

1 Introduction: Eco-Certification and Emerging Economies

In the early 1990s, Mr. H, who was in his thirties at that time, was already the general manager of a state-owned tea company in the Jiangxi province of China. However, he was struggling to find customers for tea produced in his county, Wuyuan—which had been famous for its green tea for more than 1,000 years—in a free and open market after the government had ceased to control the product price and distribution. He had tried a variety of strategies, including building connections with retailers in Shanghai and Beijing, developing different types of tea products, and applying for a government award of green food. Unfortunately, even after several years, all such efforts did not increase his sales. Finally, with the support of the China Green Food Development Center, affiliated with the Chinese Ministry of Agriculture, he participated in an international expo and met representatives from a German trading company. These German merchants indicated that they would be interested in Mr. H's products if his tea had the organic certification recognized by the European market. Mr. H soon sensed opportunities through this encounter and invited the German company for a visit to Wuyuan. In August 1997, the company and its partner certifier visited the tea farms supplying Mr. H and were satisfied by the conditions they found there. After conducting an evaluation, the auditors believed that these farms met the relevant organic standards, so the German company decided to place an order for 200 kilograms of tea with Mr. H.

Twenty years later, in 2017, when telling me about his first experience with certification, Mr. H proudly stated that by selling only organic and Fairtrade tea certified according to international standards, his company has been able to export more than 1,000 metric tons of products per year, which represents more than half of China's organic tea exports to Europe. He emphasized that organic and Fairtrade certifications have completely changed his business

trajectory and that he is personally so committed to the vision of sustainable production championed by these certification programs that he continues this practice even though this is costly.

The story of Mr. H is a telling example of how eco-certification has been taken up and understood by Chinese businesses.¹ Yet his experience may sound unusual to many of his peer companies, who barely recognize various certification programs and do not understand their required standards. In fact, sustainability certification and labels remain new to the Chinese market. About 10 years ago, when I left China to study in Switzerland, I heard the term “certified sustainable timber” for the first time and saw the “tick tree” logo of the Forest Stewardship Council, which was a common sight in European supermarkets for anyone paying attention to product packaging. Since then, every time that I go back to my hometown, Nanjing, I have tried to find the ecolabels that I had seen in Europe while grocery shopping. In the beginning, I was quite disappointed and wondered why these labels “disappeared” in China. But after a few years, I was finally able to find some familiar logos in supermarkets, coffee shops, and even on e-commerce platforms. Obviously, not all companies operating in China have embraced these programs initiated and managed by non-state actors, and certified products are likely to be more common in certain sectors than in others. But there is no doubt that some changes have happened in China regarding this novel mode of governance.² This book seeks to explain how such changes happened in China and the variation across different sectors and companies in their support for eco-certification. By showing the conditions under which transnational eco-certification arise in the unique context of China, the book will shed light on the potential and limits of this new governance mode in driving the world’s most populous country toward sustainable production and consumption.

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Over the past two decades, non-state actors, including both businesses and civil society organizations, have launched various initiatives operating across national borders to address urgent sustainability challenges, such as environmental degradation, climate change, and labor rights violations (Auld, Bernstein, and Cashore 2008; Dauvergne and Lister 2013; Bulkeley et al. 2014). Being conceptualized as “transnational governance,” this phenomenon denotes “the processes in which non-state actors adopt rules that seek to move behavior toward a shared, public goal in at least two states”

(Roger and Dauvergne 2016: 416).³ Among many transnational governance initiatives, eco-certification has been seen as one of the most prominent modes for embedding environmental and social norms in global markets (Raynolds 2000; Bernstein and Cashore 2007). Its potential lies in the assumption that demand along the supply chain can drive businesses to adopt good practices for social, environmental, and economic sustainability. In fact, with the rise of global value chains where the full range of activities that bring a product from its conception to its end use are carried out on a global scale, individual states face enormous challenges in regulating sustainability impacts of many economic activities (Gereffi, Humphrey, and Sturgeon 2005; Gibbon, Bair, and Ponte 2008). Therefore, by incentivizing firms' compliance, eco-certification holds the promise to significantly improve governance in global value chains. Based on this premise, certification has been applied quickly in various sectors and also widely studied in the literature on environmental governance and sustainable development.

Our generation has witnessed a dramatic rise of eco-certification in global sustainability governance. For commodities like coffee, cocoa, and even tea, eco-certification now regulates more than 20% of the global production volume, and therefore, no longer seems like a new phenomenon in niche markets (Willer et al. 2019). Today, consumers in Europe and North America can easily find labels indicating that products are from organic farms, sustainable forests and fisheries, or fair trade cooperatives. Moreover, although most of the existing certification programs originate from developed countries, over the past decade, many have expanded their geographic reach, trying to promote sustainable production and consumption in developing countries and emerging economies. For instance, as of 2015, Rainforest Alliance, a leading certification program for sustainable agriculture, had been introduced to tea farmers in 18 countries, and the tea produced on its certified farms was sold in 125 countries (Milder and Newsom 2015). Similarly, as of March 2017, the Marine Stewardship Council's standards had been adopted by over 300 fisheries in 34 countries and by processors and retailers in 94 countries (MSC 2017b).

However, despite efforts made by certification programs to increase their global presence, in many sectors, progress on the market uptake of certified products remains slow. To date, only 1.5% of the area on which soybeans are planted globally is compliant with at least one certification standard, and the percentages are estimated to be less than 10% for bananas, farmed

fish, and sugarcane (Potts et al. 2016; Willer et al. 2019). Meanwhile, the growth of eco-certification is uneven across regions such that sustainable production practices may not be adopted in the places where they are most needed. As an example, most of the farmed fish in the world is produced and consumed in developing countries with weak regulations on environmental and social issues; yet sustainable seafood standards have been rarely used in these countries (Bailey et al. 2018; Belton, Bush, and Little 2018).

The limited use of eco-certification around the world poses a key challenge to this new mode of sustainability governance. With insufficient market share, eco-certification is incapable of generating considerable environmental and social benefits. The assumption here is that if certification programs set credible and rigorous standards, the widespread adoption of their standards is likely to drive dramatic change in business practices throughout global supply chains, which could contribute to maintaining sustainability of the Earth system.⁴ Hence, to make this new governance mode more effective, we must investigate the challenges it faces in gaining market share around the world.

Why, despite more than 10 years of growth, have many eco-certification programs still not become mainstream in their markets? Many researchers have addressed this question by uncovering the barriers preventing actors in the Global South from adopting relevant standards, which include the difficulty of Southern producers—especially smallholders—to change practices (Klooster 2006; Marschke and Wilkings 2014; Brandi et al. 2015), insufficient financial incentives and technical support (Cashore et al. 2006; Loconto and Dankers 2014), and domestic rules, institutions, and even political cultures that run counter to transnational governance (Bartley 2010; Andonova 2014; Peña 2016). Moreover, rising consumption in the Global South over the past decade or so has further increased concerns about the prospects of eco-certification to lead sustainability transformations in global markets (Mayer and Gereffi 2010; Nadvi 2014). In fact, some preliminary evidence shows that large emerging economies, such as China and India, have become major end markets for many commodities but still lack consumer demand for sustainable products (Kaplinsky, Terheggen, and Tijaja 2011; Schleifer 2016). Thus, the extent to which these countries embrace sustainability governance in global value chains seems to determine the overall impact of the relevant programs. In other words, to become an effective governance mode to support the sustainable

development of human society, eco-certification needs to gain enough traction in large emerging economies (ISEAL Alliance 2015).⁵

While emerging economies have become increasingly important for almost all eco-certification programs, the literature on sustainability governance has paid insufficient attention to the dynamics in this part of the world. This may be because early studies tend to explore why non-state actors developed governance systems without state enforcement and because most certification programs were created first in the Global North or by Northern-based stakeholders (Vogel 2008; Hale 2020). As a result, to date, we still know little about whether and through which mechanisms transnational governance is taken up in emerging economies.

This research gap is especially astonishing in the case of China, a country that is now at the center of global value chains by being the world's largest producer and consumer of many products (Gereffi 2014). Table 1.1 lists China's position in the global supply chains of several commodities that are targeted by eco-certification. The figures are significant: in 2015, China produced, by volume, over 62% of the aquaculture and 40% of the tea in the world; it was also the world's largest consumer of soybeans (29%) and third largest consumer of palm oil (10%).⁶ These numbers suggest that production and consumption in China have significant impacts on the environment and people, both inside and outside of the country, causing deforestation, depletion of fisheries, soil and water pollution, and antibiotics resistance (Liu and Diamond 2005; Hao et al. 2016; He et al. 2018). Therefore, the choices that government officials, businesses, and consumers in China are making on sustainability issues not only influence the health and well-being of the country but also "the very future of the planet" (Shapiro 2016: 2). If certification programs thrive in China with standards that are carefully designed and implemented, they could help the world's most populous country continue its development without harming the ecosystems on Earth.

When considering China's engagement with global sustainability governance, researchers have pointed out both challenges and progress. On one hand, many have worried that China's rapid development poses significant challenges to protecting our planet (e.g., Liu and Raven 2010; Economy and Levi 2014). For a very long time, the country has prioritized economic growth over environmental protection and social equity; more recently, its expanding resource quest around the world has generated many negative

Table 1.1

China in global commodity chains and the relevant eco-certification programs

Commodity	China's position in global supply chains	Leading transnational governance programs	Year certification started in China
Banana	Second largest producer (9%); second largest consumer (13%); fourth largest importer (6%)	Rainforest Alliance Fairtrade International	Not yet Not yet
Cotton	Second largest producer (23%); largest consumer (31%); third largest importer (13%)	Better Cotton Initiative	2011
Palm oil	Third largest consumer (10%); second largest importer (13%)	Roundtable on Sustainable Palm Oil	2011
Roundwood	Third largest producer (9%); second largest consumer (11%); largest importer (37%)	Forest Stewardship Council Programme for the Endorsement of Forest Certification	2001 2007
Seafood	Largest producer (18% for wild catch and 62% for aquaculture); largest consumer (37%); largest exporter (14%); largest importer (6%)	Marine Stewardship Council Global Aquaculture Alliance's Best Aquaculture Practices Aquaculture Stewardship Council Friend of the Sea	2005 for processors and 2014 for fisheries 2006 2015 Not yet
Soybean	Fourth largest producer (4%); largest consumer (29%) and the largest importer (62%)	Roundtable on Responsible Soy	2013
Sugarcane	Fourth largest producer (6%); second largest consumer (9%); largest importer (10%)	Bonsucro	Not yet
Tea	Largest producer (38%); largest consumer (33%); second largest exporter (19%)	Rainforest Alliance UTZ Fairtrade International	2007 2014 2001

Notes: Percentages in parentheses indicate the proportion of China's production, consumption, or trade volume over the global total as of 2015. The European Union does not count as a single economy. Organic certification is excluded from the table, as different countries or regions have their own schemes subject to public regulation.

Data sources: FAO 2018a, 2018b, 2018c.

impacts on the global environment. Researchers with this concern often attribute the limits of environmental governance in China to the country's decentralized, authoritarian political system, arguing that it causes a lack of transparency, official accountability, and rule of law in the relevant policy processes (Economy 2010, 2014). One of the most frequently cited issues in this respect is the Chinese state's control over civil society, which has prevented citizens from actively participating in sustainability governance. This institutional feature may have huge implications for eco-certification programs, as many of them were developed by NGOs and became prominent in their markets through activist campaigns targeting businesses (Bartley 2003; Sasser et al. 2006; Bloomfield 2017a). From this perspective, the permissive socio-political environment for the rise of private governance in the West may simply not exist in China. If this is the case, eco-certification programs led by non-state actors will be limited in their ability to operate in China and gain support of local stakeholders.

On the other hand, scholars of environmental politics have suggested that China has been gradually transforming into a global leader in the fight to save the planet by driving a global clean energy revolution, phasing out coal consumption, controlling pollution, and developing a system of green finance (Finamore 2018). In fact, over the past decade, Beijing has taken many strong steps toward protecting the environment and promoting sustainable development. Progress has been especially noticeable in the development of the clean energy industry (Lewis 2013; Gallagher 2014). In 2014, the central government launched a "war on pollution" by leveraging a range of policy tools throughout the country, including administrative controls, strict regulations, economic incentives, and public campaigns (Wong and Karplus 2017). More fundamentally, the concept of "ecological civilization" has been strongly endorsed by Xi Jinping since his accession to power in 2012, and by adding the concept to China's five-year plan and constitution, the government identified establishing an ecological civilization as a long-term task critical to the future of China (Hansen, Li, and Svarverud 2018). Hence, given the emphasis on environmental governance by the Chinese state, we may also expect that eco-certification programs can find a footing in the country to disseminate their standards, especially if the government finds this new governance mode useful in addressing some sustainability problems.

Bearing in mind both the pessimism and optimism about China's sustainability governance, I began my research on the rise and spread of

eco-certification in the world's largest emerging economy. After obtaining access to various data and speaking to many practitioners working for different stakeholders, I realized that the picture is much more nuanced than what was expected by many other researchers. Over the past two decades, the role of transnational certification programs has evolved quickly in China's governance landscape, yet the same governance mode has grown unevenly across different supply chains. Therefore, researchers and practitioners should not infer the potential of transnational sustainability governance in China based on the country's sociopolitical system. Instead, the specific ways in which transnational and domestic stakeholders interact with one another often determine to what extent this new governance mode can thrive in the world's largest emerging economy.

More specifically, I find that transnational governance programs can be quickly adopted in China's commodity chains when they have support from actors in the Chinese state bureaucracy. In other words, some Chinese state actors, including those in extrabureaucracies (or *shiye danwei*), especially state-sponsored industry associations, are willing to leverage private rules set by transnational certification programs to achieve their own development goals. Unlike the conventional expectation that the Chinese state has little interest in or is unwilling to accept transnational governance, by identifying interests of different actors in the "state," my research shows that national industry associations can be important allies of transnational programs to promote sustainability governance. Due to their influence and networks in the country, these domestic actors could effectively nudge local businesses to adopt sustainability standards, although environmental conservation may not be their primary goal. In many instances, such support is a more important driving force than market mechanisms for the rise of transnational sustainability governance in China.

I substantiate this argument by comparing the dynamics of transnational certifications in three of China's agricultural supply chains. Before introducing my analytical framework and empirical cases, it is necessary to consider, in the rest of this chapter, the emergence of non-state actors and institutions in global environmental politics and the influence that China may have in the new phenomenon of transnational governance. After a brief explanation of my research approach, the chapter ends with an outline of the book.

1.1 Transnational Sustainability Governance in a Globalized World

Since the 1990s, the global governance system has undergone a major transformation from a largely state-led process into a multi-actor system to produce global public goods (Ruggie 2004). This transformation of “transnationalism” is especially significant in environmental politics due to the scale of many environmental issues, economic globalization, and expansion of social movements (Andonova and Mitchell 2010; Newell, Pattberg, and Schroeder 2012; Hale 2020). A key manifestation of it is the rise of governance initiatives led by non-state actors, operating across national borders, through which rules are created, compliance is elicited, and goods are provided in pursuit of collective goals (Cutler, Haufler, and Porter 1999; Hall and Biersteker 2002; Djelic and Sahlin-Andersson 2006; Hale and Held 2011). As a new governance mode, these initiatives attempt to provide a response to the global environmental crisis.

A rich literature attempts to conceptualize this phenomenon of transnational governance and explain why and how it has occurred in the field of sustainable development. One of the most influential conceptualizations is non-state market-driven (NSMD) governance, which refers to institutions using global supply chains to recognize, track, and label products and services from environmentally and socially responsible businesses (Cashore 2002; Bernstein and Cashore 2007). Relatedly, research has focused on the governance strategy of disclosing information to consumers (Bullock 2017). Another important lens of conceptualization sees such institutions as “voluntary clubs” that provide excludable but nonrivalrous public goods (Prakash and Potoski 2006a).

Overall, different conceptual strands weave together to suggest three key features of transnational governance.⁷ First, there is no use of states’ sovereign authority to make and enforce rules. This does not exclude the possibility that states remain influential stakeholders. But transnational governance programs do not derive their governing authority from states, nor are they accountable to states. Second, governance is achieved by reconfiguring global markets. To do this, programs draw on various policy tools, including price premium, information disclosure, and moral pressure, to change the costs to or benefits for their targets. Third, there are some mechanisms to verify compliance. In this respect, third-party auditing is

often deemed as trustworthy in making private rules prescriptive. Therefore, eco-certification programs created by firms and NGOs that operate across borders are a subtype of transnational governance. These programs set standards for production processes to ameliorate sustainability issues associated with relevant supply chains, such as environmental degradation and labor rights violation.

To identify the forces driving the emergence of transnational governance, many scholars have underscored the limits of state-based regulation in reducing the environmental and social impacts of increasingly globalized production systems (Knill and Lehmkuhl, 2002; Falkner 2003; Vogel 2008). From this perspective, transnational governance is understood as a functional response to serious sustainability challenges, which often transcends national boundaries. This functionalist explanation could be attributed to broader changes in the economic and social structures of world politics, including the growing power of multinational companies (Gereffi, Humphrey, and Sturgeon 2005; Clapp and Fuchs 2009), the rise of transnational activist groups (Wapner 1995; Bartley 2003), and even an ideological shift toward neoliberalism (Bernstein 2002; Busch 2014).

Following this functionalist logic, a large body of scholarship considers the role played by different stakeholders in making and supporting transnational institutions and uncovers the strategic behaviors employed by relevant actors (Mattli and Woods 2009). From the perspective of businesses, this strand of research has highlighted the function of transnational institutions in promoting collective action in the market in order to protect firms' reputations, build competitive advantage, and preempt government regulation (Haufler 2001; King, Lenox, and Terlaak 2005; Esty and Winston 2006). For example, studies drawing on club theory suggest that firms have self-interest in adopting transnational rules that produce positive social externalities, because their memberships in relevant governance programs bring them rewards from stakeholders (Prakash and Potoski 2007b; Potoski and Prakash 2009). Another strand of research focuses on civil society and social movements, suggesting that NGOs leverage their moral authority and expertise to initiate transnational governance as institutional arrangements to fill the regulatory void left by states, especially in the developing world (Gereffi, Garcia-Johnson, and Sasser 2001; Sasser et al. 2006; Conroy 2007).

Many scholars have also taken into account the involvement of different stakeholders and their interactions in the formation of transnational

governance. Abbott and Snidal (2009) use the metaphor of a “governance triangle” constituted by states, NGOs, and businesses to depict the roles of different stakeholders. Bartley (2007) finds that transnational forest and labor certification systems are the outcome of political contestation among states, NGOs, and social movements rather than the purely market-based solutions proposed by some firms. A consequence of the conflicting interests of different stakeholders is the creation of rival systems reflecting the divergent interests of their initiators (Cashore, Auld, and Newsom 2004; Fransen 2011). In fact, research focusing on stakeholder interaction does not deny the potential distributional effects of transnational governance, as some groups always have more influence than others on the design of new governance arrangements (Graz and Nölke 2008; Ponte 2014). Thus, studies taking a critical perspective suggest that transnational governance is likely to favor powerful market actors and reinforce inequality in global value chains (Fuchs, Kalfagianni, and Arentsen 2009; Bloomfield 2012).

More recently, the role of the state in the rise and expansion of transnational governance has increasingly gained scholarly attention. In the field of environmental governance, abundant research finds that states have actively engaged in the initiation of many transnational governance systems, and they have done so in various ways, including providing direct funding and technical advice, setting necessary regulatory frameworks, and orchestrating the activities of relevant non-state actors (Andonova 2014; Eberlein et al. 2014; Hale and Roger 2014). Considering the dynamics in the transnational arena, Green (2014) further suggests that the heterogeneity of state preferences is a key factor in determining the form of the governance authority that private actors can have. Regarding the interaction between states and transnational governance, the European Union has been found to be one of the most interesting regions where public authority has strategically and selectively intervened in a number of transnational governance programs in order to protect domestic producers and reduce policy costs (Gulbrandsen 2014; Renckens 2020). Hence, researchers seem to no longer debate whether or not states make influence on transnational governance, but instead look more carefully at how they influence the functioning of relevant systems.

In terms of their empirical focus, early studies primarily investigate a few archetypes of transnational governance, such as the Forest Stewardship Council (FSC) or organic and fair trade certification (e.g., Raynolds 2000;

Cashore 2002; Pattberg 2005; Taylor 2005). Gradually, however, the literature has seen the proliferation of transnational governance across sectors and issue areas and tried to explain such spillover effects and compare relevant governance programs. Highlighting the critical roles played by transnational environmental NGOs, like the World Wide Fund for Nature (WWF), and multinational brands in diffusing the certification model across sectors, Auld (2014) shows that the market and political conditions these actors have faced shaped the early characteristics of the governance rules and certification standards that relevant programs adopt. Other researchers draw on sociological perspectives to describe the cross-sectoral spillover of transnational governance systems as the rise of an organizational field, which embodies shifting norms and discourses on the legitimate procedures to achieve sustainability (Dingwerth and Pattberg 2009). Additionally, a growing population of eco-certification programs has triggered more and more large-*N* comparisons to identify the determinants of credibility, rigor, and transparency in each program (van der Ven 2015; Darnall, Ji, and Potoski 2017; Schleifer, Fiorini, and Auld 2019).

Although the field of transnational governance has increasingly grown to capture a range of questions related to the rise and continuous expansion of relevant programs, for a very long time, the mainstream literature primarily focused on questions of institutional design and legitimacy. As a result, little is known about the functioning of transnational governance “on the ground,” including how it has been practiced in different places, the influence it has had on different stakeholders, and whether it has achieved its intended impacts (Bartley 2018; van der Ven and Cashore 2018). Meanwhile, early scholarship has shown a regional bias toward developed countries, where most certification schemes were originated (e.g., Cashore, Auld, and Newsom 2004; Gulbrandsen 2010; Gale and Haward 2011). This bias seems to paint an incomplete picture of the role of transnational governance in today’s global value chains in which the Global South (and large emerging economies in particular) has moved to a central position. Therefore, to assess the potential of transnational governance for maintaining sustainability of the Earth system, it is time to turn our focus to the involvement of emerging economies in relevant programs.

Regarding emerging economies, three important questions remain largely unanswered. First, to what extent are actors in emerging economies willing to accept the existing modes of transnational governance, such as

eco-certification? To date, the implications of growing production and consumption in emerging economies for the global spread of transnational governance are still under debate. On one hand, several studies have found that South-South trade undermined the rise of transnational sustainability governance in commodity-producing countries in the developing world, meaning that buyers and consumers in emerging markets do not require their suppliers to adopt high standards (Kaplinsky, Terheggen, and Tijaja 2011; Schleifer 2016; Adolph, Quince, and Prakash 2017). On the other hand, there has been evidence of a growing uptake of transnational certification programs in some Southern markets, suggesting that companies and consumers in the Global South may be interested in sustainable products (Pickles, Barrientos, and Knorringer 2016; Schleifer and Sun 2018). Therefore, the existing literature has yet to carefully interrogate how market and political conditions in fast-growing emerging economies may influence the uptake of transnational sustainability governance.

Second, what could incentivize actors in emerging economies to support transnational governance? Given the power imbalance in global value chains and relatively low consumer demand for sustainable products, previous studies often assumed that businesses in the Global South lack the agency to voluntarily join eco-certification programs. In other words, Southern actors may only adopt transnational rules under pressure from their Northern customers. Yet recent firm-level research finds that some Southern businesses have proactively upgraded their sustainability standards to differentiate their products (Malesky and Mosley 2018; Bloomfield 2020). Moreover, as businesses in emerging economies have been well integrated into global value chains and frequently socialized with other stakeholders, they may become familiar with relevant transnational governance systems and find some benefits to adopting sustainable practices. However, the interest of these Southern firms in sustainability governance does not necessarily translate into support for existing transnational rules, as they may develop—often together with other Southern stakeholders—homegrown systems, including standards and certification programs, to complement or supplement Northern-developed programs (Schouten and Bitzer 2015; Wijaya and Glasbergen 2016; Sun and van der Ven 2020). Hence, it is crucial to investigate to what extent Northern-developed transnational governance meets the needs of actors in emerging economies and the responses of the latter to the transnational programs introduced into their respective countries.

Third, past research tends to see emerging economies as a unified category with very few comparative studies, not only across countries but also within countries. However, in addition to the huge discrepancies among emerging economies, each country is highly diverse across different sectors and regions. As research has suggested that the value chain characteristics and the political economy in each sector shape the initiation and development of transnational governance (Auld 2014; Bartley et al. 2015; Fransen and Conzelmann 2015), we must also study such sectoral factors to understand how transnational rules are spread in emerging economies. Such within-country variation is a particularly salient issue for China due to the country's size and the varied institutions and regulations across industries and issue areas.

1.2 China: An Important but Underresearched Case

As the world's largest emerging economy, China should be among the most important destinations for transnational governance. Besides its sheer size, China's authoritarian regime also makes the country unique by posing nontrivial risks for transnational non-state actors. Unfortunately, the mainstream literature on transnational governance has largely focused on places where political economy differs significantly from the Chinese context.⁸ As a consequence, we are still not sure how transnational governance functions under China's authoritarian regime and to what extent this new governance mode could contribute to the country's sustainable development. The answers to these questions have large implications for the future of the Earth system governance and, ultimately, our planet's sustainability.

In the past, the authoritarian rule in China has made many researchers on sustainability governance concerned about the transformative capacity of transnational rules and standards in this important country. This pessimistic view is based on the limited space left by the party-state for potential private regulators, such as environmental activists or social enterprises (Drezner and Lu 2009; Kaplinsky, Terheggen, and Tojaja 2011; Economy 2014). In fact, experiences around the world seem to suggest that a strong civil society is conducive to the rise and growth of transnational governance, as NGOs could serve as independent watchdogs and organize boycott campaigns to put pressure on businesses for adopting good practices (Sasser et al. 2006; Conroy 2007; Bloomfield 2014; Toffel, Short, and

Ouellet 2015; Chrun, Dolšak, and Prakash 2016). By contrast, existing studies on non-democracies has suggested that authoritarian states are likely to restrict transnational governance due to their unwillingness to accept the rule-making authority of non-state actors (Buckingham and Jepson 2013; Malets 2015; Bartley 2018).

At the same time, consumer research on China has repeatedly reported growing awareness of corporate social responsibility and sustainability standards, as well as some degree of stated willingness to purchase products made by companies certified as socially responsible (Xu et al. 2012; Cai and Aguilar 2013; Y. Li et al. 2016). This trend seems particularly salient among urban, well-educated Chinese consumers, who are not always sensitive to price when making their purchasing decisions. In other words, certain market conditions in China already may be suitable for the rise of transnational sustainability governance. Indeed, those who have been observing China have seen opportunities for eco-certifications and standards to bridge some regulatory gaps left by the Chinese state across different issue areas, including food safety, the trade of illegal wood, and fisheries management (Hanson et al. 2011; Hoare 2015; Yasuda 2015). Data reported by many certification programs have actually shown a continuous increase in the number of certified producers in China (ISEAL Alliance 2015; Willer et al. 2019). However, without in-depth research on the relevant processes, questions remain about how these programs were introduced into and quickly spread throughout China and whether variation exists across different sectors and programs. More fundamentally, linking such development to the country's authoritarian context, the question of how the Chinese state views transnational governance remains unanswered: Does it see rules and standards made by transnational non-state actors as a threat to its own authority or as an opportunity to bridge governance shortcomings in managing sustainable development? Given the government's strict regulations on the activities of foreign NGOs and businesses, the rise and growth of transnational eco-certification in China seems puzzling.

1.2.1 Key Argument

To explain the promise and limits of eco-certification in China, this book takes into account the institutionalized processes in the country's domestic governance landscape, which differ significantly from the dominant processes in Western democracies (Guttman 2015; Young et al. 2015). To do

so, I unpack China's state bureaucracy and its interactions with the market to identify various forces that may drive companies to embrace eco-certification programs created by transnational non-state actors. These forces include pressure from foreign buyers and investors, activities of private governance programs, and the structure of domestic industry. Therefore, in this book, I first build a framework for considering these factors in the political economy of China and how their interactions condition the rise of transnational governance.

Applying this framework to investigate three of China's agri-food supply chains, I find that some actors in the Chinese bureaucracy, especially state-sponsored industry associations, may be willing to accept the authority of transnational governance, and their support can lead to a rapid spread of eco-certification in the country. In contrast, without such domestic support from the state, transnational certification programs would have a difficult time attracting businesses in China. While reaffirming the state's influence on non-state actors, this finding shows a more nuanced picture of the interactions between transnational governance programs and the Chinese state than the pessimistic projections offered by many existing studies on the future of eco-certification in emerging markets. It thus spurs further reflection on the "private" nature of transnational governance when the relevant systems operate in China, a country where the boundary between "state" and "non-state" is often blurry. The Chinese case also contrasts with conventional wisdom that the diffusion of private rules and standards are primarily driven by global markets. Additionally, in order to gain interest and support of Chinese state actors, transnational governance programs and their supporters need to proactively engage with their potential allies in China and make these Chinese stakeholders realize the benefits they can get from transnational governance.

An important caveat of this study is that it focuses only on the adoption of eco-certification programs by businesses without assessing the sustainability impacts ultimately made by these programs. The latter will be determined by several factors beyond the mere adoption of relevant standards, including the nature of the standards, their enforcement, and preexisting natural conditions. Hence, we cannot assume a causal relationship between rule adoption and positive environmental and social impacts. However, although it is not sufficient, adoption is a necessary condition of impact, because without a critical mass of adopters, transnational governance cannot

change widespread practices of supply chain actors in ways that lead to improvements in the biophysical environment and socioeconomic outcomes (Espach 2005; Auld, Bernstein and Cashore 2008; Kalfagianni and Fuchs 2015). Additionally, by looking at who adopters are and their importance in the relevant industry, we can make some conjectures about the impact. In fact, as this book will show, eco-certification has only reached a small niche of the Chinese market so far and, therefore, is unlikely to provide substantive reforms on sustainable production and consumption.

Another important question beyond the scope of this book is the rigor and credibility of transnational standards, as some programs may be deemed as “greenwashing” due to their flawed rules and lack of compliance.⁹ Supporting these programs makes little, if no, contribution to sustainable development. To reduce noise caused by this factor, my study only focuses on the well-known programs that are likely to set credible standards. Even with this research design strategy, I recognize that some standards may still not be stringent enough to ensure sustainability.

Despite these caveats, through in-depth, systematic analysis of the rise and functioning of eco-certification in China, this book makes three contributions to the field of environmental governance and sustainable development. First, it complements existing theories on the diffusion of transnational governance by investigating the unique case of China, which differs from Western democracies. In this regard, my study joins a burgeoning literature on the interaction between public and private governance by shedding light on ways in which the state engages with transnational institutions in the world’s largest emerging economy (Andonova, Hale, and Roger 2017; Bartley 2018; Renckens 2020). Second, my study uncovers the agency of Chinese stakeholders—both state and non-state actors—in sustainability governance. Past research tends to suggest transnational influences as the major driver of sustainable practices in emerging economies, but this view may be too simplistic to capture the various motivations of Southern actors for changing their policies and behavior toward sustainability (Glasbergen 2018; Sun and van der Ven 2020; Starobin 2021). Hence, to examine the potential of transnational governance in China, we need to carefully investigate the incentives for domestic actors from their own perspective and understand their decision-making processes. Third, the book provides new insights into sustainability governance in China’s agri-food sector. While China’s importance in the global agri-food system is undoubtedly

demonstrated by its production and trade volume, the country remains terra incognita for both researchers and practitioners in commodity supply chain governance. My study aims to fill this knowledge gap by showing the opportunities and challenges in China for promoting sustainable production and consumption. It can, therefore, suggest practical recommendations for how to increase the uptake of eco-certification, as well as leverage other useful policies and tools in the emerging economy context.

1.3 Research Approach

This book examines the spread of transnational eco-certification in China at three levels of analysis: namely, across different commodity sectors, different certification programs, and different firms in the same sector. At the broadest level, I look at the growth of eco-certification in the three selected sectors (seafood, palm oil, and tea) to identify the factors leading to the rise (or lack thereof) of the relevant certification programs. In this comparison, I consider not only the current level of market uptake but also the progress over time in each sector. Moreover, when studying each sector, I assess variation among different certification programs and discuss how their features and strategies condition their uptake in China. Lastly, I use firm-level data to probe the determinants of firms' decisions about joining certification programs. This part of my study not only assesses the motivations of leading certified companies in each industry but also draws on statistical analysis—when industry-wide survey data are available—to discover the businesses' motives for supporting relevant standards.

The outcome variable of interest is operationalized as companies' adoption of the sustainability standards set by transnational certification programs (i.e., whether or not companies are certified). For comparison across sectors, I use the percentage of certified production over the industry's total output as a basic measure and the proportion of certified producers in the industry as a proxy.¹⁰ As data are not always available, sometimes I consider the adoption of eco-certification by leading companies (for instance, the 10 largest seafood companies by sales revenue) as an alternative indicator. Moreover, given the importance of China's domestic consumption, I also look at the sourcing policies announced by large retailers in the Chinese market, which could significantly affect the uptake of certified products. At the firm level, I consider companies' certification status, as well

as their efforts to promote certified products in the marketplace, such as their self-stated targets. Beyond considering the uptake level at any one point in time, my analysis pays special attention to the trajectory of each certification program since it entered China until 2018, which allows me to compare strategies and paths of growth in the country.

As mentioned above, the three Chinese agri-food supply chains covered by the book are seafood, palm oil, and tea. This small-*N* comparison at the sectoral level was chosen in order to find comparable cases for comparative research (Lijphart 1971; Collier 1993). More specifically, by focusing on the agri-food sector, I limit the variation between my cases in terms of product characteristics, which could otherwise significantly affect firms' reputational risks and, accordingly, their incentives to accept private governance (Mayer and Gereffi 2010; Fransen and Conzelmann 2015). Moreover, I only examine transnational certification programs akin to "hard laws"—namely, those requiring specific rules for production processes, third-party verification, and product labeling—in order to control for variation in the enforcement and monitoring mechanisms of private governance schemes, as these institutional features can affect firms' incentives for participation (Prakash and Potoski 2007b; Auld, Bernstein, and Cashore 2008).

The selection of these commodity chains is based on three criteria. The first and foremost criterion is that the three sectors vary in several market and political factors identified in chapter 2, which can significantly influence the spread of transnational governance in China. For example, they have different degrees of dependence on Northern markets and hence, do not receive the same level of pressure for the adoption of eco-certification from Northern buyers or investors. Specifically, the export to Northern markets remains important for China's seafood sector, its palm oil sector is under the influence of Northern multinationals, and the tea sector has very little connection to Northern markets. Meanwhile, the value chain structure varies in the three cases. This difference can condition the uptake of eco-certification, as large agribusinesses are more likely to support transnational sustainability governance. Comparing the three sectors shows that multinational traders are highly influential in China's palm oil supply chain and large seafood producers achieving vertical integration have arisen, but China's tea industry is still dominated by small-scale producers.

Furthermore, the likelihood of transnational certification programs receiving support from Chinese state actors also differs among the three chains

due to the variation in domestic governance systems. In this respect, regulation is highly concentrated in China's seafood chain (largely controlled by the Ministry of Agriculture), less so in the palm oil chain (the Ministry of Commerce regulating the import but not downstream industries), and very fragmented in the supply chain of tea.

These three sectors also vary in the number of transnational certification programs operating in the market and the existence of domestic certifications. With three major transnational programs and the domestic organic certification, the tea sector is a fragmented field for sustainability governance compared to the palm oil sector, which has only one transnational certification program (Lernoud et al. 2017). In the global seafood market, certifications are separate for wild capture and for aquaculture. To date, one transnational program focuses on wild capture, two on aquaculture, and another one on both; in addition, the Chinese government also created domestic certification programs for organic production and good agricultural practices (Potts et al. 2016). Hence, my cross-sectoral analysis can also probe the effects of the fragmentation of governance on business support for transnational sustainability standards (Fiorini, Schleifer, and Taimasova 2017). The existence of domestic programs may also influence the position of Chinese state actors on transnational governance if they are interested in supporting domestic programs.

Table 1.2 summarizes the abovementioned variations across the three commodity chains of China selected for this study. This research design is helpful for investigating the existence of the causal relationships between the hypothesized explanatory factors and the outcome of interest at the sector level (i.e., the entry and growth of certification programs in China; King, Keohane, and Verba 1994).

The second, but also important, criterion of selecting these three commodity sectors is that they have significant economic, ecological, and social impacts. In fact, all three commodities are critical sources of food and beverages for millions of people in the world, but their production and consumption have been associated with serious sustainability challenges (Clay 2004). For this reason, eco-certification has great potential to make critical contributions to the necessary sustainability transformations in the relevant supply chains. The third criterion of my case selection is that China has always been a major player in the global supply chains of these three commodities, as a leading producer, consumer, or both. Accordingly, Chinese

Table 1.2

Variation across three sectors for case selection

Sector	Degree of dependence on Northern markets	Regulatory agencies	Influence of large agribusinesses	Number of certification programs
Seafood	<i>Moderate to high</i> for processed products (23% of processed seafood exported, mostly to <i>developed</i> countries)	Ministry of Agriculture, supervising a national industry association	<i>Medium</i> with increasing industry consolidation	Two transnational programs for wild capture, three for aquaculture (existence of domestic programs for aquaculture)
Palm oil	<i>Extremely low</i> (0.1% of the import palm oil re-exported)	Ministry of Commerce regulating the import of the commodity, supervising a national trade association, but other agencies regulating downstream industries (e.g., food and chemicals) could be also relevant	<i>High</i> in the trading segment	Only one transnational program (no domestic program)
Tea	<i>Low</i> (16% of tea exported, but mostly to <i>developing</i> countries)	Regulatory functions shared by three ministry-level agencies, no leading association in the industry	<i>Low</i> due to many small-scale producers	Three transnational programs (existence of domestic programs)

Note: The percentages in the “degree of dependence” column are calculated based on the FAO’s estimations of average production and export volume in China in the 2010s.

actors’ support for eco-certification would have important implications for the overall effectiveness of the relevant programs in reducing sustainability impacts.

The comparison across these three commodity chains is undertaken by a qualitative analysis following a narrative approach to contextualize every step of the complex causal processes (Bütte 2002). This approach is well suited for my study on the emergence and spread of eco-certification in China, as the relevant processes involve dynamic interactions among stakeholders and the forces leading to businesses’ adoption of relevant rules may

only emerge from such interactions (George and Bennett 2005). In each of these case studies, I trace the process through which transnational certification programs were introduced in China and gradually gained support from relevant stakeholders, allowing me to assess whether the presence of the forces identified in chapter 2 led to the increase in the number of certified firms (Bennett and Checkel 2014). This historical approach enables me to show how different certification programs have evolved since they were introduced into the Chinese market. To identify the “critical junctures” in these processes, I highlight those changes having a profound influence on the subsequent development of eco-certification programs in the Chinese market, such as a change of position by the government or the support of leading companies (Mahoney 2000). This qualitative analysis draws mainly on primary data gathered from intensive fieldwork, including 106 formal interviews with practitioners working for a range of organizations involved in the relevant diffusion processes (see details on this part of the data collection in appendix A). The interview data are complemented by secondary data from academic and grey literature.

In addition to qualitatively examining the entry and spread of certification programs across the three sectors, I use novel datasets composed of firm surveys in the seafood and tea industries to quantitatively investigate factors that could motivate Chinese firms to adopt transnational eco-certification. This approach allows for testing with additional rigor some specific hypotheses on the incentives and structural constraints that businesses have in the Chinese context. The firm-level analysis is only feasible in the seafood and tea sectors, where China produces the relevant commodities domestically. In contrast, companies using palm oil as a raw material are dispersed across different industries, so that similar surveys could not be conducted.

In the case of seafood, the main aim of the quantitative analysis is to test the influence of transnational markets (i.e., export and foreign investment) on firms’ decisions to adopt sustainability standards during an early stage of certification diffusion (see details in chapter 3 and appendix B). For the study on the tea sector, I conducted an original survey with researchers at the Tea Research Institute of the Chinese Academy of Agricultural Sciences in 2018. The survey drew a geographically balanced sample of more than 200 tea producers in China. As sustainable tea certification remains largely absent in the Chinese market, this survey included a framing experiment

to probe which types of benefits might motivate firms to join relevant transnational certification programs. Specifically, I randomly assigned the respondents to groups that received information emphasizing different types of certification benefits (see details in chapter 5 and appendix C). The advantage of this approach lies in the possibility of disentangling different plausible drivers in an experimental setting and measuring their effects on firm managers' preferences.¹¹ By revealing which kind of information is more effective in motivating businesses, the results will have important policy implications for the future of transnational sustainability governance in China.

1.4 Outline of the Book

The rest of the book is organized as follows. Chapter 2 develops an analytical framework to identify the forces that are likely to condition the functioning and rise of transnational sustainability governance in China. The framework pays attention to the specificity of governance processes in China to unpack the interests of different stakeholders and the interactions among them in such processes. On each factor that may influence the uptake of transnational governance, I generate specific hypotheses with observable implications at different levels of analysis. While the framework primarily focuses on the politics of private governance in China, it may also shed light on the diffusion of transnational governance in other emerging economy contexts.

Chapters 3–5 provide in-depth empirical studies on the three different commodity sectors. In chapter 3, I examine the initial entry and subsequent development of sustainable seafood certification in China since the mid-2000s. I use both qualitative and quantitative data to investigate the key forces that have driven the rise of eco-certification in the Chinese market. My findings show that since 2013, a government-sponsored national industry association has leveraged its influence in the supply chain to effectively facilitate the growth of seafood certification, and it did so in the hope that certification would contribute to upgrading the Chinese industry and the market expansion of its member companies. Yet the analysis also shows that the rise of sustainable seafood certification in China is likely to boost only the consumption of luxury, higher trophic seafood, which may, ironically, increase the country's ecological footprint.

Chapter 4 investigates the uptake of the Roundtable on Sustainable Palm Oil (RSPO)—the leading transnational certification program for palm oil—in China. It traces the processes through which the RSPO has entered the Chinese market. Unlike the other two commodities studied in the book, palm oil is not produced in China but only imported from other developing countries for consumption. While this trade pattern limits the influence of foreign buyers on Chinese businesses' support for certification, the chapter shows that between 2015 and 2018, the RSPO quickly increased the number of its members and certified facilities in China after it had collaborated with a large, government-sponsored trade association and gained support from some large Chinese agribusinesses. However, when looking more closely at the purchase volume of certified palm oil by Chinese companies, I find that Chinese businesses have yet to reform their sourcing policy toward sustainability, and the government remains reluctant to provide further support for the RSPO, given that palm oil is not a critical commodity for the country.

In chapter 5, I investigate the diffusion of sustainable tea certification in China—a hitherto underexplored commodity in the literature of transnational governance. Although China is the world's largest tea producer and consumer, I find that the potential forces driving the rise of eco-certification remain largely absent in the Chinese tea industry. First, a large, profitable domestic market with unique product types has limited the influence of Northern buyers and investors in China's tea industry. Moreover, transnational certification programs have made little effort so far to engage with domestic state actors and to promote their standards, so that all levels of government officials in China's agricultural sector remain largely unaware of the relevant programs. In the absence of domestic champions, impetus for the rise of sustainable tea certification has not yet occurred in China. Nonetheless, the results of my survey experiment show a potentially large market for sustainable tea certification in China if the relevant programs were to actively inform Chinese producers about the benefits of adopting their standards. An effective approach could be aligning their goals with the Chinese government's policy on sustainable development.

Chapter 6 summarizes the results from my comparative study across the three sectors. It draws useful lessons about successful strategies and common challenges for transnational sustainability governance in China. I then assess the validity of the book's framework in three other major

emerging markets (Brazil, Russia, and India) and pose pressing questions to be addressed by future research. Considering the evolving role of the state in China and other emerging economies, the chapter closes by offering thoughts on three scenarios for interaction between public authority and transnational governance and their implications for sustainability impacts. The conclusion reminds researchers and practitioners on Earth system governance to turn their gaze to emerging economies and identify effective tools for steering sustainability transitions in these new centers of the global economy.

