expectations of behavior of others in a situation affected by relevant physical and material conditions") (Ostrom 2007, 15181; Searle 2010). This contrasts with other fields: a political science approach defines institutions *as* organizations, while the economics, sociology, and anthropology approach typically defines institutions as 'rules' (Vatn 2005; North 1990). The latter approach avoids the confusion caused when organizations are also agents, and agents are influenced by institutions. Therefore, as discussed in the previous section 2.3.2, this thesis draws "a line between the agent and the rules and norms defining the actions that agents undertake" (Vatn 2006, 2).

These distinctions between agents and rules/norms becomes important when applied to Bangladesh. In the context of Bangladesh, elites exert an agential role in economic growth and structural transformation (Khan 2013). The ideas and beliefs of elites shape how their interests are structured and what policy actions are prioritized (Weyland 2002; Hudson & Leftwich 2014). As discussed by Hossain (2017) and Khan (2013, 2014), the shared pro-growth ideology of both major

political parties in Bangladesh has contributed to stability for the garment sector even with elite fragmentation and power disputes among political parties. Market access opportunity in Bangladesh is largely structured by membership-based industry associations, such as the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) for garment industry and tannery groups, the Bangladesh Tanneries Association (BTA) and the Bangladesh Finished Leather and Leather Footwear Exporters Association (BFLLFEA). Since its founding in 1977, BGMEA has accumulated significant political influence. Though BGMEA lacks regulatory authority in national law, it has ensured that whereas other industries were collectively less influential to create their own regulatory conditions, the garment industry would be protected; even in a deeply divided political struggle, neither dominant party would be willing to intervene in the industry (Hossain 2017).[66] Since the 1990s, this tacit agreement became a key factor for the consistent economic growth in Bangladesh, as disputing parties aligned elite consensus along pro-factory owner lines, rather than pro-worker, bolstering resistance to organized labor and civil society demands for environmental protection (Hassan & Raihan 2017). BTA, established in 1963, oversaw leather supplied to the domestic market, while BFLLFEA member firms exported. The legal structure based on the national constitution gave the state power to control and regulate the "creation, internal organization, and activities" of private business associations (Kochanek 1996, 714).

These institutional-legal structures create the basis for the strong state-market linkages that have led to the retreatist enforcement style exhibited by the Bangladesh state regulatory agency. Amengual (2016) defines linkages as routinised processes of consultation that facilitate direct interaction between officials and organizations with interests in regulatory processes.[67] The ability of linkages to form, such as between state and society, build on state capacity theories that focus not only on the resources inside of states, but on the ability of the state to act *through* society (Evans 1995; Mann 1986; Tendler 1998). Linkages serve to selectively structure access in politicized states, shaping which groups can influence regulatory officials. Linked groups can exercise power to influence outcomes of regulatory action and simultaneously provide material support or information and possibly mount resistance to powerful groups that stand to lose from regulatory intervention. In this way, linkage structures are both political and operational. For example, linkages may allow pro-enforcement groups access to regulatory processes to create "robust strategic alliances" to balance against well-organized businesses wielding "substantial economic power" (Amengual 2016, 31; Amengual 2014; Pires 2011). In other words, when state bureaucrats

[66] Leather tanneries have four similar industry associations, though they are divided by the stage of production from raw materials through to finished products.
[67] See also O'Rourke (2004) and Houtzager and Kurtz (2000).

have linkages with societal groups that have capabilities for and interest in enforcement, opportunities for regulators to carry out their tasks are possible.

However, the opposite is also true: The political clout of industry may result in retreatist regulatory behavior by the state environmental agency.[68] In this case, state bureaucratic linkages with an interest in thwarting environmental regulation may overcome interests in enforcement and compliance with environmental laws. Pritchett et al. (2018, 32) argue that rent seeking may occur from businesses seeking to "increase profits without creating anything additional of value through distortions to market processes such as constraints on the entry of new firms." If rent seeking occurs at scale, regulatory rents may result in lost government revenue, increased economic inequality, and reduced economic efficiency from misallocated resources (Khan 2012; Ahmed et al. 2014). Mainstream economic theory tends to view rent seeking as a 'temporary imperfection in an otherwise efficient market system' (Mazzucato 2022). However, representing a departure from the view that developing countries should attempt to "emulate the institutions" of OECD countries (Pritchett et al. 2018, 12), North et al. (2007) argue that rents maintain stability. The implication of this is that, if most larger firm's bottom line is disproportionately driven by regulatory rents[69], such rents are not temporary imperfections but a "fundamental dynamic of modern capitalist economies" (Mazzucato et al. 2020). As with the opening review of the economics literature, this fundamental dynamic is not a temporary externality but rather integrated into structural-institutional operations.[70]

Despite a tradition of political economic analyses arguing that effective 'developmental states'[71] are required to achieve the "integrated growth, poverty reduction and inclusive welfare" necessary for development (Leftwich 2008, 21), the 'Bangladesh paradox' persists (Lewis & Hossain 2019). Hassan and Raihan (2018) offer a different explanation for this phenomenon:

[68] While Haque (2017, 2018) and Islam (2013) do not use the terms 'retreatist' or 'rent seeking' in their work detailing regulatory non-compliance and limited enforcement in Bangladesh, they speak to the strong influence of private sector priorities on limiting regulatory intervention on addressing water pollution.

[69] Regulatory rents are defined "as those derived from some discretionary action of government, such as bestowing firm-specific (rather than industry specific) tax advantages…" or may be 'derived from deliberate government inaction' such as not enforcing pollution regulation (Pritchett et al. 2017, 21). In the case of Bangladeshi garment and tannery industries, the former element of rents does not hold; as Chapter 6 will discuss, these industries have historically benefitted from industry-wide tax advantages. The latter element of rents – *deliberate* government inaction – is of interest in Chapter 5, which details the application of monetary penalties on firms found to be polluting the environment.

[70] Based on reviewer feedback, the core chapters briefly mention rent seeking as a concept but it is not the predominant lens of analysis. The concept of rent seeking provided early motivation to take up the analysis of penalty data in the first instance, and therefore was relevant to cover in this literature review given the discussion in Chapter 5.

[71] An effective 'developmental state' state' is defined by its ability to "promote, organize, protect, and sustain" economic, environmental, and social transformation in the interest of poverty reduction (Leftwich 2008, 4). This understanding of state effectiveness goes beyond the "capable, accountable, and responsive" liberal democratic state model (DFID 2007).

'Growth-enhancing governance', rather than 'good governance', is marked by de-facto rent-sharing across political divides, political elite's ability to separate economic and political rents, and a motivation to enable private sector growth. For instance, in the Bangladesh context, the international trade of leather is connected to trends of transnational environmental regulation managed by nonstate institutions (Tewari & Pillai 2007; Baumann-Pauly et al. 2015). The emergence of private governance reflects a wider shift from 'government to governance' (Lange & Haines 2013) or 'governance without government' (Roberts 2011, 67). The discussion of 'governance' in both normative and descriptive terms is particularly associated with demands for regulation to shift from command and control strategies to more 'market friendly' deregulation (Wright & Head 2009). As Bangladesh's largest export sectors, garments and leather tanneries' regulatory relationships with private governance regimes and the political economy in which they operate constitute an important and neglected area in research. The persistence of pollution calls for closer inspection, and Bangladesh is a compelling setting to explore these dynamics.

The rise of private governance programs is further indicative of the structural features of problems with environmental regulation. As Chapter 6 will further detail, '*private'* entails "the role of buyers in governing interactions with suppliers" (Pasquali & Alford 2022). This may be distinguished from 'public' or 'social' *governance,* the role of the state or civil society actors (Alford & Phillips 2018). Private governance institutions could be viewed as distinct standards bodies rather than serving an overarching regulatory role because they promulgate voluntary norms (Abbott & Snidal 2010). Yet, private governance institutions and actors maintain a substantive role in establishing norms and determining levels of market access (Graz & Nölke 2012, Lambin & Thorlakson 2018). The political-strategic framework proposed by Marques and Eberlein (2021) builds from Cashore et al. (2021) to refocus interest in public-private interactions within national political dynamics and development approaches. They argue that states may choose to *adopt, substitute, reject, repurpose*, or *replace* regulatory norms and standards. The political-strategic approach may be juxtaposed with views governments of global South countries as passively "unwilling or unable to regulate social and environmental conditions" (Marques & Eberlein 2021, 1209). In contrast with the state capacity literature, the political-strategic framework points to how (i) *task-specific* developmental state capacity may filter the availability of resources to dedicate to fulfill private governance and (ii) *domestic coalitions* shape the content and direction of government responses, often informed with a political character of linkages poorly recognized in the literature. Chapter 4 builds an initial foundation to empiricize private governance in Bangladesh in relation

to the garment industry, and Chapter 6 applies Marques and Eberlein's (2021) political-strategic approach to analyze the emergence of private governance in the leather tannery sector.[72]

While at a high level 'social' (e.g., labor protections) and 'environmental' considerations of private governance are often merged, these represent distinct areas of research and policy. However, scholarship on environmental private governance programs is limited and geographically scattered compared with research on labor, and a wider perspective offers broader insights to understand how international standards and norms take shape through private governance programs (Vogel 2008; Lambin & Thorlakson 2018; Tzankova 2020). For instance, recent scholarship on apparel purchasing patterns and sourcing suggests that private governance programs have ambiguous effects on achieving desired ends. Research on the Accord and Alliance programs in Bangladesh, discussed in Chapter 1–Introduction, points to the ways that private governance programs may "provide legitimacy to multinational corporations and their global brands but do little to address the structural problems arising from exploitative pricing and procurement practices" (Alamgir & Banerjee 2018; Ahlquist & Mosley 2021; Baumann-Pauly et al. 2015; Ashwin et al. 2020; Scheper 2017). Leitheiser (2021) explores how domestic contexts shape international private governance in the case Accord and Alliance. More generally, research on worker's rights and reporting mechanisms in the global South (Anner 2020) examine how flexibility in supplier relationships created obstacles to reallocating orders in response to compliance findings (Amengual et al. 2019) and how committed commercial relationships enhance the credibility of demands to improve labor standards (Amengual & Distelhorst 2019). Research on the use of audits in private governance has considered the evolution of audits as a tool, to the widespread use as a transnational mechanism used to measure accountability and shape responsibility norms. Lebaron & Lister (2015) argue that audits can be best understood as a "productive form of power" which codifies and legitimates "corporations' poor social and environmental records" and "shapes state approaches to supply chain governance." LeBaron et al. (2017) further examine the mischaracterizations of audits as a neutral tool of supply chain governance, highlighting the audit regimes' embeddedness in struggles over the legitimacy and effectiveness of private governance. Terwindt & Armstrong (2019) further examine the post-Rana Plaza landscape of social audits, arguing that the responsibility of social auditing companies themselves has been overlooked, as most attention has been paid to the role of retailers and brands.

[72] As Chapter 6 will explain, tanneries are an important industry in Bangladesh, where leather goods were identified as a priority growth sector by the government in 2017 when exports crossed $1 billion USD (Sourcing Journal 2019); garments exports were around $33 billion in 2019 (McKinsey 2021).

2.3.4 Summary

Taken together, this thesis conducts a political economy analysis of water pollution regulation with an integrated approach to the relationship between structure and agency. The decentered approach conceptualized by Black (2001, 2002) and extended in this thesis with political economy analysis develops a view that there are multiple sources of regulatory power and influence at play in Bangladesh. Political economy analysis sharpens the application of decentered regulation to a particular geography: as initially conceptualized, decentered regulation applies a 'legal universality' standpoint; however, a place-based analysis called for a complementary set of analytical tools found in political economy. This is not the first work to draw on both Black's decentered regulation and a political economy approach; for instance, Van Rooij et al. (2013) apply decentered regulation to study the dynamics of social and governmental influences on environmental law enforcement in a city in China. However, this and other environmental regulatory research to date has not more deeply taken up decentered regulation, representing an opportunity to build this area of the literature. By building from the current debates in the literature, I hope this thesis may help refine inquiry about the exercise of regulatory power and generate further research at the intersection of political economy and decentered regulation.

2.4 Bangladesh in perspective

Within the body of empirical and theoretical research on pollution enforcement and compliance, most knowledge has been developed about advanced industrialized economies (Van Rooij 2010; Gupta et al. 2019). Because societies respond to regulatory problems in uneven ways, there is significant variation in how a state that lacks features considered necessary for state capacity may achieve the desired outcomes of regulation (Amengual 2016). Examining the way that states and societies in the global South approach regulatory problems may generate insights into the relationship between economic priorities and environmental and social protection. These insights may differ from those of advanced economies. This is not to say that lessons from advanced economies are not relevant and important to make sense of trends in the global South (Hepburn 2010). However, few studies on this topic in Bangladesh are available in the peer reviewed literature.[73] Environmental regulatory research in contexts in South and Southeast Asia and elsewhere in the global South offered a basis in the literature.[74]

Broad patterns emerge in common when evaluating Bangladesh's political economy within the wider South and Southeast Asian context. The World Bank's biannual Enterprise Surveys

[73] See Haque (2017) for exception.
[74] Each chapter offers a review of the relevant literature; this is a condensed summary.

(2013) may be used to illustrate regional political economic trends. Enterprise Surveys are firm-level surveys of a representative sample of an economy's private sector, covering a range of topics including competition, crime, corruption, and infrastructure. Enterprise Survey results are widely used in the literature to assess baseline conditions for business operating environments (Huq & Wheeler 1993; Pritchett et al. 2018). The factors examined in the Surveys provide a useful starting point for understanding issues in the political economy of a country and geographic region. For example, *bribery depth* (the percentage of public transactions where a gift or informal payment was requested) occurred in 43.9 percent of surveyed firms in Bangladesh, compared with 27.1 percent in Indonesia, 34.6 percent in Afghanistan, and 28.5 percent in Pakistan. *Bribery incidence* (the percentage of firms experiencing at least one bribe payment request) was 47.7 percent in Bangladesh compared with 46.8 percent in Pakistan, 30.6 percent in Indonesia, and 22.7 percent in India. These rates of bribery are also reflected in the percentage of firms identifying corruption as a major constraint: 49.6 percent in Bangladesh, compared with 35.8 percent in India and 15.6 percent in Sri Lanka. Firms in the region often report to be expected to give a gift to obtain a water connection – 56.3 percent of respondents in Bangladesh, compared with 52.5 percent in India and 30.9 percent in Pakistan.

These trends indicate a regional 'deals-based' (as opposed to 'rules-based') approach to the conduct of business. These regional economic trends also point to a truism that developing countries vary markedly on the 'deals-rules' continuum, with a 'rules-based' approach resulting in a de-personalized application of rules and a selective 'deals-based' environment characterized by informal, personalized observance of rules (Hallward-Driemeier & Pritchett 2015). On this continuum, Bangladesh is regarded as having "highly personalized deals, with weakly enforced rule of law" (Pritchett et al. 2018, 34). Evidence in support of this includes low scores in measures of institutional quality, such as Government Effectiveness and Rule of Law in the World Bank *World Governance Indicators* (WGI 2021 Interactive).

Other shared regional trends include that despite long-standing environmental reform efforts, prompted by civil society demands and court cases, environmental health in South Asia lags compared with other regions at comparable per capita income levels (Environment Sustainability Index 2019). The poorest countries in South Asia overlap with severely environmentally stressed regions, characterized by high levels of soil erosion, variable rainfall, and degraded forests. The largest share of these costs is associated with environmental health impacts, accounting for about 20 percent of the total burden of disease, similar to the effects of malnutrition (World Bank 2012). Environmental degradation costs between 5 and 10 percent of GDP in India, Bangladesh, Nepal, and Pakistan (Asian Development Bank 2019).

Chapter 2

The growing discussion on environmental regulation in Asia largely centers on China (Ma & Ortolano 2000; Lo et al. 2009; Van Rooij et al. 2013; Van Rooij & Lo 2010; Dasgupta et al. 2001; Skinner et al. 2003; Zhao 2019). Compared with environmental protection initiatives in Bangladesh which have yielded low returns in fines, billions of yuan in pollution levies have been charged nationwide in China since 1982 (Wang & Wheeler 2005). Monetary penalty dynamics in China are significantly shaped by unique features of the Chinese regulatory system including the absence of legal options for industries to contest administrative decisions by regulators (Van Rooij & Lo 2010; van Rooij et al. 2016; Van Rooij et al. 2017) and the application of fines paid by firms to subsidize investments in pollution abatement (Wang et al. 2003). While these studies are critical to understand patterns of environmental regulatory change in an authoritarian governance regime, the particularities of China's system of government, size, and style of development, among other factors, present challenges to glean wider lessons.

Within South Asia, environmental regulatory scholarship is largely focused on India. Studies include statistical analysis of plant level characteristics and compliance (Gupta et al. 2019) and the effectiveness of regulation on pollution (Greenstone & Hanna 2014), as well as experimental approaches examining the use of auditing for compliance (Duflo et al. 2013) and inspection frequency (Ryan et al. 2014). These studies provide valuable insights about the relationship of the relative power of polluters and enforcers. For example, Gupta et al. (2019, 327) suggest that while firm characteristics do not influence compliance, firm characteristics do influence enforcement for water pollution, as "plants belonging to bigger firms (i.e., those listed on the stock exchange) and firms that are more profitable face less stringent enforcement."[75] Ryan et al. (2014) find that regulators are no more likely to identify extreme polluters or impose costly penalties, and that increased regulatory scrutiny only marginally improved compliance with air and wastewater quality standards while not significantly reducing emissions.

Other studies consider the political economy aspects of regulatory enforcement in India from a qualitative approach. Grönwall & Jonsson (2017) examine the experience of decentralized administration in Tirupur, finding that factories that did not implement mandatory zero liquid discharge gained a commercial advantage due to lesser production costs compared with factories that implemented the order.[76] Kathuria and Sterner (2006) take a mixed methods approach to examine efforts to regulate chemical plants in Gujarat, finding that intentional flexibility leads to 'official' monetary penalties varying from standards depending on the infraction, frequency, and

[75] As pointed out by Gupta *et al.* (2019, 326) "Compliance behavior is not significantly driven by plant/firm characteristics that are given but is more responsive to the frequency and thoroughness of inspections and other regulatory actions."
[76] See also *Noyyal River Ayacutdars Protection Ass. and Ors. v. Government of TN*, Public Works Department and Ors., Decided on 22 December 2006, 2007 (1) LW 275.

type of firm. Wider institutional examinations are also limited. Stuligross (1999) considers electoral politics, courts, non-governmental organizations, and aspects of trade and diplomacy as four possible institutional mechanisms to influence Indian government policies and practices in relation to enforcing environmental regulations. Prasad (2006) assesses national Pollution Control Boards, concluding that as regulatory responsibilities increased alongside rising severity of pollution the Boards were not granted additional resources.

Other regional political economic analysis offers insights into shared challenges faced by the garment factories and leather tanneries examined in this thesis. For example, tannery regulation in India and Pakistan, as Bangladesh's closest neighbors and major trading partners, provides useful insights. In India, leather production is one of the oldest manufacturing sectors to cater to the international market (Sharma 1995). Leather is now the country's fourth largest export industry, employing 2.5 million people (Singh & Gundimeda 2020). Singh (1990) traced the development of Kanpur, India as a major industrial center known for textiles and leather goods. Despite increasing government mandates for pollution management, as the industry grew, pollution increased. Also in Kanpur, Alley (1996) examined the interaction between the judiciary and government agencies, showing how monopolization of regulatory power allowed the state to avoid responding to NGO demands for accountability in pollution control. Even in light of general industrial decline in Kanpur, tanneries continued to operate (Priyadarshi 2018). A 13-month lockout of leather tanners that refused to comply with environmental mandates in Kanpur dropped exports by 29 percent from April to August 2019, compared with the same period a year prior (Rawat 2019). While factories with certifications such as ISO 14000 for environmental management systems were seen as more desirable for brands to source from, Gupta and Racherla (2018, 34) suggested that leather tanneries in Kanpur "acquire the certification under the pressure of overseas customers to meet the requirement of environmental compliance on paper only." Grönwall & Jonsson (2017) explored how mandates for 'zero liquid discharge' technology in Indian garment production facilities during an extreme drought were subverted by private industry. These findings point to systemic difficulties in successfully enforcing regulation in a context of intense economic competition.

Though some studies find tanneries cooperating with environmental regulations in Pakistan (Kennedy 1999), ongoing pollution problems also persist despite efforts at reform. Similar to Gupta & Racherla's (2018) findings in India, a report reviewing environmental laws and regulations in Pakistan notes that "environmental protection [is] an unavoidable business compulsion imposed by foreign buyers, and [industrialists] willfully neglect to maintain standards" (Sial 2018, 9). Leather goods are Pakistan's second largest export after garments, with the sector

garnering attention for producing the FIFA World Cup soccer balls in 1982, 2014, and 2018 (Padda & Asim 2018). Examining two of Pakistan's three 'clean production' centers, Ortolano et al. (2014) found that environmental regulations alone do not drive cleaner production. Rather, pressure from private governance programs of international buyers of leather and cost reductions associated with cleaner production methods were more of a substantial driver. Padda and Asim (2018) also noted that the reasons for poor environmental regulatory compliance of tanneries in Pakistan are like those in other developing countries. This includes limited and ineffective environmental guidelines, weak enforcement, lack of access to and finance for cleaner production equipment and infrastructure leading to low implementation, low availability of technical assistance to tannery owners, and "political influence which deflects efforts by local authorities to enforce regulatory compliance" (Padda & Asim 2018, 121).

Further studies point to possible structures of successful regulatory change to achieve water pollution reduction. Kathuria (2006) studied which policy instruments in Malaysia, Poland, and Colombia led to a fall in water pollution levels, and particularly what role MBIs played in pollution mitigation, finding that a combination of instruments—license fee, standards, charge and subsidies—must be reinforced by enforcement to improve environment compliance. Kathuria & Sterner (2006) examined efforts to regulate chemical plants in a state in India, finding that four preconditions–suitable design principles, effective monitoring, objective implementation of rules, and enforcement–for an industry association to be a successful intermediary between regulators and firms. Alternatively, well-managed, pollutant-specific fee structures accompanied by more effective permitting, monitoring, enforcement, transparency, and accountability resulted in pollution declines in China and Malaysia (Olmstead & Zheng 2019). Public disclosure or public rating programs such as pollutant release and transfer registries (PRTRs) or performance evaluation and ratings programs (PERPs) have supported regulatory compliance under certain conditions in South and Southeast Asian countries (Powers et al. 2011; García et al. 2009). Such programs offer a compelling opportunity as administration costs diminish due to the spread of information technology (Dasgupta et al. 2006). However, Blackman (2010) and others cautions that the handful of studies regarding PRTRs and PERPs that present positive results (Huang & Chen 2015) are overshadowed by more studies with mixed, negative, or unconvincing results in developing countries (Lee 2010; Lee et al. 2013; Bowen & Panagiotopoulos 2018). The inconclusive findings regarding the conditions under which information-based or other alternative pollution controls work in developing country settings work point to a need for more research in this area.

Other countries have also used public interest litigation to drive the enforcement of environmental law. Both India and Bangladesh have witnessed an increase in environmental public interest litigation since the 1990s (World Bank Country Environmental Analysis 2018). In India, evidence shows Supreme Court orders led to the reduction of pollution in certain states (Rathinam & Raja 2008). For example, both India and Bangladesh established purpose-built courts to manage cases related to environmental pollution–the Green Tribunal system in India in 2010, and environmental courts in Bangladesh in 2000 (revised with the Environmental Court Act in 2010). Important distinctions in terms of how different types of state and market institutions respond to environmental litigation must also be noted. For example, evidence from the Environmental Protection Bureau (EPB) in China suggests that successful lawsuits against the agency have served to justify state pressure on polluters (Zhang 2016). However, Bangladesh is unlike China, a system "accustomed to enforcing policy priorities through bureaucratic targets" (Stern 2013, 215). The courts of India and Bangladesh may only act pursuant to cases raised before them; therefore, court resolution is "only a temporary solution where legislative and executive systems have failed" (Michael & Raja 2010, 292).

However, the outsize role that the garment industry plays in the Bangladeshi political economy is a noteworthy difference from neighboring countries. The share of exports that garments occupy in Bangladesh was 81.2 percent in 2021. As discussed in the introduction chapter, this extremely high share of total exports is unusual; Vietnam is the fastest growing garment exporter in the 21st century and had its share of apparel exports fall from 12.7 percent to 11.3 percent in 2019 (Kathuria 2021). Indeed, Bangladesh has the largest manufacturing sector as a share of GDP in South Asia. While the peculiarities of Bangladesh's political economy are illustrated in Chapters 4-6, the comparative perspective discussed here establishes a basis in the literature. For example, Van Rooij's (2010) analysis of how change in governmental and social influences effect environmental enforcement in China guided the application of decentered regulation in Chapter 4. The examination of penalty fines in Chapter 5 also benefitted from comparative study on the politics of regulation in developing countries.

2.5 Conclusion

This literature review builds the foundations for how the thesis seeks to synthesize a distinct perspective from the global South at the intersection of political economy analysis and decentered regulation. This research agenda is informed by the debates in the literature and opportunities to extend inquiry into open areas. Bangladesh is at once exceptional and emblematic of commonplace struggles faced by hubs of production in the global South. Its rate of growth and the extraordinary

economic dominance of the garment industry are unusual, yet its struggles are commonplace. Therefore, analysis of regulatory dynamics in Bangladesh offers the promise of identifying trends related to deals-based approaches in the character of state-market linkages and the struggle of court cases to deliver on pro-environmental verdicts due to the curtailment of potential pro-regulation role of society.

Each empirical chapter seeks to address these gaps, extend ongoing questions, and respond to open debates in the literature. **Chapter 4,** *Normalized non-compliance: Insights from a decentered view of water pollution regulation in Bangladesh*, deepens the elements of decentered regulation introduced by Black (2001). It does so by continuing key lines of debate identified in this review. The chapter contrasts the decentered regulation approach with regulatory failure, and with the state capacity and political control literature. These lines of debate are supported by the development of decentered regulation to characterize the defining features of environmental regulation in Bangladesh: market access to state power and limited capacity of state and society actors to influence the direction of regulation. Resulting from this combined dynamic of strong market actors, weak enforcement of state regulation, and limited opportunities for societal intervention, the chapter argues that a 'retreatist' enforcement style has resulted in the normalization of non-compliance for domestic regulatory authorities and market actors.

The arguments developed in Chapter 4 on the emergence of retreatism and resulting non-compliance are further developed in **Chapter 5,** *Regulation and resistance: Water pollution penalties in Bangladesh.* Chapter 5 brings decentered regulation into conversation with the concept of enforcement styles to examine how regulatory power is asserted and contested via the application of pollution penalties. Building out from the discussion of rent seeking covered in this review, this chapter develops an entry point to examine how the interface of market and state actors shapes regulatory enforcement. Drawing from the lessons discussed in the comparative study outlined in this review, the chapter utilizes nearly a decade of 1695 recorded fines by the Bangladesh Department of Environment, policy and legal analysis, and 57 interviews. By extending political economy analysis into a study of enforcement and penalties, the chapter discusses the limited ability and willingness of regulatory authorities to coerce payment of penalties, resulting in the retreatist style.

Chapter 6, *Linkages, fragmentation, and autonomy: Private environmental governance in Bangladeshi leather tanneries*, introduces a historicized examination of the pressures leading up to the tannery reform process. In the context of the normalization of non-compliance and a retreatist approach to regulation, this chapter develops Marques and Eberlein's (2021) political-strategic approach discussed in the private governance section of this review. The chapter draws on two key elements

of decentered regulation – fragmentation and autonomy – and integrates the political economy concept of linkages with the decentered understanding of the collapse of the private-public distinction. By extending Marques and Eberlein's (2021) work with analysis of 76 interviews and secondary data sources, the chapter explores how non-state groups mobilize, contest, and create coalitions to effectively build pressure for, or against, regulation. Specifically, the chapter finds that while the state may initially 'adopt', domestic private sector actors may choose to 'reject' and ultimately obstruct regulatory achievement. This chapter advances the literature centering the perspective of the global South in discussions regarding private governance, which have to date tended to focus on the role of non-state actors in the global North (Kaplinsky & Farooki 2010).

Together, these subsequent chapters consider how regulatory power develops through relations between actors, including in civil society, government, and the private sector, and their structural-institutional context. The chapters empiricize the decentered concept by exploring how these relations are characterized by a range of dynamics and result in different outcomes in Bangladesh's efforts to regulate water pollution from the garment industry and leather tanneries. By doing so, the chapters seek to examine the distribution of regulatory power and offer insights on the nature of occluded relationships underpinning private governance of environmental sustainability in globalized supply chains (Williams 1983; Nixon 2011). Chapters 4, 5, and 6 aim to sharpen and clarify the overall political economy and decentered regulation approach to analysis. The next chapter will discuss how the research design and methodology aimed to deliver on this agenda.

Chapter 3 – Methodology

3.1 Introduction

Chapter 2 argued for developing a decentered approach to examine the political economy of water pollution regulation in Bangladesh. This chapter justifies how the thesis puts this agenda into practice *vis-à-vis* the research design. While scholars have applied decentered or political economic analyses to the study of regulation, there is less discussion about the implications for methodological practice. The means to examine the three primary concerns of political economy – summarized as 'interests, institutions, and incentives' (Hudson & Leftwich 2014) – therefore raises dilemmas for researchers to understand how regulatory power is exercised, distributed, and changed. Early on, I wondered: how could I develop this research to address the configurations of fragmented state authorities, civil society groups, and market entities operating across a range of organizations, norms, and motives?

To navigate these tensions in my research, I turned toward critical realism, which functions as a general framework but is not strictly associated with a set of methods (Fletcher 2016). This orientation would support the identification of structures from which power originates. Engagement with the principles of critical realism ontology and epistemology, such as the use of existing theory and "critical engagement with participants' knowledge and experience" (Bhaskar 2015, 181; Fletcher 2016), guided my study of power, structure, and agency. Such an approach incorporated the means to address my three main areas of interest: structural considerations, including historical legacies and the nature of Bangladesh's interaction with the global economy; institutional variables, ranging from informal social norms and patronage networks to the formal rules governing policy processes and constitutional rights; and the agency of actors, including political parties, organized interest groups such as industry associations, and external stakeholders including international donor or financial institutions (Hudson & Leftwich 2014). Integrating these dimensions into my research design allowed me to examine the subtle workings of regulation, regulators, and the regulated; to learn how otherwise faceless bureaucracies, industries, brands, and factories function by exploring the attitudes of bureaucrats, industrialists, and factory owners; to grasp how they interact in practice, and with what impact on advancing the goals of sustainable development.

I begin this chapter by introducing the research design. Next, I contextualize the four main periods of fieldwork in Bangladesh and review the methods: interviews and related sampling, coding, analysis, and interpretation aspects; exploratory analysis of Department of Environment penalty data from 2010-2019; and document analysis. I close the chapter by reflecting on how I approached ethical issues and the limitations of my research. Throughout I contemplate how my

positionality– as an American female researcher from a British university – informed research interactions and the type of access I was granted.

3.2 Research background and design

My interest in the political economy of regulation began in 2011 when I lived in Cochabamba, Bolivia during my undergraduate research on community-managed water systems. This interest was sustained throughout my graduate research on post-apartheid water governance in South Africa (MSc in Poverty and Development Economics at the University of Manchester) and on agricultural water management in China (MSc in Water Policy and Science at King's College London). My initial research proposal for this DPhil, devised with the broader REACH: Water Security for the Poor research remit in mind, focused on the role of water quality regulation for achieving Bangladesh's UN Sustainable Development Goal (SDG) targets, with the intent to examine the experiences of people living in urban riverine communities impacted by pollution. Focusing on 'pro-poor' regulation and using both water quality data and spatial analysis would complement the extensive work led by the Bangladesh University of Engineering and Technology (BUET) and work led by Dhaka University on the relationship between water security and poverty.

However, as my understanding improved of my research area–both in terms of debates in the literature and political economic dynamics in Bangladesh–I felt less certain about pursuing this direction. Feedback in my Transfer of Status and my Confirmation of States milestones confirmed the need to hone my methods and intended contributions. Focusing on impoverished riverine communities risked closing off opportunities to 'study up' by examining "the culture of power rather than the culture of powerlessness, the culture of affluence rather than the culture of poverty" (Nader 1972, 5). I re-evaluated my research design, particularly my approach to interview sampling, to better incorporate multiple perspectives and viewpoints of actors more directly involved in regulatory development, compliance, and enforcement.

The experience of shifting research methodology is understandable in qualitative social sciences research, particularly involving the uncertainties and contingencies of fieldwork. Yet, research design and methodological development are typically presented in a linear fashion. While many features of my research design choices were the result of intention and deliberation, qualitative research is influenced by external conditions, accidents, and serendipity (Stake 2010). This process of 'progressive focusing' is described by Parlett and Hamilton (1972, 18) as an approach whereby "researchers systematically reduce the breadth of their enquiry to give more concentrated attention to the emerging issues." Bhaskar (1979) argued that 'observation should be theory driven.' As indicated in the progressive focusing model (Sinkovics & Alfoldi 2012), a

theoretical basis is considered to the be first task of research. This thesis is methodologically and analytically guided by a critical realism lens (Frauley & Pearce 2016). Compared with other possible approaches, critical realism creates space to consider political economy and regulatory power in a way conducive to the issues under consideration. Figure 2 shows a visual representation of the linear model, contrasted with Figure 3 which shows the progressive focusing model for a qualitative research process (Sinkovics & Alfoldi 2012). Progressive focusing facilitated iterative refinement of my research design as I learned more about my research area and built relationships.

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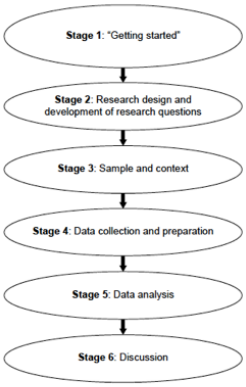

Figure 2: Linear research model (Sinkovics & Alfoldi 2012)

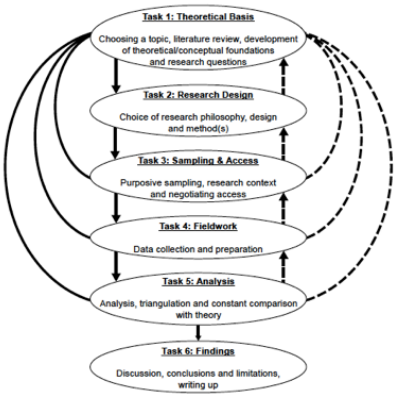

Figure 3: Progressive research focusing (Sinkovics & Alfoldi 2012)

Further, this thesis is influenced by second and third generation political economy research. Hudson and Leftwich (2014, 6) usefully characterize the 'three generations' of political economy

analyses whereby 'first generation' scholarship in the 1990s examined issues of 'good' governance from a normative "technical, administrative, managerial, capacity-building and…public sector management perspective." 'Second generation' approaches emphasized historical, structural, institutional and political elements (Datta et al. 2014; Moncrieffe & Luttrell 2005; Utomi et al. 2007), while the empirical-leaning 'third generation' focused on the 'economics of politics' to examine the way that incentives shape behavior or outcomes (Hudson & Leftwich 2014). Whereas earlier forms of political economy analysis focused on structure, institutions, and agency, the research design integrates consideration of power and how the interactions between agents and their structural-institutional context inform the conditions for the political economy of pollution regulation (Hay 2002). This approach influenced the development of interview questions and themes, and later complemented and intersected with the decentered regulatory analysis.

3.3 Methods

The geographic centers of inquiry were predominately garment factories, leather tanneries, government offices, and informal riverine dwellings (called *basti* in Bengali, referring to clusters of five or more homes on government or vacant land, with insufficient public infrastructure for sanitation, lighting, drinking water, and housing) around the urban centers and sub-centers of the Greater Dhaka Watershed including Dhaka, Narayanganj, Munshiganj, and Gazipur, shown in the map in Image 1.

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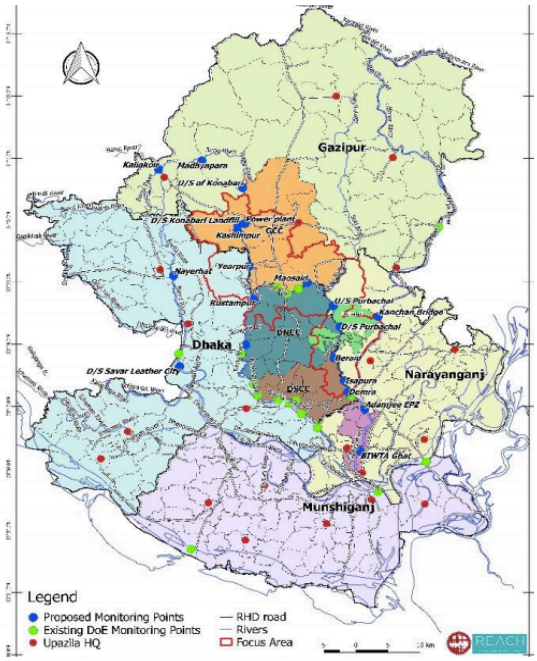

Image 1: Map of the Greater Dhaka Watershed study area (BUET 2018).

Four fieldwork periods totaling eight months included November–December 2017, April–May 2018, April–May 2019, and November 2019–February 2020, outlined in Table 4.

Table 4: Fieldwork periods

Field period in Bangladesh	Purpose
November – December 2017	-Initial field visit to meet research partners -Conduct first round of interviews -Intensive Bengali language study
April – May 2018	-Participate in the REACH annual research conference with colleagues -Conduct interviews and follow ups -Continued Bengali language study
April – May 2019	-Household surveys in riverine communities -Industrial Water Use Policy, 1st and 2nd meeting -Conduct interviews and follow ups -Continued Bengali language study
November 2019 – February 2020	-Join Oxford REACH colleagues in meetings with senior government officials -Industrial Water Use Policy, 3rd meeting -Access and translate Department of Environment (DoE) fine data

	-Participate in Bangladesh Garment Manufacturers and Exporters Association (BGMEA) meeting -Present at IWP-Singapore conference -Conduct interviews and follow ups -Preparation for Urban Water Futures conference -Continued Bengali language study

3.3.1 Interviews

Each of the three core chapters make use of semi-structured interviews. The interview sampling frame was developed through the four-point approach outlined in Table 5. This entailed defining a 'sample universe' and specifying criteria for inclusion and exclusion; sample size; sampling strategy; and sample sourcing (Robinson 2013; Thorne 2016).

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Table 5: The four-point approach to qualitative sampling (Robinson 2013)

Name	Definition	Key decision
Define sample universe	Establish sample universe by way of inclusion/exclusion criteria	Homogeneity vs. heterogeneity, inclusion/exclusion criteria
Decide sample size	Choose sample size range by accounting for ideal scenario and practical conditions	Idiographic (small) or nomothetic (large)
Devise sample strategy	Select purposive sampling strategy to specify categories of person to be included in sample	Stratified, cell, quote, theoretical strategies
Source the sample	Recruit participants from the target population	Incentives vs. no incentives, snowball sampling varieties, advertising

Ahead of my first round of fieldwork in November 2017, I identified key state regulatory agencies, industry associations, and civil society groups. Individuals from each group were identified based on their knowledge of and experiences with the previous, current, and planned efforts to manage and respond to water pollution. Additionally, individuals with experience in the business or sustainability aspects of the garments, leather, or wider industry were of interest considering the wider context their perspectives may offer. Seeking the perspectives and experiences of interviewees across different groups is based on a critical realist view that the "heterogeneity and polyvalency of agents" is of interest; therefore, "it is appropriate to use research techniques that emphasise rather than suppress the differences between subjects" (Pratt 1995, 68).

Two areas presented early challenges: Factory owners and political-*cum*-market elites. With some 6,000 to 7,000 factories in Dhaka alone, I decided to approach each 'type' of factory – large export-oriented factories with more than 8,000 workers, extensive sustainability credentials, internationally educated owners and management; mid-range factories usually with some 2,000 to 7,000 workers often with some certifications but not enough to attract higher-end buyers; and

small factories often operating in the regulatory shadows on a sub-contract basis to fill in the gaps of last-minute orders. With close links between 'large export factory' and 'political elites' as the owners or other stakeholder in the operation of the factory, I quickly found that the world of influential players in Dhaka is closely networked. Considering the close relationships between state, market, and society actors, many elite interviewees were accessed through direct reference. The selection of interviewees and their participation depended on a number of factors including their availability, willingness to speak and their suitability to address research themes.

The emergence of broad categories – state, market, and society – developed over the course of my second round of fieldwork in April 2018. I had begun processing the initial tranche of interviews and wondered how to make sense of surfacing trends in relation to the decentered framework. The theoretical basis for these categories is established elsewhere (Streeck & Schmitter 1985); determining the basis for these categories then entailed both the practical consideration of processing and making sense of data, and making an analytical choice to identify patterns and to deepen conceptual clarity in considering each area in relation to another.

Yet not all interviewees neatly fit into one category or another. At what point is an elected official who also owns garment factories coded as 'State' versus 'Market'? In such cases, I decided depending on (1) the nature of how the person wished to be identified with respect to their approach to anonymity and/or (2) the primary focus of the interview. If, taking the aforementioned case, the individual spoke more to the aspects of their role as a factory owner than as a policy maker and wished to be identified as a factory owner, then the interviewee would be coded as 'Ma-' and a note that this person also owns a factory.

Ultimately, this research draws on 140 semi-structured interviews conducted between October 2017 and December 2021. An ever-present question is *how will I know when I have done 'enough' interviews?* From previous experience conducting interviews for my undergraduate and masters dissertations, answering this question is subjective. Attaining adequate saturation–appropriate and adequate depth and breadth (Bowen 2008)–in this study was achieved with a mix of two areas: (a) data are collected until nothing new is generated or there are no new patterns in the data (Gaskell 2000) and (b) variability between established categories of interviewees are explained and the relationships between them are tested (O'Reilly & Parker 2012). To bound the scope of analysis, this thesis is primarily focused on political economy dynamics within Bangladesh; however, the thesis does offer some initial consideration of the interaction or influence of Bangladeshi actors' engagement with 'external' entities including policies, programs, and roles of international institutions, private governance programs, and brands sourcing from Bangladesh based factories. As such, saturation was attained when both no new information on the subject

matter arose over the course of new interviews, and adequate variability within each category was accounted for; for instance, where possible, I aimed to collect interviews from persons at different levels of authority by speaking with senior, mid-level, and junior individuals.[77] [78]

Most interviews (123) took place in person in the geographic focus area of the greater Dhaka watershed. Initial introductory interviews or follow up interviews were sometimes conducted remotely via Zoom, Skype, or phone calls particularly from March 2020 onward due to the onset of the COVID-19 pandemic. Thirty-five interviews or quotations from public remarks took place during the Zero Discharge of Hazardous Chemicals (ZDHC, a global consortium of brands committing to phase out certain toxic chemicals from their supply chains) annual meeting in Amsterdam, the Netherlands in December 2018 and the South Asia regional meeting in Mumbai, India in February 2019.

Individual interviewees were coded according to the primary grouping of the interviewee's professional role. Interviews were noted by their code, indicating the broad 'category' to which I determined the interviewee belonged in relation to regulation, when referring to quotes or information obtained from interviews–Ma for Market, So for Society, and St for State.[79] The majority of the interviewees from the 'state' category (35) are bureaucrats within Bangladesh government, including Bangladesh judicial branch, members of Parliament, the Department of Environment, and ministers.[80] The 'society' category was comprised of individuals (47) from Bangladeshi and international NGOs, academics, representatives from riverine communities in Dhaka, international donor organizations, environmental lawyers, and newspaper journalists.

A more complete picture of decentered regulation required understanding how brands sourcing from Bangladesh engage in managing the factories in their supply chain. As such, the 'market' sector has individuals (58) employed by clothing brands based in the Global North (including corporate sustainability managers, sourcing managers, chemical managers, or other environmental strategy officers), specifically in the UK, EU, and USA. It also includes garment factory owners and managers, private factory auditors, consultants, industry associations, other private companies including wastewater technology and infrastructure firms, and bankers and financers.

[77] Very junior staff were usually not at a level of clearance that would position them to speak with an external interviewer.
[78] Future work may explore the interaction of these with international policy and regulations (such as Extended Producer Responsibility programs from EU countries regarding physical and/or financial responsibility for treatment or disposal of consumer products).
[79] In cases when an individual held multiple roles – for example, the person served as both a government official and owned a factory – they were marked on the basis of the capacity they were interviewed for (e.g. interviewed in their government office with the focus as their experiences in government would be marked as 'St,' where as if they were interviewed in their factory and focused on their experiences in industry they would be marked as 'Ma').
[80] The total number of MPs interviewed is 5; several wear multiple 'hats' as factory owners, Ministers, etc.

The representation of interviewee characteristics is largely at the discretion of the researcher and her approach to analysis, ranging from 'collectiveness' (clustering the presentation of interviewee characteristics) to 'uniqueness' (individualizing characteristics). The presentation of interviewee characteristics in this thesis is generally collective-clustering, with interviewee job roles and institutional affiliation listed where possible in the main text as well as in the complete interviewee list. Appendix I includes the interview list with the code, date, and the interviewee position/institution (where possible within the individual's preference for anonymity).

3.3.1.1 Interview themes

The five cross-cutting themes across interviews related to the central areas of research interest. These are further reflected in the sample interview schedule in Appendix II:

- (1) Regulation and enforcement of environmental laws and policies;
- (2) The role of markets and industry actors; interviewees would reflect on the relative position of brands, factories, industry associations, pricing, access to finance, incentive structures, and competition;
- (3) The role of the state; how does the interviewee understand the place of national and local government, courts, law and policy in environmental and industry regulation, particularly in relation to market and society;
- (4) The role of society; core themes that emerged were around the 'protective' role of 'activist' groups and local or international NGOs;
- (5) Other perceived forces, relationships, institutions, and/or power dynamics with an influence, impact, or role to play that otherwise may not have emerged in the course of the interview. Here, issues related to donor institutions, international financial institutions, corruption or deal making, and the history of Bangladesh came to the fore. For instance, some interviewees raised the point that 'Bangladesh is a young country' and referenced rivers in developed countries (particularly the Thames in the UK) going through stages of extreme pollution during periods of industrialization. Additionally, broader trends and patterns emerged through this last area.

Questions common across interviews included how the interviewee understood environmental regulation, specifically for water pollution, in Bangladesh; their perceptions of change over time and causes for change in regulatory enforcement and compliance; and the relative role of factories and industries, the Bangladesh government, brands, or international organizations in regulatory enforcement. Common questions supported the development of broad themes across interviews,

while specific questions supported the depth of specific areas of knowledge. Where appropriate, questions were tailored to the experiences and expertise of the individual interviewee. In relation to the critical realist perspective of the thesis, this reflects a view of interviews as "a meaningful type of communication which maximizes the information flow by making use of communicative and social skills, by being willing to adapt preconceived questions and ideas in the course of the interview" (Sayer 2010, 223).

3.3.1.2 Interview coding and analysis

Interview data, once transcribed from recordings or notes, were input to NVivo 12. NVivo was selected due to (1) accessibility through a University license; (2) my prior training in, and use and knowledge of the software; (3) the ability to develop an organized and structured approach to data analysis; and (4) the speed of processing and efficiency to support data analysis processes. The technical process of coding entailed first typing up recorded interviews and any handwritten notes, followed by multiple close readings of interview transcripts and notes. Pages of transcription and notes were organized in a linear timeline, e.g. the first interview completed in October 2017 is first and last interview completed December 2021 is last. This process familiarized me with the overall content of the corpus of interview data. All interviewees were anonymized at the time of the interview and then coded into a 'case node' as a unit of observation based on their position – 'market' actors listed as 'Ma-' followed by the number order in which the interview occurred. For instance, the fifth interviewee from the market category would be noted as 'Ma-05' in the chapter text. People with whom I spoke to more than once have multiple dates listed next to their names in the interview list (included in Appendix I).

Once all interview data was in typed form and input into NVivo, I then refined the nodes and sub-nodes based on emergent themes, devised through both theory-driven and data-driven codebooks shown in Figure 4 (Decuir-Gunby et al. 2011). These groupings of coding structures were not, at first, specifically designed with the decentered approach in mind. As described previously (p. 76), I initially coded each interviewee with one of three 'category' nodes that the interviewee would be noted as – state, market, or society. In NVivo, a 'node' is a collection of references about a specified theme or relationship (NVivo 11 2022). Nodes are developed in the process of coding, with lines of written text highlighted and added to a selected node or sub-node. Nodes may be descriptive or analytical, about why an issue matters; I did not distinguish between the two. Once I chose to use Black's decentered approach to regulation, I became attentive to the relationship between aspects of complexity, fragmentation, autonomy, etcetera, and the labeling of nodes. While the nodes and subnodes are generally broad labels ('regulation' as a node and 'audit' as a subnode), political economy and decentered regulation then provided an approach to

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make sense of the coded interview and create meaning from a series of interviews, the document analysis, and/or the penalty data in relationship to one another. For example, an interviewee coded as a 'society' actor with an environment group remarking on the role of brands in improving regulatory observance would be noted as 'Society – So' followed by the number (e.g., 'So-005') followed by the coding of the remark as 'Market' (as a distinct area of interest from the interviewee category of 'market actor') > 'Brands' as illustrated in Figure 5. I would then consider the substance of the interview in relation to the decentered regulatory approach as I wrote each chapter, drawing quotes from interviews that supported, or contravened, the core arguments presented. This approach is illustrative of a flexible deductive process consistent with critical realism (Fletcher 2016).

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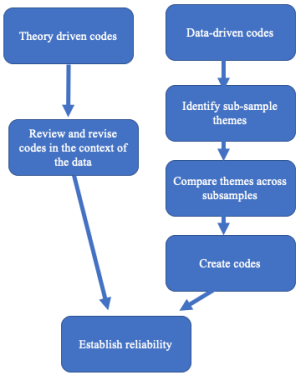

Figure 4: Steps for developing a codebook (DeCuir-Gunby et al. 2011, 142).

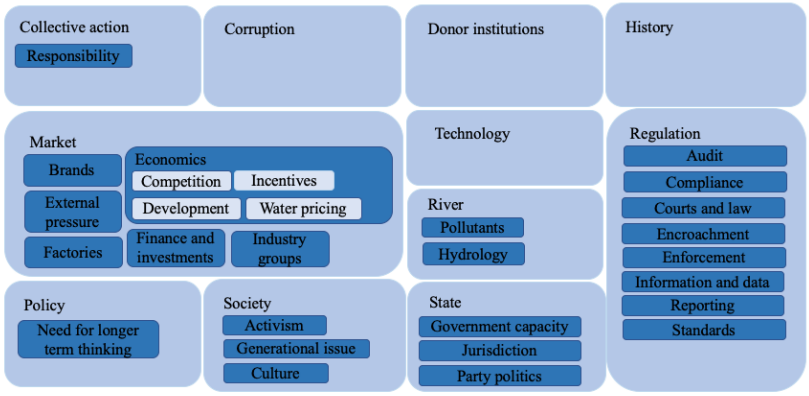

Figure 5: NVivo coding nodes and sub-nodes for this thesis

Interview analysis may be evaluated on grounds of rigor (Baxter & Eyles 1997), addressed by speaking to the number and length of interviews, appropriateness and breadth of interviewee samples within the goals of the study, the types of questions asked, level of detail in transcription, and practices undertaken for transcription accuracy (Tracy 2010). Coding, with NVivo or otherwise, faces limitations. The subsequent analysis and interpretation strive to achieve more precision and sophistication in establishing relationships between power, structure, and agency than the relatively simple nodes. The research's credibility, dependability, and confirmability is supported through triangulation (Bloor 2001; Baxter & Eyles 1997). Borrowed from the field of navigation, triangulation refers to the use of multiple methodological practices to obtain a fuller picture of the issue under investigation (Natow 2019). This thesis drew on multiple perspectives across the categories of interviewees, as well as different sources of information including pollution penalty data and key documents. Triangulation, particularly of interview data with these other modalities of data, served several purposes in this research including to ensure accuracy of findings (Merriam 1991) by checking biases or inaccuracies that may emerge from a single source (Leech & Onwuegbuzie 2007) and to demonstrate multiple conceptions of social realities (Golafshani 2003). This approach to 'source' triangulation allowed me to corroborate an argument or construct with more than one report from a data set (Denzin 2008).

3.3.2 Exploratory analysis of penalty data from the Bangladesh Department of Environment

Data on state penalties for individual industries was obtained from the Department of Environment (DoE), a division of the national Ministry of Environment and Forestry (MoEF), in December 2019. These data were used primarily in Chapter 5 and to inform the overall conclusions in Chapter 8. The penalty data analysis complemented the qualitative inquiry of this study in several ways, including bringing the results into conversation with interview data as a way of conducting 'triangulation' (Natow 2019) and contributing to the small but growing number of studies that incorporate factory-level analysis of penalty patterns (Gupta et al. 2019; Haque 2017).

As described further in Chapter 5, data on penalties from the DoE are not publicly available. The data were made available on the request of the Director General of the DoE in an agreement with Bangladesh University of Engineering and Technology (BUET), a research partner of the University of Oxford. Factory names and specific locations were redacted by the DoE. All other categories and raw data inputs remained unchanged. The data, originally in Bengali, were subsequently translated to English at BUET and sent to the DoE for review and approval.

The nationwide data cover 1695 recorded DoE penalties on industrial units between July 2010 to October 2019. All data were processed in Stata version 14 on Mac or Excel Version 16 (2018) for Mac depending on the complexity of the analysis due to my own and my coauthors

experience with these software programs. Data cleaning and consolidation was necessary to process the raw data obtained from DoE; more than 50 originally listed industry varieties in the raw data needed to be unified into more consistent headings for analysis. We identified six industry categories by organizing similar types into more coherent groupings for processing. Further ways of processing the data–for example, examining fine distribution by month or by year–were determined based on the kind of analysis we had sufficient understanding through the literature, interviews, and/or documents to analyze. The results of this exploratory analysis informed my wider thinking and some of the conclusions.

3.3.3 Document review

Documents may be understood as 'social facts' (Atkinson & Coffey 1997) which are "produced, shared, and used in socially organized ways" (Bowen 2009, 27). The analytical process of finding, selecting, making sense of, and synthesizing data in documents is intended to yield excerpts, quotations, or passages to organize into themes, categories, or case examples. Because the thesis is interested in the political economy of regulation, a detailed understanding of the regulatory landscape entailed understanding the constitutional, legal, and institutional base.

Water policy and water management documents supported my understanding of the empirical basis for claims made in interviews. For instance, the Environmental Conservation Act (ECA 1995) and Environmental Conservation Rules (ECR 1997) provide the legal basis for the enforcement role of the Department of Environment. Document review revealing contradictory institutional responsibilities between two different government agencies regarding particular regulatory enforcement tasks could confirm claims made in interviews about agency conflicts over coordinating responses to problems. Document review also facilitated an analysis of differences between formal written regulation and quotidian practice. Chapter 5 illustrates that though the ECA (1995) designates fines for specific offenses, the DoE regularly over- or under-charged fines compared with the ECA.

Other national policy documents, such as the Seventh Five Year Plan (FYP 2016-2020) reflect government priorities and plans. Such documents often helpfully outline big picture, national scale issues related to political economy and environment. For example, the Seventh FYP points to garments and leather tanneries as the "most important industrial polluters" and describes progressively worse water quality over time in urban rivers (General Economics Division 2015, 60). Such documents provide crucial insights particularly where peer reviewed academic literature is scant.

I wish to make a note on my research's use of grey literature, defined as information "which is produced on all levels of government, academics, business and industry in print and electronic

formats, but which is not controlled by commercial publishers, i.e., where publishing is not the primary activity of the producing body" (Farace & Frantzen 2005). In certain disciplines, such as medicine, the grey literature is seen as a valuable resource particularly in systematic reviews (Godin et al. 2015; Paez 2017). Grey literature may usefully broaden the scope of relevant studies and provide a more complete view of available evidence (Mahood et al. 2014). Particularly for research on topics in developing countries that are not well represented in the international peer reviewed academic research, the grey literature provides a critical source of information.

However, outside of medicine, other areas of study lack clear standards to evaluate grey literature and include it in the conduct of formal academic research. Due to limited studies in the area that this thesis covers, this paper triangulates fieldwork and peer reviewed literature with selected grey literature including working papers, government reports, organization's websites, and conference proceedings. This 'composite narrative' approach forms part of the descriptive and analytical basis for the thesis (Willis 2019; Wertz et al. 2011).

Together, these documents provided a foundational base for the research design, overviewed in **Error! Reference source not found.**. The documents listed in the top – national planning documents, the national constitution, national environmental laws and policies, legislation and private governance programs of other countries, and other sources including newspaper articles – interface with the relevant institutions and actors listed below. The core national planning documents of interest in this thesis are the Five Year Plans of the General Economics Division. National planning also interfaces with the role of donor organizations and lenders, such as the World Bank; Chapter 6 explores the interaction between donor involvement and national planning. Bangladesh's constitution (1972) forms the legal basis for the court cases discussed in this thesis related to water pollution and the leather tanneries, allowing for the public interest litigation of the Bangladesh Environmental Lawyers Association (BELA) and Human Rights and Peace for Bangladesh, discussed in Chapters 4 and 6. Bangladesh's Environmental Conservation Act (ECA) and Environmental Conservation Rules (ECR) form the basis of the DoE's legal ability to levy monetary and other penalties on polluting factories, assessed in Chapter 5. The major features of the ECA and ECR are listed in Table 6.

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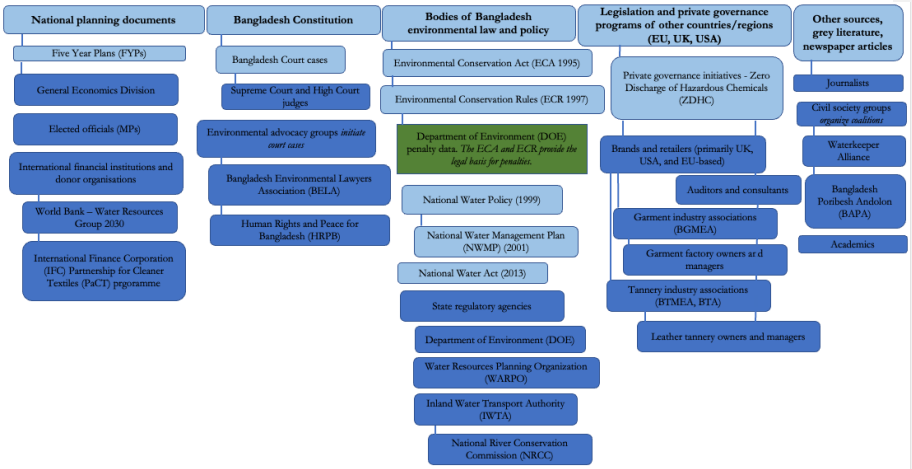

Figure 6: Overview of key documents and general groupings of interviewees.

Table 6: Major features of the Environmental Conservation Act and Rules (Dewan & Corner 2013)

Major features of the Environmental Conservation Act and Rules	
Environmental Conservation Act (1995)	**Environmental Conservation Rules (1997)**
Assistance from law enforcing agencies	Complaint procedure by communities to Director General against non-compliance of project approval conditions
Polluters pay principle	Power to collect samples from factories
Formulation of environmental guidelines	Environmental clearance certificate (ECC) procedure with specified time limit
Claim for compensation by affected people	Environmental screening of public and private projects
Penalties for violation of project approval conditions	Review of Environmental Impact Statement (EIS)
Offences committed by proponents and action against proponents	No objection certificate from local government division
Power of DoE to make and enforce rules	Appeal by proponents against order or directions from DoE

Other policy documents form the policy backbone for the DoE, Water Resources Planning Organization (WARPO), Inland Water Transport Authority (IWTA), and the National River Conservation Commission (NRCC). The legislation and private governance programs of other countries includes programs such as the Leather Working Group (LWG) and Zero Discharge of Hazardous Chemicals (ZDHC). These private governance programs most closely interface with private sector associations in Bangladesh including the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and Bangladesh Tanners Association (BTA). Last, other

documents and sources such as newspaper articles led me to journalists to speak with. The importance of newspapers and role of journalists in influencing action on water pollution is significant; as mentioned in the Chapter 1 – Introduction and Chapter 7 – Conclusion will revisit, a *Daily Star* article became the basis of the 2019 High Court case leading to the landmark 'rights of rivers' verdict.

3.3.4 Interpretation

The thesis aims to align the methods with the goals of the study, the types of questions asked, and the interpretive process (Tracy 2010). Interpretation of data is supported through a critical realism approach to abduction and retroduction (Edwards et al. 2014). Abduction, or theoretical re-description, is defined as a process of "inference or thought operation, implying that a particular phenomenon or event is interpreted from a set of general ideas or concepts" (Danermark et al. 2019, 205). Interviews, penalty data, and documents are re-described using theoretical concepts connected with political economy and decentered regulation. Such 'thick description' entails several components[81] including accurately describing and interpreting social interactions within the appropriate context in which the action took place; capturing the web of social interaction among participants in their operating context; reflecting upon the motivations and intentions for the actions; and describe context and specifics of actions (Geertz 1973; Denzin 1989; Ponterotto 2006). Thick description is distinguished from thin description, which does not feature interpretation applied in light of a theoretical and analytical basis related to "patterns and traits of social life in a culture" (Holloway 1997, 154).

Retroduction then seeks to "ascertain what the broader context must be like in order for the mechanisms we observe to be as they are and not otherwise" (Edwards et al. 2014, 25). To do so, I identified patterns over time and in different contexts. For example, I observed that factory managers are more inclined to respond to the demands of brands compared with those of government regulators (a 'mechanism'). This observation points to other processes at play, suggesting the opportunity to understand more about the relationship between the observation of this mechanism and the context in which it operates. Using theoretical resources, I would then aim to explain variance within this observed mechanism. Drawing on existing theory, I would consider the nature of political-economic structures and how they enable or disable the opportunities for agents in order to explain why it is that brands wield more influence while government environmental regulators exert less. Abduction and retroduction add theory to data;[82]

[81] Integrating the work of Geertz (1973), Denzin (1989), Holloway (1997), and Schwandt (2001).
[82] Many researchers view abduction and retroduction as one 'movement', e.g. from "qualitative data to the best theory that explains the data" (O'Mahoney 2014; Mingers 2006; Ketokivi & Mantere 2010).

in this way, critical realist researchers seek to "generalize, not about populations, but about theoretical propositions" (Montano & Szmigin 2005, 367).

3.4 Ethical considerations

I obtained ethical approval by the University of Oxford Central University Research Ethics Committee (CUREC, reference SOGE 17A-208) before beginning this research. However, I feared that reliance on CUREC requirements alone risked 'research ethics' becoming a vague, catch-all term, reduced to paperwork and a checklist of safety protocols. I was fortunate to share my DPhil cohort with tremendously thoughtful peers who engaged in critical conversations to guide my understanding of ethics in practice, to see ethics as the moral principles and actions that would inform my research from concept to completion (Wilson & Darling 2016). Ethical research, beyond a series of functional requirements, requires acknowledging one's own strengths and failings. Recognizing the 'messiness' of social research rather than sanitizing the process allowed me to develop my own context-relevant understanding of research ethics to apply to my day-to-day practices, seeing ethics as a series of situated judgments through which I enacted responsibility for those involved in my research (Harrowell et al. 2017). This section explains two ethical principles that guided my research–a relational approach and responsibility–and how I put them into practice throughout my research process.

3.5.1 A relational approach

Through ongoing reflection and engagement with peer and colleagues, I developed a relational understanding of research ethics. In addition to being an American researcher at Oxford working in Bangladesh, I faced "all sorts of cross-cutting and contradictory personal commitments" that needed to be negotiated (Marcus 1995, 113). As White (2002, 409) writes on race and development in relation to her experience conducting her anthropology doctoral research in Bangladesh, "Imagine for a moment that a 22-year-old Bangladeshi who speaks a smattering of English could stay 18 months in Britain and then return to write a PhD in Bengali on people in Britain. Which is subsequently used as a teacIg resource on British society... The i"ea is laughable. And yet that is exactly what I did in reverse." A relational approach entailed considering opportunities to redress the extractive nature of research conducted from institutions of the global North (Griffiths 2017). Before, during, and after fieldwork, I sought to go beyond institutional approval processes by engaging in challenging unequal power relations that emerge throughout the process of research (Nagar 2010; Sultana 2015). "A re'ational approach entailed building relationships with Bangladesh-based collaborators, some of whom are long-term partners of Oxford researchers. Importantly, this research was facilitated through Bangladesh-based partners

of the REACH program. REACH partners, particularly at the Bangladesh University of Engineering and Technology (BUET) and Dhaka University, provided access to government officials and general support in the day to day needs of research. The high regard for these institutions in Bangladesh facilitated interviews and participation in conferences that otherwise may not have been possible. Through these relationships, I developed connections with relevant government ministries and their ministers; senior bureaucrats involved in environmental regulation; and otherwise hard to reach individuals. This facilitated interviews with individuals who may not otherwise be represented in academic research, including 'elites' (Natow 2019), to whom gaining access may be difficult due to gatekeepers. This may present bias, for instance in terms of gaining access to select networks."A relational approach was central to advancing policy-oriented goals connected with the wider remit of my work with REACH. Building relationships across academia, government, and industry earned entry to meetings that I otherwise would not have had the opportunity to participate in, such as the Industrial Water Use Policy forum. Participating in the three stakeholder consultation meetings shaping the Industrial Water Use Policy over the course of 2019 improved my understanding of the process of policymaking; how implementation and enforcement are considered at the policymaking stage; and how different water related agencies interface with one another and manage regulatory responsibilities.

3.5.2 Responsibility

Interview data are influenced by researcher positionality and interpretive frame such that even "the most accurate observations are shaped by formative theoretical frameworks" (Schensul et al. 1999, 95). Therefore, the quality and depth of the outcomes of observation will relate to the skill of the researcher to listen, observe, document, and interpret observed phenomena (Schensul et al. 1999). Some resulting limitations may be addressed by reflexively considering personal theoretical orientation, providing context of interviewee responses, and avoiding imposing preconceived categories while taking field notes, rather allowing analysis to emerge from the observations.

This view entails that the representation of the content and context of interviews are an important component of this research, as is acknowledging researcher bias and positionality throughout the research process. My approach to positionality includes recognizing the power differentials between myself as the researcher and my interviewees (Jazeel & McFarlane 2010). I introduced myself as a doctoral researcher based at the University of Oxford at the outset of arranging interviews. At the beginning of each interview, I explained the purpose of my research and its intended outputs, as well as the REACH program objectives and priorities to contextualize the wider scope of my work. In each case I explained that what was discussed in the interview would be anonymized. Interviews were only recorded with interviewee consent. For formally

arranged in-person interviews, meeting places were determined ahead of time and accompanied by a Dhaka-based REACH team member where possible. Pre-written questions went 'off-script' when new themes or topics emerged, as was appropriate in the setting. Most interviews were conducted in English, except those with riverine dwellers. In such cases, I was accompanied by a research partner from Bangladesh and I worked with a fluent Bengali speaker to translate audio recordings as needed.

I viewed sharing preliminary findings with interviewees and REACH team members to build dialogue between myself and research peers and participants. This dialogue will continue after my thesis submission, and I will aim to turn each of my core chapters into a one- or two-page policy brief and arrange short presentations to relevant stakeholders.

Finally, alongside my DPhil research, I sought to improve my understanding of the water quality aspects of these issues through co-authoring five papers, a book chapter, and a REACH policy brief (detailed in Chapter 7 – Conclusion). In partnership with Oxford and Bangladesh based colleagues, I contributed to these outputs, though they are not part of my DPhil. My participation substantially improved my understanding of the biophysical basis and wider environmental context of regulation and policy. Developing proficiency in the technical aspects of this work and learning the language of science spoken by Bangladeshi colleagues supported my approach to conducting responsible research.

3.6 Research limitations

This research encountered limitations in the design, fieldwork, and analysis phases. In addition to individual methodological constraints highlighted in each core chapter (4-6), limitations are discussed further here. My evolving understanding of the landscape of data availability and quality changed the trajectory of the research between conception and execution.[83] Limited access to data on regulatory enforcement and penalties impacted Chapter 5; for example, as the redaction of factory names from the list of DoE penalties (despite that the DoE publishes individual fine amounts and factory names in newspapers) for polluting industries prevented a deeper understanding of repeat offender behavior.[84]

Substantial issues related to the overall qualitative research approach were addressed through a combination of engagement through the Advanced Qualitative Methods course offered

[83] The data availability issue regarding water quality and regulation is widely remarked upon, recently noted by the World Bank 2030 Water Resources Group in their report 'Consolidation and analysis of information on water resources management in Bangladesh' (2015, 11): "The availability of comprehensive, integrated and up-to-date information on hydrological characteristics and water usage statistics is restricted across the country."

[84] Haque (2017, 2018) collected all instances of DoE fines for factories as reported in newspapers from 2010-17 for his analysis. The number of fined factories published is much smaller compared to the comprehensive list maintained by DoE.

by Social Sciences Division; developing a critical understanding of the research design and analysis in relation to the literature; and discussion with research partners.[85] Efforts to establish rigor (Baxter & Eyles 1997) included triangulation, or verification of information shared by interviewees to overcome some of these limitations. These aspects are further considered in the methodology sections of Chapters 4, 5, and 6. The approach may constrain the generalizability of findings outside of Bangladesh. However, this thesis does not make claims on the wider application of the research; it does offer a critical review in Chapter 2 of the environmental regulatory literature from other similar developing country contexts to position this work in relation to other findings.

Finally, this thesis aims to explore the complex factors that influence the exercise of power, authority, and legitimacy in regulatory processes. Yet cultural or other biases may influence the research framing, representations of persons or phenomena, or the relative emphasis placed on different findings (White 2002). Further, this researcher's gender, class, ethnicity, and theoretical orientation affected the level and type of access, interview style, and resulting interpretation and analysis. As much as possible to acknowledge and mitigate bias, I sought direction from research partners in developing my research approach and identifying interviewees. I attempted to address some of these biases by making my theoretical orientation explicit, providing context of interviewee responses including the role of the interviewee in water governance or management, and avoiding imposing preconceived categories while taking field notes to allow groupings to emerge from observations.

Identifying shortcomings with this research is a subjective process requiring interpretation of the impact of limitations on the research. While each of these limitations impacted the study, the impact was mitigated through collaboration with research partners and preparation. Each paper further discusses limitations faced in the individual study. I am immensely grateful for the support and guidance I have received throughout this thesis, from inception to fieldwork to writing; all omissions and errors are my own. The next chapter will now shift to examine normalized noncompliance with environmental regulation in Bangladesh.

[85] See Tracy (2010), Maxwell (2011), Anfara & Mertz (2015), Ritchie and Lewis (2003), and Cho and Trent (2016).

Chapter 4 – Normalized non-compliance: Insights from a decentered view of water pollution regulation in Bangladesh

Abstract

This chapter examines how the interactions of state, market, and society influence the emergence of decentered environmental regulation of water pollution in Bangladesh. Despite government mandated requirements for industrial wastewater treatment, mounting directives from clothing brands sourcing from Bangladeshi factories, and increasing civil society engagement, the use and disposal of water as an economically unrestricted industrial input contributes to severe consequences for river water quality. Drawing on 108 interviews conducted from November 2017 to November 2021, the chapter finds non-compliance is normalized as state regulatory agencies adopt a retreatist approach to enforcement and society is limited in its capacity to exert influence. Variability in a firm's ability and willingness to comply suggests that more stringent regulation alone will not drive improved compliance. Though diffuse in their scope and prevalence, private environmental governance approaches to respond to regulatory shortcomings face sharp limitations in effectively detecting, reporting, and correcting environmental problems. By shifting the focus of regulatory analysis to the interactions of a wider range of actors, norms, and institutions through which regulatory power is asserted and contested, the chapter advances a decentered regulatory approach to understand environmental challenges as private governance takes up a more prominent role.

Keywords
Compliance; Political Economy; Regulation; Bangladesh; Pollution

Chapter 4 – Normalized non-compliance: Insights from a decentered view of water pollution regulation in Bangladesh

4.1 Introduction

During the past two decades, concern about the social and environmental impacts of water pollution has driven its inclusion in international development objectives including the United Nations Sustainable Development Goals (SDGs). While this high-level attention has bolstered research agendas on the issue (SDG Resource Centre 2022), questions remain regarding the ability of regulation to encourage compliance with water quality laws, strengthen enforcement, and deter polluters. Pollution is an expected externality of economic growth, perhaps especially so in states characterized by a high degree of politicization, weakly institutionalized bureaucracies, and the significant influence of power exercised outside of formal institutional channels (Amengual 2013, 2016; Williams & Mawdsley 2006; Estache & Wren-Lewis 2009).[86] Particularly in countries in the global South where government policy makers, private sector actors, and civil society groups have concurrently sought to address environmental issues, interactions between state, market, and society are poorly understood.

To assess the character and consequences of these interactions, this chapter applies a decentered regulatory approach as conceptualized by Black (2001, 2002) to examine water pollution in Bangladesh. As a rising middle income country facing persistent tensions between pursuing economic development and improving environmental sustainability, Bangladesh offers a valuable terrain for analysis. In Bangladesh, unpriced water is treated as an unlimited resource by key industries such as ready-made garment (RMG) factories and leather tanneries, which intensively use water and generate wastewater in their production processes (ARUP 2015; Sagris & Abbott 2015). While Bangladesh strives to deliver on national aspirations to accelerate industrialization and achieve the SDGs, government and industries contend with falling groundwater levels, domestic demand for pollution abatement, and uneven pressure for environmental compliance from international brands that source from Bangladesh-based factories (Hossain & Khan 2020). Despite the introduction of mandatory requirements for wastewater effluent treatment from the national government and mounting directives for environmental sustainability from clothing brands, overall surface water quality indicators related to industrial pollution have worsened throughout the river system, causing rivers in Dhaka, the capital city, "to be unsuitable for any human use" (General Economics Division 2015, 423; Department of

[86] The level of variation or 'unevenness' in developing countries accounts for key differences in patterns of regulatory enforcement and compliance, and influences the intensity and distribution of enforcement (van Rooij & Lo 2010; van Rooij & McAllister 2014; Estache & Wren-Lewis 2009).

Environment 2008; Rasul et al. 2006). Though all sources of water pollution are of concern, including from municipal, agricultural, and other industry sources, the focus on garments is due to the sector's political-economic power, higher relative consumption of water, and contribution to the total river pollution load with harmful chemicals and heavy metals including from dyes (Hossain et al. 2018; Sakamoto et al. 2019).

This chapter, drawing on 108 interviews conducted from 2017 to 2021, aims to sharpen understandings of how the contours of power at the intersection of state-market-society regulatory relationships. The decentered approach supports understandings of the ways that diverse institutions and actors seek to exert power and influence. Three principal arguments emerge from the analysis. First, state regulatory efforts are informed by the significant influence exercised by market elites and broader political priorities to sustain economic development. A retreatist enforcement style of the environmental regulatory agency and the limited capacity of civil society emerge as a consequence of this distribution of influence and reflecting deference to private sector priorities. Second, while some analyses may treat regulated interests as uniform, this assumption risks oversimplifying the relationship between regulation and political economy (Yeager 1991, 11). Variability in firm ability and willingness to comply with regulations suggests that more stringent regulation alone will not drive improved compliance.Third, private governance programs have benefited from legitimacy as market-driven regulatory mechanisms gain perceived objectivity and manufactured transparency. However, private governance approaches face sharp limitations in effectively detecting, reporting, and correcting environmental problems.[87]

The chapter proceeds as follows. First, it reviews the literature to define the scope of regulation, introduces decentered regulatory analysis, and considers the intersection of regulation, bureaucracy, and the state. The chapter then outlines the political economy of water pollution regulation in Bangladesh and the methodology of the research. In the next section, the chapter draws on Black's (2001) framework to examine each dimension of decentered regulation: complexity, fragmentation, autonomy, interdependency, and the collapse of the public-private distinction.[88] The chapter then assesses the implications of the findings and concludes with reflections on directions for future research.

[87] See also Dauvergne & Lister (2012) and LeBaron et al. (2017).

[88] Although Black (2001) characterizes this element of decentered regulation as a 'collapse' of the distinction (suggesting that the distinction does not exist or does not matter, in either an ideological or material sense), the shift in the distinction is closer to reflecting Kennedy's (1982) discussion of a continuum (whereby there are no absolutes) or 'loopification' (whereby the ends of the continuum are less distinct such that everything is both private and public).

Chapter 4

4.2 Perspectives on regulation and political economy

4.2.1 Defining regulation

The concept of regulation exists across legal, economic, and political contexts, and is applied to both economic and non-economic activities (Koop & Lodge 2017). As such, the term has accumulated a variety of meanings. Definitions vary, ranging from 'any tool by government to intervene in the economy' (OECD 1997) to "the monitoring and control of a sector or business by Government or an entity appointed by Government" (World Bank 2022). Each characterization emphasizes the restrictive implications of state regulation, intended to limit activities or behavior of individuals or groups, particularly private sector actors. While terminology including *smart regulation* and *co-regulation* (Ayres & Braithwaite 1992; Gunningham & Sinclair 2017) have emerged over the past two decades, indicating a recognition of pluralized regulatory relationships, these developments are minimally extended to scholarship on the political economy of regulation in developing countries (Grabosky 2013; Marques & Eberlein 2021). As a result, the literature on environmental regulation following the state-centered definition does not adequately recognize interconnected state, market, and society relationships and their influence on regulatory practice and outcomes in the global South.

From the decentered perspective, regulation is defined as "the sustained and focused attempt to alter the behavior of others according to defined standards or purposes with the intention of producing broadly identified outcome(s), which may involve mechanisms of standard setting, information gathering, and behavior modification" (Black 2002, 20). In contrast, a decentered approach aims to overcome dichotomies in regulation scholarship, for instance between "state and market, citizens and consumers, social movements and transnational corporations" (Lange & Haines 2015, 3). This framing acknowledges that the state is acted upon as it acts on others, meaning that the state does not have a monopoly on the practice of regulation. Here, the state is not the center of analysis, and is not located at the top of a conceptual hierarchy above market and society.

A contribution of the decentered approach to regulatory scholarship is to provide an alternative analysis of 'regulatory failures' in developing countries (Blackman 2008; Donadelli & Heijden 2022; Gunningham 1987). Regulatory or government failure is often invoked, but considerable debate remains on the nature of failure and resulting externalities, its significance in theory and in practice, and appropriate institutional responses (Damania et al. 2019; Damania et al. 2004; Johnston 2012). Regulatory failures may be explained on the basis of four forms: first, inappropriate regulatory design (instrument failure); second, insufficient government knowledge to identify the cause of the problem, design appropriate solutions, or identify non-compliance

(information failure); third, inadequate implementation of the regulation (implementation failure); and fourth, that regulated entities are insufficiently motivated to comply, while the regulators are not inclined to regulate in the public interest (institutional failure, or capture theory).

Relying on these explanations of failure, however, may obscure the sources of persistent shortcomings in regulatory approaches that a decentered analysis clarifies. Compared with applying one or more of the types of failure to understand regulatory dynamics, a decentered interpretation of the normalization of non-compliance foregrounds how regulatory power is exerted, distributed, and challenged. As Marques and Eberlein (2021, 1212) argue, the literature has largely neglected a political perspective that "focuses on competing interests and contestation in the relationship between governments and transnational norms and schemes that are pushed through global value chains onto domestic contexts." To analyze the political economy of regulation and understand the emergence of normalized non-compliance with water pollution laws in Bangladesh, this chapter draws on dialogue between Foucault (1980) and Gramsci (Arnold & Hess 2017). This dialogue approach views power as "productive, in the sense of materiali[z]ing a reiterated norm" (Ekers & Loftus 2008, 703).[89] The concept of regulatory power recognizes that multiple forms of power may be exerted by actors, institutions, and systems across regulatory space, and be re-produced over time through socio-economic relations and the creation of norms.

4.2.2 Analyzing decentered regulation

The central elements of decentered regulation as outlined by Black (2001) are complexity, fragmentation, autonomy, interdependency, and the collapse of the public-private distinction. These elements stand in contrast to views on the form and function of regulation extrapolated from the literature, which are driven by five core expectations: first, regulation is a unilateral approach wherein government delivers 'instructions' to market actors through laws and policies; second, regulatory formation follows linear progress to implementation and enforcement; third, a high degree of internal coherence of the state, characterized by hierarchical and meritocratic state bureaucracy; fourth, binaries that treat state and market as distinct entities; and fifth, regulatory theory is equally applicable to developed and developing countries. These propositions form the foundation for scholarship which is widely reflected in the theory and practice of environmental regulation. One or more of these theoretical expectations may be found in the substantial body of regulatory literature.

In the decentered approach, 'complexity' does not suggest more complex regulation in response to complex problems (Black 2001). Rather, complexity entails both causal complexity and complexity of interactions between actors. This approach stands in contrast to the reduction

[89] See also Stoddart (2007).

of complexity, which simplifies widespread problems as 'governable' and therefore 'regulatable' (Demeritt 2011). By reducing complexity through standardization, the literature often supports a view of regulation as unilateral and unidirectional, flowing outward from the state to the market (Dechezleprêtre & Sato 2020).

Fragmentation, drawing on Foucault's notion of the inseparability of knowledge and power, has two interlinked elements: fragmentation in the construction of knowledge, and fragmentation of the exercise of power and control. Fragmentation of knowledge and information is a departure from the familiar construction of 'information asymmetry.' When viewed as a problem of 'information asymmetry,' policy responses to improve information availability are predicated on creating conditions of 'symmetric information', based on the premise that all relevant information may be knowable to all parties (Miller 2005; Tirole 2012; Williamson 1975). A decentered understanding acknowledges that under certain conditions, relying on more information in the hands of the state may be unlikely to make powerful violators more compliant, and alternatively motivate firms to seek to change the rules (Khan 2012).

Fragmentation of control underscores that the state does not have a monopoly on the exercise of regulatory power; rather, power in multiple forms is distributed among a number of social actors. Other spheres of regulation are equally important as the formal ordering of the state for forming the 'rules of the game' (Black 2001). Traditional analyses rely on a narrow concept of power, exemplified by Weber's reflection that power is "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance" (Weber 1965, 152). This perspective represents a direct and visible power, unlike institutional power, bargaining power, or ideological power (Barnett & Duval 2005; Wrong 1995; Mann 1986). In contrast, this chapter assesses institutions and social relations, both formal and informal, as embodying regulatory power by influencing discourse and behavior. Identifying individual special interests that influence regulatory processes and outcomes may be a starting point, but "interests as such are not determinative" (Yeager 1991, ix). Regulatory power is therefore not only about the outcome of opposition, but the content and dynamics of interactions and how they are mediated through social actors and institutions.

Interlinked with fragmentation is the autonomy and ungovernability of actors and systems. In traditional regulatory scholarship, autonomy is characterized as the "ability of the state to formulate and pursue goals that are not simply reflective of the demands of social groups or classes" (McAllister 2008, 62; Skocpol 1985; Evans 1995). From a decentered perspective, it is not just *state* autonomy and *state* capacity under consideration, but also the autonomy and capacity of society and market actors. Expanding from this basis, autonomy does not mean only state freedom from

market interference, but that actors will "continue to develop or act in their own way in the absence of intervention" (Black 2002,108). Further, 'the' state is not a unitary actor; nor do civil society groups or private sector actors engage with cohesion. Each consists of various groups that may pursue different and sometimes conflicting interests and policies, and may be responsive to different pressures or incentives. Actors' choices may change over time, depending on "which domestic forces or regulatory coalitions hold political sway over government policy in a specific policy area at a given time" (Marques & Eberlein 2021, 1213; Zhang & Whitley 2013). As such, 'government responses' or 'society responses' to environmental problems may appear disjointed. Autonomy entails acknowledging the variety of explanatory factors needed to offer a more contextualized analysis of what leads an actor to respond in a certain way in a given industry (Maxfield & Schneider 1997). In other words, regulation may or may not induce changes in behavior and could lead to unintended outcomes. Therefore, approaches to change polluter behavior with regulation may need to vary depending on the changing attitude of regulated entities toward enforcement and compliance.[90]

Autonomous, ungovernable actors and systems form interactions and interdependencies (Black 2001). From this perspective, regulation is a multi-directional process and regulatory power is diffused through a web without a definite center (Stoddart 2007). Regulatory institutions and the distribution of power have interdependent relationships. In this sense, regulation is 'co-produced' by multiple actors across state, market, and society (Ostrom 1996).[91] Interdependencies influence the ability of regulators by shaping access to information and operational support from non-state groups via linkages (O'Rourke 2004; Amengual 2016). Linkages among actors and institutions are routinized processes of consultation that facilitate direct interaction between officials and organizations with interests in regulatory processes (Amengual 2014; Houtzager & Kurtz 2000). Linkages serve to selectively structure access in politicized states and determine which groups can influence and operationally support, or undermine, regulatory processes.

In some scholarship, the public-private distinction of states and markets is prominent in liberal discourse and neo-classical economics, interpreted as a demarcation between the sphere of the 'public' authority of the state and the relations between 'private' individuals in the market (Squires 2018).[92] Seen as critical to upholding a legal science that would separate law from politics, this distinction is constructed as a necessity for analyses relating to maintaining social institutions and conducting regulation, alternately referring to the legal regimes (public law versus private law)

[90] See Baldwin (1995) and Kagan and Scholz (1984).
[91] Coproduction was conceived as an alternative approach for the delivery of public services through joint action by citizens and public sector entities where resources are shared (Ostrom 1996).
[92] See Turkel (1988, 801) and Blank and Rosen-Zvi (2014, 201) for further discussion.

and the legal status of actors involved (differentiating between private bodies) (Blank & Rosen-Zvi 2014; Shamir 2014; Turkel 1988).[93] Constraints on informal action are shaped by the conventions, codes of conduct, and norms of behavior that collectively underlie and supplement formal rules, and provide the framework for human interactions (North 1990). However, a distinguishing feature of weak states is the high degree of 'personalized' application of rules. Shifting analysis to reimagine the public-private distinction restructures the apparent boundaries of 'formal' and 'informal' regulatory authority. When formal governmental rules are neglected or rule of law is treated flexibly, linkages take on more significance in influencing regulatory outcomes (Black 2002).[94] This departs from earlier literatures focused on the application of de jure policies, rules, or formal institutions (Pritchett et al. 2018).

Taken together, these elements form a 'decentered' view of regulation. Building on the insightful contributions on regulation across civil society, private governance, and state spheres, including that of McAllister (2008, 2010), O'Rourke (2004), van Rooij et al. (2013), Lange & Haines (2015), Amengual (2016), and Marques and Eberlein (2021), this chapter extends Black's decentered approach to critically examine environmental regulation in Bangladesh beyond regulatory failure or formal state authority alone.

4.2.3 Regulation, bureaucracy, and the state: State capacity, political control, and enforcement style

Dominant approaches to regulatory inquiry are largely based on two understandings: notions of strong state bureaucracies, and a view that regulation primarily or only comes from the state. The elements of an ideal type bureaucracy are thought to "give officials strong incentives against corruption, insulate agents from political interference, and enable them to undertake complex operational tasks" (Amengual 2016, 25). This view of bureaucracy and the role of the state provides the theoretical underpinnings for two broad areas of explanations of regulatory effectiveness from the political economy and political science literatures. The first literature is the 'state capacity' literature, which contrasts strong, autonomous states with weak, captured states (Acemoglu & Robinson 2000; 2001; 2008; Acemoglu et al. 2015). This literature focuses on the presence or absence of capable regulators (Carruthers 2001; Dasgupta et al. 2000; Dasgupta et al. 2006; McAllister et al. 2010). The central argument in the capable regulators literature is that the quality of the state, whether 'weak' or 'strong', determines regulatory outcomes. By expecting state action to be determined by the quality of the state regulator, this literature treats strong bureaucracies as

[93] There are a number of other ways of understanding the distinction; see Lucy's (2013) identification of five ways of distinguishing public and private: public law v. private law; matters of general concern v. matters of individual concern; public goods v. private goods; realm of the state v. realm beyond or free from the state; public realm of politics, law, and the market v. private realm of family, the household, and intimacy.
[94] See also Rhodes (1996) and Braithwaite & Drahos (2000).

a prior and necessary condition for state capacity to deliver regulatory goals (Pires 2011). The implication is that solutions to improve regulatory outcomes are linked to reforming state bureaucracies to make them closer to a Weberian ideal type (Berliner et al. 2015).

The second literature on political control hinges on which groups gain power and become 'principals' that direct state 'agents' in bureaucracies. In this view, the role of state bureaucracy is to "respond to political signals from principals and to adjust its action accordingly" (Amengual 2016, 6). Political control focuses on the "extent to which elected political principles influence the decisions of unelected agents in the bureaucracy" (Short 2019, 4). Though dominant in the literature to study political influence, the scope conditions for principal-agent theory are largely not met in states with fragmented bureaucracies. For principal-agent dynamics to hold, regulatory agencies need internal coherence to respond to political signals from external principals. Under conditions of low state capacity, politicians may be unable to induce action because bureaucrats will be less motivated to comply with regulatory mandates (Amengual 2016; Gerth & Mills 1948). In such circumstances, bureaucracies cannot reliably respond to signals from external principals if they are subject to internal weakness (Huber & McCarty 2004). Bureaucracies that cannot direct their agents or that lack sufficient resources will not reliably respond to political demands. This lack of responsiveness means that external political influence is limited by the degree of hierarchical structure within the bureaucracy (Brehm & Gates 1997). As a consequence, this literature does not adequately support understanding of the political and economic factors which influence regulation in states with imperfect bureaucracies and close linkages between market and state institutions.

In contrast with capacity and political control, this chapter examines the concept of 'enforcement style' (Kagan 1994; May & Winter 2002; McAllister 2008), which describes dimensions of "how regulators interact with regulated entities" (McAllister 2010, 61). Dimensions outlined by McAllister (2010) include formalism, coercion, autonomy, and capacity, with styles ranging from legalistic–marked by high autonomy, capacity, formality, and coercion–to retreatist, with low markers across the dimensions. Importantly, enforcement style "does not bear any single, invariable relationship" to effectiveness; rather, understanding different styles helps to grasp "what impact, under particular conditions, administrative style has on programmatic effectiveness, viewed in all its dimensions" (Kagan 1994, 386). In other words, rather than treating enforcement styles as fixed variables that determine decision-making and behavior, this understanding expresses the relational contours of regulation as distributed among a number of actors (Coslovsky et al. 2011).

4.3 The political economy of water pollution regulation in Bangladesh: A decentered perspective

This section introduces the regulatory context in Bangladesh and outlines the research area and methods. It then delves into each area of Black's (2001) notions of decentered regulation– complexity, fragmentation, autonomy, interdependency, and the collapse of the public-private distinction.

4.3.1 Regulatory context in Bangladesh

Major regulatory challenges are brought into sharp relief by the economic power and contribution to pollution of the garment industry. The emergence of the garment industry as a political economic force in Bangladesh is contextualized by early state formation led by elite settlements, which "consist of broad compromises among previously warring elite factions, resulting in political stability" (Burton & Higley 1987, 295) that have structured enduring state-market relations (Hassan & Raihan 2018). In the early 1990s, Bangladesh was the first South Asian country to liberalize its economy as the World Bank and International Monetary Fund drove export-led industrial growth through trade liberalization, making such policies a condition of ongoing financial assistance (Hossain 2017).

The support of political elites for growth-enhancing governance is widely identified as a defining feature of the political settlement in Bangladesh (Ahmed et al. 2014). While garments have multiple national industry associations for various types of production, the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) accumulated significant political influence since its establishment in 1977. Though BGMEA lacks formal regulatory authority in national law, its tactics and institutional strength ensured that whereas other industries were less influential to create their own regulatory space, garments would be protected; even in a deeply divided political struggle, neither dominant party would intervene in the industry for labor or environmental reasons (Hossain 2017).[95] Since the 1990s, this tacit agreement became a key factor for the consistent economic growth in Bangladesh, as disputing parties aligned elite consensus along pro-owner lines, bolstering resistance to organized labor and civil society demands for environmental protection (Ahmed et al. 2014).

The influence of the garment industry is reflected in advantageous financial arrangements, such as tax benefits and loan rescheduling, for which BGMEA has effectively advocated through strong political ties with ruling elites (Hassan & Raihan 2018). BGMEA, which is "dedicated to promote and facilitate the apparel industry through policy advocacy to the government" (BGMEA 2020) has reduced the transaction costs of members through collective negotiation. Further, the

[95] Leather tanneries have four similar industry associations, though they are divided by the stage of production from raw materials through to finished products.

government delegated authority to BGMEA to issue trade certificates and licenses (Ahmed et al. 2014). In other words, membership to an industry association is essential to gain an export license in Bangladesh and to the survival of an export-oriented factory.

4.3.2 Study area and research design

Field research predominately took place around the urban center and sub-centers of Dhaka including Narayanganj, Keraniganj, Gazipur, and Tongi between October 2017 and February 2020.[96] Semi-structured interviews were arranged with 108 individuals selected on the basis of their knowledge of and experiences with the historic and current efforts to respond to water pollution. Interviews were first conducted in person and then conducted virtually from November 2021 following the onset of the Covid-19 pandemic. Considering the networked relationships between state, market, and society, many interviewees were accessed through direct reference.

The research sought to explore the views of actors across state, market, and society, introducing a 'multivocal' perspective to regulatory analysis Tracy (2010). The role of interviewees in relation to the political economy of pollution are noted by their code – Ma for Market, So for Society, and St for State.[97] The majority of the 108 interviewees from the 'state' category (33) are appointed bureaucrats within the Bangladesh government, with one from the Bangladesh judicial branch and two elected members of Parliament. 'Society' is comprised of individuals (36) from Bangladeshi and international NGOs, academics, local community representatives, international donor organizations, environmental lawyers, and newspaper journalists. The 'market' sector has individuals (39) from banking and finance, garment factory owners and managers, international fashion brands, private factory auditors, consultants, and industry associations. Quotations from interviews, indicated in italics and in quotation marks, are brought into conversation with the literature to compare and triangulate. This 'composite narrative' approach forms the descriptive and analytical basis for the study (Willis 2019; Wertz et al. 2011). Interview data are supported through thick description (Geertz 1973) and triangulation (Bloor 2001; Natow 2020).

[96] Before beginning this research, ethical approval was obtained by the University of Oxford Central University Research Ethics Committee (CUREC, reference SOGE 17A-208). All participation was informed and uncompensated. After verbally informing participants of the study process and research objectives, all resulting personal data from engagement was stored on a secure platform.

[97] In cases when an individual held multiple roles – for example, the person served as both a government official and owned a factory – they were marked on the basis of the capacity they were interviewed for (e.g. interviewed in their government office with the focus as their experiences in government would be marked as 'St,' where as if they were interviewed in their factory and focused on their experiences in industry they would be marked as 'Ma').

4.4 Decentered regulation in Bangladesh

4.4.1 "Land of a thousand policies": Complexity in regulation

Against this backdrop of ascendant BGMEA influence emerged the third of three distinct growth episodes in Bangladesh. The rapid expansion of the RMG sector from 1996 to 2010 occurred alongside the first national environmental protection law to specify waste discharge quality standards for industries. Normalized non-compliance in this period of rapid industrialization arose early on, beginning after the introduction of the Environmental Conservation Act (ECA) (1995). The ECA and subsequent Environmental Conservation Rules (ECR) (1997) established that polluting industrial units were required to build an individual effluent treatment plant (ETP) on the site of the unit and apply for a location clearance and an environmental clearance certificate. Through the ECA, the Department of Environment (DoE) gained legal authority to take administrative action, including determination of fines against polluters (Section 8, ECA 1995).

This policy and the institutional context of industrial water quality regulation in Bangladesh suggests that significant state effort was placed on developing enforcement responses to pollution. Yet, contradictory goals abound. Bangladesh is home to "*two hundred environmental laws"* (Interview April 2016, So-006) and is the "*land of a thousand policies*" (Interview November 2017, Ma-004). As pointed out by a senior government bureaucrat, it is "*not that we don't have laws and rules, just that no one follows them*" (Interview April 2019, St-012).[98] As with many low and middle-income countries, environmental regulatory agencies in Bangladesh are among the least powerful in government (van Rooij & McAllister 2014). Consequently, the DoE's relatively low position in the state bureaucratic hierarchy undermines its regulatory strategy. Though the DoE's regulatory authority has continued to expand through the ECA and ECR, as with other contexts with low capacity and autonomy (Coslovsky et al. 2010; van Rooij & McAllister 2014), the prevalence of strong laws on the books but 'weak-in-practice' enforcement are characteristic of a retreatist enforcement style (Braithwaite et al. 2007).

With its retreatist approach, the DoE has struggled to defend administrative actions when such actions have contradicted other agencies which more directly adhered to the growth-oriented priorities of the state (Interview November 2017, St-002). As leaders of environmental regulatory agencies faced competing pressures amidst a maze of obstructions, "*the fate of the institutional process [was] to push out effective [director generals]*" (Interview April 2019, So-020). Pressure to abide by tacitly

[98] This is further supported by the literature (Haque 2017; Hossain et al. 2018; Whitehead et al. 2019), government documents (General Economics Division 2015; DoE 2016), and reports (World Bank Country Environmental Analysis 2018).

accepted institutional processes of non-enforcement penetrated the inner structures of state compliance efforts, as when a "*DoE compliance officer cracked down on textiles. Then [they were] removed from the post… their successor [was] not as strict*" (Interview February 2019, So-036). Circumstances whereby individuals faced professional consequences when deviating from the non-enforcement norm echoes other findings that regulatory agencies "must come to terms with the environment" in which they exist in order to survive (Gunningham 1987, 86).

Regulatory enforcement, symbolically and practically, is the "final indicator of the state's seriousness of purpose and a key determinant of the permeability of the barrier between compliance and lawlessness" (Yeager 1991, 251). The theory of deterrence that often underpins penalty fines as regulatory strategy is reflective of a view of state-led regulatory action (Becker 1974). Policy often supports the perception that the higher the penalty and the greater the probability of detection, the "more likely it is that rational firms will choose to comply" (Amengual 2016, 17). But, as hypothesized by others including Amengual (2016) and Yeager (1991), enforcement in cost-sensitive industries is likely to be detrimental to political support for regulation because agencies will face more intense pressure from these sectors. In Bangladesh, garment factories compete against each other, and other countries, to offer brands the lowest price possible (Ahlquist & Mosley 2021). Under these conditions, the costs to politicians and government agencies for enforcement are increased. In this view of regulator behavior, in circumstances where state "*environmental enforcement is only as strong as the political will*" (Interview, St-008) regulators are more likely to be lenient and the state may "opt to prosecute the simplest and most easily identifiable cases, regardless of seriousness, and single out smaller enterprises less likely to offer effective resistance" (Gunningham 1987, 89).

This circumstance is reflected in the discretion of regulatory agencies in Bangladesh to engage in enforcement actions, specifically in relation to the application of fines as a state regulatory strategy (Haque 2017). Whereas fine amounts for pollution are informed by theories of firm behavior in traditional regulatory approaches, the policies governing penalty rates for the type and severity of violations are opaque, as the DoE maintains a high level of discretion for regulatory action (Haque 2018). To illustrate, in 290 publicly disclosed cases by the DoE between 2011-16 for water pollution, fines ranged from $117.00 (USD) for an RMG factory without a clearance permit or an ETP, to $353,598.00 (USD) for 'partial operation of an ETP' on the factory site (Haque 2018). Repeat offenders were not fined more than first time offenders, and did not face progressively more serious legal action. Efforts to standardize fines, initiated by the DoE in 2019 in response to scrutiny of fining practices by local journalists, maintain a system that appears coherent on paper but is non-uniform and unpredictable in its effects and outcomes. These

pressures contribute to the retreatist style exhibited by DoE toward regulatory enforcement, described by Kagan (1994, 388) as one in which "officials avoid hard choices, backing down at the least sign of opposition, postponing decisions, or generating meaningless paperwork that creates only the appearance of regulatory enforcement."

The influence of private governance mechanisms on changing factory norms are instructive. Private governance entails the assumption of standard setting and enforcement powers associated with democratic state structures by individual private entities (Cashore et al. 2021; Falkner 2003). Central to the effectiveness of private governance are sourcing practices, which entail a combination of rewarding compliant suppliers with purchase orders, or cutting out violators from supply chains (Amengual et al. 2019). When brand sourcing managers are effectively linked with social and environmental responsibility managers, this balance of reward and punishment creates effective pressure from private governance mechanisms to drive export factories to internalize environmental externalities in the form of increased investments in infrastructure (Interview February 2020, Ma-034).

However, the commercial activity of sourcing departments is often de-linked from corporate-social responsibility teams within brands (Interview December 2018, So-012).[99] As a result, the "*costs of compliance*" are not incorporated in established factory or brand pricing structures as they were "*never internalized in the production process*" (Interview January 2020, Ma-32). The low margins of the RMG sector support the global fast fashion industry which is reliant on low production costs, often enabled by insufficiently compensated laborers and a lack of expenditure on environmental compliance. Without effective structural mechanisms to place "*collective interests above the few*" to advance compliance, "*the smaller profit margins*" associated with investments to appropriately operate ETPs or upgrade water treatment infrastructure for compliance purposes "*presents a risk*" to individual factories (Interview December 2019, Ma-29). In lieu of a way to make the "*wider market viable*" factory owners find "*no clear benefit*" to invest in the estimated 30-40 percent higher capital and annual operating costs associated with environmental sustainability that are anticipated to take many years to recoup (Interview January 2020, Ma-32).

4.4.2 "Spheres of compliance and resistance": Fragmentation of knowledge, information, and control

The concept of fragmentation acknowledges the relational nature and distribution of power among actors in a regulatory system. Fragmentation of knowledge and information is an active process, supported by actors and systems with their own motives and agency. Fragmentation of knowledge recognizes the agency of actors to negotiate, contest, and mediate power relations to shift the

[99] Further supported in the literature, see Amengual and Distelhorst (2019).

distribution of information (Heidingsfelder 2019). Contravening the notion that the state maintains a monopoly on power, fragmentation of control attends to the multiplicity of actors participating in regulatory interactions.

The rise of brand-led compliance programs as a form of private governance and the strategies of factories to respond to regulation depending on their relative political economic power illustrate the intersection of fragmentation of knowledge and of control. The state-market relations that shaped increasing self-regulation of brands solidified the position and perceived legitimacy of private governance systems in Bangladesh (Interview December 2018, So-011). Landmark events, notably the 2012 Tazreen factory fire and the 2013 Rana Plaza factory collapse, catalyzed the alteration of power relations between state, market, and society, as consumer and domestic demands pushed some international brands to drive improvements in protections of garment industry workers.[100] Once high-profile brands integrated environmental standards into their purchasing decisions based on collective brand consortiums and consumer pressure, factories that previously filled RMG orders with minimal oversight regarding environmental compliance now *"will do whatever [the brand] wants*" (Interview November 2017, Ma-002). While shifts in standards introduced challenges to factory operations, "*no one dared complain*" based on factory concerns about losing buyers (Interview November 2017, Ma-005).

However, while brand-driven compliance programs improved the observation of environmental standards of some export factories, the limited uptake points to internal divisions within market responses to regulatory programs. These uneven responses suggest "*spheres of compliance and resistance*" whereby more well-resourced export factories can afford to upgrade their technology to comply with brand standards, or dispute government fines in court in order to continue operating while remaining non-compliant, whereas smaller firms cannot negotiate this way (Interview April 2019, Ma-029). In cases where the power of a polluter is high as indicated by firm size and earnings, compliance is difficult, and the likelihood of being caught is low, powerful firms may seek to evade difficult rules (Khan 2018). Evasion may be supported through negotiation with regulators, or by appearing to be compliant by switching on an ETP at the time of inspection (Interview November 2019, Ma-031). The ability of firms to avoid detection creates a system in which "*government is putting out fires but cannot control the fuel*" (Interview January 2020, Ma-032). Even when sufficient information regarding pollution violations is available, government "*cancellation of an environmental clearance permit is very rare*" (Interview May 2019, St-009). The

[100] The Rana Plaza factory collapse in April 2013 resulted in 1134 deaths and over 2500 injuries, the most fatal industrial accident in the history of Bangladesh and one of the deadliest in the world. Several international initiatives including Accord and Alliance formed to restructure workplace safety to improve international market confidence in the Bangladeshi RMG sector (Leitheiser 2021).

unwillingness by the DoE to use its authority to cancel a permit, once given, suggests that more information in the hands of the state is unlikely to make violators more compliant or increase state enforcement levels, and may motivate firms to seek changes to rules (Khan 2012).

In such circumstances, adopting "*gold-standard regulation*" is not an assured solution to achieve compliance, because "*making a standard more uniformly strict will unite firms against the regulators*" (Interview March 2019, So-018). When compliance is unattainable for most factories, for example due to a lack of availability of financing for infrastructure upgrades, powerful firms may seek to capture rents (Khan 2012). Rent seeking may occur when a firm that purports to have upgraded its infrastructure for environmental efficiency and sustainability attains an ecolabel certification and receives advantageous terms and contracts with brands (Interview April 2019, St-008; see also Mutersbaugh 2016). As pointed out by an environmental lawyer, more information is less likely to change the behavior of well-resourced export factories; the "*bureaucratic culture of impunity for both government and industry*" (Interview April 2019, So-001) may strengthen the capacity of these actors to extract rents and redirect regulation.

Alternatively, when compliance is difficult and the power of the violator is low, enforcement of difficult rules may lead to the economic exclusion of smaller firms through closure or consolidation (Rahim & Wisuttisak 2013; Mayer & Gereffi 2017). A factory owner, who also serves as a senior government official, noted that "*either we make [the factories] compliant, or they will consolidate and die a natural death*" (Interview February 2020, St-026). Instances of the purchase or repurposing of smaller factories by owners of larger factories in need of more space to expand production illustrates this trend in Bangladesh, which is also noted in China (Zhu & Pickles 2014). Amaller firms may seek to evade rules by shifting to participate in the 'informal' subcontracting or domestic-only economy (LeBaron et al. 2017; Mosley 2011). As suggested by a senior garment industry sustainability professional, "*in the last five years, the small [factories] disappear, and medium are swallowed by large factories*" (Interview April 2019, Ma-029). As factories that are not necessarily compliant but large enough to protect themselves from regulatory scrutiny prevail within the export market, a factory owner remarked that "*only the top tier can appear to make the 'global best practices' possible*" (Interview January 2017, Ma-006). This suggests a tension whereby factories that are unable to achieve international certifications or comply with standards set by international brands are faced with a choice: be bought out by a larger factory, shift production to supply for the largely unregulated informal export sub-contracting or domestic market, or close down.

4.4.3 "Choose to stay blind": Autonomy and ungovernability

Although evidence in the regulatory literature suggests that audits face limitations in their effectiveness at detecting, reporting, and correcting problems (Lebaron, et al. 2017; Distelhorst et

al. 2015), interviews point to the ways that audits have gained legitimacy as a regulatory mechanism through two factors: perceived objectivity and manufactured transparency.[101] While audits are presented as a demonstration of transparency and accountability by market actors, the results of audits are private, held confidentially by the auditor and client (Lebaron & Lister 2015). While the results are designed to insinuate comprehensiveness, audits are only conducted on a small percentage of top-tier suppliers (Interview April 2018, Ma-009). This constructed transparency "*creates a business mindset"* motivated by a financial outcome *"rather than one of real improvement*" (Interview February 2019, Ma-020). When audits are publicly communicated, results tend to be aggregated, concealing the location, type, and size of the factory (Interview February 2019, Ma-022). Additionally, factory workers and community members living in industrial areas have "*no form of recourse*" in the audit regime because procedures exclude their participation (Interview April 2019, So-022). The approaches taken by this strategy contributes to a view by some factory owners that brand compliance programs are "*not real partnerships, just [brands] passing the buck*" (Interview January 2017, Ma-033) and that "*we are not getting justice, only 'training'*"(Interview January 2020, St-022).

Autonomy means that private governance actors operate "in the absence of formal hierarchical arrangements," relying "more heavily on non-compulsory 'steering' to modify the behavior of its targets" (Cashore et al., 2021, 5). This modification includes when markets engage social forces through corporate social responsibility initiatives or when states devolve authority to private governance regimes (Alamgir & Banerjee 2019). To illustrate, private companies sourcing apparel from Bangladesh have responded to sustainability mandates and challenges by deputizing auditing firms to monitor the application of environmental standards into day-to-day factory operations. Such authorization occurs through private governance mechanisms, including brand environmental compliance programs that rely on third-party auditing firms for certifications (Marques 2019; Terwindt & Armstrong 2019; Baumann-Pauly et al. 2015).[102] Environmental certifications are typically based on factory-level audits of internally selected criteria of environmental compliance. Ecolabel certifications from international organizations focus on environmental management and are frequently driven by evolving brand demands on suppliers. Achieving social and environmental certification makes a supplier more competitive to international brands than non-certified peers (Interview December 2018, So-15; Oelze et al. 2020).[103]

[101] See LeBaron et al. (2017) and Locke (2013).
[102] For other examples, see Distelhorst et al. (2015) and Foley and Mccay (2014).
[103] Other sustainability programs include Bluesign (assessment of production processes for sustainable manufacturing of industries and brands) and Oeko-Tex (denoting textile products made without harmful substances). This finding is consistent with the literature, including in other Asian countries; see Nayak et al. (2019) on Vietnam. Other identified

Analysis of autonomy also supports interpretation of the ways that private governance regimes may conceal significant problems in environmental regulatory systems by constraining debates about the use of audits along "highly technical lines of inquiry," whereby audits are approached as "apolitical and neutral instruments" (Lebaron & Lister 2015, 907). This generates conditions whereby individual factories may earn a 'pass' but the cumulative environmental impacts of the sector are neglected.[104] As a consequence, audits gain productive power as practices intertwine the expansion of market control with "leadership and expertise intended to sustain and enlarge capitalist market society and its associated principles of governance" (Gill 2011, 1). Factories that are not suspended or blacklisted from supplying to brands following regular audit procedures are, by default, considered compliant.[105] In this way, the audit regime exerts power in the regulatory system by "codif[ying] and legitimat[ing] retail corporations' poor social and environmental records and shap[ing] state approaches to supply chain governance" (Lebaron & Lister 2015, 908).

While certifications and related capacity building offer tools for improvements in factory-level environmental management, they vary in their level of rigor, requirements, and transparency in disclosures. Though they embody a normative, market-based agenda, audit processes that lead to certifications appear to apply objective tools and metrics. Auditing firms choose what is evaluated and when, creating a system in which "*middlemen [negotiate] between the perceived intent and harm of violations*" (Interview January 2020, Ma-037). In the course of designing these negotiated practices, the "*standardized check lists from auditors are not met by reality in how inspections actually go for evidence collection – [factories] hire one inspection firm over another based on how relaxed [the firm] [is]*" (Interview January 2020, Ma-037). Though brands feature the certifications earned by their supplier factories as a sign of their sustainability commitments, a factory auditor noted that "*brands set up this system and then choose to stay blind*" (Interview February 2020, Ma-037). As a consequence of brand 'blindness' to systemic environmental issues, an environmental specialist with the Bangladesh Export Processing Zones Authority (BEPZA) reflected "*compliance is still based on avoiding disaster*" and "*real change is not a priority*" (Interview May 2019, St-013). By appearing objective, the role and power of private governance programs have increased significantly as audit regimes have shifted from a tool that companies used to track performance to occupying a central position

motivators for sustainability certifications include understanding that the benefits more than offset costs for a particular business and, on the supply-side, recognition of resulting efficiency gains (Neumayer & Perkins 2004).

[104] Though the total number of sustainability labels and environmental upgrading in Bangladesh is increasing, for instance an increase in the number of LEED-certified factory buildings, water quality indicators related to the garment industry (rather than agriculture or municipal waste, two other major contributors) continues to decline in the system (Fontana 2019).

[105] After achieving initial certification, Oeko-Tex requires an audit every three years.

in transnational corporate governance (Interview December 2018, So-015). The consequence is an appearance of regulation that does not effectuate changes toward improved environmental practices (Dauvergne & Lister 2012; Marques 2019).

4.4.4 "Uneven and insufficient alone": Interdependency and the co-production of regulation

Interdependencies influence the co-production of regulation by actors across state, market, and society. The depth of participation in co-production varies depending on the strength of linkages between state, society, and market actors with regulatory power (Amengual 2016). For this examination, unevenly distributed influence in regulatory co-production is traced through three trends: the cumulative influence of international brands sourcing garments from Bangladesh, the mobilization of civil society groups, and barriers restricting civil society actors from influencing regulatory processes.

In the 1980s and 1990s, garment production by global North retailers moved to an 'offshore' production model and export-processing manufacturing became the default approach (Gereffi & Christian 2010). As brands from the US and Europe shifted garment manufacturing abroad, a complex system of "contractors and subcontractors in developing countries" resulted as firms sought low cost, non-unionized labor and operations "without any appreciable" environmental standards (Connell 2019, 294). The impacts of these issues gained visibility for consumers when scrutiny of labor practices and building safety expanded to include sustainability standards. Campaigns by activist networks and a rise in consumer demands for sourcing disclosure escalated demands for brands to take action (Bartley 2005; Lambin & Thorlakson 2018). For example, a non-governmental organization based in the Netherlands, Zero Discharge of Hazardous Chemicals (ZDHC), formed in 2011 in response to the transnational Greenpeace 'Detox' campaign to phase out toxic chemicals from supply chains (ZDHC 2019). While programs such as ZDHC sought to unify disparate, haphazard industry-wide sustainability initiatives under a single program, individual brands sourcing from Bangladesh continued to develop parallel mechanisms (Interview September 2019, So-018). Through linkages with international brands and consortia leading mandates to address the environmental impacts of production, export factories engaged with multiple forms of private governance including audits to certifications.

Regulatory observance by some factories was mobilized by the threat that brands would not source from factories without social-environmental certification or undertaking environmental trainings such as those provided by ZDHC. Though the role of foreign brands sourcing from Bangladesh is understood as a source of regulatory pressure, a garment industry sustainability expert pointed out that "*buyer pressure is uneven and insufficient alone"* as the reach is limited to export-oriented factories (Interview April 2019, Ma-029). In such cases, the 'community driven regulation'

hypothesis suggests that civil society may serve to "kick in motion a dynamic between agencies, NGOs, and firms that ultimately determine the effectiveness of regulation" (O'Rourke 2004, 20-21). This form of society-led coproduction of regulation is reflected in the work of domestic organizations such as the Bangladesh Environmental Lawyers Association (BELA) and Bangladesh Poribesh Andolon (BAPA) as well as civil society movements with international linkages, including the Buriganga Waterkeeper. These organizations began their work at a time when addressing pollution was still politically tenuous. Still, they advocated for regulatory action and contributed to initiating a "*tipping point in wider public recognition*" (Interview February 2020, So-030). By circulating petitions, serving as a source of information for community members, and holding high-profile public hearings, these groups sought more negotiating power and deeper engagement in policy processes (Interview April 2019, So-001; Islam 2013).

Illustrative of the influence of community driven co-production, civil society groups including BELA, BAPA, and the Buriganga Waterkeeper drove increased media coverage of industrial water pollution in Bangladesh. Following the increase in media coverage, a newspaper article in the *Daily Star,* an English-language newspaper, in November 2016 became the basis of the *Human Rights and Peace for Bangladesh vs Government of Bangladesh and Others* case in the High Court, which handed down its decision in February 2019. Engaging with media was an intentional strategy by civil society groups based on a perception that state and market actors would have "*impunity unless battled in the courts*" (Interview April 2019, St-012). This High Court verdict, focused on penalties for pollution and encroachment (structures built without a permit or environmental clearance), renewed pressure to address longstanding impacts on rivers. This corresponds with literature positioning co-production as a "key driver of change in governance processes, a more powerful tool for institutional restructuring" (Huang et al. 2020, 2*;* Galuszka 2019; Coslovsky et al. 2011).

By demanding regulatory action, these civil society-led programs demonstrate the countervailing power that strategic alliances exert in support of regulation. Such linkages may allow pro-enforcement groups access to regulatory processes to create "robust strategic alliances" to balance against well-organized businesses wielding "substantial economic power" (Amengual 2016, 31). In this way, linked groups exercise power to influence outcomes of regulatory action and simultaneously provide material support or information, and possibly mount resistance to powerful groups that stand to lose from regulatory intervention (Interview April 2019, So-019). As a result of these linkages, improvements in regulatory observance do not necessarily depend on reforms of formalized institutions – rather, developing the ability of groups that mobilize,

contest, and create alliances between state and society to effectively build pressure for regulation (O'Rourke 2004).

However, linkages may also be mobilized to limit pro-regulatory action via strong state-market linkages. This means that established civil society groups with a national presence have limited opportunities to participate in regulatory-institutional processes outside of filing petitions and lawsuits. Although BELA has successfully led public-interest environmental litigation cases, winning significant court cases against polluting industries, the organization is rarely able to participate in supporting state agency regulatory processes. For example, the DoE commissioned a substantive report on 'green governance' from BELA in 2016, but did not enact any of the recommendations (Interview April 2019, So-021). The marginalization of BELA, BAPA, and other civil society groups advocating for environmental and social protections from state processes is further compounded by elites remaining undaunted by court victories (Interview February 2020, Ma-029; see also

The degree to which market elites accept or reject regulatory efforts also emerges as a factor in the success or failure of achieving regulatory goals. Through their strong linkages to the state, in a context where "*eighty percent of people in Parliament have business interests,*" elite actors are positioned to limit the uptake of pro-enforcement regulatory pressure. [106] Such a position is reflected in the view of the leader of a major national industry association that unless factory owners "*can see a clear benefit, compliance is not seen as profitable. [I am] allergic to the term compliance… we are not a social business*" (Interview January 2020, Ma-032). This view points to the limitations of regulation to compel compliance if elites have significant influence to contest the formation of linkages led by civil society attempting to support environmental regulation (Islam 2013). Otherwise, the absence of elite support of action to address widespread environmental pollution limits the solidification of the "social production of business offenses" (Yeager 1991).[107] Without addressing barriers to civil society involvement, elite groups may maintain disproportionate influence in regulatory co-production.

4.4.5 "If the boat capsizes": Collapse of the public-private distinction

The boundary between public and private realms is often seen as essential to the study of regulation (Lucy 2013; Turkel 1988). The 'public-private distinction' provides a "conceptual vocabulary, organizational scheme, [and] modes of reasoning and characteristic arguments" (Kennedy 2006, 22) that guides environmental regulation (Blank & Rosen-Zvi 2014). But the nature of state-market

[106] Estimates range from 10 percent to 40 percent of Members of Parliament having direct or indirect interests in garment factories (BDNews24 2009; Alamgir & Banerjee 2019; Transparency International 2013).
[107] As discussed in Yeager (1991) the social production of business offenses entails that formerly common business practices, such as releasing industrial discharge directly into a river, become socially unacceptable over time.

relations in Bangladesh facilitates fluid shifts between formal laws and regulations and a wider "range of informal and personalized relationships that are observed between economic actors and political elites" (Pritchett et al. 2018, 24). By shifting analysis from the public-private distinction, the boundaries of 'formal' and 'informal' regulatory authority may be reevaluated. As observed in the literature, a consequence of state dependence on private sector growth in a single industry is a tendency for state interests to become aligned with those of industry (Gould et al. 1996; Yeager 1991). The observation that the "*garment industry is affiliated with politics*" suggests that the state will be responsive to the concerns of industries driving economic growth (Interview, November 2017, Ma-004). In this way, state-market linkages become a core mechanism for the accumulation of political-economic power, and economic development becomes a shared ambition of the strongest market sector–garments–and the state (Sobhan 1991).

The direct, formalized influence of market actors in the political sphere in Bangladesh is manifested in the presence of business actors in political institutions, such as Parliament, as well as in electoral politics at sub-national levels (Greenleaf et al. 2014). The distribution of business elites in positions of political power has ensured channels of influence in policy processes and institution formation across regulatory bodies, parliamentary committees, and other entities (Bair et al. 2020). An outcome of this tightly linked state-market network is the relegation of environmental protection to "symbolic politics" whereby the government "acknowledged the necessity of preserving the environment" without concurrently developing "concrete action plans" in support of this goal (Al-Muti 2017, 8). Although the government noted in the 7th Five Year Plan that "grow first and deal with the environment later is a bad strategy" (2015, 45), it simultaneously committed in its Industrial Policy (2010) that "no effort would be spared in raising the growth rate of the Gross Domestic Product (GDP) to 8 percent by 2013… and thereby to elevate Bangladesh to the cherished rank of 'middle income country.'" Despite decades of government-led policy efforts to encourage economic diversification, significant dependency on the RMG sector is illustrated by the concern of a factory manager that if "*the [garment] boat capsizes, half the Bangladesh economy will crash*" (Interview November 2019, Ma-031). These market-driven linkages and networks of control guide informal constraints on the effectiveness of regulation to address non-compliance, emerging from the state's dependence on growth in the private sector, driven by sweeping privatization measures from the post-independence period (Sobhan 1991; Humphrey 1990; Uddin 2005).

Considering these interactions, the networked interests of industry sectors may be expected to act as a forceful constraint on the implementation of regulatory law (Yeager 1991). For instance, industry associations such as BGMEA "*form a collective lobby for industry specific reform to*

reduce the costs of doing business" (Interview December 2018, St-013). Alternatively, informal networks or linkages as described in the interdependencies section may partially uphold regulation in the absence of formal government intervention or legal sanction. Indeed, intersecting compliance mechanisms may be necessary in light of the view that the *"government will not enforce [regulations]*" (Interview November 2017, Ma-005) and that the "*hand of the government is weak compared to brands*" (Interview November 2017, Ma-004).

However, these external, market driven programs are limited to export factories that maintain membership with industry associations. This means that "*only the top twenty factories become compliant*" while sub-contracted, informal manufacturers are excluded from external market-driven regulatory oversight (Interview November 2018, So-009).[108] When "*the market is the strongest driver*" for regulation, the distinction between markets and state regulation posited by economic theories of regulation is less clear (Interview April 2018, So-006). These findings support arguments in the literature that the distinction between public and private diffuses "through the privatization of states and the domination of markets by powerful corporate actors" (Picciotto 2001, 337). As a result, market access to state power, and the limits of state and society capacity to influence the uptake of private governance, have become defining features of the political economy of environmental regulation in Bangladesh and driven the normalization of non-compliance.

4.5 Conclusion

Scholarship on regulation has progressed toward recognition of non-state regulatory interactions. The United Nations Sustainable Development Goals (SDGs) drove global attention to problems related to water pollution and supported research in this area (SDG Resource Center 2022). However, state-centric concepts of regulation have yielded lackluster results, failing to effectively promote compliance with water quality laws, strengthen enforcement, or deter polluters. Regulatory non-compliance is often summarized as resulting from regulatory failure. This restricted characterization has limited constrained understandings of how regulatory non-compliance becomes normalized.

In juxtaposition to state-oriented accounts, this chapter applied a decentered analytical framework developed by Black (2001, 2002). The chapter analyzed how predominant definitions of regulation emphasize the restrictive implications of government-led regulations and neglect interconnected state, market, and society relationships. Based on this premise, the chapter brought the elements of decentered regulation into conversation with political economy analysis

[108] Verifying that the 'top twenty' factories (presumably as measured by output volume and revenues) are or are not compliant with either Bangladeshi national law or brand-specific environmental standards was not possible with currently available regulatory data.

and a composite narrative approach. Rather than discrete moments of failure, this analysis showed that the character of the interface of state, market, and society actors produce non-compliance as a norm in Bangladesh. Together, these relations produce the conditions of the emergence of normalized non-compliance, whereby contravening national environmental regulation is engrained into the practice of business, gaining acceptance among elites and government agencies. These findings deepen understandings of environmental regulation by assessing social, economic, and political relations underpinning prevalent normalized non-compliance. By addressing decentered regulation in a specific political economic context, this analysis engages with the consequences of normalized non-compliance, marked by ambiguous accountability and imprecise responsibilities.

The analysis leads to three main arguments. First, the significant access of private sector actors to state authority, and the limited capacity of state and society actors to influence the direction of regulation, has become a defining aspect of the political economy of environmental regulation in Bangladesh. This has limited the ability of civil society actors to advance effective 'community driven' regulation (O'Rourke 2004). The influence of market pressures on state regulatory efforts materializes in the retreatist enforcement style of the DoE, as its low degree of formalism, coercion, autonomy, and capacity establish the agency as susceptible to external influence and broader mandates for economic development. Second, the prevalent assumption that factories uniformly respond to regulation misses the variability of firm ability and willingness to comply means that more stringent regulation alone will not drive improved compliance. As demonstrated by variable factory responses to private governance interventions, some firms comply whereas others may shift to sub-contracting. Third, private governance has benefited from legitimacy as market-driven regulatory mechanisms gain perceived objectivity and manufactured transparency; yet private governance approaches face sharp limitations in detecting, reporting, and correcting environmental problems (Dauvergne & Lister 2012; LeBaron et al. 2017).

Empirically characterizing regulatory power relations is a useful step toward understanding the emergence of normalized non-compliance and identifying alternative approaches to regulate industrial water pollution in developing states. As revealed in the activation of civil society groups to advocate for action on pollution, non-compliance is not normalized in the sense of being unchallenged. Rather, non-compliance is embedded in structures of legitimacy and has gained tacit acceptance among political elites and government agencies. By doing so, this chapter analyzed the normalization of non-compliance through the conditions of political-economic dynamics and their relationship with regulatory institutions.

Specifically, the chapter aims to make the following contributions. First, it strengthens recognition of the role of non-state regulatory pressures by extending the application of Black's

(2001, 2002) decentered regulatory analysis. Drawing on the case of Bangladesh, the chapter offers an account of the contestation of private governance programs illustrated by uneven uptake by factories, and shows the tensions resulting from the character of domestic political drivers to achieve continued growth and brand-driven sustainability mandates. The chapter contributed novel evidence to the literature on environmental regulation in the global South. While China and India feature prominently, Bangladesh–as a rising middle-income country with a population larger than either Russia or Japan and a significant role in global production–is deserving of a closer examination of its regulatory dynamics.

Second, a decentered approach supports an assessment of various configurations of power relations from a Gramscian and Foucauldian view, and offers a new perspective regarding the mechanisms of power related to regulating industrial water pollution. Close ties between state and businesses have long been understood as an important channel for information about industry needs, coordination of industrial strategy, and legitimating state action (Ahmed et al. 2014; Quadir 2010). However, the literature often neglects the political relationship of linkages between private sector and state actors (Marques & Eberlein 2021). Compared with analyses that render power relations inert by narrowly focusing on narrow, instrumental views of regulation, this chapter sought to apply a decentered understanding of power relations to better understand constraints on the implementation of environmental regulation. By focusing on the regulatory dynamics of water pollution in Bangladesh, the chapter articulates a recognition that multiple forms of regulatory power are exerted, influencing behavior and shaping norms.

Third, this analysis recognizes the limitations of attempts to reform individual policies or institutions and the need to address the interactions of regulatory development with political economic relations. By applying the decentered framework to understand the persistence of industrial water pollution in Bangladesh, the tenets of traditional regulatory scholarship–regulation is unilateral; that regulatory formation follows to implementation and enforcement; that there is a high degree of internal coherence of the state; that all relevant actors and action may be simply classified into a private-public dichotomy; and that regulatory strategies may be equally applied in developed and developing countries–may be reconsidered in light of the political-economic dynamics of a weak state.

What may we learn from the decentered approach to shape pathways for policies and practices that can challenge normalized non-compliance? Considering the failure of widespread effluent treatment plant installation to achieve sufficient wastewater treatment, technical solutions alone are unlikely to result in meaningful change (Al-Muti 2017). Future research may be usefully focused on the conceptual base generated by decentered regulation – characterized by Black (2001)

as hybrid (combing state, society, and market actors), multifaceted (using a number of different strategies simultaneously or strategically), and indirect (focusing on interactions between systems and their environment). Further, research from the perspective of the global South would support more nuanced understandings of the heterogeneity of emerging economies and approaches to decentered environmental regulation. Last, additional empirical work on decentered regulation could be brought into conversation with the emerging study of private governance.

Chapter 5 – Regulation and resistance: Water pollution penalties in Bangladesh

Abstract

Rapid urbanization and industrialization are associated with environmental impacts. By establishing the Environmental Conservation Act in 1995, Bangladesh created a legal basis for the use of monetary penalties against polluters. This chapter utilizes a decentered regulatory approach and the concept of enforcement styles to understand how regulators have responded. The chapter analyzes 1699 cases of water pollution-related fines from the Bangladesh Department of Environment from 2010 to 2019. These data are considered in relation to policy documents and 57 semi-structured interviews with policy makers, civil society groups, and factory owners or managers. By linking penalties with the political economy and legal context, three findings result: despite increases in the number of industrial units and higher concentrations of river pollution, penalty frequency and amounts have largely stayed the same over the past decade; the penalty amounts established by the Environmental Conservation Act (1995) are not consistently applied; and certain industries are more likely than others to seek waivers through appeals while being less likely to pay the entire fine. These findings point to low dimensions of formalism, coercion, autonomy, and capacity, creating a retreatist enforcement style. This chapter generates new insights into the application of penalties and how they are contested by regulated entities.

Keywords
Regulation, enforcement, political economy, Bangladesh, pollution

Chapter 5 – Regulation and resistance: Water pollution penalties in Bangladesh

5.1 Introduction

The human and environmental risks posed by water pollution in rivers command attention across academia and policy, including the United Nations Sustainable Development Goals (SDG). Target 6.3 of the SDGs seeks to improve ambient water quality "by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater" (United Nations Sustainable Development Goals 2015). Yet causes of water pollution, including intensifying industrialization, urbanization, and land use change, are increasing in scope (Damania et al. 2019). These pressures drive a need to better understand how regulators and industries respond to rising water pollution.

Bangladesh is a useful context to examine these challenges. Bangladesh has experienced extraordinary industrialization and economic growth, driven by the water-intensive ready-made garment industry transforming the nation into a $33.1 billion USD global hub for 'fast fashion.'[109] However, this growth has come at the expense of environmental health (Hossain & Khan 2020; Whitehead et al. 2018). Despite significant economic transformation and new pollutants threatening river systems and human health during the past three decades (World Bank National Accounts Data 2019), Bangladeshi environmental regulations have not been significantly updated since the establishment of the Environmental Conservation Act (1995).[110] Though Bangladesh has a relatively long history of environmental regulations pre-dating independence in 1971,[111] the worsening ambient water quality in river systems suggests a misalignment between written regulation and approaches to enforcement (General Economics Division 2015). The tension between the trajectory of industrialization and environmental regulation in Bangladesh finds commonality with other countries seeking to shift from low income to middle income country status (Marcotullio 2007; O'Rourke 2004).

Penalties, as signals conveyed by enforcement officials to regulated enterprises, are an entry point to examine how the interface of market and state actors shapes regulatory enforcement in Bangladesh. Learning from earlier pluralistic approaches to regulation (Parker 2008), this chapter expands Black's (2001, 2002) decentered approach with the concept of enforcement styles (McAllister 2010) to examine penalties for water pollution in Bangladesh. Decentered regulation provides an analytical basis for regulation that does not work "in a mono-directional manner within

[109] Measured in terms of annual revenue, as of 2019.
[110] Other legislation and policy is more recent, but the actual quality standards in terms of parameters including concentrations and lists of regulated substances remains the same as in 1995.
[111] See MoEF East Pakistan Water Pollution Control Ordinance (1970) and Environment Pollution Control Ordinance (1977).

the state" (Van Rooij et al. 2013, 322), while enforcement style describes dimensions of "how regulators interact with regulated entities" (McAllister 2010, 61). This is the first study to use the Department of Environment (DoE) national 2010-2019 dataset with 1699 water pollution related cases. These data are discussed in relation to 57 semi-structured interviews conducted from November 2017 to November 2021, as well as national legal frameworks and policy documents. The chapter aims to understand the conditions under which the DoE has come to adopt its regulatory approach, generating new insights into the application of penalties and how they are contested by regulated entities.

The rest of the chapter is structured as follows. Section 2 contextualizes the literature in relation to environmental policy and regulatory institutions in Bangladesh. Section 3 explains the methods applied, while Section 4 introduces the results of the exploratory analysis of the DoE pollution penalty data. Section 5 then discusses the results from a decentered perspective, offerings analysis of dimensions of enforcement style. It also points to policy implications and outlines the limitations of the study. Finally, Section 6 concludes the chapter.

5.2 Perspectives on regulation

5.2.1 Decentered regulation and dimensions of enforcement styles

Over the past two decades, conceptions of regulation, including smart regulation, co-regulation, and regulatory pluralism, have expanded to acknowledge diverse regulatory relationships (Parker 2008).[112] However, in traditional perspectives following a state-centered definition of regulation, interconnected state, market, and society relationships are not well recognized.[113] Narrow conceptions of regulation often presume divisions between state, market, and society spheres (Lange & Haines 2015).[114] Such divisions limit understandings of the active roles of state, market, and society actors and institutions in regulation. As a result, only a 'state-driven' form of regulation–where the formalized planning process of a government bureaucracy mobilizes state capacity to regulate–is generally recognized in the literature (Amengual 2016). Linked to this is a reliance on the concept of 'capture' to describe a range of private sector involvement in state

[112] See smart regulation (Gunningham & Sinclair 2017), co-regulation (Ayres & Braithwaite 1992), and regulatory pluralism (Parker 2008).
[113] See also van Rooij et al. (2013) for an examination of social and governmental influences on environmental law enforcement in China from the decentered perspective.
[114] With *state* defined as "historically specific political institutions for the exercise of public powers"; this chapter approaches the state as "composed of various political factions" but "perceive[s] it as distinct from civil society and thus a 'social sphere' which has its own relative autonomy and operates according to its own social dynamics" (Lange & Haines 2015, 26, cf. Polanyi Levitt (1990). Unlike in Lange & Haines (2015, 4) which defines *civil society* as "including all non-state actors involved in regulatory activity, including private, commercial actors", for purposes of coding interviews, this research distinguishes between individuals affiliated with private commercial enterprises and those with civil society organizations, academia, non-profits, etc.

regulatory processes; yet capture theory has little to say regarding how forms of power, control, and benefits are challenged through the 'subpolitics' of institutions and actors (Coslovsky et al. 2011; Short 2019).

To expand analysis of interactions between regulators and regulated entities, this chapter examines decentered regulation in relation to 'enforcement styles.' As outlined in Table 7, McAllister (2010) develops a dimensional conception of enforcement style, integrating autonomy and capacity as aspects significant in a developing country context. These dimensions – formalism, coercion, autonomy, and capacity – interact with a range of degrees of intensity. A retreatist style points to low degrees across all dimensions, considered 'strong-on-paper' but 'weak-in-practice' (Braithwaite et al. 2007). Alternatively, a conciliatory style demonstrates low degrees of formalism and coercion, but a higher degree of autonomy and capacity. A 'flexible' or 'adaptive' style (Hawkins 1984) is one in which an agency regulator exhibits situational judgement. Perfunctory styles, or 'going through the motions' (May & Winter 2002), suggest that autonomy and capacity are low even if coercion or formalism are high. Last, legalistic enforcement is characterized by high degrees of enforcement officials across all dimensions. While not all enforcement styles may fit into this general typology, McAllister's (2010) adaptation is useful to the study of regulator behavior in the global South.

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Table 7: Dimensions of Enforcement Style (adapted from McAllister 2010)

Dimension	Description	Spectrum of Ideal Types
Degree of Formalism	How flexibly regulators apply rules	Rule-bound, rigid ↔ Flexible, particularistic
Degree of Coercion	How regulators react to identified violations	Threatening, punitive ↔ Friendly, helpful
Degree of Autonomy	Extent to which regulatory goals are influenced by regulated entities	Mission-dominated ↔ Client-dominated
Degree of Capacity	How much effort regulators make to identify violations	Energetic, proactive ↔ Restrained, passive

To further explore the concept of enforcement style, which may risk being too static in its interpretation (Coslovsky et al. 2011), the dimensions of formalism, coercion, autonomy, and capacity may be examined in relation to the decentered view of regulation. Decentered regulation as developed by Black (2001) creates conceptual space to understand non-state interactions within and between regulatory relationships. A central notion of decentered regulation is to acknowledge that the state is acted upon as it acts on others (Black 2001), with the implication that the state does not have a monopoly on the practice of regulation. This notion carries particular implications for two areas of enforcement style: autonomy and capacity. Autonomy is often

defined as "the ability of the state to formulate and pursue goals that are not simply reflective of the demands of social groups or classes" and capacity characterized as "the state's ability to implement its policies" (Skocpol 1985). From a decentered perspective, it is not just state autonomy and state capacity under consideration, but also the autonomy and capacity of private actors. This understanding facilitates analysis of penalties for polluters as a contested arena of resistance, negotiation, and discretion. Here, autonomy means that "actors will continue to develop or act in their own way in the absence of intervention" which "will to an extent render [an actor] insusceptible to external regulation" (Black 2001, 109). This may include the differential willingness of firms to comply with or avoid regulation, such as by appealing a fine or invest in uninspectability (Gupta et al. 2019; Heyes 1994).

Building from these earlier contributions, opportunities abound to develop understandings of the pathways and dynamics of "influence at the enforcement stage" which has "seldom been treated as the alternative means of interest articulation which in fact it is" (Scott 1969, 1142). Enforcement actions both shape and reflect the position and interests of state and market actors in the environmental regulatory landscape. Enforcement, seen as the "visible hand of the state" aiming to correct non-compliance, is "both symbolically and practically" the "final indicator of the state's seriousness of purpose and a key determinant of the permeability of the barrier between compliance and lawlessness" (Yeager 1991, 251). Penalties in the form of fines, warnings, or public censure are a widely used government instrument in environmental enforcement in both industrialized and industrializing countries (OECD 2009). The purposes of fines as a regulatory instrument are to deter future non-compliance; eliminate financial gain or benefit from non-compliance; be proportionate to the nature of the offence and harm caused (Macrory 2006); and be responsive, considering what is appropriate for the particular offender and regulatory issue . Fines may be fixed in legislation, or variable as set through administrative or judicial channels. This research focuses on monetary penalties whose amount, though established in policy, is ultimately discretionarily determined in practice by the Bangladesh DoE according to a number of technical, administrative, and political-economic factors (DoE 2008).

5.2.2 Environmental regulation and political economy in Bangladesh

Surface water pollution regulation in Bangladesh is shaped significantly by historical-institutional and political economic relations. In the fifty years since achieving independence in 1971, the economy of Bangladesh has experienced three 'growth episodes' marked by extensive export promotion measures and favorable market access in the EU and US (Hassan & Raihan 2018). While many developing countries underwent externally compelled privatization of public utilities and institutional reforms during the structural adjustment period of the 1980s and 1990s, efforts

at economic reform in Bangladesh were incomplete and uncoordinated (Uddin 2005). As such, Bangladesh is widely thought of as a paradox by economists for its 'growth without governance' trends (Hossain 2017). In March 2018, Bangladesh became one of the first nations to meet the criteria for economic and human development targets required for recommendation for 'graduation' from least developed country to middle income country status (United Nations Department of Economic & Social Affairs 2018). These criteria were largely achieved due to the structural shift of the Bangladesh economy from agrarian to export manufacturing–specifically, garments and leather goods, with the Bangladesh garment industry becoming the second largest exporter after China (Anner 2020).

In addition to wet-process garment factories and tanneries, other sources of surface water pollution in the Greater Dhaka Watershed include urban waste and sewerage, pharmaceuticals, agriculture, and paper and pulp factories. Additionally, the North and South Dhaka City Corporations and the Dhaka Water Supply and Sewerage Authority (WASA) have low capacity to expand coverage.[115] Low levels of piped water infrastructure are available in millions of informal settlements, meaning that raw, untreated sewerage often directly enters river systems (Dewan & Corner 2013). Together, these sources of pollution have resulted in severe river pollution and public health risks (Rampley et al. 2020; Rasul et al. 2006; Sarkar et al. 2015; Whitehead et al. 2019).

The legal frameworks that establish state regulatory authority vis-à-vis industrial water use and discharge are convoluted. The Water Act (2013) and its implementing Water Rules (2018) appeared to update regulatory provisions, but defers to two pre-existing documents: The Environmental Conservation Act (1995) (ECA) and the Environmental Conservation Rules (1997). The Act and the Rules are two separate pieces of legislation; the Rules operationalize the content of the Act. Overseeing both the ECA (1995) and ECR (1997) is the DoE, one of four departments of the Ministry of Environment, Forests, and Climate Change (MoEFCC). Although the Water Act (2013) attempted to shift responsibility to the Water Resources Planning Organization (WARPO) within the separate Ministry of Water Resources, DoE ultimately retains regulatory authority to issue penalties. The ECA and ECR establish DoE's mandate for enforcement of environmental regulations. Schedule-1 of the ECR designates a classification system of industrial units or projects based on their location and impact on the environment. These categories range from 'green' for least severe to 'red' for most severe;[116] for example, garment factories and leather

[115] A policy brief covering findings by Water & Sanitation for the Urban Poor (2020) and the University of Waterloo explores these issues in some depth.

[116] For instance, the 'green' category includes tea packaging and bookbinding; the 'Orange-A' category includes small-scale agriculture and industrial food manufacturing; 'Orange-B' includes plastics and garment production; and the red category includes leather tanneries, fabric dyeing and chemical processing, and water treatment plants.

tanneries are categorized as 'red' because their significant volume of discharge is characterized by high concentrations of pollutants (Dey & Islam 2015; Hossain et al. 2018; Sakamoto et al. 2019).

Though there is limited environmental regulatory scholarship in Bangladesh, Haque (2017) examines DoE reports of penalties published in newspapers, finding that repeat polluters are penalized at the same rate as first time offenders; textile factories are not penalized heavily compared with non-textile factories; and there are significant differences in fines among types of violations. This generates an institutional setting of weak enforcement whereby "the benefits from non-compliance far outweighs the potential fines polluters will face if they get caught" (Haque 2017, 1). Other literature on water pollution and regulation describes the capacity constraints of the enforcement by DoE due to the shortage of staff, ambiguity of existing rules, and unclear institutional responsibilities (Chan et al. 2016; Petrie & Hoque 2014; Islam 2014).

5.3 Methods

5.3.1 Department of Environment penalty data

Our primary source of data on penalties to individual industries was obtained from the DoE. The non-publicly available data were shared upon request of the Director General of the DoE in an agreement with Bangladesh University of Engineering and Technology (BUET), a research partner of the REACH: Water Security for the Poor program. Originally written in Bengali, the data was subsequently translated to English at BUET and sent to the DoE for review. The nationwide data cover 1695 recorded DoE regulatory interactions with industrial units between July 2010 to October 2019.[117]

Data cleaning and consolidation were necessary to process the raw data obtained from DoE. Over 50 original industry varieties in the raw data needed to be unified into more consistent headings for analysis. We identified six main industry categories, summarized in Table 8 by organizing similar types into more coherent groupings for processing. 'Wet process' garment units account for the entirety of the sector represented in the data, as non-water using ('cut and sew' factories) were not included in the dataset. We note that 139 cases are excluded from the initial sample of 1699 because they do not list a monetary penalty; this could mean the industrial unit was issued a verbal warning, no penalty was given, or the data was missing. Untreated sewerage into the river system from public utilities are not monitored by DoE.

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[117] This represents the complete DoE dataset; no recorded fines are available prior to 2010. This is because fines were not given regularly, and penalty data were not collected by DoE before this time.

Table 8: Industry categories and areas included

Code	Category	Included
AGRM	Agriculture and food-related	Fish processing, dairy industry, poultry farm, and food and beverage industry
GARM	Garment	Wet-process units for dyeing and washing, printing and accessories production
MAT	Materials and other production	Chemical industry, ceramics, oil refi‘eries, batteries
P’AR	Pharmaceuticals	Included 'medicine production'
PRIN	Printing, paper, pulp mills	Any paper related industry included in ‘his head’ng
OTH	Other	Included items such as 'shipyard' that did not fit into any other category

The categories for analysis are identified in Table 9, with additional explanation to illustrate the types of violations that are condensed under a more unified heading. The 8 categories we identify for types of pollution were based on clarifying the more than 40 variations in the initial list provided by the DoE to ensure accuracy in statistical processing. Effluent treatment plants are listed as ‘ETPs’ in the data. ‘Bypass drains’ are used to dump untreated effluent directly into waterbodies, bypassing the treatment plant to reduce operating costs.

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Table 9: Categories of pollution types and areas included

Code	Category	Included
1	Analysis of sample exceeds the standard level	A physical water quality sample processed in a DoE laboratory has one or more water quality indicator that does not meet established ECR (1997) criteria.
2	Bypass drain	Included 'industrial operation through using bypass' and 'use of bypass during industrial operation and environmental pollution' in the original sub-headings - condensed variations under a unified category for consistency in analysis.
3	Bypass drain and no or lapsed clearance certificate	This category included all that would fit in category (2) but also explicitly state that the inspected factory did not have an environmental clearance certificate or the certificate had lapsed.
4 Discharge waste		Category reflects cases such as industrial operation through polluting environment' that did not necessarily involve an ETP issue or water quality sample analysis.
5	Faulty, incomplete, or inactive effluent treatment plant (ETP)	Combination of 7 DoE 'subheadings' including Environmental pollution due to closed ETP on the site of the factory; Environmental pollution due to absence of ETP; Inactive ETP and discharge of liquid waste without treatment from industry; Incomplete ETP and environmental pollution from dyeing industry; Industrial operation during construction of ETP; Industrial operation with closed ETP and environmental pollution; and No ETP. Pollution due to discharge of liquid waste. Condensed into common category regarding ETP.

6	Faulty, incomplete, or inactive ETP and no or lapsed clearance certificate	Would include any from category (5) that also explicitly stated an issue with the clearance certificate in the reason for the fine.
7	No or lapsed clearance certificate	When only a clearance certificate issue is listed as the reason for the fine, the case would be categorized here.
8	Other	Included 'sound pollution,' 'no compensation,' 'risky ship breaking yard,' 'obstruction to government activities,' and 'misbehaving with DoE authority.' These 'other' category items did not fit in any other category.

Industrial units producing garments account for four in five of all monetary penalty cases. Of the 1560 cases with fines listed, 1247 cases (80 percent) are for garment factories, which include leather tanneries (10 cases),[118] and dyeing and washing facilities. The remaining cases are printing, paper and pulp mills (97 cases), materials and other production (75 cases), agriculture and food related products (58 cases), pharmaceutical and health (49 cases), and other (39 cases) including recycling, ship breaking, and electronics. Factory names and addresses were redacted by the DoE; as a result, we could not evaluate repeat offender behavior.

5.3.2 Policy and law in Bangladesh

The Environmental Conservation Act (1995) established the first monetary penalties guidelines for industrial water pollution in Bangladesh. The Environmental Conservation Act (1995) and ECR also established the right of appeal by penalized units.[119] At the discretion of the Appellate Authority, the DoE may "approve, modify, or set aside the disputed notice, order or direction" (ECR 1997, 10). While the Appellate Authority is compelled to record "proper reasons in support of their decision," with a requirement to specify the "remedy to which the appell[ant] is entitled" and sending a copy of the order to the "concerned office of the Department and to the Director General" (ECR 1997, 10), these interactions are not recorded, and documentation is not publicly available. The Environmental Conservation Act (1995) was amended in 2010 following two years of committee consultations, resulting in changes to penalties for several 'offence' categories. Appendix I to this chapter summarizes the categories and penalty changes to highlight the changes. A point of differentiation between the original Environmental Conservation Act (1995) and the amendments (2010) are that the amendments offer both a minimum and a maximum suggested penalty for imprisonment or a financial penalty, whereas the ECA only points to a maximum. Additionally, several of the amendments suggest a differentiation in penalties for repeat offenders,

[118] The leather tanneries listed in the sample were grouped with garments because only 10 tanneries were listed, too small to constitute a separate group but also too economically and analytically valuable to exclude.
[119] Sections 9-11 of the ECR (1997).

while the original Environmental Conservation Act (1995) does not remark on this. Because the data from DoE was anonymized, it prevented analysis of repeat offenders.

Other documents reviewed for this research includes national Five Year Plans (FYPs) produced by the General Economics Division of the Ministry of Planning. FYPs are central to the process of development planning in Bangladesh, which implements annual budget allocations against each selected development project.

5.3.3 Interviews and composite narrative building

Interviews were conducted with senior DoE officials and from other government agencies related to water management, factory owners and managers, civil society organizers, and employees of brands sourcing from Bangladesh including sourcing managers, sustainability managers, and sustainability officers. Direct, semi-structured interviews were conducted between November 2017 and November 2021. Interviews are brought into conversation with the analysis of the penalty data to compare, triangulate, and supplement field observations. This 'composite narrative' approach shapes the descriptive and analytical basis for the study (Willis 2019; Wertz et al. 2011). Interview data are supported through thick description (Geertz 1973), triangulation (Bloor, 2001), and multivocality (Tracy 2010). Triangulation is guided with reference to government documents such as national Five-Year Plans. Ethical approval was obtained before beginning this research by the University of Oxford Central University Research Ethics Committee (CUREC, reference SOGE 17A-208).

5.4 Analysis of Department of Environment penalty data

In the data, the 'original penalty' is the amount initially determined by DoE and is listed in Bangladeshi Taka (BDT) currency followed by the equivalent US Dollar amount ($1 USD = 86 BDT). This amount is intended to be based on the amended guidelines established by Section 15 of the Environmental Conservation Act (1995). Section 15 established the basis for penalties in 2002, including monetary fines or imprisonment, for "violation of a provision or for non-compliance of a direction" or for other specified activities. From the nine-year period of penalty data (2010-19), 1,966,354,428 BDT (about USD $23.3 million in 2019 dollars) was charged by DoE.[120] This results in an average fine total of 218,483,825 BDT ($2.6 million USD) per year.

Of the total number of cases in which a monetary penalty is given, 166 units (10.6 percent) appealed the original charge. These appeals resulted in at least partially reducing fines for 112 units by 201,835,116 BDT (US $2.4 million in 2019 dollars) and entirely forgiving fines in two cases through waivers. The remaining fines went unchanged. Appeals reduced the total fine determination by DoE to 1,764,519,312 BDT ($20.8 million USD) over the data period. Of the

[120] $1 US dollar (USD) is about 84 Bangladeshi BDT (BDT).

appealed cases, 86 (77 percent) belong to the garment group. The data also shows that there are 463 fines where a balance is due, whereby the total fine amount was not paid. Out of these 463 incidents with a remaining balance of fines, 408 (88 percent) belong to the garment group. The representation of garment producing units in the data may be due to factors including the high proportion of garment factories concentrated in Dhaka, where all fine data were collected, and because of all water using types of units, effluent from garment dyeing processes is highly visible.[121]

The 'collected fine' data shows how much has been collected by the DoE to date, while the 'remaining balance' value shows the outstanding amount compared with the finalized fine amount after appeal. To date, 1,144,508,980 BDT ($13.4 million USD) has been collected, and 620,010,332 BDT ($7.3 million USD) has not been collected. Figure 7 shows the original fine compared with the collected fine over a nine-year period, with an average fine recovery rate of 52 percent across all years. While there was an increase in fines and overall fine revenue from 2013 to 2016, it did not improve the percentage of collected fines.

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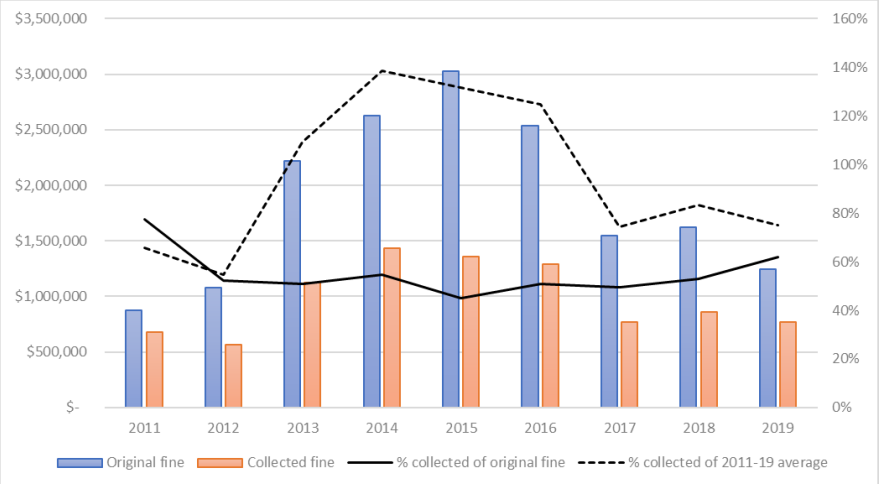

Figure 7: Distribution of original fine amount and percent collected for the garment category, 2011-19 (n=829)

We examined the distribution of fines in relation to the Environmental Conservation Act (1995) designation and how DoE categorized the reason for the penalty. Faulty, incomplete, or inactive ETPs account for 806 cases in the data and are the primary category of fines for the garment industry. This is different from the earlier discussed 757 cases of fines, as 49 of the cases do not

[121] The limited geographic distribution of fines – constrained to Dhaka – may also be reflective of the limited staffing of DoE in other major industrial clusters, such as Chittagong.

list a fine amount. Units with 'faulty, incomplete, or inactive ETP' and 'operating without an environmental clearance certificate' (ECC) or with a 'lapsed ECC' account for 403 fine instances, while 'discharge waste' (175 cases) and 'no or lapsed ECC' (152 cases) account for the next highest categories. For garment factories specifically, four categories–discharge waste; no or lapsed clearance certificate; faulty, incomplete, or inactive ETP; and faulty, incomplete, or inactive ETP and no or lapsed clearance certificate–accounted for 94 percent of all fines.

We also compared DoE designated fines against the penalty guidelines established by Section 15 of the Act in the Environmental Conservation Act (1995).[122] As described previously, the 1995 penalties were revised with amendments in 2010. Section 15 outlines a penalty of up to 1 million BDT ($11,632 USD) for violations of Section 9 for "discharge of excessive environmental pollutant" (ECA 1995). Violations of Section 9 on discharging excessive pollutants are set at a minimum of 50,000 BDT ($580 USD) with a maximum of 200,000 BDT ($2,326 USD).[123] For subsequent offences, minimum fines are set at 200,000 BDT with a maximum of 1,000,000 BDT (about $10,000 USD). There are 163 instances of violations of Section 9. While only 8 fines fell under the minimum for first time offenders, 63 cases were charged more than 1,000,000 BDT ($10,000 USD), the legal maximum.

Similarly, violations of Section 12 for environmental clearance certificates mandate a minimum fine of 100,000 BDT ($1,163 USD) and a maximum of 500,000 BDT ($5,816 USD). In the Environmental Conservation Act (1995) and the Amendments (2010), no differentiation is made for repeat offenders of Section 12. Of the 449 instances of violations of Section 12, 67 cases are under the minimum penalty while 215 are over the maximum.

5.5 Discussion

5.5.1 Degree of formalism and coercion

Within the spectrum of enforcement styles, the penalty data and interviews suggest that the regulatory relationship between the DoE and industrial units exhibit a low degree of formalism and coercion. Formalism is the amount of flexibility observed by the regulator, while coercion "concerns what officials do once they have decided that the regulated enterprise's actions constitute 'violations'" (Kagan 1994, 387–88). The low formalism-low coercion relationships are illustrated by trends in appeals and non-payment or partial payment of fines. Factory appeals of penalties, though only sought in 10.6 percent of cases by industries according to these data, often

[122] Considering the dataset, only certain sub-sections of Section 15 could be applied for analysis; for example, without more specific location data for each industrial unit, we could not cross-check if the factory is located in an 'Ecologically Critical Area' and therefore possibly penalized at a maximum rate of 1,000,000 BDT (about $10,000 USD).
[123] Some numbers are denoted in the original using 'lac', a notation shorthand in Bangladesh for one hundred thousand. For instance, '10 lac' is 1,000,000.

did result in reducing DoE determined fines. As a DoE official in the enforcement department noted, "appeals go to the Ministry and are often reduced or forgiven" (Interview, St-010). The latter view is supported by the data, which suggest that while only two fine instances were completely forgiven, units that appealed had a 67 percent likelihood of successfully reducing their fine.

While appeal attempts are limited, non- or partial payment occurs from nearly a third of identified violators. The low formalism-low coercion in relation to low capacity also explains non-payment behavior. Two justifications for non-payment emerged: the perceived legitimacy (or lack thereof) of the fine and awareness that the DoE cannot effectively enforce the payment. First, views of factory managers on the legitimacy of penalties were informed by perceptions of fines as being arbitrary and motivated by an "environmental agenda" that came at the expense of factory profitability (Interview, Ma-056). The government is aware of the arbitrary variation of penalties as noted in the "key issues" section of the Country Investment Plan regarding the "inconsistent and unequal enforcement/application of regulatory frameworks" (2016, 22). Yet, the departure from penalty guidelines in the Environmental Conservation Act (1995) in at least 412 of 1695 fines given by the DoE supports the perception of arbitrarily applied penalties.

Second is an understanding that the DoE has limited ability and willingness to coerce payment of penalties (Interview, St-002, St-008, Ma-043). According to a senior enforcement official in the head DoE office in Dhaka, "We issue three warning letters for those who have not paid. They can pay in installments if [the] fine is high, [or] ask for gradual payment. Sometimes they do not respond, so we have [a] provision to claim of property back or make a [legal] case against the factory. But this is a lengthy process, [we do] not go for this often. [This is] not regular, it is an uncommon scenario. Five percent of cases maybe. In a year, maybe 15 cases total" (Interview, St-011). Another official noted, "When we fine a new factory, we have a tendency to show leniency, but for a repeat offender that does not establish an ETP, is a habitual offender, not keeping good reputation over two years, we enforce and maximize the penalty [and] cut services [to] make them follow the rules" (Interview, St-012).

These remarks are consistent with DoE activities documented in newspapers and on the DoE website, but not included in the enforcement data. For instance, the DoE's Inspection and Enforcement Manual (2008) highlights a range of available enforcement responses for violations, including warnings; closure, prohibition, or control direction; direction to disconnect services; prosecution; and civil action to recover damages. The DoE reports on its website that it has stopped the activities of 17 factories by disconnecting the power supply to prevent pollution, but

does not include this in the enforcement data (Department of Environment 2022).[124] News outlets regularly report DoE-issued warnings that are not represented in the data.[125] Other sectors including municipal wastewater treatment plants operated by WASA are not included in this list, as they are not fined by the DoE.[126]

The variation in penalties invites a closer examine how low coercion and low formalism may influence penalty determinations and non-payment trends. The fixed nature of fines in the Environmental Conservation Act (1995) apparently does not prevent the DoE from assigning penalties above or below the stated maximum and minimums, inviting examination of how fines are flexibly determined and applied in relation to other regulatory strategies. The low formalism and low coercion of the DoE have implications for garments and leather as industries with particular economic clout, of which owners of large factories are viewed as capable–directly or indirectly–of influencing the direction of regulatory authority with their political connections (Restiani 2014; Harris 2016; Al-Muti 2017; Hassan & Raihan 2018; Hossain et al. 2018; Sakamoto et al. 2019). Garment industries account for most instances when DoE fines exceeded the Environmental Conservation Act (1995) guidelines on penalty structures; of the 363 total industrial units found in violation of Section 12 (Environmental Clearance), 357 were garment factories. Garment factories are in some instances charged over the 500,000 BDT maximum established in the Environmental Conservation Act (1995), which suggests the DoE's non-compliance with its own policy, or indicates a double penalty for multiple infractions. Though the DoE is required to follow the fine guidelines in the Environmental Conservation Act (1995), the higher average fines given may reflect attitudes of the DoE toward garment factories, viewing them as able to manage higher fines due to the profitability of the sector (Interview, St-015), as well as the "out of date nature of the fine amounts" (Interview, St-016).

Further illustrative of DoE's low coercion approach is the leather tanning sector, which faced ten years of fines and court cases over environmental pollution issues (Interview, Ma-041, So-002), though only ten cases are reflected in the DoE data. The DoE leveraged fines of 50,000 BDT (about $590 USD) per day in June 2016 against the roughly 300 tanneries located in Hazaribag, Dhaka for not following earlier orders (Shaon 2017). The tanneries filed appeals against the penalties with the Court of Judicial Review. A Supreme Court order and multiple High Court cases ultimately authorized regulatory authorities to turn off utility connections and compel

[124] List of penalties on the DoE website (2022).
[125] For instance, the Daily Star (2016) reported that the government "issued warnings" to up to 185 industrial units and would "close down factories" unless ETPs were constructed; these warnings are not included in the DoE data.
[126] The Water Act (2013) exempts government authorities "of any violation, non-compliance, negligence, wrongfully causing financial damage to individuals or organizations, and/or avoidance to implement this Act in the name of good faith" (Khalequzzaman 2013; Chan et al. 2016).

relocation to a designated industrial estate with purpose-built effluent treatment facilities (Shaon 2017). When asked why the DoE-maintained penalty data only includes ten cases involving leather tanneries considering this history, a senior DoE enforcement official said that the "tannery business was [a] booming one for Bangladesh" and that though the "government is very friendly, no penalties are imposed" because the "hundred years old industry needs time to change habits," the industry is "hostile" toward regulators (Interview, St-011).

This range of interpretation of enforcement may be compared with other regulatory contexts where regulators go 'by the book' and respond to infractions coercively, and have the resources to do so consistently: In Sao Paolo, Brazil, the Environmental Crimes Law (1998) increased the degree of formalism and coercion by giving prosecutors power in the state environmental agency to enforce laws, file criminal and civil actions against both private and governmental actors, and negotiate judicially enforceable settlements (McAllister 2010). China's legalistic style has shuttered thousands of factories for non-compliance (van Rooij et al. 2013), increased government spending on environmental protection, and increased the number of inspections and regulatory staff (van Rooij et al. 2016).

5.5.2 Degree of autonomy and capacity

Examinations of state autonomy usually seek to understand the extent to which agency goals are influenced by regulated entities by considering proxy measures of the rate of employee turnover, employee job security, measures of corruption, or the status of the regulatory agency in relation to other agencies. Environmental regulatory agencies in Bangladesh are some of the least powerful in government, as with many low and middle-income countries (van Rooij & McAllister 2014). Further weakening the DoE is the institutional and legal fragmentation driven by more laws, policies, and programs proposed to compensate for its underperformance. The resulting contradictions in policy and allocation of responsibilities, persistent coordination problems underpinned by territoriality between state agencies, and lack of involvement or exclusion of key interlocutors in regulatory formation undermine regulatory legitimacy (Interview, St-002).[127] For example, though national-level water quality policies require a number of agencies to coordinate actions, tensions between government agencies result in each taking an autonomous approach to policy-making. For instance, the National Water Management Plan (NWMP) (2001) called for 35 agencies from central government including the DoE and 13 different ministries to implement the National Water Policy (1999). The NWMP stated that all water related projects would be coordinated by the Planning Commission with support from WARPO. Concurrently, the Water

[127] See also Chan et al. (2016).

Act (2013) states that WARPO will be responsible for all water related projects. This contradiction leaves other agencies and ministries unsure of their roles in relation to implementing the Act (Interview, So-006). In navigating the convoluted policy landscape, "everyone exploits this loophole" of institutional ambiguity, contributing to the continuity of low autonomy (Interview April 2019, St-012).[128]

Issues with the low autonomy of DoE as an institution may be usefully understood in relation to the high autonomy of private sector industry actors. As the analysis and interpretation of these data identifies, industries demonstrate their autonomy by resisting enforcement through non-payment and challenging the DoE through appeals. In this way, through routine enforcement transactions, both regulators and regulated industries "reshape their interests and the environment in which they operate" (Coslovsky et al. 2011, 1). This dynamic illustrates the how the subpolitics of regulatory enforcement, or the politics outside of "established state-related institutions" (DeVries 2007, 787), are operationalized. Rather than treating enforcement styles as fixed variables that determine rational decision-making and behavior, this understanding articulates the relational contours of regulation.

Further illustrating the relatively high autonomy and capacity of regulated industries in comparison to the DoE is the ways that firms opt to invest in 'uninspectability' (Gupta et al. 2019; Heyes 1994) or 'concealment activity' (Linder & McBride 1984) to avoid penalties. Uninspectability may include efforts to "change operations or employ idle capacity in order to 'pass' onsite inspections" (Linder & McBride 1984, 339). Interviewees from industry, government, and civil society also identified that when faced with a monetary penalty that a factory owner cannot or does not want to pay, the owner may 'rename' the factory because this option is easier than filing an appeal (Interview, So-002, Ma-032, Ma-042, So-021). Safeguards to prevent this behavior are not in place, creating a challenge for the DoE to accurately track repeat offenders (Interview, So-006). Other studies on factory-level enforcement that we examined did not address this trend of 'renaming' to avoid detection. If this is a common pattern, it is possible that repeat offender data is underestimated in existing studies.

State capacity issues are assessed in relation to technical expertise, the size and quality of staff, availability of sufficient budget, and the extent to which the agency proactively identifies regulatory violations. By some of these indicators, the DoE maintains a degree of capacity. Most senior staff are technical experts from within the bureaucracy, rather than political appointees, with four of the past seven Director Generals holding doctorates. But the extremely low number of annual cases nationwide – peaking at a high of 249 cases in 2015, with 24 factories appealing

[128] See also Petrie et al. (2014) report on water governance in Bangladesh.

the fine and 83 with outstanding payments – compared with the severity of pollution and thousands of factories points to both low coercion and low capacity. Because the DoE penalty data alone does not address deeper relational or institutional aspects, we turn to other sources to understand capacity: interviews and policy documents.

While specific government data on funding allocation for the enforcement wing of DoE is not available, interviews with enforcement officials suggest that offices "are always understaffed" with "around 10 people in the national office, and six or seven in each regional office" (Interview, St-011). This understaffing issue is consistent with a persistently low budget. For example, in the Mid-Implementation Review of the Sixth Five Year Plan, the General Economics Division (2015, 142) noted:

> "Budgetary resources for environmental and climate change management has been generally small and has fallen as a share of GDP. Although there is considerable donor funding available to support adaptation initiatives for climate change, these are fragmented and do not support capacity creation or funding for large-scale and visible projects relating to river restoration or the reduction of vulnerabilities of the lower delta region. Bangladesh will benefit from a strategic rethinking of its environmental strategy and climate change management that combines elements of regulations, incentives, capacity development and visible high-impact projects."

The report goes on to state that the "institutional capacity" of the DoE will be "enhanced" with 21 new offices and the creation of 468 new positions, increasing "manpower to… 735" (General Economics Division 2015, 140). Yet, interviews with DoE staff suggested that these new roles did not materialize in practice and only 487 employees are listed on the January 2022 DoE roster.[129] Of these 487 staff, 49 individuals are listed as 'drivers' assigned to various individual DoE offices.[130] Despite significant high-level political attention including from the Prime Minister to environmental problems related to industrial water pollution, the under-resourcing persists.[131] The Eighth Five Year Plan (2020, 492) states, "at present, the MoEFCC and the DoE lack technical expertise, trained staff, baseline information." The Plan elaborates (2020, 483):

[129] Available on the DoE website page under 'All employees list' (Department of Environment 2022).
[130] This suggest that the number of agency staff alone is not necessarily a good metric of capacity; nearly 10 percent of the listed DoE staff are not related to enforcement, data collection, or other technical or regulatory responsibilities of the agency.
[131] The Seventh Five Year Plan (General Economics Division 2015, 401) noted that while "the Government of Bangladesh has taken substantial initiatives on the environmental front… the state of environmental quality is quite alarming."

> "There is little debate that at the heart of the weak performance of environmental protection is the shortage of financial resources. Direct spending by the coordinating ministry responsible for managing the national environmental program[s] (MoEFCC) has been almost negligible and even as late as FY2020; the targeted budget was only about 0.05% of GDP. Total public spending of the core ministries dealing with water, land and environment-related services constitute about 0.39% of GDP. This resource scarcity severely limits the scope of institutions within the government to support a comprehensive set of activities for sound environmental management and execute climate change adaptation program[s]."

The lack of funding may be further considered in relation to DoE monitoring practices for enforcement. The approach taken by DoE to identify polluting factories follows one of three entry points (Interview, St-002, St-008). The first is responding to specific complaints and requests for pollution problems. Complaints may be lodged online or over a hotline. The second is following newspaper articles reporting on pollution hotspots, to which the DoE responds. Last, the DoE may random choose areas for 'pollution drives' to conduct onsite inspections based on a list of factories registered with their ETP. These 'surprise' factory visits illustrate a response to uninspectability behavior (Interview, St-005). Such visits are viewed by regulators as a mechanism to keep factory managers from preparing for an inspection with the intent to obscure non-compliance (Interview, St-007). Surprise visits are intended to prevent factory managers from having sufficient time to engage in preparations for uninspectability, such as 'switching on' an ETP that was turned off to save on energy costs (Interview So-005, So-009, St-002).

In the literature, we would expect that plants with low compliance, a history of non-compliance, or those belonging to particularly polluting industries will be inspected more frequently than high compliance and 'clean' industries to make the most use of limited agency capacity (Gupta et al. 2019; Haque 2018). This appears to be the case based on the penalty data and interviews, where garments are categorized as a pollution intensive industry, and export factories supplying to international brands are more likely to be inspected because they are listed on the DoE registry of established ETPs and environmental clearance certificate applications, and account for a high percentage of water-using industrial units (Interview, St-002). The fact of more frequent inspections not necessarily leading to higher compliance suggests that the challenges preventing the alignment of environmental standards with private sustainability regulation mirror similar issues with labor compliance (Amengual 2014; Anner 2020).

In sum, the low degree of capacity of the DoE is more pronounced in relation to the high capacity of regulated entities to appeal fines, avoid payment, or invest in uninspectability. Currently, the "advantage [for industries] to not comply is so high" (So-020) because the cost of running an ETP is significant compared with fines low in relation to profits, and that are unlikely to be enforced. Haque (2017) and the World Bank Country Environmental Analysis of Bangladesh reach a similar conclusion that "even if the factory is fined twice a year, for an average of 1,000,000 BDT ($10,000 USD), it would be more economical to pay the fine rather than run a wastewater treatment plant" (2018, 27).[132] In other words, the prevalence of pollution and non-compliance suggests that the enforcement style is not achieving a deterrence effect.

5.6 Policy implications

Together, the low formalism, coercion, autonomy, and capacity of the DoE exemplifies a retreatist mode of state enforcement, described by Kagan (1994, 388) as one in which "officials avoid hard choices, backing down at the least sign of opposition, postponing decisions, or generating meaningless paperwork that creates only the appearance of regulatory enforcement." Yet this 'ideal type' does not tell the whole story. Within the wider regulatory ecosystem in Bangladesh, the DoE is just one of many actors; to reduce the structural forces exerted on the agency to say it "avoids hard choices" risks neglecting to account for the conditions under which the agency has come to adopt this approach.

Two emerging initiatives may benefit from the insights of this analysis: the Industrial Water Use Policy, managed by the Water Resources Planning Organization (WARPO) of the Ministry of Water Resources, and the development of a new World Bank environmental governance program focused on pollution reduction. The Industrial Water Use Policy has three objectives: Optimize industrial water use, reduce pollution from industries, and ensure effective monitoring for compliance. As the Industrial Water Use Policy seeks to establish 'full cost' pricing for water, it establishes a basis for proactive, publicly accessible online disclosure of effluent information. However, since 2010, the DoE has noted the importance of "public disclosure of environmental quality information through different public media" (Parliamentary Standing Committee on Ministry of Environment & Forests 2010) and yet little has been accomplished in the past decade to advance this goal (Interview, St-007). Due to the ongoing lack of public disclosure, publications have incorrectly stated that the DoE does not maintain a "database of inspections, fines, and

[132] The original source is from the newspaper *Prothom Alo* (2013), which estimated that the average cost of wastewater treatment for a textile dyeing factory is around BDT 32 per cubic meter using chemical method, which can translate into an annual cost of 13,350,000 BDT (or $157,490 USD) for a small factory.

compensation levied" (World Bank Country Environmental Analysis 2018, 27).[133] Considering that the DoE selectively 'names and shames' fined factories in newspapers (Haque 2017) and does maintain internal documentation of fines, publicly disclosing the comprehensive list and providing details on inspections that do not result in a fine would support more detailed policy analysis in the future.

In 2020, the World Bank established a $250 million USD program in Bangladesh with the objective of strengthening environmental governance and reducing pollution discharge from key sources (World Bank 2020). This research suggests that the World Bank and DoE could revisit penalty structures because the upper thresholds of fines in the ECA are significantly lower than the cost of operating an ETP (Haque 2017). Though fixed fine amounts may appear to be a reasonable deterrent at the time of policy formation, static penalties do not respond to changing compliance and enforcement dynamics. Through assessing the standpoints of various stakeholders in regulation, this research identifies that the reliance on technology adoption to achieve regulatory goals appears misplaced. While ETPs have been required since the ECR (1997), the DoE 2018-19 annual report finds that of 2,087 orange or red-listed factories around Dhaka, only 1,691 had set up ETPs.[134] As this research suggests, the construction of an ETP alone is not sufficient when uninspectability behavior is present; the ETP must be continuously and effectively operated to achieve the desired pollution reduction. Further, interviews suggested that the nearly twenty-year old Environmental Conservation Act (1995) and ECR are outdated in terms of their environmental standards.

This study also provides evidence that though the DoE states the importance of the history of compliance, degree of harm, and principles of consistency and fairness, both interviews and the incomplete condition of the penalty data suggest that the DoE does not discursively engage with its own penalty practices. For instance, though the DoE emphasizes the role of water quality samples in enforcement processes, samples were rarely used in practice (Interview, St-012); only 27 cases of 1695 list water quality samples as a basis for determining penalty.[135] Fines are more often given for administrative issues, such as a lapsed ECC (138 cases), or infrastructural infractions, such a faulty, incomplete, or inactive ETP (757 cases). This raises the point that the new World Bank program could direct resources to strategic interventions that respond to entrenched and emerging regulatory problems, rather than assigning specific fines per unit of

[133] Additionally, databases, documents, and other updates on government websites may only be available in Bengali, not English, making access difficult for non-Bengali readers.
[134] The 2018-19 report is the most recent available report; subsequent reports from 2019 onward have not yet been released.
[135] This reflects similar findings in Haque (2017) with 11 out of 290 fine instances involving water quality samples.

pollution based on water samples as this is not common practice. Such interventions may include addressing the administrative burden on both the DoE and factories for maintaining ECC documents, and clarifying institutional arrangements for responsibility to enforce pollution regulations.

5.6.1 Limitations

This study faces several shortcomings. To begin, we were unable to examine a number of potential variables of interest. For example, due to the redaction of factory names and absence of key points in the dataset, we cannot assess the status of factories as export versus domestic suppliers. Additionally, a lack of firm level data such as age of the factory or ETP size meant we could not analyze other outstanding questions, such as the size of the fine in relation to ability to pay or to the general operating costs of the ETP. More specific information on factory location would support analysis of the spatial implications of violations, such as the requirement for factories not to be in residential zones or ecologically critical areas. Last, data on the DoE's annual expenditures on enforcement and compliance, as well as information on staff dedicated to regulatory tasks, are not available. This precludes a more detailed understanding of annual expenditures on enforcement.

5.7 Conclusion

As progress stalls toward meeting the Sustainable Development Goal targets related to water quality, analysis of barriers to progress are urgently needed. Regulatory interventions to address wastewater in light of ongoing urbanization and industrialization are poorly understood. Through applying a decentered regulatory approach, this chapter sought to advance analysis of regulatory enforcement for water pollution in Bangladesh with three main contributions. First, we analyzed nearly a decade of enforcement information to assess how government and industries interact to shape regulatory outcomes. We identified appeals and non- or partial payment of fines as entry points to understand the nature of enforcement styles in Bangladesh. We find that garment-producing industrial units are more likely than other sectors to seek waivers through appeals and are less likely to pay the entire fine. This is consistent with the literature that powerful industries have a stronger negotiating position on the basis of their economic characteristics (Yeager 1991). The attitudes of different actors and institutions toward the problem of pollution provide insights for further investigation.

Second, the decentered approach provides an analytical basis to examine interactions of state and market actors that shape styles of regulatory enforcement (McAllister 2008; van Rooij et al. 2013). By extending analysis to examine the nexus of state-market interaction around the politics

of enforcement, this research finds that industries are significant players in translating regulation into patterns of defiance. Importantly, enforcement style "does not bear any single, invariable relationship" to effectiveness; rather, the task is to understand the conditions under which agencies adopt different styles and "what impact, under particular conditions, administrative style has on programmatic effectiveness, viewed in all its dimensions" (Kagan 1994, 386). This suggests that though the DoE's retreatist character of enforcement influences regulatory outcomes, the autonomy of actors in state-market interactions result in varied, unpredictable outcomes. This extension of decentered regulatory analysis to enforcement style is valuable particularly in the underexplored context of a country seeking to reconcile sustainable development with economic growth.

Last, this chapter contributes to understandings of developments in studies related to political economic areas of the regulatory literature. It addresses emerging policy and institutional approaches to pollution and how these insights may be applied. As the World Bank and DoE prepare policies based on the Country Environmental Analysis (2018) which relied on earlier analysis by Haque (2017), this research significantly expands on earlier work through access to the previously unavailable DoE maintained dataset. Further research is needed to understand the fine appeals process, particularly how regulatory agencies respond to appeals and what kind of evidence industries use to marshal support of claims. Future research may also seek to understand the specific ways that politics influence the distribution of regulatory power through heavily politicized reform processes. As Kagan (1994, 399) emphasizes, "Regulation is a political process. It emerges from political demands and political struggles, and is shaped by competing political ideas and theories." One way to identify the pathways through which regulatory power operates would be further research engagement with the mechanisms, tactics, and strategies of states, civil society groups, and industries to shape the direction and outcomes of environmental regulation.

Chapter 5

Appendix

Appendix I: Environmental Conservation Act (1995) and Amendment (2010) Categories of Offence and Penalty

ECA (1995)	Penalty in ECA (1995)	Penalty in Amendment (2010)
Non-compliance of a direction issued under sub-section (2) or (3) of Section 4: Power and functions of the Director General	Imprisonment not exceeding 10 years or fine not exceeding 1,000,000 BDT or both	In case of first offense imprisonment minimum 1 year, not exceeding 2 year or a fine minimum 50,000 BDT, not exceeding 200,000 BDT or both. In case of each subsequent offence an imprisonment 2 year, not exceeding 10 years or a fine 200,000 BDT, not exceeding 1,000,000 BDT or both.
Violation of sub-section (2) by continuing activities or processes or by initiating activities or processes, prohibited under subsection (1) of Section 5: Declaration of an Ecologically Critical Area	Imprisonment not exceeding 10 years or fine not exceeding 1,000,000 BDT or both	In case of first offense Imprisonment, not exceeding 2 year or a fine not exceeding 200,000 BDT or both. In case of each subsequent offence an imprisonment 2 year, not exceeding 10 years or a fine 200,000 BDT, not exceeding 1,000,000 BDT or both.
Violation of sub-section (1) or (2), or failure to take remedial measures in accordance with subsection (3) of Section 9: Discharge of excessive environmental pollutant	Imprisonment not exceeding 10 years or fine not exceeding 1,000,000 BDT or both: Provided that where a lower penalty is fixed by rules for violation of section 9(1), that penalty shall be applicable.	In case of first offense, imprisonment minimum 1 year, not exceeding 2 years, or a fine minimum 50,000 BDT, not exceeding 200,000 BDT or both. In case of each subsequent offence an imprisonment 2 years not exceeding 10 years or a fine 200,000 BDT, not exceeding 1,000,000 BDT or both.
Failure to render, without reasonable excuse, assistance or cooperation to the Director General or a person authorized by him as required by sub-section (2) of Section 10: Power of entry	Imprisonment not exceeding 3 years or fine not exceeding 300,000 BDT or both.	Imprisonment 1 year, not exceeding 3 years or a fine 50,000 BDT, not exceeding 300,000 BDT or both.
Violation of Section 12: Environmental Clearance	Imprisonment not exceeding 3 years or fine not exceeding 300,000 BDT or both	Imprisonment 2 year, not exceeding 5 years or a fine 100,000 BDT, not exceeding 500,000 BDT or both.

Violation of any other provision of this Act or a direction issued under the rules or obstructing the Director General or a person authorized by him in discharging his duties or intentionally delaying the discharge of such duty	Imprisonment not exceeding 3 years or fine not exceeding 300,000 BDT or both.	Imprisonment not exceeding 3 years or a fine not exceeding 500,000 BDT or both.

Appendix II: Summary of key differences between Haque (2017) and this study

This table summarizes the key differences between this study and the Haque (2017) study. This study significantly adds to the number of cases and expands on the timeframe, from a sample size of 309 from 2011–16, to 1695 from 2010–19. Additionally, this dataset includes not only the original penalty determined by DoE, but also the amount appealed, the amount paid, and the unpaid balance. We also conduct a comparison of fines and fine 'categories' with the standards established in the ECA to examine variation from the established legal guidelines. The descriptive statistics show that the Haque (2017) paper overestimates numbers including mean fine, which is lower when calculated from the complete fine population data.

Haque (2017)		**This study**	
Time period	2011 Q2 – 2016 Q1	**Time Period**	July 2010 – October 2019
Sample size (n)	309	**Population size (N)**	1699
Source	Newspaper reports from the DoE	**Source**	Provided by DoE but factory names anonymized
Analysis	Grounded theory	**Analysis**	Objective driven
Fining incidents involving garments	255 (82.5 percent)	**Fining incidents involving garments**	1247 (80 percent)
Unique quality	Name of offending factory identified	**Unique quality**	Record of waived amount & balance against initial fine
Descriptive Summary of Fines (n = 290)*		**Descriptive Summary of Fines (N = 1560)****	
Minimum Fine	1,000 BDT ($11.60 USD)	**Minimum Fine**	202 BDT ($2.35 USD)
Maximum Fine	30,000,000 BDT ($349,172 USD)	**Maximum Fine**	30,000,000 BDT ($349,172 USD)
Median	800,000 BDT ($9311 USD)	**Median**	500,000 BDT ($5,819 USD)
Mean	1,965,000 BDT ($22,870)	**Mean**	1,260,484 BDT ($14,670 USD)
Mode	200,000 BDT ($2,327 USD)	**Mode**	100,000 BDT ($1,163 USD)
Std. Deviation	3,531,116	**Std. Deviation**	2,171,678

* Excludes fining incidents reported as a group in the press.
** Excludes enforcement records not resulting in fines.

Chapter 5

Statement of Authorship for joint/multi-authored papers for PGR thesis
To appear at the end of each thesis chapter submitted as an article/paper

The statement shall describe the candidate's and co-authors' independent research contributions in the thesis publications. For each publication there should exist a complete statement that is to be filled out and signed by the candidate and supervisor **(only required where there isn't already a statement of contribution within the paper itself).**

Title of Paper	Regulation and resistance: Water pollution penalties in Bangladesh
Publication Status	□Published □ Accepted for Publication **X** Submitted for Publication □Unpublished and unsubmitted work written in a manuscript style
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Student Confirmation

Student Name:	Rebecca M Peters	
Contribution to the Paper	Wrote the manuscript, gathered data from the Department of Environment, led data interpretation, supported analysis of the data, serving as corresponding author for journal submission.	
Signature Rebecca Peters	Date	August 31, 2022

Supervisor Confirmation: By signing the Statement of Authorship, you are certifying that the candidate made a substantial contribution to the publication, and that the description described above is accurate.

Supervisor name and title: Professor Rob Hope		
Supervisor comments Rebecca conceived the idea of the paper, led the writing and interpretation, and supported the data analysis. Dr Haque and I provided support in the argument, data analysis and interpretation.		
Signature R Hope	Date	6th September 2022

This completed form should be included in the thesis, at the end of the relevant chapter.

Chapter 5

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To whom it may concern,

I, Nabil Haque, certify that Rebecca Peters completed majority of the work in the journal article below, which forms part of her DPhil thesis:

- *Regulation and resistance: Water pollution penalties in Bangladesh*

Signature: 

Date: 1st September 2022

Chapter 6 – Linkages, fragmentation, and autonomy: Private environmental governance in Bangladeshi leather tanneries

Abstract

Transnational private environmental governance initiatives are a prevalent response to address environmental sustainability 'governance gaps' in global value chains. Building on the case of water pollution resulting from the leather tannery industry in Bangladesh, this chapter draws upon historical analysis and 76 interviews conducted between 2017 and 2021 to analyze the confluence of private governance and domestic political economy from a decentered regulatory perspective. The chapter argues that private governance emerged from the roots of independence-era growth strategies, leading to the initial formation of domestic state-market linkages. Subsequently, politicized antipathy and the marginalization of civil society in the tannery reform process illustrated the fragmentation of knowledge and power and the autonomy of actors. As contestations over the distribution of power changed over time, the high degree of autonomy of tannery owners enabled them to pursue contravening actions in the reform process. The chapter finds that while state agencies may initially repurpose and then seek to adopt private governance initiatives, domestic private sector actors may reject and ultimately obstruct regulatory change. The chapter aims to extend a political-strategic analysis of the relations shaping private governance since Bangladeshi independence. It contributes an empirical vantage point from the perspective of the global South, illustrating the agency of states and non-state actors in mediating transnational private governance on the ground.

Keywords
Private governance, regulation, linkages, autonomy, fragmentation, Bangladesh

Chapter 6 – Linkages, fragmentation, and autonomy: Private environmental governance in Bangladeshi leather tanneries

6.1 Introduction

Unbounded by national borders and enabled by the global market economy, the private governance of environmental sustainability has focused on assessing or implementing standards in global production in areas including energy efficiency and wastewater quality (Smith & Fischlein 2010; Thistlethwaite & Paterson 2015; Renckens & Auld 2020).[136] Audits, sustainability certifications, and other forms of private governance have emerged as complements or alternatives to state-led regulation (Schleifer 2016). Relationships between state bureaucracies, civil society organizations, business associations, and manufacturing entities in the global South have significantly shaped the uptake of sustainability programs led by institutions based in the global North (Marques & Eberlein 2021). Yet understandings are limited of the capacity of actors and institutions in a given political economy to act as a mediating force on the direction of international private governance.

In particular, discussions of transnational private governance have largely marginalized the agency of global South states, civil society groups, and business interests to influence the direction of implementation and outcomes (Macdonald 2020). However, recent literature has widened the aperture of scholarship in this area, revealing the benefit of a more inclusive conceptualization of the role of relationships between state, market, and society in negotiating the embedding of environmental regulatory programs in the global South (Dermawan & Hospes 2018; Pacheco et al. 2020; Ponte 2008; Ponte & Cheyns 2013). This chapter develops this area of inquiry in relation to the environmentally intensive manufacture of leather goods in Bangladesh. Private governance initiatives have increasingly focused on leather production, with some 300 million animal hides treated per year around the world and a global estimated export market value of $170 billion in 2020 (Razzaque et al. 2020). Environmentally harmful practices persist in leather producing countries, where industry is disinclined to respond to significant attention from civil society groups and transnational regulations on leather goods including European Union restrictions on leather imports with certain concentrations of restricted chemicals (European Chemicals Agency 2022).

To explore this dynamic, this chapter extends the political-strategic framework proposed by Marques and Eberlein (2021) and Black's decentered regulatory approach (2001) to examine the interactions of transnational private governance with domestic leather tanneries, civil society

[136] A range of terms are used in the literature to refer to similar phenomena, including transnational business governance (stylized as 'TBG' in Marques & Eberlein 2021). From here, 'private governance' will refer to transnational private governance of 'the environment' which may include corporate sustainability metrics (such as factory energy efficiency) or specific environmental quality parameters (such as the water quality released by factory effluent).

groups, and government entities in Bangladesh, where leather is the second largest export sector after ready-made garments (Bangladesh Investment Development Authority 2022). Following nearly three decades of substantial reform efforts and escalating legal struggles to address severe river water pollution (Singh & Gundimeda 2020), the 155 units comprising the tannery industry were forcibly relocated from Hazaribagh in central Dhaka to a designated industrial estate in nearby Savar. Yet, following the failure of a centralized effluent treatment plant (CETP) to improve wastewater to an acceptable standard, tanneries did not earn accreditation from the Leather Working Group (LWG), the industry's dominant transnational sustainability certifier. This effectively suspended the industry from exporting to many international markets, undermining the anticipated economic benefits of the relocation.

Drawing from 76 interviews conducted from 2017 to 2021, this research assesses three trends associated with decentered regulation (Black 2001; Smith 2002) that have emerged with private governance interventions in Bangladesh's tannery industry: the collapse of the public-private distinction via the formation of state-market linkages, fragmentation of knowledge and power, and the autonomy of actors. Private governance emerged from the historic roots of the post-independence era in Bangladesh when domestic state-market initially linkages converged. As regulatory power was distributed and redistributed over time, the relative degrees of autonomy of the actors involved in the reform process meant that private governance efforts led to unpredictable outcomes. The animosity between major party leaders underlies the distribution of power and conflict related to domestic industrial and political interests, shaping the Bangladeshi national political economy.[137] Based on this assessment, the chapter finds that while state agencies may initially repurpose and then seek to adopt private governance initiatives, domestic private sector actors may reject and ultimately obstruct regulatory change.

The chapter proceeds with Section 2 examining the literature, discussing private governance in relation to decentered regulation. Section 3 reviews the study area and methodology, while Section 4 discusses the evolving role of private governance in Bangladesh's tannery sector from independence to the present. Section 5 discusses the implications of the findings and concludes the chapter.

6.2 Private governance and decentered regulation

A decentered approach to understanding environmental regulation contributes to the study of private governance by expanding the range of actors, institutions, and norms examined in relation to compliance and enforcement efforts (Smith 2002). Analysis of environmental

[137] For the earlier development of the term 'partyarchy', see Coppedge (1994) on Venezuela.

regulation from a decentered perspective includes formal legislation and state environmental protection practices related to the enforcement of environmental laws, as well as private or market-related and community or society-related aspects (Van Rooij et al. 2013). The elements of a decentered analysis of regulatory interactions illustrates how non-state groups may mobilize, contest, and create coalitions to effectively build pressure for, or against, regulation (O'Rourke 2004). Particularly in the context of state, market, and society relations in Bangladesh, a decentered approach facilitates consideration of the area between formal law and the broader "range of informal and personalized relationships that are observed between economic actors and political elites" (Pritchett et al. 2018, 24). Therefore, a decentered approach to understanding private governance offers merits as applied to understanding environmental regulation in the global South.

Private governance is often conceived of as a leverage point for change by allowing private actors to exert direct pressure on factories and suppliers to comply with certain voluntary environmental standards (Vatn 2018; Kalfagianni 2013; Perez 2011). As a result, private governance has taken on a substantive role in establishing norms and determining levels of market access, including by issuing producer certifications, conducting factory sustainable audits, and overseeing environmental quality monitoring and enforcement (Graz & Nölke 2012; Lambin & Thorlakson 2018). The term *'private'* focuses on "the role of buyers in governing interactions with suppliers" (Pasquali & Alford 2022), distinguished from 'public' or 'social' *governance,* which relate to the role of the state or civil society actors in regulating global value chains (Alford & Phillips 2018). The shift toward privatization of environmental governance is viewed by some to bridge 'governance gaps' and enhance efficiency in global value chains (Engel, Pagiola & Wunder 2008), while others argue that 'big brand sustainability' is fundamentally limited by the overall impacts of consumption patterns, changing lifestyle expectations in the global South, and corporate use of sustainability to enhance competitive advantage for increased sales (Dauvergne & Lister 2012; Dauvergne 2010).

As 'traditional' state-led public governance programs struggled to deliver sustainability goals (Bernstein & Cashore 2007; Bäckstrand 2008; Smith & Fischlein 2010; Chkanikova & Lehner 2015; Grabs et al. 2021), private actors gained new importance (Abbott & Snidal 2009; Foley 2017; Fransen & Conzelmann 2015; Fransen 2011; Kalfagianni 2013; Schouten & Bitzer 2015; Johnstone 2019). Yet, the literature tends to narrowly focus on the role of non-state actors from the global North in "developing norms, standards, and new organizational forms" that govern environmental conditions in global production (Marques & Eberlein 2021; Green 2014). Accounts of private governance often offer a limited discussion of the competing interests and contestation in the relationship between private governance and domestic state, civil society, and private sector-

oriented institutions. As Marques and Eberlein (2021, 1209) point out, earlier iterations of this scholarship depoliticize the conflictual relations of distributional struggles related to industrial production, viewing governments in the global South as passively "unwilling or unable to regulate social and environmental conditions." In contrast, their political-strategic framework builds from the premise that Southern governments pursue their own economic and political interests by *adopting, substituting, rejecting, repurposing, or replacing* regulatory norms and standards when making choices about the involvement of private governance actors and institutions. While the institutions and actors involved in private governance rarely operate independently of the political economy in which they seek to exert influence, understandings of the interaction of these areas and the resulting implications for sustainable development are limited. The proliferation of private governance initiatives originating in the global North interfacing with state-level political economy in the global South therefore constitutes an important yet underexplored area.

A central premise of the political-strategic framework proposed by Marques and Eberlein (2021, 1210) is that governments in the global South will pursue political or economic interests when they make decisions about their engagement with private governance. These choices are shaped by political settlements, the "balance or distribution of power between contending social groups and social classes upon which any state is based" (Di John & Putzel 2009, 4; Pritchett et al. 2018) and elite settlements, "broad compromises among previously warring elite factions, resulting in political stability" (Burton & Higley 1987, 295). The coalitions formed by political and elite settlements influence the character of linkages between government actors and organized producer interests. Building on the 'complementary, competitive, co-existence' framework of Cashore et al. (2021), four formal responses of global South governments to transnational standards are proposed: reject, replace, repurpose, or adopt. *Reject* entails resisting, obstructing, or undermining private governance. Governments may also *replace* a private standard with a national standard, or *repurpose* a standard to fit the particular needs of a country. *Adopting* private governance programs may occur when the standard is a "strategic instrument of competition" (Reardon et al. 1999, 421).

As transnational norms are pushed into new domestic contexts in the global South and states make choices regarding rejecting, replacing, repurposing, or adopting standards, three aspects of decentered regulation are accentuated: Linkages, fragmentation, and autonomy. Linkages are formed by alliances between private governance entities, state regulators, market actors, or society groups. These linkages serve to influence to what extent regulators can marshal the resources of particular groups. In a politicized bureaucracy like Bangladesh, the internal organization of a bureaucracy is an unreliable way to prevent regulatory interference; when

violators have a seat at the table, they create opportunities to influence bureaucrats' regulatory choices. Linkages therefore "play a central role" in whether or not regulators "can undertake the key tasks of enforcement" (Amengual 2014, 22). As a result, linkages between inspectors and civil society organizations that share an interest in strengthening enforcement may assist bureaucrats to overcome resistance by organized interests (Clapp 2007; Leitheiser 2021). Building from the application of the term 'clientelism' used to describe relationships in the discourse on Bangladesh's political economy (Sarker & Nawaz 2019),[138] linkages create the possibility of enabling information about violations to reach regulatory agencies from groups outside the state and facilitate the sharing of resources needed to address violations. However, strong linkages between government regulators and industry coalitions, paired with weak linkages with society actors seeking to advance environmental and social protection, risk creating a context in which state and private sector interests coalesce at the expense of societal welfare (Streeck & Schmitter 1985).[139]

Autonomy is framed by Black (2001) as the concept that, in the absence of intervention, actors will continue to act according to their own logic. Autonomy "will to an extent render [actors] insusceptible to external regulation"; as a result, no one actor can "dominate the regulatory process unilaterally" because "all actors can be severely restricted in reaching their own objectives, not just by limitations in their own knowledge, but also by the autonomy of others" (Black 2001, 109; Kooiman 1993). This perspective accords with Skocpol's view in which states are "administrative and coercive organizations… that are potentially autonomous from (though conditioned by) socioeconomic interests and structures" (1979, 14). Unlike markets or society, states are characterized by political settlements, the "balance or distribution of power between contending social groups and social classes" (Di John & Putzel 2009, 4). Based on this account, states and economic systems are not reducible to the other. As a consequence, varying degrees of the autonomy of actors in a political economy means that states maintain relations with socioeconomic structures, but do not solely pursue the interests of dominant classes (Skocpol 1985).

The two dimensions of fragmentation–fragmentation of *knowledge* and fragmentation of *power*–acknowledge the distribution of agency among actors in a regulatory system (Black 2001). Drawing on Foucauldian approaches to the inseparability of knowledge and power, fragmentation entails that the state does not have a monopoly on the exercise of power and control (Zelli & van Asselt 2013). Rather, regulatory power is distributed across institutions and actors. Other spheres

[138] Clientelism is defined as 'ongoing exchanges of goods and services between those with more and those with less power, a long-term relationship of unequal power in which identifiable actors exchange goods and services that often involve political allegiance' (Grindle 2016).
[139] This situation may result in a private interest government (Streeck & Schmitter 1985).

of non-state regulation are just as important for forming 'rules' as the formal ordering of the state (Black 2001, 4). Fragmentation of knowledge means that one actor cannot be assumed to have the information necessary to solve complex problems, offering a departure from 'information asymmetry.' Unlike information asymmetry, fragmentation of knowledge recognizes the agency of state, market and society actors to contest, negotiate, and mediate power relations in ways that impact the type and flow of information. Fragmentation of power drives uncertainty for state and market actors regarding the causes of and solutions for regulatory problems (Heidingsfelder & Beckmann 2019). This approach stands in juxtaposition to traditional economics-oriented diagnoses of regulatory failure.

While the overlapping or competing provisions of state, market, and society actors involved in environmental governance drive linkages, autonomy, and fragmentation, analysis of private governance often narrowly focuses on the role of market actors in the global North (Marques & Eberlein 2021). Correspondingly, prevailing environmental regulatory theory draws on state-centered ideas of an 'ideal type' of a separation in the regulatory role and capacity of states and markets (Black 2001). But market-focused or state-centric approaches face several analytical limitations in understanding the entanglements of regulatory influence (Heyvaert 2019) and the role of civil society (Lange 2013). Compared with state-centric definitions of regulation, decentered regulation is characterized as "the sustained and focused attempt to alter the behavior of others according to defined standards or purposes with the intention of producing broadly identified outcome(s), which may involve mechanisms of standard setting, information gathering, and behavior modification" (Black 2002, 20). This more expansive conceptualization creates space to account for the intersections of society, market, and state relationships in the process of regulation. While each area overlaps and engages with others via different linkages, the society sphere is distinguished from state regulatory agencies and markets, and markets as a form of coordinating economic activity.

6.3 Context for the study

6.3.1 Leather tanneries

Leather tanneries often occupy the margins of societies and economies in the global South (Damodaran & Mansingh 2008). Yet, tanneries are a significant source of economic growth and employment potential, particularly in South Asian countries including Bangladesh, India, and Pakistan–nations where leather commands a top-five position as an export sector (Razzaque et al. 2020). The sector is widely dominated by small scale firms, with each step of the leather making process divided into different stages from raw materials to finished product (Damodaran & Mansingh 2008; ARUP 2015). Because of their potential to contribute to national economic

growth, particularly related to diversification and risk-reduction from reliance the garment sector, tanneries in Bangladesh have received significant state and donor support for their operations. Yet, as an industry with roots in the immediate post-independence period, until the relocation push, many tanneries operated with "outdated and inefficient" infrastructure (Ahmed 2018, 20). As a result of their relative inscrutability and low visibility in global value chains, tanneries have received insufficient attention in the literature (Kroepsch & Clifford 2021).

Under conditions of limited regulatory enforcement to manage industrial wastewater or solid waste, tanneries release significant polluting discharges into river systems (Whitehead et al. 2019). Discharges are characterized by high concentrations of lead, zinc, cadmium and chromium and low biodegradability (Lofrano et al. 2013). These high concentrations in wastewater discharged into rivers harm aquatic ecosystems and present hazards to human health (Prasad et al. 2021). Around 90 percent of leather globally is tanned with chromium, accounting for over 15,000 tons of Cr-salts used annually (Pradeep et al. 2021). Though wastewater treatment technology is improving and zero liquid waste and recycling initiatives are gaining traction in the Bangladeshi national policy arena, only 50 to 60 percent of the chemicals applied during production is fixed in the leather (Pradeep et al. 2021). Without a functional CETP, this results in large releases of chromium and other chemicals and compounds through wastewater into river systems from tanneries (Hoque et al. 2021; Whitehead et al. 2019).

6.3.2 Methods

Semi-structured interviews were conducted with 76 individuals both in person and online from October 2017 to December 2021 based on interviewee knowledge of the efforts to relocate and reform the tanneries in Bangladesh.[140] The selection of interviewees depended on factors including suitability to address specific research themes. Common questions following core themes across interviews supported identifying trends, while tailored questions supported gaining depth of specific areas of knowledge. Interviews, once transcribed from recordings or notes, were input to NVivo 12 for coding. Interviews are noted by the code associated with the professional role of the individual – 'Ma-' for Market, 'So-' for Society, and 'St-' for State (see Appendix for list of interviewees).[141] The majority of interviewees from the 'state' category are appointed bureaucrats within Bangladesh government, with one from the Bangladesh judicial branch and two elected members of Parliament. The 'society' category is comprised of individuals from Bangladeshi and

[140] Before beginning this research, ethical approval was obtained by the University of Oxford Central University Research Ethics Committee (CUREC, reference SOGE 17A-208). All participation was informed and uncompensated.
[141] In cases when an individual held multiple roles – for example, the person served as both a government official and owned a factory – they were marked on the basis of the capacity they were interviewed for (e.g. interviewed in their government office with the focus as their experiences in government would be marked as 'St,' where as if they were interviewed in their factory and focused on their experiences in industry they would be marked as 'Ma').

international NGOs, academics, local community representatives, donor organizations, environmental lawyers, and newspaper journalists. The 'market' sector has individuals from banking and finance, garment factory owners and managers, fashion brands, private factory auditors, consultants, and industry association leaders.[142]

Quotations from interviews are brought into conversation with secondary data sources to triangulate, compare, and supplement information (Natow 2020). This chapter draws on multiple perspectives across categories of interviewees to critically assess the quality and validity of non-peer reviewed information and interviewee positionality. Triangulation of interviews with other sources of data serves several purposes, including to support accuracy of findings by checking biases or inaccuracies that may emerge from a single source (Leech & Onwuegbuzie 2007) and to demonstrate multiple conceptions of social realities (Golafshani 2003).

Secondary data sources included both peer reviewed academic research and grey literature, defined as information "which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers, i.e., where publishing is not the primary activity of the producing body" (Mahood et al. 2014; Paez 2017). This included legal and policy documents such as national Five Year Plans (FYPs) from the General Economics Division of the Planning Commission. Particularly for research on topics in developing countries that are not well represented in peer reviewed academic research, the grey literature provides a critical source of information. Due to limited studies in the area that this chapter covers, the research triangulates interviews and peer reviewed research with selected grey literature including working papers, government reports, organization's websites, and conference proceedings. This 'composite narrative' approach forms the descriptive and analytical basis for the study (Willis 2019; Wertz et al. 2011).

6.4 Regulatory change in Bangladesh's tannery sector

6.4.1 Early days of independence: The formation of state-market linkages and vanishing public-private boundary

The foundations for contemporary private governance in the Bangladeshi leather sector may be traced to the origins of tanneries and their early relationship with the state.[143] This section traces the formative trends in political commitment to economic liberalization in shaping the domestic political economy relationships with private governance. After Partition in 1947, the first leather manufacturing units were established in the newly formed East Pakistan by tanners displaced from

[142] As with Dauvergne & Lister (2012, 37) this chapter conflates brand 'retailers' and 'manufacturers' – this distinction is blurred as retailers manufacture private labels and brands like Nike and Apple operate retail stores.
[143] Most archival material on the history of tanneries was lost during the Independence War. The little that remains largely is in the possession of a few individuals with family connections to the tannery industry.

India. Tanneries were initially built in Narayanganj due to its proximity to the first Bengal capital, Sonargaon, and its status as the largest port city, located at the confluence of two major rivers at a time when riverine transport dominated due to limited road and train infrastructure. Early state policies anticipated the environmental impacts of industrial expansion; the Factories Act (1965) required that "effective arrangements shall be made in every factory for the disposal of wastes and effluents due to the manufacturing process carried on therein." The Act also established the role and powers of inspectors, and outlined steps to achieve licensing and registration for factories (Factories Act 1965). The Water Pollution Control Ordinance (1970) expanded legislation for the prevention and abatement of pollution, and established the East Pakistan Water Pollution Control Board. Yet, as a result of inadequate infrastructure, absence of capital and credit, and "apathy toward trade and industry" due to a structural lack of opportunity under the West Pakistan government for Bengali Muslims, the majority of the population in East Pakistan, industrial development proceeded slowly (Kochanek 1996).

As a common transition for industrializing nations shifting from agriculture to manufacturing, the development of the apparel industry influenced the trajectory of economic development in Bangladesh (Hassan & Raihan 2018). By the 1960s and 1970s, road and train transport improved, and the burgeoning tannery industry shifted closer to the new legislative capital in Dhaka, becoming concentrated in an area called *Hazaribagh*, a name roughly translating to *one thousand garden*s. Hazaribagh offered proximity to the *posta*, or raw hide market in Old Dhaka, as well as a convenient location adjacent to a major river system, the Buriganga, for using and disposing of wastewater and solid waste. The relative isolation of Hazaribagh from main residential areas at the time allowed for flourishing satellite industries turning tannery by-products into gelatin and hairbrushes (Interview, Ma-038).

Following the displacement resulting from the independence war in 1971, Bangladeshis became more involved in the tannery and leather goods industries (Interview, So-001). As a result, leather tanning in Bangladesh became viewed as a "homegrown sector" in which factory owners "took special pride" (Interview, Ma-038). The rise of an opposition bloc in parliament and the election of a civilian government in 1973 led to victory for the Awami League party and further recalibration of state economic and industrial policy. The newly formed government of Sheikh Mujibur Rahman nationalized all privately held industrial assets including those formerly controlled by West Pakistan. This move grew the public sector from 34 percent to 92 percent of total industrial assets (Kochanek 1996). Correspondingly, the first Bangladesh constitution in 1972 laid the foundations for a democratic-socialist society. The four pillars of state policy in the constitution mirrored the economic policies of the Awami League's four principles under Prime

Minister Sheikh Mujib, referred to as 'Mujibism': nationalism, secularism, democracy, and socialism (Hossain 2012). These principles established the basis for state ownership of key sectors of the economy (Baxter 1997). Specifically, Article 15 asserted the responsibility of the state to attain a "constant increase of productive forces" through "planned economic growth" that would lead to "a steady improvement in the material and cultural standard of living of the people" (The Constitution of the People's Republic of Bangladesh 1972). Yet the financial system remained highly regulated and the exchange rate was overvalued, contributing to poor macroeconomic performance, hindering human development, and destabilizing the legitimacy of the nascent government (Hossain & Alauddin 2005).

The proactive approach of the new government to economic development led to significant interventions of the state in the market sphere, while global trade forces resulted in cascading benefits for Bangladesh's economy. To remedy low economic performance, the Awami League government's First Five Year Plan (1973-78) included efforts to 'modernize' tanneries for export quality production including the establishment of a center for leather research and product development (Interview, So-31). In parallel, though not specifically applied to Bangladesh or leather goods, the Multi-Fiber Arrangement (MFA) governed quotas for garments and textiles exported from developing to developed countries from 1974 to 2005. The MFA effectively restricted the sale of Chinese goods in the United States and Europe, to the advantage of Bangladesh in its early days of economic development (Ahmed 2009; World Bank 2005; Kabir et al. 2019; Khan 2013). Despite this focus on economic development, Sheikh Mujib "acted on environmental issues from early in his relatively brief regime, following his own inclinations, domestic interests, and pressures from international donors of vitally needed foreign aid" although the new "Constitution did not mention environment" (Fisher 2018, 195).

Political and economic instability, driven by a coup and the assassination of Sheikh Mujib, followed by another coup and military government from 1977 to 1979, led to state withdrawal from the tenets of Mujibism and rendered near-term state development aims unachievable (Riaz 2005). The fall of the independence government in 1975 to General Ziaur Rahman's military regime ushered in a new state philosophy for industrialization that emphasized export-oriented growth led by the private sector, exhibiting a shift to an ideological commitment to economic liberalism. Rahman's government amended the constitution, replacing 'socialism' with 'economic and social justice', along with other changes to allow denationalization, eliminate the ceiling on private investment, and introduce export promotion measures (Ghosh 1986). This "reversal in policy and ideology received the enthusiastic backing of conservative politicians, pro-market senior bureaucrats, and most importantly, Western nations, which set the stage for the pro-market

economic reforms under the guidance of the World Bank and the IMF" (Hassan & Raihan 2018, 103). The first Industrial Investment Schedule (1976) marked a turning point in favor of privatization with a number of substantial policy changes, which withdrew restrictions on private sector participation in manufacturing, allowed foreign direct investment, disinvested nationalized factories through public tender, and reactivated the Dhaka stock exchange.

During this time, the Water Pollution Control Ordinance (1970) was repealed and replaced by the Environment Pollution Control Ordinance (1977) to provide an expanded legal basis for the control, prevention, and abatement of pollution. The government, led by the recently formed Bangladesh Nationalist Party (BNP), put forward an interim Two-Year Plan (1979-80), which emphasized improvement in the quality of hides for export with an underlying interest in diversifying and growing the country's economy to shift from agriculture toward manufacturing. Despite high expectations, little change resulted and the Second Five Year Plan (1980-85) did not contain policy support for tanneries. However, the Second Five Year plan marked the first explicit commitment of the government of Bangladesh in national planning documents to deemphasize the public sector and indicate the private sector as a leading player in the economy (Khan 2014). Only one sector (fertilizer) saw public investment (Ahmed 1987); this shift portended the future composition of the industrial sector, which would come to depend on "the private sector's investment choices" (Interview, Ma-029, St-020).

Two trends took shape throughout the 1970s to form the basis of state-market linkages: political commitment to economic liberalism and the role of foreign donor aid in shaping the direction of privatization.[144] First, while the Awami League was historically aligned with populism in contrast to the BNP's close links to industry and the military, political agreement on the primacy of a 'pro-owner' rather than 'pro-labor' approach to became a formative convergence transcending otherwise deep ideological divides between parties (Hossain 2017, 175).[145] Though rivalries between major political parties and a series of opposition efforts threatened the stability considered to be a precondition for growth, a political settlement focused on achieving stability for private enterprise was facilitated by dual-party agreement on privatization (Hassan & Raihan 2018). Yet both parties continued an approach to a planned economy, underpinned by national Five Year Plans and frequently updated industrial policies, may be distinguished from approaches to

[144] Though it is "beyond question that pressure from aid donors explains some of the key turns in macroeconomic, trade, and social policy in Bangladesh's development history" (Hossain 2017, 68), the relationship of donor aid with state, market, and society and the direction of private governance in the tanneries is less understood.
[145] Bangladesh has divested a substantial amount of public enterprise; by some measures, more so than any other country, with 609 of the 1,076 in the industrial sector (Humphrey 1990).

economic growth in developed market economies (Sobhan 1991).[146] While most industrialized states expected that private sector actors will accelerate investment in industry in a way conducive to the imperatives of the market, many developing country governments viewed the process of industrialization and economic growth as requiring a designated state strategy (Khan 2013). Following this trend, industrial policies in Bangladesh were intended to "stimulate and direct private investment to conform" to the industrial policy formulated by the state, wherein the "broad direction of industrial expansion and the agents of this industrialization process, public or private, domestic or foreign were spelt out" (Sobhan 1991, 202). As such, the early expansion of privatization efforts initially had limited effect on the withdrawal of state engagement, and Five Year Plans continued to play a significant role in shaping domestic private sector dynamics.

Second, since independence, Bangladesh came to rely on foreign aid as its major source of external finance to support state priorities for growth and development (Rahim 1975). In the 1970s, aid was primarily intended for post-war relief, repairing significant damage to the country following the nine-month conflict, and responding to the devastating 1974 famine (Hossain 2017). Initially, the unavailability of domestic resources persuaded the government to accept foreign aid; both policy elites and donor institutions viewed the balance of private and public sector investment as a critical variable to influence the pace of industrialization, with a view that a large public sector would inhibit growth (World Bank 2005; Sobhan 1981). In the post-Mujib era, state commitment to a program of privatization was further encouraged by a concerted effort by international financial institutions to reduce state regulation of the industrial sector (World Bank 1995). As a result, Bangladesh pursued low-cost, indirect policies including bonded warehouses and back-to-back letter of credit financing that did not require direct state financing (Hong 2018; Razzaque et al. 2020).[147] The trend toward re-allocating previously state-led economic governance accompanied the shift toward privatization and increased the role of donor institutions (Ahmed et al. 2014). Over time, the government increasingly delegated responsibilities from state agencies to groups including domestic tanning and leather associations and international institutions (Interview, St-013).

Initiating privatization entrenched donor influence in the country's economy. Reliance on institutional funders, including the World Bank and IMF, gave donors a degree of leverage over the direction of national policy by tying aid to conditions reflective of neoclassical economic

[146] Policy interventions in developed economies are usually aimed at the macro-level to regulate the exchange rate, supply of money, and the rate of inflation, and interventions in the private sector tend to be *ad hoc* and based on a response to concerns about competition or other issues, with some exceptions including Japan.
[147] A bonded warehouse is a secure building or area where dutiable goods may be stored or undergo operations without being subjected to a duty.

philosophies (Uddin & Hopper 2003).[148] Rehman Sobhan, an influential Bangladeshi economist and member of the country's first Planning Commission, argued that while Five Year Plans identified the state's priorities for investment, the actual direction of investment in practice derived "more from the priorities assigned by particular donors to finance a particular project" of the government of Bangladesh (Sobhan 1991, 203). Further, these policies provided "bureaucrats with the opportunity to use the policy to extract rents" (ibid.). As a result, state industrial policy became a "broad spectrum weapon" which could "ensure that any particular industry deemed important by the [government of Bangladesh]" would receive investment because the state remained "dependent on private entrepreneurs acting according to their reading of the market to make their choices" (ibid.).[149] Consequently, Five Year Plans increasingly came to reflect the prevailing views held by international financial institutions and country donor organizations (Interview, St-020).

Changes in fiscal, financial, and industrial policies formed the building blocks for a market-oriented economy, while trade policy provided a basis for liberalization. In 1982, the military government issued the New Industrial Policy (NIP) after General Hussain Ershad came to power through a bloodless coup (Riaz 1993). Marking the transition to a liberalized regime, the NIP introduced significant reforms in the industrial sector, changing the highly regulated policy environment to favor a dominant role for market forces and further denationalizing public enterprises. During this period, the state facilitated the emergence of business as a "major player in national decision making which, in turn, adversely affected the state's ability to either enforce contracts or to develop a mechanism for redistributing assets" (Quadir 2010, 209). Tanneries were included on a list of 'free sector' industries by the NIP. As a result, no formal permission from the government was required to set up new industrial units, and entry into the industry became a function of access to capital rather than official fiat (Uddin 2005). However, tannery owners seeking capital from nationalized commercial banks or development finance institutions (DFIs) remained "exposed to bureaucratic restraint, political patronage and corruption" such that the "regulatory and allocative role" of the government remained present (Sobhan 1991, 208).

Subsequent policy reforms, spurred by donor-guided structural adjustment programs emphasizing economic liberalization and export-led growth, contributed to the tannery industry's expansion. During the Third Five Year Plan (1985-90), Bangladesh began exporting raw hides and wet-blue leather – the stage when raw hides are converted to leather using chromium salts – which added to export earnings but required additional overseas channels. Following success in establishing joint ventures with foreign private investment, the national government banned the

[148] The share of foreign aid to finance the Annual Development Program remained around 30 percent in 2016 (Khatun 2018).
[149] See also Hossain (2018).

export of wet-blue leather in order to convert wet-blue producing industrial units to higher value-add production such as crushed and finished leather (Hoque & Clarke 2013).

The early 1990s gave rise to another proactive chapter of state-led industrial and trade liberalization, concurrently with new national environmental policies. Re-democratization in 1991 with the BNP in the parliamentary majority shifted the country to a market-based economy when the government ended all permitting requirements to establish new industries, removed restrictions on provisions for equity participation by foreign investors, and expanded export processing zones (Dowla 1997). Significant growth across the leather industry during this period was further bolstered by the Industrial Policy (1992) which sought to double down on developing leather industries by driving the domestic manufacture of input chemicals. The complementary Export Policy (1993-95 and 1995-97) built out additional incentives. Fiscally, it provided for bonded warehouses to facilitate duty-free imports of raw materials, duty drawbacks, exemption from income tax by 50 percent of income arising from export business, provision of duty-free import of capital machinery for 100 percent export-oriented industry, and duty-free import of samples (Razzaque et al. 2020). A subsequent Industrial Policy (1996) listed input chemicals for foreign investment and declared tanneries as a 'thrust sector' to further drive state incentives and measures.

Reflecting the state's reluctance to abandon its role in the governance of the tanneries, the newly elected BNP government established a task force to devise broader social development strategies. These strategies were compiled into four volumes, of which one focused on addressing environmental problems associated with the tanneries (Task Force 1991). This document, considered the "first reasonably comprehensive work[s] on the Bangladesh environment," recommended measures to strengthen environmental legislation and institutions (Khan & Belal 1999, 312). Subsequently, the National Environmental Policy and the National Conservation Strategy were introduced in 1992, and a National Environmental Committee formed in 1993 with the Prime Minister as chair to address environmental issues at the central state level (Khan & Belal 1999).

Though these advancements in policy suggested a willingness to accommodate environmental concerns, over time, the political legitimacy of the BNP became closely tied to the fate of private sector development. The BNP was not "in a position to act independently of the business community" after it established "even closer ties with big business" in the 1991 Parliamentary elections "when the party deliberately picked up almost half of its candidates from [the business] community" (Quadir 2010, 2017). Accordingly, following business demands for widespread reform, the BNP closely followed the World Bank and IMF structural adjustment

policies, leading to strengthened macroeconomic performance but no corresponding microeconomic improvement (Kochanek 1996). As a result, the export policy outlined in the Fifth Five Year Plan (1998-2002) provided additional targeted incentives to develop the leather sector. Strategies included investing in upgrading leather manufacturing units to increase the production of finished leather goods for export; excluding tanneries from the import license fee (2.5 percent) and the prevailing customs duty (2.5 percent); encouraging banks to develop a uniform policy on bank loans and rates of interest for credit to the sector; declaring 80 percent export industries as 100 percent export industries; and granting permission to sell goods rejected for export on the local market. However, the internal market for hides suffered from constraints on production and processing at this time due to limited infrastructure. The government updated the Industrial Policy (1999) to grant additional land to the Bangladesh Small and Cottage Industries Corporation (BSCIC) for transformation into 'industrial estates' and established new incentives ranging from duty free import of machinery to continuity of the bonded warehouse system (Razzaque et al. 2020).

These incentives indicated ongoing political commitment to economic liberalism and demonstrated the significant role of donor-driven aid in shaping the character of domestic state-market linkages and the future coalitions involved in the tannery reform process. The "growing government–big business nexus pressurized [the BNP] government to accelerate market reform programs" (Quadir 2010, 206). These patterns indicate how a state becomes responsive to the needs of market actors as a strategy to establish political legitimacy, and set the stage for domestic political economy as contentious force influencing private governance. The historic linkages between tanneries and the state generated a structural reluctance to enforce the regulation of water pollution. The next section will discuss the ascendant domestic influence of the tannery industry and its changing capacity to direct the outcomes of private governance efforts.

6.4.2 Tracing patterns of fragmentation and autonomy in the tannery relocation

Despite an initially hostile relationship between private industry and the state at the time of independence from Pakistan, intertwined turning points shifted the terrain to embed tanneries interests in state policy: a structural shift toward economic liberalism led by donor policy, and political agreement on the role of the private sector with the BNP as a major party orienting toward private sector-led expansion of the economy. Yet, these close state-market linkages fragmented into competing coalitions over time, with adversarial relationships characterizing the nearly twenty-five years of efforts to remediate tannery pollution and relocate the industry from Hazaribagh to a designated industrial zone in Savar. This section discusses how the process of fragmentation ensued among state, market, and society during the tannery relocation and reform process. It also

assesses how the autonomy of tannery owners persisted in light of concerted efforts by private governance actors, donors, the government of Bangladesh, and civil society groups to address environmental risks and improve sector competitiveness. By examining fragmentation and autonomy, this section establishes how the government of Bangladesh initially sought to repurpose, then adopt, regulatory change based on pressures exerted by private governance-driven environmental reforms. However, the low degree of autonomy of state regulators and agencies means that the tanners, with their relatively high degree of autonomy, exerted effective resistance in the regulatory reform process. While public interest litigation created an opportunity to establish new linkages for civil society actors seeking to improve regulatory reform, the character of state-market linkages and retreatist enforcement style of regulatory agencies resulted in the marginalization of civil society actors (McAllister et al. 2010).

The state approach to economic growth in Bangladesh reflects the legacies and consequences of donor involvement, contributing to fragmentation in subsequent environmental governance initiatives. The combination of pressure (Sobhan 1982; Hossain 2017) and internal political choice (Uddin 2005) to yield to the donor-led approach to economic policy and governance shaped under-resourced state administrative institutions and undermined environmental regulatory agencies (Uddin & Hopper 2003). Simultaneously, the "massive economic reform programs" supported by donor-funded projects "substantially increased the power" of business and industry and "subsequently further reduced the state's ability to develop an effective regulatory framework" (Quadir 2010, 209). By the mid-2000s, in official documents the government remarked on the impacts of environmental pollution and the risk it posed to further market expansion. As the Seventh Five Year Plan noted, "Waste from humans, tanneries, other industries, along with tons of pesticide and fertilizers enter Dhaka's surface water untreated. This causes the water in the city to be unsuitable for any human use" (2015, 423). The Seventh FYP also highlighted several issues related to improvements in environmental governance (General Economics Division 2015, 424):

> "Policies to combat pollution are largely ineffective because of loose [regulatory] practices. Governance elements such as information access, transparency, accountable decision-making, management tools all need improvement. The [government of Bangladesh] realizes that environmental policies need to instil market-based incentives to firms to encourage good environmental performance."

The FYP language indicated the state's commitment to apply "market-based incentives" to government policy to achieve improved environmental outcomes (Seventh FYP 2015, 424). In 2008, the Awami League returned to power under Prime Minister Sheikh Hasina. Marking a

transition in party approach to managing private sector growth, the Awami League created Vision 2021, a political manifesto comprising a series of development targets intended to "transform the socio-economic environment of Bangladesh" (Giménez et al. 2014, 2). The Vision 2021 document remarked that (2007, 42):

> "…environmentally-responsible behaviour will be increasingly important for our export-oriented industries as the global movement for environment protection will put increasing pressures on importing countries to boycott products that have a negative impact on the environment during their production process."

The limited capacity of domestic industry to resist or facilitate private governance initiatives contributed to rising pressures on global North importing countries to respond to environmental concerns in industrial production. The immediate post-independence political environment was hostile toward business, and most industries came under state control.[150] As a result, domestic industry associations, characterized as "organizationally weak [and] highly factionalized", initially "played only a limited role in the political process" and in shaping the direction of industry (Kochanek 1996, 715). This included the two major the domestic tannery groups: the Bangladesh Tanneries Association (BTA) and Bangladesh Finished Leather and Leather Footwear Exporters Association (BFLLFEA). BTA, established in 1963, supplied primarily to the domestic market, while BFLLFEA principally comprised firms seeking to export to Europe and other markets concerned with environmental compliance. The legal structure based on the national constitution gave the state power to control and regulate the "creation, internal organization, and activities" of private business associations (Kochanek 1996, 714). This changed with the economic liberalization policies of General Hussain Ershad in the 1980s; compared with Mujib's vision of extending the state "in every possible way" into economically productive activities (Islam 1986), private industry gained new autonomy.

Following a loss of support for General Ershad from the United States after the end of the Cold War, Bangladesh transitioned from authoritarian military rule to a democratically elected government in 1991 (Hossain 2012). Simultaneously with the loosening of state control of private industries under BNP rule, state efforts began in earnest to relocate the tanneries from Hazaribagh to a purpose-built tannery industrial estate with the promise of improving exports. At this time, the leather tanning industry–consisting of about 170 varying sized units–was entirely located in the now densely occupied riverine area of Hazaribagh (Asian Development Bank 2018). The

[150] Previously, business associations continued to function within the legal traditions and frameworks of the period under Pakistani rule, organized under the Trade Organizations Ordinance (1961) which remained in force during the formation of Bangladesh.

increasing pollution generated by these units, due partially to a lack of space to accommodate a central water treatment plant of appropriate capacity, drew international scrutiny to the sector. A 1990 study by Harvard's Institute for International Development and the Bangladesh Planning Commission remarked (Huq & Ahmed 1990):

> "Hazaribagh has, however, turned out to be a wrong place for the concentration of an industry like leather manufacturing. Firstly, the area was originally developed as a residential locality and consequently, its narrow streets and limited sewerage facilities are highly inadequate to meet the needs of a growing industry like leather manufacturing. Secondly, the unplanned growth of the industry at Hazaribagh and the limited land area available in the locality have not made it possible to make any provision for the much-needed effluent treatment."

As pressure built on the government to address the environmental consequences of the tannery industry in Hazaribagh, a simultaneously changing role of donor aid shifted the basis of basis of state-market linkages. As shown in Figure 8, aid flows were variable to begin with, but a precipitous decline began with the 1991 elections. The rapid economic growth of the 1990s only partially explains the declining relative importance of aid; as Hossain (2017, 67) argues, "aid relations were always easier, from the point of view of donors, under authoritarian regimes." Early donor relationships supporting 'development darling' NGOs gave way to the mutual animosity with elites who viewed aid as imperial domination, an "ill-concealed extension of colonial rule" resulting from the "gross inequalities of power enacted in the aid relation" (Hossain 2017, 68). As the economy grew under democratically elected governments and official donor assistance declined in influence, private governance began to take on an increasing role in shaping the domestic political economy. Though statistics on the total volume of such initiatives are not compiled as they are for donor aid, the post-Rana Plaza era witnessed an influx of brand and retailer-funded private programs for a range of worker safety and environmental targets (Bair et al. 2020).

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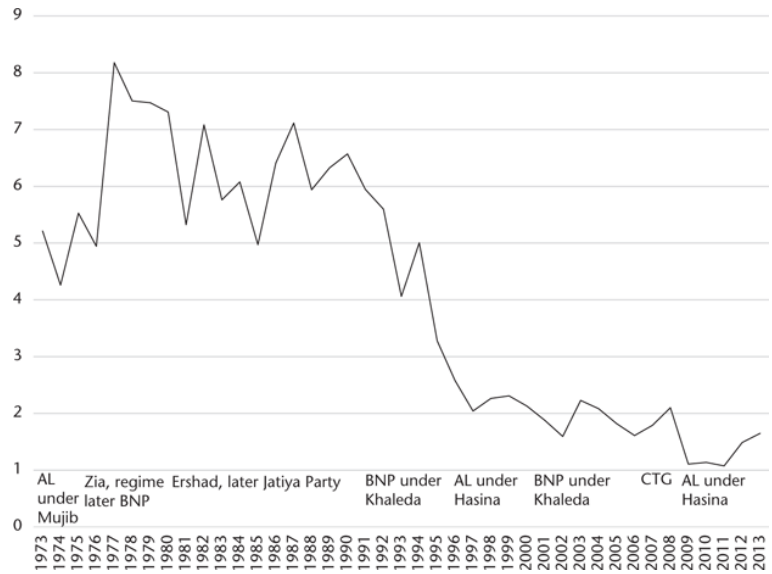

Figure 8: Aid as a percentage of gross national income, 1973–2013 (World Development Indicators in Hossain 2017)

As aid entered a period of decline and environmental pollution rose alongside waves of economic liberalization, domestic public interest litigation marked a turning point in the ability of societal actors to intervene in the regulatory sphere. Compared with previous "judicial unwillingness to break away from colonial legal thinking and abandon constitutional textualism or legal formalism" (Hoque 2007, 400)[151], the introduction of public interest litigation in the early 1990s allowed civil society organizations to make use of changing judicial attitudes. Both courts and civil society groups took up a stronger environmental protection role as a result (Karim et al. 2012). At this time, the adoption of Article 102 allowed for the uptake of judicial activism (The Constitution of the People's Republic of Bangladesh 1972). By allowing associations and non-governmental organizations representing interests on behalf of the public to file for judicial review, the scope of judicial review expanded with the formal acceptance of public interest law (Razzaque 2004; Hoque 2007).[152]

Establishing itself during this expansion of public interest litigation and an economic boom, the Bangladesh Environmental Lawyers Association (BELA) formed in 1992. To address the

[151] Deeper discussion on the structural shifts allowing PIL in Bangladesh is beyond the scope of this paper; please see Hoque (2007) and Atkins et al. (2006).

[152] Further, Article 111 of the Constitution established the doctrine of binding judicial precedent. This doctrine meant that law declared by the Supreme Court, including from the High Court and the Appellate Division, would be binding in all subordinate courts. See the Constitution of the People's Republic of Bangladesh, Article 111 – Part VI: The Judiciary. http://bdlaws.minlaw.gov.bd/sections_detail.php?id=367&sections_id=24668

ongoing environmental and human health risks associated with leather tanning in Hazaribagh, BELA initiated its earliest litigation via a writ petition to the Supreme Court in 1994 to relocate and clean up the tannery sector through broader engagement on city-wide industrial pollution.[153] BELA cited the failure of the government to address the pollution generated by 903 'red-flagged' industrial operations around Dhaka, including all 176 tanneries. These flagged operations were noted as the "most polluting industrial units in Bangladesh" discharging "untreated solid and chemical wastes to the major river systems" (BELA Writ Petition 1994, 315). The industrial operations identified as 'highly polluting' were ordered by the court to take immediate steps to control hazardous waste from being deposited into the Buriganga river (Harris 2015; Hoque & Clarke 2013).

The court order was initially viewed as a success, and the case appeared poised to tilt the responsibility of industrial interests toward taking more serious measures to address river pollution resulting from the use of chemicals in production processes (Pearshouse 2012). Yet, while the increased role of public interest litigation allowed civil society organizations to build linkages to the state, enforcement resources were not increased for the DoE or other regulatory agencies. Though the DoE had new regulatory power under the 1995 Bangladesh Environmental Protection Act (BEPA) to apply punitive measures for non-compliance, the Department only issued warning notices to the industries, of which 196 of the 903 replied; the rest did not (Interview, St-029; Khan & Belal 1999). This inaction on the part of DoE and non-response from industries deepened perceptions from civil society groups of the retreatist regulatory stance (McAllister 2008) resulting in "the ambitious promises of environmental protection" not becoming "reflected in the practical execution and functioning of the principal national legislation (BEPA) and public institutions (DoE)… [BEPA] is most likely to serve rhetorical purposes only for the central political and bureaucratic leadership. Thus far, propagandist language and discourse… have been the dominant feature of the governmental action towards environmental protection" (Khan & Belal 1999, 316). The approach exhibited by DoE and its inability to collect fines point to its low capacity to enforce, and the retreatist pattern of its enforcement style.[154]

Civil society actors' dim view of the state's inability to regulate industrial pollution was further entrenched in the course of ongoing court battles. The official state decision to shift the tanneries from Hazaribagh resulted from an August 1998 meeting of the Board of Investment with the Prime Minister as the chair, but no location was determined (BELA 2003). A lack of subsequent action to identify a location led to another case led by BELA, arguing that the "the

[153] Information ascertained through interviews in November to December 2017 and April 2018.
[154] See Chapter 5, this volume.

Government has not been acting diligently and in their decision-making process [and a] lack of commitment and transparency is causing further deterioration of environment… causing continuous degradation of environment as such they have miserably failed to perform their statutory duty…" (BELA 2003). Responding to the pressure generated by the court cases and increasing negative attention they generated for the industry internationally, in 2002 the government approved a relocation plan to move the tanneries from Hazaribagh to a designated tannery industrial estate in Savar district that could accommodate a purpose-built CETP to manage all wastewater from the tanneries and bring them into compliance with environmental standards for export. The approval of the plan represented a significant turning point of the state's stance toward adopting the reform plan that would secure LWG certifications for the tannery industry.

Following the approval, the first memorandum of understanding (MoU) among the government and two major tanning associations was signed in 2003. In the period after the relocation MoU, no progress on implementation was made by the coalition. High level political acknowledgement[155] of the severity of the pollution situation and the risk it posed to export did little to drive action, and the society-driven pressure prompted a consequential state decision with unexpected longer-term ramifications. Referencing the responsibilities of the state, particularly the Ministry of Industries, BELA argued that the state had "miserably failed to translate their words into action and the tanneries in Hazaribagh area continue to operate regardless of environmental and health consideration of the surrounding populace" (BELA vs. Government of Bangladesh 2003). Responding to this, the central government signed an industry transfer agreement MOU with the Bangladesh Small and Cottage Industries Corporation (BSCIC) under the Ministry of Industries and major leather tannery industry associations.[156]

The MOU decision generated politicized antipathy toward the relocation process, particularly because BSCIC was seen as an unusual choice to manage the transition. From 2001 to 2006, Bangladesh was governed by the Four Party Alliance of right-wing political parties led by the BNP. As a result, a coalition member from the Jamaat-e-Islami party was awarded a cabinet post as Minister of Industries from 2003 to 2006 (Interview, So-008).[157] The Ministry of Industries post was responsible for issues related to the leather sector, yet leaders of the tannery associations

[155] When inaugurating the International Leather Fair in January 2002, the Prime Minister "reiterated the need for relocation of the tanneries from Hazaribagh in consideration of public health and future of the nation" (BELA v. Government of Bangladesh and others 2003).
[156] BSCIC was formed in 1957 to provide services for small, rural and cottages industries. It is intended to serve several functions including providing loans, assistance for business development and expansion, constructing industrial estates with necessary facilities, and linking small and cottage industries with medium and large industries.
[157] The Jamaat (translating to 'Islamic Assembly') party was the largest Islamist political party in Bangladesh. In 2013, the Bangladesh Supreme Court declared the party as illegal and unfit to contest national elections because its charter "puts God above democratic process" (BBC 2013). A number of Jamaat leaders were tried in a Bangladesh war crimes tribunal for their role in the genocide of Bengali people during the independence war (Al Jazeera 2013).

were "unwilling to forget the history of Jamaat-e-Islami as a party that opposed independence during the conflict that led up to the creation of the Bangladeshi state" (Harris 2015, 19). The leather associations subsequently subverted support for the relocation as they were unwilling to be seen as aligned with the BSCIC governed under the same ministry controlled by the Jamaat party (Interview, Ma-038, Ma-058). Further, while some small tanneries fit in the remit of BSCIC, it lacked experience managing an endeavor of this complexity, particularly to address the thorny question of who would pay for the relocation (Interview, So-010). As a consequence of the government's decision to select BSCIC, the leather industry associations became further estranged by the relocation process.

In the midst of the political gridlock, The Asia Foundation, headquartered in California,[158] began a 'strategic partnership' with the Australian Department for Foreign Affairs and Trade (DFAT) in 2012. The partnership sought to identify an issue that constituted "an economic reform challenge that, if solved, would lead to significant impact on the country and its economic prospects" (Harris 2015, 9). After identifying the tannery reform as such an 'economic reform challenge', in 2013 the Asia Foundation began the Bangladesh Leather Sector Initiative with the Dhaka-based South Asian Network on Economic Modeling (SANEM) to reframe the relocation as an economic issue rather than a social or environmental one to the tanners.[159] The government, hamstrung by the politicization of the relocation, handed over its convening authority to the Asia Foundation and SANEM, perceived as more neutral players to manage the relocation coalition.

During this period, the national government faced extraordinary pressure both to diversify exports from garments by strengthening the leather sector, and to address the growing social unrest related to environmental problems of the leather industry. In the view of the government, achieving either of these goals would require securing recognized sustainability certifications to supply to European companies (Razzaque et al. 2020). At this time, the LWG was the primary private environmental certifier for leather products. Formed in 2005 and based in the United Kingdom, the LWG's founding members included leather manufacturing companies and brands such as Adidas, Clarks, Ikea, Nike, Marks & Spencer, New Balance, and Timberland (LWG 2021). The LWG's audit protocols, first launched in 2006, became the "gold-standard" rooted in

[158] The Asia Foundation identifies itself as a "nonprofit international development organization committed to improving lives across a dynamic and developing Asia" (TAF 2021). Operating in 18 countries across Asia, its work in Bangladesh has centered on literacy, governance, economic opportunity, and women's empowerment for 65 years.
[159] Concurrently, the European Union funded two separate initiatives, the Integrated Support to Poverty and Inequality Reduction through Enterprise Development (INSPIRED) program and the SWITCH-Asia Reduction of Environmental Threats and Increase of Exportability of Bangladeshi leather products (RE-TIE Bangladesh). INSPIRED, at a cost of €19 million, ran from 2012 to 2017, while the €2 million Re-TIE ran from 2009 to 2012. These programs are referenced in a footnote, rather than central to the analysis, as they were not viewed by interviewees as of sufficient consequence in the landscape of relevant interventions in the tannery reform process.

established International Standardization Organization (ISO) protocols used to assess environmental performance in leather manufacturing facilities (Interview, Ma-039).[160] LWG audit compliance became a precondition for tanneries to supply to member brands (Interview, Ma-037).[161] A former LWG director noted that due to the environmental hazards, "Immediately, Hazaribagh was a no-go zone. No tanneries could be approved from that region without really stringent, almost double auditing. It was already a highly sensitive area with special measures in place" (Interview, Ma-057). To pass the LWG audit, the tanneries would need to complete the relocation to Savar and the CETP would be required to pass water quality tests (Interview, Ma-058).

The politicized context of varied support for the tannery relocation was further exacerbated by tanners' frustrations with the character of private governance involvement in the reform effort. In particular, the lack of options for support and pathways to certifications in the leather sector outside of LWG fostered resentment by tannery owners. For instance, while LWG develops audit and certification requirements for tanneries to sell to member brands, it does not offer material support to achieve improvements (Interview, Ma-038, Ma-039). As a former LWG director cautioned, "Look at the big boys[162] – they have entire teams working on certification, it's a whole different ball game. When you're talking with a small tannery, their needs are so much greater. Environmentally and socially, it's far more impactful to get in at the grassroots level then working with the guys at the top with the means and knowledge… if [knowledge] forever stays at the top, it's not helping. Because the big wins for the environment have to be able to filter it down" (Interview, Ma-057). But frustrations with what tanners perceived as a double standard came to a head, whereby "for tanners, you cannot become a member of LWG unless you pass the audit. A brand or a supplier can just pay an annual subscription and tick that box and say 'I'm a member.' But if you're a tanner you cannot" (Interview, Ma-058). The lack of financial and other support to change production practices further entrenched the tannery associations' rejection of the relocation process.

Pointing to both autonomy and fragmentation characterizing decentered regulation, overlapping groups drove gridlock blocking the relocation. After the Asia Foundation began managing the coalition, a division in the tannery associations led to conflict. The smaller tanneries belonging to the Bangladesh Tanners Association (BTA) did not anticipate significant benefits from the relocation because they produced for the domestic market, or export markets that did

[160] ISO draws from nearly 180 technical committees and involving tens of thousands of experts and working groups; ultimately, though, the "institutional backbone of [ISO] networks is formed by private sector standards bodies operating at the national level" (Papadopoulos 2013, 145).
[161] Also listed on the LWG website as a requirement (LWG 2021).
[162] In this context, the interviewee was referring to large firms and brands selling leather goods.

not require environmental compliance; as a result, these tanneries stood to incur higher costs to their business (Interview, So-008). The BTA decided to break from the coalition, rupturing the close relationship of tanneries with the coalition (Interview, So-008). Other firms with the financial capacity to relocate feared that becoming a first mover would be "to the detriment of their relationships with the rest of the industry" due to the closely networked professional associations (Harris 2015, 28). Affiliated industries, such as chemical supply firms, without provisions or government support to relocate, stood to lose from reduced demand for their goods (Harris 2015).[163] The initial political animosity driven by the appointment of the member of Jamaat-e-Islami and struggle over payment continued to create mistrust and block the relocation process.

Due to the leather associations' ongoing refusal to relocate and the inability of BSCIC or other regulatory agencies to compel compliance with the court order, nearly 15 years after the government approval of the relocation plan, 90 percent of tanneries remained in Hazaribagh. Continuing their refusal to respond to the DoE's warning notices, only one of 155 tanneries that agreed to move had started construction in Savar for their new facilities by March 2015 (Momtaj 2015). At this stage, The Asia Foundation sought to form a new coalition including the tannery associations and state agencies to address "legacies of mistrust", believing "that if a group of prominent tanneries with strong incentives to relocate led the process (principally due to their engagement with export markets that demand cleaner production), then the remaining tanneries would follow" (Harris 2015, 10). This strategy did not gain traction; though 2015 marked the new government deadline for all tanneries to move to Savar, 80 percent remained in Hazaribagh. In 2016, following a petition from the legal advocacy group Human Rights and Peace for Bangladesh, the High Court ordered all tanneries remaining in Hazaribagh to pay 50,000 BDT (about $570 USD) per day the DoE to compensate for environmental damage; these payments were never collected (Interview, St-002, St-015).[164] As of January 2017, only 34 of 155 tanneries had relocated to Savar. Those that had completed the move were largely the better resourced tanneries that tuned into the private governance requirements of buyers in the global North (Interview, So-008). Subsequently, a coordinated push to remove all remaining tanneries from Hazaribagh led the government to shut off electricity to all remaining factories in the area (Shaon 2017). The severity of this executive state action marked a shift toward pursuing a pathway that would push the tannery sector toward adopting LWG-compliant production practices.

However, even as the physical relocation process concluded and the payment arrangement reached an agreement with the government covering most of the costs, reliance on a technical fix

[163] For instance, if the CETP chromium recovery system reduced the need for new chromium inputs.
[164] See also Chapter 5, this volume, which notes that only ten tanneries are listed in about nine years' worth of Department of Environment maintained penalty date.

undermined the achievement of environmental goals. The environmental benefits of the relocation were predicated on the CETP solving major water quality effluent problems. Despite ongoing assurances of the "clear political will at the highest levels of government to ensure that the CETP in Savar is put right in the shortest possible time to attain internationally accredited levels of environmentally sustainability" (Interview, Ma-038), due to a range of engineering, financial, and management failures, the CETP did not function as intended (Interview, St-003, St-013). By one account, the tanners, frustrated with years of delay, built their own wastewater pipelines directly to the river (Interview, St-003). In another account, the CETP capacity was built to receive only up to 25,000 m^3 of wastewater per day, whereas the tanneries would, in peak season, generate 35,000 m^3 daily (Interview, St-015). Regardless of the specific cause, a former LWG director noted that the "move to Savar happened and immediately again the talk started about the CETP not working. From [the] LWG perspective, any auditor approached to do an audit in Bangladesh had to let the facilitators know in advance and there would be special attention paid. There was an informal rule that unless they had their own ETP and were discharging directly to the environment having treated it themselves, any tannery discharging into the CETP couldn't have an audit" (Interview, Ma-057). Skepticism of reliance on a CETP also resulted from Pearshouse's (2012) high-profile Human Rights Watch report which argued:

> "There is a widespread assumption in government circles that building a planned central effluent treatment plant (CETP) in Savar will resolve the environmental and health issues related to the Hazaribagh tanneries… A CETP will do nothing to resolve most of the problems identified in this report, such as poor occupational health and safety conditions, hazardous child labor, and the existing industrial pollution of Hazaribagh."

As of August 2022, the centralized effluent treatment plant (CETP) in the Savar industrial estate is not functionally treating tannery wastewater. Though only four tanneries in Bangladesh have obtained an LWG audit and certification, leather exports as a whole dropped only 5.5 percent in 2017 in the peak of the relocation crisis (De 2019). Though "non-compliance with internationally accepted [labor], environmental, and product standards is considered as a major factor inhibiting improved export performance" (Razzaque et al. 2020, 229), the increased buying power based in countries with less stringent approaches to environmental standards has shifted the terrain of influence. As the Asia Foundation noted, "producing for non-compliant markets could easily

become entrenched as the dominant strategy for Bangladeshi leather firms" (Harris 2015, 43).[165] Buyers from less regulated countries may not be motivated by the same pressures to purchase LWG certified leather, and have continued to buy leather from Bangladesh even as other buyers from Europe and the United States withdrew (Interview, Ma-057, Ma-038). This has effectively bifurcated the industry, with well-resourced tanneries adopting private governance standards by building a private ETP to achieve certification independently and supply finished leather products to buyers in the global North, and those that cannot upgrade production shifting to selling leather to other buyers less concerned with environmental regulation.

Contestation over regulatory power plays out through the relative autonomy of state, market, and society actors involved in the reform process. This analysis demonstrates how the autonomy and fragmentation of actors interfacing around the uptake of regulatory change may shift a state's 'adopt' stance to a private industry-driven 'reject' position. Rather than consider how state actors in a given political economy receive private governance, this section expanded the analysis to understand how the different capacities of state, market, and society groups to pursue their own goals and form aligning or competing coalitions results in uncertain outcomes (Burns et al. 2016; Macdonald 2020). From the lens of decentered regulation, the approach of private governance to the tannery reform process contributed to the compression of claims by civil society illustrated in the court proceedings into a series of technical interventions primarily driven by state and market elites. While the emergence of public interest litigation created space for society-linked actors to engage in the tannery reform effort, the retreatist approach to regulation by the DoE marginalized the impact of the court verdicts. The belief of donors and private governance entities that the market-driven pressure to achieve transnational standards for the CETP would be sufficient to motivate action once the tanneries completed the relocation did not account for the autonomy of Bangladeshi tanners to pursue selling to less regulated markets in response to failure to achieve LWG certification. Unlike with garments where certification schemes proliferate, LWG cornered the market for auditing and certification of leather goods. Therefore, when the CETP failed to generate promised water quality improvements, LWG pivoted its own certification strategy, largely refusing to certify producers using the faulty central wastewater treatment. These dynamics point to the structural limitations of private governance in responding to the effects of fragmentation and managing the autonomy of actors in a domestic political economy.

[165] In particular, the outsize buying power of China is notable. The Eighth Five Year Plan (2020-25, 657) found that "a loss of $16 million is predicted due to China's slowdown through global value chains, where 94 percent of the loss is expected to be borne by the leather industry."

6.5 Discussion

What does the political-strategic approach to decentered regulation help us learn about how domestic political economy interacts with private governance, and how civil society actors negotiate access to regulatory power? The shift in approach by the government of Bangladesh from repurposing to adopting reform did not reflect the rejection of the relocation efforts by a strong oppositional coalition by most tanneries. This research points to the promise and the fragility of the linkages underpinning the coalitions mediating the direction of private governance in Bangladesh. While laws such as the Environment Pollution Control Ordinance (1977) and National Environmental Policy (1992) took aim at addressing pollution, pressures to rapidly recover the country from the independence war and establish legitimacy for new political parties shaped countervailing trends in the trajectory of economic development. Shared political commitment by both major parties to economic liberalism opened the door to a significant role for international donors. The character of the political settlement coalescing around privatization, while maintaining a high degree of state involvement in economic planning, established a revolving door between political elites and market elites (Cook & Minogue 1990; Uddin 2005). The political settlement and donor-led structural adjustment programs supported and expanded the nascent tannery industry. This expansion blurred the traditional demarcation made in the literature between the sphere of the 'public' authority of the state and the relations between 'private' individuals in the market (Squires 2018).

Though the process of remediating tannery-related pollution first initiated in 1994 by BELA, the reform efforts transformed with the shift in priority to upgrade the sector. In an effort to build a countervailing voice in favor of environmental protection, BELA and Human Rights and Peace for Bangladesh sought to exert regulatory power through public interest litigation. While the court's verdicts are legally binding, the lack of a mechanism to force DoE to act on the decision meant that the verdicts failed to create sufficient motivation for change in the DoE's retreatist approach to regulation. However, eventually, the negative attention on the tanneries generated pressure on the government to approve a relocation plan in 2002 that would shift the tanneries to a designated site with a CETP. This approval marked a shift in the state's acceptance of adopting a reform plan for the tannery industry. While seen as a precondition to attain LWG certification, the relocation also became imperative for diversifying the Bangladeshi economy from reliance on garments and ensuring the future growth of leather goods by exporting to developed economies.

What we can also learn from the perspective of decentered regulation is that 'the state' does not act with one voice; in the case of the tannery relocation, the relative independence of the judiciary led to new pressure on the executive branch to address the situation. Similarly, the

coalition of tanneries was not entirely unified in its rejection of the pressures of private governance. Better resourced tanneries with a clear export market in the global North understood the need to complete the relocation to secure LWG certification. In contrast, smaller tanneries and those with emerging or already strong linkages to markets in countries with less stringent environmental regulations resisted the relocation. Further, a decentered perspective shows that although close ties between states and private industry are recognized in the literature as conduits for information, coordinating industrial strategy, and the legitimacy of state action (Marques 2019), the "political character" of these linkages is little acknowledged (Marques & Eberlein 2021, 1220). The politicized facets of the tannery coalition's relationship with the state that came to the fore with the appointment of BSCIC to manage the relocation process demonstrated the unintended changes in behavior characterizing autonomy (Grabosky 2013). This points to the decentered view of the autonomy of actors that regulation cannot take the behavior of the targets of regulation as a constant, and the form of regulation may need to vary depending on the attitude of regulated entities towards compliance (Kagan & Scholz 1984; Black 2001; Baldwin 1995).

More recently, signs of a shift in national policy are emerging. Compared with other five-year plans with an emphasis on private-sector growth, the 8th FYP mentions privatization only once. In relation to fiscal policy for equitable growth, the 8th FYP recognizes "instances where privatization efforts have been captive to political patronage whereby public enterprises have gone to political elites or prominent businessmen in society, have yielded low benefits to the government, and have increased the costs of services for the poor. There is now clear consensus that the business of industry is not the business of government" (8th FYP 2020, 48). The influence of this consensus on the interface of domestic civil society groups, government, and tannery associations with the ability of private governance to achieve goals related to sustainable development remains to be seen.

This research encountered limitations that draw attention to understudied areas in the literature around the interaction of public-private entities in environmental governance and regulation. First, while Marques and Eberlein (2021) established the importance of business ties to the state in their political-strategic model, further work remains to develop a fuller accounting. For instance, are there generalizable patterns factors driving the domestic reception of private governance initiatives? Second, certain countries–particularly China, Indonesia, and India–are generally better represented in the literature while others including Bangladesh are understudied. Similarly, sectors such as forestry, fisheries, and palm oil receive more attention than others; expanding research agendas and developing comparative insights could further strengthen understandings. Third, future scholarship that examines both Northern and Southern responses

in similar industries may round out understandings of domestic political economy responses to private governance. Last, gaps in the interview sample or approach to historical analysis may generate bias or inaccuracies; efforts were made to address this with triangulation or other verification.

6.6 Conclusion

By bringing insights from decentered regulatory analysis to the study of private governance, this chapter extends this area of scholarship by exploring the interplay of public-private actors with national regulatory dynamics through the case of the leather tannery industry in Bangladesh. The chapter sought to offer two main contributions. First, the chapter extended Marques and Eberlein's (2021) political-strategic framework by mapping the range of responses to private governance programs in the leather tannery sector. The research traced the cumulative forces that tipped the scales in favor of government adoption of the relocation: years of concerted court cases by BELA and Human Rights and Peace for Bangladesh resulting in a forceful court order, followed by pressure exerted on the national government to support the relocation for tanneries to secure LWG certification. The confluence of circumstances to diversify exports and the requirement to relocate the tanneries in order to attain LWG standards shifted the government's approach; however, attitudes of the tannery coalition acted as a barrier to the move. Even once the government forced the hand of the tanners to relocate, weak environmental practices for all but the largest exporters to the global North remained unchanged, as the retreatist enforcement style of the DoE prevented more concerted regulatory action.

Second, the chapter aimed to add new empirical evidence to the literature regarding the emergence and evolution of private environmental governance in a country and sector not otherwise discussed in the literature. By foregrounding a historical analysis of the interactions of donor institutions, private sector coalitions, party politics, and legal advocacy groups, the chapter examined the relationship of international private governance programs with Bangladesh's domestic political economy. A decentered approach was applied to recognize the breadth of regulatory relationships and widen the scope of analysis to be inclusive of the influence of these relationships on the distribution of regulatory power. This chapter identified the interface between state, market, and society as characterized by a dissolution of the public-private boundary, fragmentation, and autonomy. By examining the expansion of private governance initiatives from the vantage point of Bangladesh, this chapter addresses the limited discussion of the agency of global South states and non-state actors in contesting and mediating the direction of private governance implementation.

"The struggle itself towards the heights is enough to fill a man's heart. One must imagine Sisyphus happy."

- Albert Camus, *The Myth of Sisyphus and Other Essays*

Chapter 7 – Conclusion: Taking on a Sisyphean task?

7.1 Introduction: Bangladesh in 2022

The shift of industrial production following the globalization of trade and capital has built palaces of merchandise in the global North and left a dismal legacy of pollution concentrated in the global South (Nixon 2011). Now, decades into an increasingly global environmental movement, an unwelcome paradox emerges: pollution worsens even as concern grows for the integrity of ecosystems and the disproportionate impact of pollution on vulnerable social groups. With pollution on the rise (Landrigan et al. 2018) and corporate environmental responsibility claims under scrutiny, what may we learn about how power relations forged in the hubs of global production impact the character of regulatory power relations? Bangladesh provides a useful vantage point to examine these issues. In the five decades since achieving independence, Bangladesh has become a locus for global supply chains, resulting in extraordinary economic development and societal change. Yet, as Bangladesh prepares to become one of the first countries to formally shift from 'Least Developed Country' to 'Middle Income Country' status, this growth has come at the expense of hundreds of rivers, rendering national aspirations to 'bring back golden Bangladesh' to a slogan on a bridge. Entrenched water pollution poses challenges for the many uses of water: agriculture, households, industry, and nature itself. In other words, addressing pollution appears to be a Sisyphean task.

This chapter will first trace two circumstances amplified since the onset of the Covid-19 pandemic and conclusion of my fieldwork in March 2020: the 2019 'rights of rivers' verdict of the Bangladesh High Court and the changing interface of private governance programs and regulatory pressures on exporting factories. These circumstances throw the contested character of state, market, and society relations into sharp relief. Building on these reflections, the next section will review the research contributions to conceptual, empirical, and policy-related areas to assess what we have learned about the regulation of water pollution from the interstices of state, market, and society relationships. The subsequent section will review the implications of this research for factories, state policy, regulatory agencies, and civil society actors. The last section will conclude by offering avenues for future research to take on the task of analyzing environmental regulation in the global South.

7.1.1 Rights of rivers High Court verdict

The *Daily Star* headline minced no words – *Time to declare Turag dead: River grabbers appear mightier than [government], judiciary; all steps go in vain.* This 2016 headline set in motion a series of court hearings that would upend the Bangladeshi legal landscape. Some two and half years after the article's release, the Bangladesh High Court reached a landmark verdict establishing 'rights for rivers' in February 2019. The 456-page written decision, released in July 2019, contained seventeen directives for immediate action, outlined in Appendix III.[166] One of these directives empowered the National River Conservation Commission (NRCC), an agency currently administratively located within the Ministry of Shipping, to act "*in loco parentis*"[167] for rivers. Another directive to the Bangladesh Bank required a circular declaring "any institution, company, or person involved in river encroachment or pollution" to be ineligible for loans (High Court 2019, 456). The determination of 'encroachment' would be based on the "original territory" of the rivers, based on historical maps.[168] The decision also asked the National Election Commission to disqualify identified encroachers or polluters from contesting any type of elections, including Parliamentary polls, and to submit a list of disqualified people to the court. The verdict was largely upheld in an appeal, renewing pressure for addressing the longstanding impact of pollution on rivers and communities. A *Daily Star* article released two days after the verdict posed the question "will the HC judgement be enough to save our rivers?", to which the author immediately responded: "The answer is probably no" (Khalequzzaman 2019).

The article author's bleak view sharply contrasted with celebrations of the verdict, largely from organizations based in the global North. While the concept of legal rights for non-human entities is not new (Stone 1972), only recently has it been applied to nature (O'Donnell & Talbot-Jones 2018). The application of legal rights to specific natural features, particularly rivers, built on larger movements to pass legislation recognizing the rights of nature.[169] Whereas other countries including New Zealand[170] and the Indian state of Uttarakhand[171] granted rights to individual rivers, the Bangladesh case was the first of its kind to grant legal protections to all national rivers. Reflecting the optimism of the 'legal personhood' movement, the U.S.-based organizations Earth Law Center and International Rivers argued that a universal declaration of rights for rivers "will

[166] The English translation is 454 pages; the original, which is about half English, half Bengali, is 283 pages.
[167] Meaning 'in place of a parent', or in this case, for the NRCC to have legal responsibility to carry out functions established in the verdict. From the English translation of the original verdict (Human Rights and Peace for Bangladesh v. The Government of Bangladesh, Writ Petition No. 13989/2016, 96).
[168] It should be noted that the selection of maps and their demarcations is extremely controversial; the maps are not (yet) publicly accessible, but the implications of returning rivers to a historic baseline throws up significant practical barriers.
[169] For example, as in Ecuador and Bolivia.
[170] The New Zealand case granted specific legal rights to the Whanganui River.
[171] This case in India granted legal rights to the Yamuna and the Ganges rivers.

foster the creation of a new legal and social paradigm based on living in harmony with nature and respecting both the rights of nature and human rights" (Universal Declaration of the Rights of Rivers Preamble 2020). However, this 'new paradigm' has not arrived in Bangladesh, where after the High Court verdict the Inland Water Transport Authority (IWTA) led mass eviction drives to force *basti* dwellers out of their homes to clear riverine land of unpermitted structures, rather than enforcing regulations on industries (Chandran 2019). In an editorial reflecting on the International Day of Action for Rivers in March 2022, the *Daily Star* reported on data from the Dhaka-based River and Delta Research Centre that the "quantity of the occupied land [has] increased" since the verdict (Roy 2022). While *basti* dwellers awaited resettlement or struggled to rebuild precarious riverine-based structures, factories continuously occupied riverbanks.

The High Court verdict and intersecting roles of the judiciary and executive branches in shifting the foundations for the distribution of regulatory power are shaping the political economy of water pollution regulation. Only three years have passed since the verdict and perhaps more time is needed for implementation, particularly with significant state and private sector attention and energy diverted to manage the pandemic response since March 2020. However, the outcome to date and the faith placed in the verdict speaks to enduring belief in the ability of formal law and institutions to deliver regulatory change. The verdict represented a window of hope for aggrieved communities living in polluted riverine areas; yet, this hope has since been eroded by the IWTA evictions, the stubborn patterns of absent enforcement assessed in Chapters 4 and 5, and the saga of the leather tannery relocation discussed in Chapter 6. The widespread optimism in the global North regarding the ability of law to drive change clashes with the situation in Bangladesh, where beleaguered environmental leaders face a discouraging outlook. While a more activist judiciary has taken up public interest litigation cases since 1994, the executive has not followed through on the institutional reform needed to ensure the independence of regulatory agencies including the NRCC and the Department of Environment (DoE). This judicial action-executive inaction divide exhibits that 'the state' is not homogenous, nor uniformly responsive to political-economic pressures. Moreover, resistance to change shows how efforts to achieve redistributions of regulatory power may be subverted by the significant influence of private industry, hamstrung role of civil society groups, and low degree of autonomy of domestic state regulatory institutions. Under these conditions, public interest litigation may result in a landmark verdict (granting legal rights to all rivers), but in practice have limited environmental protection benefit and face perverse outcomes (evictions of riverine *basti* residents) without corresponding institutional or political change.

7.1.2 Private governance

Unlike the High Court verdict, borne from decades of domestic societal demands to address pollution, new debates on the legitimacy of sustainability metrics used in garment and tannery sector private governance speaks to the outsize impacts of external private governance. As donor funding has decreased in relative importance in light of rising gross national income, private governance initiatives have assumed greater significance in shaping the character of state-market linkages. Now, the vulnerabilities of private governance programs to external scrutiny are illustrated by the controversy surrounding the Higg Index,[172] the de facto global sustainability assessment tool used by brands and retailers including Patagonia, H&M, and Walmart. The Higg Index is a metric used in private environmental governance programs to produce lifecycle assessment (LCA) analysis of fabrics and materials used in apparel production and to conduct factory sustainability audits; factories and brands sign up and share their environmental performance score to show their sustainability bona fides. In June 2022, the Norwegian Consumer Authority (NCA), the country's consumer watchdog group, raised the possibility of banning public-facing sustainability labels for individual products on the basis of violating the country's Marketing Act (Tabuchi 2022). The complete suspension of the use of the Higg Index by its owner, the Netherlands-based Sustainable Apparel Coalition (SAC), was announced by the CEO in a written statement, arguing that the SAC recognized "the additional challenges that come from translating LCA data to consumer facing information. [The SAC] will be working with our program partners directly to determine how this will work operationally and hope to reactivate the program upon alignment with the NCA and other regulatory bodies" (Razvi 2022).

Further investigation into the Higg Index, and the stringent anti-greenwashing stance of a number of national regulators like the NCA, suggest that this 'alignment' may be challenging for private governance entities to overcome. Though the methodology of how the Higg Index is calculated is not available to external examination, the SAC (2022) maintains that the index is underpinned by "independent, scientifically reviewed data." A review of the input data contends the accuracy of this claim. For example, the index rates polyester as a 'sustainable fabric' based on data supplied by a plastics-industry group of based on European methods of polyester production; however, most polyester is made in Asia with non-renewable energy sources and less regulated environmental standards (Tabuchi 2022). This misrepresentation of data allows the SAC make certain claims, and the high rating for polyester stands to benefit the membership base of the SAC, which are largely the same 'fast fashion' companies using polyester in the majority of their apparel

[172] Because this issue is so recent, there is no peer reviewed literature on the incident. Therefore, a variety of trade and news publications were consulted.

products. Alternatively, silk garnered an unfavorable rating based on a 2014 study from Oxford-based researchers of 100 farmers using irrigated land in a state in India (Astudillo et al. 2014). The abstraction of a small, limited study to use for a standard global index raises significant questions about the underlying methodology of private governance and sustainability reporting programs.

While brands and retailers in the global North grapple with the regulatory implications of the collapse of the Higg Index in light of corporate sustainability reporting requirements, garment and leather factory owners in Bangladesh face an increasingly fragmented landscape of international private governance programs. Factory owners continue to manage the perceived environment-economic tradeoffs: to allocate financial resources to comply with ever-changing and often contradictory sustainability standards from buyers to be able to sell to more regulated markets, or to supply goods at a lower price to less regulated markets. Factories unable to meet the criteria of buyers from the global North may resort to the latter strategy, as the increase of volume of export trade with China, which is less concerned than U.S., Canadian, or European buyers with environmental standards. While these options may be framed in the economics literature as a matter of rational choice, Chapter 4 and Chapter 6 showed that such tradeoffs are shaped by multiple forces, including the availability of capital to upgrade facilities, the low prices paid for apparel by buyers in the global North, taxes on imported water treatment technology that is not domestically available, and other constraints of globalized supply chains. This bifurcation in factory strategies has enabled better-resourced factories to upgrade and pass required audits, while other factories remain uncertified and perhaps less likely or able to attain improvements in water effluent quality. Though this research has shown that passing a private audit and achieving a certification does not ensure that effluent quality standards are achieved, the incentives for factories able to export to more regulated markets in the global North to remain compliant are higher than the alternative.

What are the stakes of this bifurcation for the direction of environmental regulation and economic development pursued in Bangladesh? The tensions of private governance programs in the global North and domestic industries in the global South come as the European Union develops new laws to drive circularity[173] in the apparel industry. The forthcoming European Union-wide apparel Extended Producer Responsibility (EPR) law stands to shift regulatory power relations by obliging producers to internalize the costs associated with recycling the post-consumer textiles they sell. However, without a stronger evidence base, the potential benefits and drawbacks are unclear. For example, under France's textile EPR initiated in 2007, textile companies selling to

[173] Circular economy may be defined as a "development model" that aims to "minimise the negative impact of human activities by applying principles related to the '3 Rs': reduce, reuse, and recycle" and "to maintain the highest utility and value of products, components, and materials at all times" (Scarpellini et al. 2019, 2211).

the French market became responsible for recycling or otherwise properly disposing of products (Bukhari et al. 2018).[174] The benefits of the program included significantly reducing the volume textiles sent to municipal solid waste. However, once leaving France, the fate of the goods is unknown; a substantial amount of what is collected for reuse ends up in African countries and goods for recycling are exported to Asia. The influx of these goods is not always properly managed, leading to headlines in the global North regarding how "fast fashion is using the global South as a dumping ground for textile waste" (Wohlemuth 2022).

The rights of rivers verdict, shifts in private governance, and changing patterns of economic development, trade, and regulation leave an ambiguous future for redressing water pollution in Bangladesh. The resulting uncertainties increases the stakes of understanding the implications of state, market, and society relations for how regulatory power is exerted to address water pollution. This thesis extended the application of decentered regulation and political economy analysis to take stock of these changes in Bangladesh. Through research conducted since 2017, this thesis has developed a snapshot of this critical juncture in the country's trajectory at a time when attention to global environmental issues is at a historic high (Smith 2021; BBC 2021). Accordingly, this conclusion now turns to contemplate the contributions of this research.

7.2 Contributions

7.2.1 Summary: Synthesis of findings

This thesis has explored the political economy of water pollution regulation in garment and tannery industries in Bangladesh's Greater Dhaka Watershed, the country's capital area and hub for economic production. As identified in the literature review chapter, tensions and gaps in the evolving academic terrain generated opportunities for this thesis to contribute new perspectives. Prevailing economics and political science scholarship about regulation suggests that regulation primarily or only comes from the state. While inroads in regulatory scholarship, particularly from a political economy perspective, have developed more pluralistic approaches, an incomplete picture remains of how national political dynamics interface with private governance programs and domestic civil society actions. Further, the relational dimensions of regulation are underexplored, and examinations of Bangladesh are especially limited. Learning from the gaps in the literature, this research situated its conceptual and empirical focus on the urban rivers, communities, factories, and government agencies of Dhaka, drawing on extensive fieldwork,

[174] Sellers have two ways to comply: (1) contributing financially to a third-party producer responsibility organization or (2) establishing an in-house take-back program approved by the French regulatory bodies (Bukhari et al. 2019). 'Take-back' programs usually occur in one of two ways: (1) A specific brand allows customers to bring back their old clothes from that brand to be collected and either resold, recycled, or discarded; or (2) general recycling schemes, where retailers will collect any apparel from any brand and work with a recycler to recycle the apparel.

secondary literature, penalty data, and interviews with government policy makers, regulatory agencies, factory owners, factory auditors, brand and retail representatives, civil society leaders, lawyers, judges, and journalists. The thesis was guided by three research questions:

- How do actors and institutions across civil society, national government bodies, and the private sector shape regulatory responses to water pollution?
- How do state regulatory agencies and private sector actors shape their relationship with one another?
- How do civil society actors negotiate access to regulatory power?

In Chapter 4, I responded to the first and third research questions. Using interviews and triangulating with the literature, this chapter applied the decentered regulation concept to explore the emergence of normalized non-compliance with water quality regulation. In contrast with siloed economics-based notions of regulatory failure or political science concepts of political control or state capacity, the integrated political economy-decentered regulation analysis in this chapter finds the DoE's approach to regulation is characterized by a retreatist pattern. Chapter 5 responded to the second question by utilizing nearly ten years of pollution penalty data from the Bangladesh Department of Environment and policy and legal document analysis to understand how the state and private sector actors negotiate regulatory power. It refined the concept of enforcement styles by considering how varying levels of formalism, coercion, autonomy, and capacity dimensions shape enforcement style. By adopting a retreatist style of enforcement, the Department of Environment and the factories it levies penalties on shape their relationship through negotiated compliance strategies. Chapter 6 responded to the second and third questions by examining the interface of private governance with the national regulatory reform process for leather tanneries. This chapter extended the political-strategic framework of Marques and Eberlein (2021) by applying the lenses of autonomy, fragmentation, and the public-private distinction to a historical analysis of the consequences of the interface of the national government, leather tanneries, and transnational private regulatory interests. The chapter found that civil society actors have utilized public interest litigation when seeking access and redress through the courts in their efforts to exert regulatory power. However, this strategy is limited by the high autonomy of leather tanneries and inability of state agencies to change retreatist patterns to enforce regulation.

These chapters examined how regulatory power is distributed, contested, and pursued by contending actors and institutions operating within a specific political economic context. At the heart of this research is an interest in how regulatory relationships shape consequences for regulatory action. The answers to these questions suggest that the uptake and direction of

regulation related to the management of water pollution is characterized by the elements of decentered regulation – complexity, fragmentation, autonomy, interdependence, and the collapse of the public-private distinction. By foregrounding a vantage point from Bangladesh, this thesis set out to understand how the exertion of regulatory power within a particular political economy becomes implicated in mandates for economic growth and subject to multiple sources of influence.

7.2.2 Conceptual and empirical contributions to the academic literature

Together, the chapters in this thesis aimed to ground a discussion of regulatory power in the global South through the experience of Bangladeshi garment and tannery industries. This thesis developed the study of the political economy of environmental regulation in Bangladesh as a window into a wider set of issues related to how institutions and actors of state, market, and society relate to one another. This set of issues speaks not just to the political economy of regulation, but to the broader range of possible pathways that states, markets, and societies may undertake. This thesis sought to offer the following broader contributions to the academic literature.

First, this thesis aimed to contribute to the pluralized conception of regulation as relationally produced. A relational approach to how the institutions and actors of state, market, and society interface must then extend to how regulatory power is understood in the context of shifting relations between the global North and South, as Southern governments and private sector entities exert their agency within their structural-institutional context. This relational view aimed to extend the scholarship on decentered regulation to nuance the elements first introduced by Black (2001, 2002), particularly related to autonomy, fragmentation, and the collapse of the public-private distinction. By focusing on decentered regulation as a lens with which to study regulatory relations, the thesis refocused attention on how private sector actors make use of linkages to gain access to state power, while applying their autonomy to reject regulatory enforcement. This aimed to contribute insight to how different dimensions of the components of decentered regulation interact across state, market, and society, generating new space to understand the interface of structure and agency.

An important shift took place over the course of the research. As my fieldwork developed and relational understanding of the regulatory landscape evolved, my approach to reflecting on structure and agency gained more nuance. 'Regulatory power' as exerted by specific actors and institutions became both more diffuse and embedded, more driven by strong personalities with deep personal networks, yet still constrained by shifts in political tides. A political economy analysis of regulatory power in this case was operationalized by focusing on paying attention to differences across groups within each 'category' of state, market, and society. By foregrounding the

intersection of relationships in this research, analytical attention may be focused beyond a narrow reading of the state's use of force (Shover et al. 1986) to a longer temporal arc that is inclusive of multiple actors and institutions through which regulation is contested. When understood through this lens, power is less a matter of 'having' or 'not having', but about the *distribution* of ability to exert influence across a variety of dimensions based on different socially produced characteristics. Viewed this way, civil society groups do exert regulatory power by effectively using the linkages made available to them through public interest litigation. However, this society-driven exertion of power is limited by the high degree of autonomy of private actors and the low capacity of state regulatory agencies to coerce compliance or carry out enforcement.

Second, political economy scholarship on regulation has begun to explore the experience of countries in the global South. What remains underexplored is how domestic regulatory institutions and state government, civil society, and private governance interact in response to regulatory change. Drawing from comparative analysis of scholarship in other countries in global South, this research extended the concept of dimensions of enforcement style into decentered regulation. By doing so, this perspective facilitates deeper understanding of penalties for polluters as a contested arena of resistance, negotiation, and discretion. This research considered how low degrees of state autonomy interact with a high degree of autonomy for private governance actors, garment factories, and tanneries. This low state autonomy-high private sector autonomy was brought into conversation with Marques and Eberlein (2021) political-strategic framework to examine how a state may initially reject, then accept the influence of private governance reforms, but that if sufficient domestic private sector rejection occurs, the intended regulatory reforms will not sufficiently embed. As a consequence of this distribution of autonomy and influence, both state and market-led regulatory efforts are limited by the DoE's retreatist approach to regulation, which reflects both material limitations in capacity to enforce and deference to private sector actors in garments and leather tanning industries.

Third, from the decentered view we may learn something of the limitations and possibilities of regulation and exertions of regulatory power to achieve change. Political economic analysis suggests that the limitations of environmental regulatory effectiveness are "institutionalized in the enduring structures" of state, society, and market relations in a given political economy (Yeager 1991, ix).[175] Though these limits are not fixed, they are more "stable and forceful" than episodes of economic growth, political change, or corruption (Yeager 1991, ix). A decentered lens on pollution regulation perhaps takes us to a similar conclusion. Narrow interpretations of environmental regulation and private governance have yielded instrumental

[175] For further elaboration, see Braithwaite (2008) and Polanyi (2001).

understandings of regulatory challenges. But regulatory change without corresponding opportunities to redistribute power will mean little for those most impacted by the consequences of prioritizing economic growth at the expense of environmental and social protection. The experiences of these communities are not represented or valued by static models of regulatory failure or efficiency. In this way, understanding regulation as dynamic and embedded in enduring relations of power creates analytical pathways to imagine how a 'social sphere' (Lange 2013) may harness the agency to respond to risks posed by environmental pollution and address accountability deficits (Mason 2008).

Last, the insights of this research also show how using multiple methodological approaches to study regulatory relationships and behavior may support analysis of circumstances when regulatory data may be limited, of low quality, or inaccessible to the public. Rather than rely solely on or be constrained by the availability of secondary or country-level penalty data, qualitative research methods are well-suited to assessing regulatory conditions. If penalty data are available, complementing analysis of this data with examination of the domestic policy landscape and legal framework may offer a deeper understanding of what accounts for variation in penalty frequency, payment rates, or ability of firms to contest the penalty. Distinguished from an economics or political science-oriented focus on empiricizing specific models, this political economy study grounded in fieldwork and interviews concurs with research showing how available but incomplete factory-level penalty data may be combined with qualitative research on the ways that firms avoid penalties by investing in uninspectability (Gupta et al. 2019; Heyes 1994) or concealment activity (Linder & McBride 1984). Moreover, in using qualitative-led methods, the thesis foregrounded first-hand accounts of regulatory dynamics which aided in thinking relationally across state, market, and society spheres. This approach contributed the voices and perspectives of a range of actors and institutions not all often represented in scholarship on environmental regulation in the global South.

7.2.3 Contributions to policy and practice

'Translating' research into policy is not linear, nor an individual effort. Indeed, mirroring the relational approach taken to understanding decentered regulation in this thesis, it is the relationships themselves formed during the research process that have created possibilities to contribute to policy. The trust invested in me to participate in policy processes was the result of a strong foundation of relationships created by the REACH program.

For the duration of this research, I committed to engaging with the possible policy applications and impact of my work. However, given my understanding that any policy contributions would likely not take place until after the completion of my DPhil, this did not preclude my interest in

conceptual areas of scholarship. Rather, the concern led me to pursue meaningful relationships with colleagues in other fields of water science, policy, and management, both within Oxford and in Bangladesh. These collaborations yielded a number of outputs not part of this thesis, including five co-authored, peer-reviewed journal publications, one book chapter, and a policy brief:

- **Journal article:** 'River pollution and social inequalities in Dhaka, Bangladesh' in *Environmental Research Communications* (Hoque, Peters, Whitehead, Hope, & Hossain 2021);
- **Journal article:** 'River toxicity assessment using molecular biosensors: Heavy metal contamination in the a New Multibranch Model for Metals in River Systems: Impacts and Control of Tannery Wastes in Bangladesh' in *Sustainability* (Whitehead, Mimouni, Butterfield, Bussi, Hossain, Peters, Shawal, Holdship, Rampley, Jin, & Ager 2021);
- **Journal article:** 'Turag-Balu-Buriganga river systems, Dhaka, Bangladesh' in *Science of the Total Environment* (Rampley, Whitehead, Softley, Hossain, Jin, David, Shawal, Das, Thompson, Huang, Peters, Holdship, Hope, & Alabaster 2020);
- **Journal article:** 'Modelling heavy metals in the Buriganga River System, Dhaka, Bangladesh: Impacts of tannery pollution control' in *Science of the Total Environment* (Whitehead, Bussi, Peters, Hossain, Softley, Shawal, Jin, Rampley, Holdship, Hope, & Alabaster 2019);
- **Journal article:** 'Restoring water quality in the polluted Turag-Tongi-Balu river system, Dhaka: Modelling nutrient and total coliform intervention strategies' in *Science of the Total Environment* (Whitehead, Bussi, Hossain, Dolk, Das, Comber, Peters, Charles, Hope & Hossain 2018);
- **Book chapter:** 'Water Quality Modelling, Monitoring, and Management' – Chapter 4 in the Oxford University Press book, *Water Science, Policy, and Management: A Global Challenge* (Whitehead, Dolk, Peters, & Leckie 2019);
- **REACH Policy brief**: 'Understanding river water quality risks to promote economic growth and reduce poverty in Dhaka' (April 2018).

Producing these outputs had a positive reinforcing effect on building the trust necessary to contribute to policy. For example, these outputs collectively have been applied to inform the development of the National Water Quality Monitoring system (WQMS, elaborated upon in the policy implications section below), co-led by REACH collaborators at the Bangladesh University of Engineering and Technology (BUET), Professor Mohammad Abed Hossain and Professor Mashfiqus Salehin. Importantly, the input data required to produce each paper, involving river water quality samples hand collected by BUET colleagues, needed tremendous international

collaboration. The quality of these relationships led to my inclusion in otherwise closed-door meetings, including participating in three of the four Water Use Policy workshops, to which I contributed direct input to the language of the policy document, and to the BGMEA 'Green Growth' workshop, for which I led the 'solutions' breakout group.[176]

Additionally, I organized the bilingual translation of the 2019 High Court rights of rivers verdict. In November 2019, I worked with REACH colleagues to apply for a UK Research and Innovation Strategic Priorities Fund grant for £50,000 to cover the costs of a bilingual translation and organize a roundtable hosted at Oxford with stakeholders involved in the garment and tannery industries called the Forum on Economic Transitions and Urban Water Security. Although the roundtable was cancelled due to the outbreak of the pandemic, I liaised with the University of Dhaka Law Department and the High Court to complete an official translation. Once the complete Bengali and English language versions were approved by the Court, I coordinated with the REACH program at Oxford and Bangladeshi colleagues to host a launch event to share the translation and its implications. An introduction by lead author of the verdict, Justice Ashraful Kamal, High Court Division, Supreme Court of Bangladesh set the stage for the opening remarks by Her Excellency Saida Muna Tasneem, High Commissioner of Bangladesh to the United Kingdom. Following this was a panel discussion.[177] Coverage of the event included from *The Daily Star* 'Protecting Rights of Rivers: Turning intention into action' (November 2020) and 'Celebrating the bi-lingual translation of the HCD verdict on rivers' (November 2020). As the introduction of this chapter opined, the longer-term outcomes and potential benefits are not yet known. However, by making the whole verdict publicly available in both English and Bengali, a wider audience may learn from the approach taken in Bangladesh as the first country to establish nation-wide rights of rivers.

Going forward, I hope that this research will be useful to the REACH program and partners in Bangladesh, as well as to the wider community of scholars interested in the political economy of regulation. To increase the usability of the findings, I intend to produce a series of policy briefs to communicate the findings to a non-academic, policy-oriented audience in Bangladesh. As travel resumes to Bangladesh, I hope to discuss these findings with the policy

[176] Pre-pandemic, the goal outcome of this meeting was to develop a national proposal based on the outcome of a series of these workshops. Also present were the Danish Ambassador to Bangladesh; the International Labor Organization (ILO) Country Director; Delegation of the EU Deputy Chief of Mission; Director of the Bangladesh Water Resources Planning Organization; World Bank Country Director; Director of the Department of Environment; and others. Coverage of the January 2020 event is available on the BGMEA website: https://bgmea.com.bd/index.php/page/BGMEA_monthly_session_on_Green_Growth_held_

[177] The panel included Mahfuz Anam, Editor and Publisher, *The Daily Star*; Sharif Jamil, General Secretary, BAPA; Advocate Manzill Murshid, President, Human Rights and Peace for Bangladesh; Sharmeen Murshid, Member, National River Conservation Commission; and Mohammad Golam Sarwar, lead translator and lecturer, Department of Law, University of Dhaka.

makers and industry leaders with whom I have built a rapport over the years. Further I hope to present my work at the REACH Water Security conference in September 2023. Last, I will apply the lessons gleaned through the process of completing this thesis in my new role.

7.3 Implications

7.3.1 Implications for Bangladeshi factories, state policy, and regulatory agencies

The findings of this research are not intended to result in a policy prescription. Rather, policy-applicable ideas are generated by reflection upon the wave of interest in regulation driven by reform. Specifically, the contributions of this thesis may be applied to consider the implications for three distinct policy plans currently underway in Bangladesh: (1) the National Industrial Water Use Policy, led by the Water Resources Planning Organization (WARPO); (2) the National Water Quality Monitoring System (WQMS), led by a multi-stakeholder partnership of government agencies and private industries in collaboration with the World Bank Water Resources Group 2030 and the DoE; and (3) the RMG Sustainability Council (RSC), led by the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) to develop an industry-led environmental sustainability mandate. These emerging programs are too recent to assess their outcomes in shifting the regulatory landscape toward more effective enforcement, compliance, and deterrence. However, based on the results of this research, these entry points may identify regulatory trends that historically have contributed to normalized non-compliance and prevented meaningful improvements to reduce pollution.

First, the WARPO-led Industrial Water Use Policy seeks to (1) optimize industrial water use efficiency; (2) reduce pollution; and (3) ensure effective monitoring for compliance. However, this thesis research has shown that policy interventions to date are either too unevenly applied to achieve widespread impact (such as fines), or are too diffuse to be accountable (such as audits associated with private governance). Though the Policy aims to build from World Bank advocacy for a 'rule-based system' in which the state penalizes polluters, the findings from Chapter 5 suggest that increasing fines without a simultaneous increase in the DoE's bargaining power may continue a pattern of non-payment or firms with a high degree of autonomy disputing fines in court (World Bank 2018). Further, without a concurrent increase in DoE leverage, retreatist state environmental enforcement may continue. Without motivation to comply generally, the policy change represented by the Industrial Water Use Policy is unlikely substantially alter behavior.[178] Further, interpretation of the fine and interview data suggests that firms will not respond to regulations evenly; rather, their capacity to respond to or evade rules relates to their relative political-economic position. However, the Policy may also create a new basis to build the legitimacy of state regulation

[178] Policy proposal based on a draft document of the DoE fine schedule (2019).

with industry. The Policy could shift the regulatory approach for non-compliant factories: rather than the arbitrary application of penalties discussed in Chapter 5, the Policy could create a new basis to collect detailed information on the processes of polluting industries, and then respond with consultations to factories without in-house expertise or those struggling to manage environmental aspects of factory production.

Second, for the WQMS to achieve its aims, government policymakers could critically assess the role of information in the landscape of fragmented knowledge and power. For example, the WQMS strives to "gather maximum information at minimum effort and cost."[179] Rather than creating a parallel information system, integrating the WQMS with existing but underutilized approaches to data collection would allow the multi-stakeholder partnership and DoE to apply lessons from similar contexts.[180] For instance, the Bangladesh Center for Environmental and Geographic Information Services (CEGIS) under the Ministry of Water Resources (MoWR) has collected extensive water quality data. Gathering these data alongside public disclosure or public rating programs such as pollutant release and transfer registries (PRTRs) or performance evaluation and ratings programs (PERPs) have supported regulatory compliance under certain conditions in other South and Southeast Asian countries (Powers et al. 2011; García et al. 2009). Such programs offer a compelling opportunity as administration costs diminish due to the spread of information technology (Dasgupta et al. 2006).

Last, based on the decentered regulatory approach, the RSC could test the adoption of hybrid approaches, such as professionalizing and licensing ETP operators. Additionally, the RSC is positioned to strengthen externally led compliance programs by advocating to close the gap between industry and government standards for wastewater quality and improve oversight of brand compliance programs. By being agnostic about specific programs at risk of defaulting, such as the Higg Index, this approach may allow complementary programs such as Zero Discharge of Hazardous Chemicals that outline roadmaps for industries to phase out toxic chemicals from their supply chains and for governments to develop more effective regulatory strategies to monitor and control chemical production, storage, and use in industrial application. Other research finds that "regulatory and market-based pressures do not have a direct impact on toxic releases but an indirect effect by encouraging institutional changes in the management of environmental concerns"

[179] Draft WQMS document (2017).

[180] The GoB acknowledges this in the chapter dedicated to the environment and climate change section of the 7th Five Year Plan (FY2016-2020) highlights issues that relate to the need to improve environmental governance. It notes that "Policies to combat pollution are largely ineffective because of loose regulatory practices. Governance elements such as information access, transparency, accountable decision-making, management tools all need improvement. The GoB realizes that environmental policies need to instil market-based incentives to firms to encourage good environmental performance. Access to information and knowledge about risks could greatly reduce the harmful impacts of environmental factors" (2015, 425).

(Anton et al. 2004, 632). However, developing structural interventions–such as through release of firm-level environmental performance (Dasgupta et al. 2001), incorporating environmental criteria into credit risk management (Weber et al. 2015), or import countries adopting extended producer responsibility (Niinimäki et al. 2020)–require systematic cooperation and would be outside the remit of the RSC. In this regard, international retailers and brands remain in a stronger position to close loopholes in auditing systems and align their purchasing with responsible sourcing to advance a tangible intervention point.

7.3.2 Implications for civil society

This research's examination of environmental regulation points to the role of civil society groups, particularly those involved in social movement building and legal advocacy to drive policy change. Yet, civil society groups also have limited pathways to build meaningful linkages to state or market entities to directly influence the distribution of regulatory power. Civil society-oriented forums created by the state, such as the environmental courts, offered the promise of an alternative arena in which everyday people, not just political or market elites, might make themselves heard. However, in light of the strong basis of state-market linkages allowing private sector actors to disproportionately influence the direction of regulation, many goals of society-led movements have been subverted. The opportunity for society to build meaningful linkages with the state seems to be through the engagement of the Bangladesh Environmental Lawyers Association (BELA), BAPA, and other public interest environmental groups seeking to leverage the courts, though this research suggests limitations to this strategy.

First, courts are reactive, not proactive; generally, a court may only rule based on cases raised before it, meaning that it provides "only a temporary solution where legislative and executive systems have failed" (Faure & Raja 2010, 292). Whereas the executive and legislative bodies of national government largely maintain a narrow focus on economic growth and state regulatory agencies exhibit retreatist behavior, the judiciary has played a countervailing role to create a legal framework for environmental protection. On the back of the rights of rivers High Court verdict, Bangladeshi civil society groups now have two primary pathways for judicial influence: judicial review and binding precedent. Although not explicitly used in Bangladeshi law, Article 102 of the Constitution allows for writ petitions to be filed at the High Court Division to review the actions of public authorities (Khilnani et al. 2012). The court cases that spurred the relocation of the tanneries from Hazaribagh to Savar indicated the seriousness of purpose of the judiciary to address pollution. However, this approach risks the critique that the judiciary is substituting "judicial

governance for executive governance" whereby judicial decisions are reactive and may result in an underdeveloped independent national bureaucracy (Razzaque 2000).

Second, courts have not successfully mandated agencies such as the DoE or NRCC to establish and execute environmental standards. In this way, court interventions may only be effective to the "extent they act as a remedy to executive apathy" (Faure & Raja 2010, 291). For example, a key element of the High Court verdict is the legal empowerment of the NRCC as the 'legal guardian' of all rivers. However, the NRCC is not an implementing agency itself and does not have institutional independence; rather, it provides recommendations to other agencies for implementation. The NRCC's main source of authority will be the annual reports that it submits to Parliament, showing the list of recommendations it has made to different regulatory agencies and whether those agencies fulfilled their tasks to show compliance. Parliament could then, in theory, use this mechanism to change budgetary allocations to agencies if they are not carrying out their duties. This means that the NRCC could leverage enforcement agencies (such as the Department of Environment) into imposing fines. Time will tell if the NRCC is a viable counterweight to the retreatist approach of DoE toward regulation.

7.4 Future research

This research grew out of a commitment to better understand pathways to 'bring back golden Bangladesh.' These pathways would likely entail changing roles and new capacities for actors and institutions across state, market, and society. Each sphere faces particular and shared limitations and possibilities in their agency and possible courses of action. While the concluding recommendations offer a starting point, institutional transitions to advance environmental protection is a Sisyphean task. Therefore, future research focused on expanding possibilities for sustainable development in the global South could develop a more complete understanding of the political economy of state-market-society relations. This research would support the craft and implementation of hybrid strategies that strengthen regulatory institutions and more effectively align economic development with environmental and social commitments.

Building on the lessons of the first three generations of political economy research (Hudson & Leftwich 2014), by integrating the decentered approach this thesis has established what a fourth generation of research could entail. Three areas that this fourth generation could make use of the elements of decentered regulation are private governance, enforcement styles, and linkages. Future research in this vein could further develop and nuance the private governance typologies of *adopt, substitute, reject, repurpose*, or *replace* as initially outlined by Marques and Eberlein (2021). As Chapter 6 argued, the autonomy of actors reveals that while a state may initially repurpose, then eventually adopt, private governance, private sector actors may ultimately reject

implementation. Further studies of other economic sectors from the grounded perspective of the global South would support both industry-specific insights and expand the base of inquiry. Questions may include under what conditions do governments in the global South choose one approach over another, and how does regulatory conflict or resistance from the domestic private sector manifest? Similarly, fourth generation approaches to research on enforcement styles would support analysis of the causes of variation in regulatory institutional development. Specifically, this generation may support understandings of the relationship between enforcement styles and enforcement outcomes. Last, future research could develop a typology of linkages beyond the established state-market and state-society. Refinement in understanding linkages may support the identification of generalizable patterns of behavior. Future questions may include: If low levels of capacity and autonomy prevail, how can civil society groups build more effective linkages to exert influence? Do different types of institutional linkages affect the embeddedness of regulatory power and outcomes? How do historical structural-institutional factors impact the directionality of influence – under what conditions does a high degree of autonomy for private actors lead to a retreatist approach by state regulators, or does a weak regulator create the conditions for autonomy of the private sector?

The thesis also provides a foundation for the use of the analytical tools of political economy for future studies focusing on decentered regulation. Three possible lines of inquiry that future scholarship could pick up on are: (1) strategies of directing regulatory power, (2) use the elements of decentered regulation to analyze what works and why to achieve regulatory goals in non-OECD countries, and (3) the direction of private governance in the global South. First, a renewed focus is needed on how regulatory power is distributed and ways to challenge entrenched interests thwarting compliance and enforcement in furtherance of environmental protection. Further elaboration on regulatory power could entail deeper engagement with the mechanisms, tactics, and strategies of states and specific industries to shape the direction and outcomes of environmental regulation. Second, key for Bangladesh and for other countries struggling to improve environmental protection is to learn from instances of successful navigation of achieving regulatory goals a similarly challenging political economic context. Understanding what works and under what conditions to improve environmental outcomes will be a crucial step to implement improved practices and build toward institutional change. This could include a deeper examination of the political economic circumstances and conditions (rather than strictly legal factors) under which environmental public interest law may improve policy enforcement. In such instances, what role do 'pockets of bureaucratic effectiveness' (McDonnell 2020), community-driven development (O'Rourke 2004), or private interests play in achieving successful regulatory outcomes? New

research in on successes could speak to the conditions under which regulation works to deliver environmental protection and distributes benefits to vulnerable social groups. Last, the limited empirical evidence on private governance in the global South is primarily from large Asian countries, with China and Indonesia taking center stage, while other regions, particularly Latin America and Africa, are understudied. Similarly, only a narrow group of industries has been studied to date. Future research on private governance could usefully address these geographic and sectoral siloes.

Last, this research points to a gap related to linking research to policy impact. Academics are often not comfortable with, nor rewarded professionally for, engaging directly in policy change. This tide is turning, slowly, with research funding tied to planned policy change. Similarly, the pace and demands on policy makers do not align with the constraints and timelines of academia. Though the pathway to effective research-based policy advocacy is lengthy and non-linear, researchers working at the intersection of political economy and decentered regulation may also strive to maximize the impact by ensuring appropriate embeddedness of their work with colleagues and research stakeholders. Building a research agenda *with*, rather than *for,* people directly impacted by problems associated with pollution and poverty is challenging, but the increased likelihood of sustained and beneficial outcomes would be worth the effort.

This thesis sought to illuminate, rather than to resolve, controversies in the political economy of water pollution regulation. Now, humanity's key task in the twenty-first century is to live within ecological boundaries by addressing the degradation of environmental systems from intense pollution (Folke et al. 2011). Addressing barriers to improve water quality may remain a Sisyphean task. But with advancements in these areas of scholarship and practice, a better world is possible, and 'bringing back golden Bangladesh' may no longer be just words written in vain on a bridge, but actions in reality.

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Appendix I: List of interviews

Interview code ref.	Date(s) of interview	Interviewee role/title	Institutional affiliation (if applicable)
Market			
Ma-001	November 2017	Director	Bangladesh-based bank
Ma-002	November 2017, October 2018	Head of compliance	UK-based brand
Ma-003	November 2017	Director	Bangladesh-based bank
Ma-004	November 2017	Factory owner	Garment factory
Ma-005	November 2017, October 2018, March 2020	Director of sustainability	UK-based brand
Ma-006	November 2017	Factory owner	Garment factory
Ma-007	December 2017	Wastewater (ETP) operator	Garment factory
Ma-008	April 2018, March 2020	Ethical trade manager	UK-based brand
Ma-009	April 2018	Senior factory manager	Bangladesh-based textile mill
Ma-010	December 2018	Senior manager	Aldi
Ma-011	December 2018, March 2020	Sustainability manager	Inditex
Ma-012	December 2018	Senior director	Nahar Industries
Ma-013	December 2018, March 2020	Director of sustainability	International brand - leather
Ma-014	December 2018	Head of compliance	US-based garment auditing firm
Ma-015	December 2018	Senior manager	EuroTex
Ma-016	December 2018	Senior manager	Large international auditing firm
Ma-017	December 2018	Director	Bangladesh-based bank
Ma-018	December 2018	Senior manager	EU-based social and environmental compliance auditing firm
Ma-019	December 2018	Senior manager	EU-based social and environmental compliance auditing firm
Ma-020	February 2019	President	BGMEA
Ma-021	February 2019	Director	Dhaka Chamber of Commerce
Ma-022	February 2019	Director of operations	India-based brand
Ma-023	February 2019	Sustainable supply chains officer	EU-based brand
Ma-024	February 2019	Sustainability manager	EU-based brand

Ma-025	February 2019	Senior supply chain coordinator	EU-based brand
Ma-026	March 2020	Senior manager	PWC
Ma-027	April 2018	Factory Owner	Export-oriented garment factory
Ma-028	January 2020	Engagement manager	McKinsey
Ma-029	April 2019, December 2019	Senior Secretary and Environment Lead	BGMEA
Ma-030	November 2019	Consultant	British consultant based in Bangladesh
Ma-031	November 2019	Senior factory manager	Export-oriented garment factory
Ma-032	January 2020	President	BGMEA
Ma-033	January 2020, February 2020	President	Industry Bangladesh
Ma-034	February 2020	Chief Sustainability Officer	Primark - Large UK-based fast fashion brand
Ma-035	February 2020	Chief Sustainability Officer	PUMA
Ma-036	March 2020	Senior Manager	PwC
Ma-037	February 2020	Factory auditor	International garment auditing firm
Ma-038	April 2019	Tannery owner	Member of tannery association; Export-oriented tannery
Ma-039	April 2019	Tannery owner	Member of tannery association; Export-oriented tannery
Ma-040	April 2018	Wastewater (ETP) operator	Export-oriented garment factory
Ma-041	April 2018, April 2019	Wastewater (ETP) operator	Export-oriented garment factory
Ma-042	April 2018, April 2019	Wastewater (ETP) operator	Export-oriented garment factory
Ma-043	April 2018, April 2019	Wastewater (ETP) operator	Export-oriented garment factory
Ma-044	April 2018	Wastewater (ETP) operator	Export-oriented tannery
Ma-045	April 2019	Wastewater (ETP) operator	Export-oriented tannery
Ma-046	April 2019	Wastewater (ETP) operator	Export-oriented tannery
Ma-047	November 2019	Wastewater (ETP) operator	Export-oriented garment factory
Ma-048	November 2019	Wastewater (ETP) operator	Export-oriented garment factory
Ma-049	April 2018	Designer	UK-based brand
Ma-050	April 2018	Factory Owner	Garment factory
Ma-051	April 2018	Factory Owner	Garment factory
Ma-052	April 2018	Factory Owner	Garment factory

Ma-057	December 2018, May 2021	Former Managing Director	Leather Working Group
Ma-058	May 2021	President	Bangladesh Tanners Association
Society			
So-001	November 2017, April 2018, November 2019, December 2019, February 2020, March 2020	Professor of Law and practicing environmental lawyer	University of Dhaka, Law Department
So-002	November 2017	Senior Associate	GIZ
So-003	November 2017	Lead Researcher	BRAC Institute of Governance and Development
So-004	November 2017	Director	The Asia Foundation
So-005	November 2017, December 2021	Lawyer	BELA
So-006	April 2018, November 2019	Water section director	World Bank WRG 2030
So-007	November 2018	Industrial water lead	World Bank WRG 2030
So-008	November 2018	Tannery relocation manager	The Asia Foundation
So-009	November 2018	Consultant	The Asia Foundation
So-010	December 2018	Tannery relocation lead	The Asia Foundation
So-011	December 2018	Head of Detox campaign	Greenpeace
So-012	December 2018	Program director	ZDHC
So-013	December 2018	Senior manager	Business association for sustainable trade
So-014	December 2018	Senior manager	Leather Working Group - UK
So-015	December 2018	Senior manager	ZDHC
So-016	December 2018	Senior researcher	SAICM
So-017	February 2019	Lawyer	BELA
So-018	March 2019, September 2019	Economics Advisor	World Bank
So-019	April 2019	Professor	Center for RMG Studies
So-020	April 2019	Director	Center for Policy Dialogue
So-021	April 2019	Lawyer	BELA
So-022	April 2019	Country Director	River Keeper
So-023	April 2019	BAPA	Joint Secretary, Organizational Focal Person for SDG platform
So-024	April 2019	Journalist	Daily Star - newspaper
So-025	September 2019	Journalist	Prothom Alo - newspaper

So-026	September 2019	Senior academic	BUET
So-027	September 2019	Senior researcher	EU-based NGO
So-028	November 2019	Senior manager	World Bank WRG 2030
So-029	November 2019	Senior researcher	EU-based NGO
So-030	November 2019	Community leader, Konabari, Dhaka	Awami League
So-031	December 2019	Executive Director	South Asia Network for Economic Modelling (SANEM)
So-032	February 2020	Journalist	Bangladesh-based newspaper
So-033	February 2020	Director	Global Fashion Agenda
So-034	February 2020	Director	Bangladesh-based international NGO
So-035	February 2020	Evicted community member	Turag River
So-036	February 2020	Evicted community member	Turag River
So-037	February 2020	Community member	Turag River
So-038	February 2020	Community member	Turag River
So-039	March 2020	Senior Project Manager	Adelphi
So-040	February 2020	Associate Director	Global Fashion Agenda
So-041	January 2020	Professor, former member of government	Economist, Founder of Centre for Policy Dialogue
So-042	January 2020	Professor	Former Minister of Law
So-043	January 2020	Professor	Economist, Former head of Ministry of Finance and Planning
So-044	January 2020, Feb 2021	Researcher	University of Waterloo
So-045	November 2017, January 2020	Journalist	Bangladesh-based newspaper
So-046	February 2021, November 2021	Journalist	Prothom Alo
So-047	November 2021	Journalist	Daily Star
State			
St-001	November 2017	Program manager	Bangladesh Water Development Board
St-002	November 2017 (as senior before DG), April 2019	Former Director	Department of Environment
St-003	April 2019, May 2019	Environmental lead	BSCIC
St-004	April 2018, April 2019, Jan. 2020	Enforcement officer	Department of Environment

St-005	April 2018, April 2019	Enforcement officer	Department of Environment
St-006	April 2018, April 2019	Director	Bangladesh Water Development Board
St-007	December 2021	Factory inspector	Department of Environment
St-008	April 2018, April 2019	Director of Enforcement and Compliance	Department of Environment
St-009	April 2019	Factory inspector	Department of Environment
St-010	April 2019	Enforcement officer	Department of Environment
St-011	April 2019	Member	NRCC
St-012	April 2019	Commissioner	NRCC
St-013	May 2019	Environmental specialist	BEPZA
St-014	September 2019	Country manager	DFID/FCDO
St-015	November 2019, December 2019	Department of Environment, Monitoring and Enforcement Department	Department of Environment
St-016	November 2019	Executive Director	CEGIS
St-017	November 2019, December 2019	Director General	WARPO
St-018	November 2019	Director - Technical	WARPO
St-019	November 2019	Justice of the High Court	Bangladesh High Court Division
St-020	November 2019	Director	PMO Governance Innovation Unit
St-021	January 2020	Magistrate	High Court Division
St-022	January 2020	Personal Secretary to the PM	Prime Minister's Office
St-023	January 2020	Director	CEGIS
St-024	January 2020	Director	Ministry of Local Government
St-025	January 2020	Country climate lead	DFID - in Dhaka
St-026	February 2020	Advisor	Former MP, current Minister-level private sector advisor to the PM
St-027	February 2020	Program lead	DEFRA
St-028	January 2020	Minister of Planning	Ministry of Planning
St-029	November 2019	Director of Natural Resource Management and Research/Deputy Secretary	Department of Environment
St-030	November 2019	Director	Inland Water Transport Authority (IWTA)
St-031	December 2021, January 2020, March 2020	Bangladesh Country Director	Oxford Policy Management (OPM)

St-032	December 2021	Member	NRCC
St-033	November 2019, March 2020, November 2021	Justice	Bangladesh High Court Division
St-034	November 2018, November 2019	Retired	Former Foreign Secretary of Bangladesh
St-035	November 2019, Feb. 2020, May 2021	Retired	Former International Affairs Advisor to the PM

Appendix II: Semi-structured interview guide

The goal of the question here are to answer the research questions. This section indicates the types of questions asked over the course of a typical 60 to 90 minute interview. If the interviewee was limited on time, or the interview was conducted over more than one session, not all questions may be asked in an interview. I would be flexible with the order of questions to allow for a natural flow; similarly, though I would have a copy of written out questions on hand, I knew my interview guides by memory to improve conversational flow and build trust. When possible or needed, I would review questions with collaborators in advance or when working with a Bengali speaker for assistance with translation of certain words or concepts that required forethought. The questions are intended to be relatively informal, open-ended, non-leading, and free of jargon. If a planned question raised a further question or required clarification, the interview would go 'off-script' to further explore areas of interest. Some version of these questions was common across all interviews to support the development and identification of key themes.

- Tell me about your pathway to your current role – your education, previous work experience, and (if applicable) other roles held in the same office/institution.
- How would you describe your current role – your responsibilities, level of seniority, authority, engagement with any peers, superiors, subordinates?
- How do you view the relative role of national/local government, courts, civil society pressure, and private sector entities in addressing industrial water pollution?
- How do civil society organizations respond to water pollution, and how do they engage with one another, the government (local and national entities), and/or private sector institutions or associations?
- Under what conditions do you think that [state/market/society organizations] become involved in responding to water pollution? How sincere are these efforts?
- What are your thoughts on how the government approaches penalties for pollution in Dhaka? (Possible follow on depending on the response – Are penalties adequate? If not, what do you think is the problem? What could be done differently?)
- Which players/institutions do you view as exerting the most influence in supporting or undermining regulation to address water pollution in Dhaka?
- What are the main barriers to addressing industrial water pollution in the greater Dhaka watershed?
- Who/what institution is (or should be) responsible for paying to address these problems?
- How common or pervasive are these issues – is this special to Bangladesh, or a general issue?
- How has the role of international donor institutions changed in Bangladesh over time? How do you perceive the impacts of these changes on the direction of environmental regulation in Bangladesh?
- How do you view the relationship between [institution] and the Department of Environment?
- How do current legal frameworks regulate water pollution? What could be done differently regarding the approach to enforcement by brands? By the government of Bangladesh?
- How do you think these issues will change/develop over time in the future?
- Is there anything else that you would like to discuss that we haven't yet addressed?
- Close by asking for references to any other people to speak with.

Appendix III: High Court Directives (2019)

High Court directives of the 'rights of rivers' verdict (2019). All spelling and word usage preserved from translation.

Supreme Court of Bangladesh

High Court Division

(Special Original Jurisdiction)

Writ Petition No. 13989/2016

Human Rights and Peace for Bangladesh

---- Petitioner.

Versus

Government of Bangladesh and Others

---- Respondents.

Advocate Manzill Murshid with

Advocate Md. Sarwar Ahad Chowdhury

Advocate Ekhlas Uddin Bhuian

Advocate Ripon Baroi

Advocate Sanjay Mondal

---- On behalf of the Petitioner.

Advocate Syed Mafizur Rahman

--- On behalf of Respondent No. 2.

Advocate Md Imam Hasan with

Advocate Md Shahinul Islam

---- On behalf of Respondent No. 3.

Advocate Khandoker Shahriar Shakir

---- On behalf of Respondent No. 4.

Advocate Md Harun-ur-Rashid

---- On behalf of Respondent No. 10.

Advocate Md. Asaduzzaman

----- On behalf of Respondent No. 12.

Advocate A.M. Mahbub Uddin with

Advocate Saqeb Mahbub

---- On behalf of Respondents No. 13 to 21.

Advocate Mohammad Mehedi Hasan Chowdhury
Advocate Sheikh Fazle Noor Taposh
Advocate Apurbo Kumar Biswas
Advocate Josna Parvin
Advocate Upama Biswas
Advocate Swapnil Bhattacharya
---- On behalf of Respondents No. 22, 23.
Advocate Md Ekramul Hoque, Deputy Attorney General with
Advocate Purabi Rani Sharma, Assistant Attorney General
Advocate Purabi Saha, Assistant Attorney General
--- On behalf of Respondent No. 5.

Present:
Justice Moyeenul Islam Chowdhury
And
Justice Md. Ashraful Kamal

In the riverine Bangladesh, lifestyle and economy is entirely dependent on water. Most of our communication system is dependent on seas, rivers, canals etc. The most cost-effective means of transportation is the waterway. Civilisations have grown up on the banks of rivers and seas. Destroying the rivers is, after all, the same as our collective suicide. Destroying the rivers is like destroying our present and future generations. River polluters and encroachers are the enemies of our country, our independence and of humanity. River polluters are the killers of the human race. They are the killers of civilisation.

The clean and pristine water of the Turag River, the navigability of its waters, the riverine wind blowing over it, its scenic and incomparable beauty, the unrestricted movement and growth of its fishes, the control of pollution in Turag river and its conservation are all valuable and protected by the Constitution, laws and the Public Trust Doctrine. All rivers including the Turag must be made free of pollution and encroachment and must be made for transportation.

If 'special measures' are not undertaken in 'specially important circumstances', there is a possibility of irreparable harm which will be impossible to mitigate. The current matter is so significant, our existence is at the risk of extinction. The pollution and encroachment in the

Turag River has reached such terrifying levels, that, as the last option of protecting the River, we are declaring it as a legal person.

Therefore, the court orders that the current Rule is finalized without any cost as to expenses.

The 'inaction' of the Respondents with regard to the protection of the Turag River from pollution and encroachment have been undertaken without lawful authority thus, it is declared that such 'inaction' have no legal authority, and it is directed that the respondents ensure that the illegal structures, encroachment and pollution in the Turag River shall be removed at the expenses of the encroachers, as is their duty. We, therefore, issue the following orders and directions:

1. The broad explanation, analysis and description of the Public Trust Doctrine made in the present judgment is a part of the law of Bangladesh.
2. Turag river has been declared as a legal person/legal entity/living entity. All rivers flowing within and across Bangladesh shall be granted with the same status.
3. The River Conservation Commission has been declared as the legal guardian (person in loco parentis) with regard to the conservation, protection and development of and removal of pollution and encroachment from Turag and other rivers. The National River Conservation Commission, with the cooperation of concerned organizations, departments and ministries shall be bound to remove all pollution and encroachment from rivers and make it fit for navigation, and protect, conserve and develop the rivers. All the concerned organizations, department and ministries shall be bound to provide all necessary assistance.
4. The 'Precautionary Principle' and 'Polluter Pay Principle' are declared as parts of our laws.
5. The Planning Commission, LGED, Water Development Board, BIWTA, BADC and other concerned officials shall notify the National River Conservation Commission regarding any new programme regarding the Turag and other rivers and shall obtain a no-objection certificate from the same.
6. Respondents No. 10 to 23 shall remove their encroachments from the concerned rivers within the next 30 (thirty) days. Otherwise, the National River Conservation Commission, with the assistance of concerned authority, shall evict the respondents at the cost of the Respondents themselves. The encroachers shall pay for the removal of the encroachment and for the return of the river to its earlier condition.

7. Respondent No. 1 shall make necessary amendments to the National River Conservation Commission Act 2013, declaring river encroachment and river pollution criminal offences, imposing strict penalties for the offences and laying out the procedure for filing, investigating and trying such cases, and shall notify the court regarding the steps it has undertaken in that regard by submitting an affidavit within the next 6 (six) months.
8. The SPA, RRSO satellite with the help of RS/GIS developed technology shall be used for the preparation of the digital database and the determination of the geographical location of rivers, lakes, canals and waterbodies; and maps of all Unions, Upazila and Districts are to be prepared and displayed as billboards in open spaces by the concerned departments and the upazila and district administrative office shall take steps to ensure that any citizen, upon payment of a fixed fee, shall be able to collect such map.
9. Respondent No. 1 shall undertake all necessary measures to make the River Conservation Commission an effective and independent body.
10. All the public and private schools, colleges, schools and colleges, colleges, madrasas, vocational training institutions, public and private institutions of Bangladesh shall, in every two months, conduct a one-hour awareness session on the importance of rivers and their conservation and protection from pollution in every class and shall conduct regular field visits to the rivers in the nearby areas. Apart from this, all educational institutions are directed to take measures to display local and international documentaries on the importance of rivers, nature and environment on large-screens. The Ministry of Education is directed to supervise whether all educational institutions are conducting classes as per these directions.
11. All small, medium, large, public and private industries and factories shall, in every two months, conduct one *'discussion'* on river with the participation of all its workers. The Ministry of Industries is directed to supervise whether the industries are undertaking necessary measures in this regard.
12. All Union Parishad Chairmen, Upazila Chairmen, Paurashava Mayors, and District Parishad is directed to conduct a day-long rally related to rivers, art exhibition, and other competitions, discussions and seminars once every three months in all Unions, Upazilas, Paurashavas and Districts.
13. Every Union, Upazila, and District shall prepare a list of polluting individuals and corporations and encroachers in rivers within their territory and all chairmen and

district administrators are directed to hang such list in an open place as a billboard for the awareness of the people within 6 (six) months.

14. Since the environment, climate and waterbodies, i.e seas, rivers, seashores, riverbanks, lakes, canals, marshes, wetlands, drains, waterfalls and open waterbodies, hills, mountains, wildlife, air are public trust properties, or public property, therefore, any person or corporation against whom complaints of such land grabbing or pollution exists shall be ineligible for any loans, and such necessary directions as may be necessary shall be issued by circulars and notices by the Bangladesh Bank to all its scheduled banks. The Governor of Bangladesh Bank is directed to submit an affidavit regarding the progress in the realization of these directions to notify the court in that regard.
15. Since the environment, climate and waterbodies, i.e seas, rivers, seashores, riverbanks, lakes, canals, marshes, wetlands, drains, waterfalls and open waterbodies, hills, mountains, wildlife, air are public trust properties, or public property, therefore, any person or corporation against whom complaints of such grabbing or pollution exists shall be ineligible for nomination as a candidate for all Union, Upazila, Paurashava, district and national elections and the Election Commission is directed l incorporate these directions and notify the court with an affidavit within the next 6 (six) months.
16. Secretary, Ministry of Education is directed to include subjects related to river conservation and pollution in the curriculum of schools, colleges and universities with the aim of raising awareness about rivers.
17. The Director General, Bangladesh Television is directed to broadcast documentaries prepared in the country and abroad on rivers, nature and environment every Friday for one hour on Bangladesh Television. Further, private television channels are directed to broadcast documentaries made in the country and abroad on rivers, nature and environment for one hour, one day every week.

The current writ petition shall continue in the form of a ***Continuing Mandamus.*** It is further ordered that in case of any doubts arising out of the directions issued in the present judgment, the applicants, respondents, National River Conservation Commission, Election Commission, Bangladesh Bank, Ministry of Labour and Employment, Ministry of Education and other concerned ministries, government and non-governmental organizations and any citizen of Bangladesh can file an application requesting the directions of the High Court Division.

Appendix IV: Photos of Bangladesh

The bridge crossing the Buriganga river from which this thesis found its name (Peters 2018). The white Bengali text reads "Nodi bachle bachbe desh, firiye anbo shonar desh." This translates to: "If the river lives, the country will live - and bring back golden Bangladesh"

Many low-income households populate the banks of rivers across Dhaka (Peters 2019). Here, a woman approaches the water's edge with a bucket in hand.

Household activities including clothes washing take place at the edge of the river (Peters 2018).

Rubbish accumulates in some stretches of rivers due to flow patterns; here, a woman navigates a 30cm/12in thick layer of mostly plastic waste in the Tongi river canal (Peters 2018).

Wastewater from a textile dyeing mill is disposed directly into the Turag river (Peters 2017).

A student-led initiative from the Independent University of Bangladesh (IUB) and Riverine People to clean up trash from a stretch of the Balu river (Photographer unknown 2019).


Households, mixed informal economy activities (cloth drying), and riverine transport along the banks of the Sitalakhya (Peters 2020).

Evidence of evictions of riverine households by the Inland Water Transport Authority (IWTA) on the basis of returning watercourses to 'historic' boundaries according to the 2019 verdict (Turag River, Peters 2021).