

How and Why Do Economic Operators Comply With EU Law? Analysis of Firm-Level Responses to the EU Timber Regulation in Germany

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Abstract

The European Union (EU) Timber Regulation (EUTR) formally requires EU operators to conduct due diligence along their supply chains to prevent illegally sourced timber products from entering the European market. Little is known about the regulatory behaviour and motivations of operators to comply with this regulation. We explore the regulatory behaviour of companies by applying a synthesis of behavioural theories of regulatory compliance and transnational market regulation. Informed by qualitative and quantitative mixed methods, this study finds that EUTR compliance is influenced by operators' regulative, economic, normative and cultural-cognitive motivations. The empirical analyses reveal that larger, publicly exposed companies are driven to comply through social pressure and the deterrence effect of sanctions and control. Operators' perceptions of the costs and benefits do not explain compliance behaviour in a significant, quantitative way. The Internal values to abide by the law are found to be a stronger motivator than economic cost–benefit calculations.

Keywords: due diligence; EU law; regulatory behaviour; regulatory compliance; timber legality

Introduction

The European Union (EU) trade policy usually uses the strength of the EU's single market to achieve economic and non-economic (environmental protection and social rights) objectives (Dür et al., 2020). Economic globalization and the growing reliance of EU market actors on commodity imports from low-income countries with a high corruption index are leading to increased complexity and risk of illegality and non-sustainability in global supply chains (Eckhardt and Poletti, 2016; Zeitlin and Overdevest, 2021). To mitigate this, the EU has started using environmental laws employing trade policy measures. Prominent examples to address global trade in illegal timber are the EU Forest Law Enforcement, Governance and Trade (FLEGT) Regulation (Council, 2005) and the EU Timber Regulation (EUTR) (European Parliament and Council, 2010) based on the EU's 2003 FLEGT Action Plan.

In this article, we study the compliance behaviour of economic operators with the EUTR. This helps narrow existing knowledge gaps regarding the poorly understood role of businesses in EU law compliance, although theoretically conceptualized in early EU studies (Treib, 2016). Our findings also help draw lessons for the implementation of the new EU Deforestation Regulation (European Parliament and Council, 2023) that will repeal the EUTR but carry out and extend its regulatory approach.

EU compliance research has so far focused on the role of member state authorities and EU institutions in shaping domestic implementation and (non-)compliance with EU law;

the main topics are social (e.g., Falkner and Treib, 2008), environmental (e.g., Börzel and Buzogány, 2019) and financial (e.g., Mendez and Bachtler, 2017; Pircher and Loxbo, 2020) policy issues. Little research has been done on compliance with EU environmental law regulating EU foreign trade with implications for the single market, like the EUTR (McDermott and Sotirov, 2018).

The key insight in EU studies is that law (non-)compliance is determined by domestic implementation in countries, explained with political controversies, voting powers and administrative capacities resting on the political economy 'logic of consequentialism' (Börzel, 2021). In parallel, scholars also find high institutional impacts on countries' compliance through legal enforcement by EU institutions (EU Commission, European Court of Justice) explained with the 'logic of appropriateness' (Blauberger, 2014; Börzel, 2021). An alternative idea-based explanation resting on the 'logic of interpretation' is seen in different cultures of (non-)compliance in political and administrative structures in distinct groups of EU countries; these so-called 'worlds of compliance' range from 'neglect' to 'domestic politics' to 'dead letters' to 'law observance' (Falkner and Treib, 2008). EU law compliance studies do not always provide confirmatory evidence, however, calling into question the explanatory leverage of the world of compliance typology (Thomson, 2009; Treib, 2016).

There is also little research on company compliance. Existing studies focus on the idea- and interest-driven coalitional politics of EUTR formulation (Sotirov et al., 2017) and incoherent domestic policy implementation across EUTR countries due to political economic differences (McDermott and Sotirov, 2018), which support the general insights about different country clusters but challenge the aforementioned cultural explanation (e.g., Falkner and Treib, 2008). Further studies investigate the interplay between the EUTR as hard law with soft-law instruments like FLEGT Voluntary Partnership Agreements (VPAs) or private regulation by forest sustainability certification (e.g., Dieguez and Sotirov, 2021; Zeitlin and Overdevest, 2021). Another set of studies analyses the effects of the EUTR on the timber market outside the EU (e.g., Neshataeva, 2015; Pfannkuch and Zabel, 2014). Only one study explicitly deals with economic operators, but it explores only their awareness of the EUTR in the case of Germany (Köthke, 2020). None of these studies analyses the compliance behaviour of economic operators with the EUTR.

Illegal logging and associated trade are estimated as the third largest crime worldwide (Nellemann et al., 2016). Due to the illegal nature of the problem, no accurate figures are available on the extent of illegal timber trade. Dieter et al. (2012) estimate that 10%–20% of total global logging is illegal, with 6%–13% of timber imports into the EU and 2%–5% of timber imports into Germany coming from illegal sources.

This article aims to narrow the aforementioned knowledge gaps, especially as regards understanding the key behavioural drivers and inhibitors of operator compliance with EU law, taking the case of the EUTR. For this, the present article addresses the main research question of how and why operators comply with EU environmental trade law.

To answer this question, we test a set of theory-driven assumptions by a mixed qualitative and quantitative study of EUTR compliance of operators in Germany as the largest market economy in the EU27.

First, this article draws theoretical assumptions about operators' compliance behaviour. A theoretical synthesis of compliance theory and transnational business regulation

literature helps specify research hypotheses about compliance, including regulative, economic, normative and cultural-cognitive behavioural motivations. Second, a mixed research design of qualitative and quantitative methods is presented and justified. Results from a content analysis of in-depth qualitative key informant interviews conducted with EUTR actors as well as from analyses of quantitative survey data with German operators are provided along the four compliance pathways. The empirical findings are then discussed as regards the explanatory power of the theoretical pathways, and conclusions are drawn about the role of economic operators in EU law compliance.

I. Background to the EUTR

The EUTR (European Parliament and Council, 2010) prohibits the placing of products from illegally harvested timber on the EU market. The 'EUTR-products' covered by the regulation are listed in an annex. Companies importing EUTR-products are required to apply a due diligence system (DDS) to ensure that these products do not originate from illegal sources. The DDS must contain three mandatory steps: (i) documentation of relevant information describing supply chain transactions and evidence that the products comply with applicable national legislation in producing countries; (ii) risk assessment to evaluate the risk of placing illegally harvested timber products on the market; and (iii) risk mitigation measures, in case of non-negligible risks. If third parties [non-governmental organizations (NGOs) and companies] have evidence of non-compliant companies, they can file the so-called substantiated concerns with the competent authorities, potentially resulting in checks on operators.

Since its entry into force on 1 March 2013, the EUTR has been directly applicable to all EU countries. EUTR countries had to transpose the EU regulation into national law to set out detailed implementation and enforcement measures. After some delays, EUTR countries designated competent authorities, which carry out factual audits according to risk-based inspection plans to verify that (selected) companies comply with the regulation. Risk-based factors applied include volume and value of imported timber products, importance of the company to import markets, country of origin of traded products, product type and species [United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC), 2018b]. The competent authorities can enforce the EUTR by issuing notices of remedial actions and imposing sanctions on operators in case of infringements (see, e.g., UNEP-WCMC, 2020, 2021, 2022).

II. Theoretical Framework of Regulatory Compliance

Regulatory compliance theories investigate whether and why regulatory targets conform to legal rules that govern their (market) behaviour and identify the underlying factors and barriers (e.g., Grasmick and Green, 1980; Malloy, 2003; May, 2005; Sutinen and Kuperan, 1999). Accordingly, compliance refers to 'an actor's behavior that conforms to [a regulation's] explicit rules' (Mitchell, 1996, p. 5).

In this article, we apply the new institutionalist regulatory compliance theory of Scott (2013), which holds that compliance behaviour is influenced by three main causal mechanisms. These include (i) formal legal sanctions (regulative pathway), (ii) external norms of societal actors (normative pathway) and (iii) internal norms/values of regulatory

targets (cultural-cognitive pathway) (Scott, 2013). We add (iv) market incentives and costs (economic pathway) from business regulation theory as another causal logic of compliance (Bernstein and Cashore, 2012; Eberlein et al., 2014).

This multi-causal theoretical framework of compliance is justified for two reasons. First, it helps to systematically understand the central but little-studied role of economic operators as regulatory targets, including their interaction with state regulators and civil society organizations in the implementation stage of EU law application and enforcement (Treib, 2016), as opposed to the well-researched EU law transposition stage dominated by state actors (Börzel, 2021). Second, EU studies agree that the analysis of EU law enforcement and application can build on theoretical insights from traditional domestic policy implementation or new governance research as the application and enforcement of EU law are not fundamentally different from domestic policy implementation and the role of businesses therein (Börzel, 2010; Falkner et al., 2005; Treib, 2016; Versluis, 2007).

Regulative Pathway: Rules With Consequences and Deterrent Effects

According to new institutionalist compliance theories, regulatory targets are regarded as behaving rationally in order to maximize the attainment of their preferences (Sutinen and Kuperan, 1999). Actors are assumed to follow established rules, such as laws, in order to attain associated rewards or to avoid sanctions (Scott, 2013). In this utilitarian logic of consequences, individuals are considered rational beings motivated to violate legal regulations if their calculations reveal that the utility of non-compliant behaviour exceeds the utility of compliant behaviour. However, the standard deterrence model posits that prosecution of violations and effective punishments by law enforcement alter the individual's cost–benefit calculation, leading to compliance (Becker, 1968). The cost of non-compliance is assumed to be a product of the probability that the violation will be discovered and the severity of the punishment (Becker, 1968; Spence, 2001). Based on these propositions, we formulate the first hypothesis:

Hypothesis 1: Operators are more likely to comply when penalties are set by law and enforced by a regulator and when operators evaluate the consequences as deterrent and the enforcement as effective.

Economic Pathway: Market Incentives

Second, the transnational business regulation literature (Cashore, 2002; Eberlein et al., 2014) holds that the compliance behaviour of operators can rest on a market-based causal logic. Foreign market-dependent operators fear business disincentives, for example, by market competition or consumer boycotts, and try to avoid the associated costs. Conversely, operators seek positive market incentives such as market access, price premiums and firm recognition (Bernstein and Cashore, 2012).

Based on these propositions, we formulate two further hypotheses:

Hypothesis 2a: Operators are more likely to comply when they depend on foreign markets and are exposed to market incentives.

Hypothesis 2b: Operators are more likely to comply when they perceive that market benefits outweigh the market costs of compliance.

Normative Pathway: External Societal Pressure

Regulatory targets can also be driven by ‘the desire to achieve a favorable self-image by winning approval from others’ (Wrong, 1961, p. 189). This normative pathway of influence is characterized by a logic of appropriateness (March and Olsen, 1989; Scott, 2013) where external norms define appropriate ways of behaving, shaped by widely held beliefs about social obligations (Scott, 2013). Deviations from the expectations of appropriate norms can be sanctioned by moral pressure from external societal parties (Scott, 2013) in the form of gossip, stigma and shaming, leading to severe reputational concerns for operators. For appropriate behaviour, external parties may grant rewards in the form of appreciation and enhancement of operators’ reputation (Grasmick and Green, 1980). Based on these propositions, we formulate the next hypothesis:

Hypothesis 3: Operators are more likely to comply when they are exposed to external normative pressure by societal parties regarding appropriate behaviour.

Cultural-Cognitive Pathway: Internal Norms and Beliefs

Regulatory targets can also follow a logic of cognition and interpretation. The operators’ cognitive beliefs and internalized cultural values can motivate and even constitute compliance, especially when non-compliance is not deemed credible or possible (Vandenbergh, 2003; Wrong, 1961). Beliefs and values lead to ‘routines [that] are followed because they are taken for granted as “the way we do these things”’ (Scott, 2013, p. 68). In terms of substance, internal beliefs and values refer to the primacy of the abidance by law (legality) and/or sustainability (Vandenbergh, 2003). Based on these propositions, we formulate the next hypothesis:

Hypothesis 4: Operators are more likely to comply when they hold their own beliefs and internalized cultural values of abiding by the law and/or sustainability.

Awareness and Information as a Prerequisite for Compliance

None of these compliance pathways directly and constantly shape behavioural decision-making; rather, they have to be reasoned and activated to have their change effects (Schwartz, 1977). Thus, the regulatory regime can motivate compliance or inhibit it by providing information about the consequences of a non-compliant action and the individual’s responsibility (Vandenbergh, 2003). That is, only informed and aware operators can be compliant. Due to the specific and complex requirements of the EUTR, accidental compliance can be excluded. Based on these propositions, we formulate a prerequisite for compliance:

Prerequisite hypothesis: Operators are able to comply only when they are aware of the existence of the regulation and know its content, including their obligations as regulatory targets.

III. Methodological Framework

This article applies mixed methods for data collection on the compliance behaviour of importing operators in Germany as well as perceptions of competent authorities and civil society groups. We selected to focus on Germany, as extensive survey data on this population are available, which is not the case for other EUTR countries. Germany was also selected as the biggest EU economy in the single market, strongly dependent on foreign trade in timber products (McDermott and Sotirov, 2018). It has a comparably high number of companies importing EUTR-products (about 25,000) and is considered to have a comparably strong law enforcement amongst EUTR countries (UNEP-WCMC, 2018a).

Collection and Analysis of Qualitative Interview Data

A total of 52 semi-structured qualitative interviews were conducted in three rounds in 2013–2014, 2016–2017 and 2020–2021. The interviews capture both the early transposition stage and the subsequent implementation stages of EUTR application and enforcement. Key informants were selected as interviewees based on their observed role as main players in domestic implementation (McDermott and Sotirov, 2018). Thirty-eight interviews were conducted with individual operators from trade, industry and retail and their associations. Six interviews with representatives of state regulatory authorities and eight interviews with civil society actors including environmental NGOs, auditors/certifiers and scientists were also conducted (Table 1).

The interviews were conducted using a theory-driven questionnaire. The interview data were coded with the MAXQDA software and analysed by means of qualitative content analysis (Creswell, 2005; Yin, 2009). This includes the definition of theory-driven coding categories and their revision with regard to the extraction and allocation of relevant text units to the respective categories, as well as paraphrasing and bundling the extracted material. The data analysis aimed to cluster key informants' perceptions along

Table 1: Overview of Interviewed Actors in the Qualitative Interviews.

	<i>Operators from</i>			<i>Stakeholders</i>		<i>Total</i>
	<i>Timber trade</i>	<i>Timber industry</i>	<i>Timber retail</i>	<i>State regulators</i>	<i>Civil society actors</i>	
<i>Years</i>	<i>n = number of interviewees</i>					
2013–2014	6	5	4	3	5	23
2016–2017	6	5	2	1	1	15
2020–2021	4	5	1	2	2	14
Total	16	15	7	6	8	52

the different compliance pathways. For each pathway, three to four different responses were distinguished, to which the different interviewees' perceptions were assigned.

Collection and Analysis of Quantitative Survey Data

This study analysed data drawn from a quantitative survey by direct mail conducted in 2018 (Köthke, 2020a). For the survey, 5100 importing operators were invited via post to participate. These were randomly sampled from a total of 17,130 operators, stratified by import quantities. Contact data originate from import declaration lists of EUTR-products in 2017 of the German customs authority. The stratification for the sampling was performed according to import quantities of EUTR-products, where importers of larger quantities were contacted disproportionately more often than smaller importers. Five hundred forty anonymous survey responses (response rate 11%) were received and analysed for this study. Responses cover a total of 2% of all German operators in terms of numbers and about 20% of the total import value of EUTR-products to Germany (see Köthke, 2020a, for details). Importers of only small quantities of wood products make up the majority of operators in the basic population. Customs data show that 98.5% of operators import only 16% of the total weight of EUTR-products. Small importers are underrepresented in the distribution of responses.

The structured questionnaire contains 25 closed questions related to import activities in 2017, operators' characteristics and perceived burdens and benefits (the questionnaire is published in Köthke, 2020a). Parts of the survey data were analysed and published by Köthke (2020b) to assess the structure of companies concerned and their knowledge about the EUTR. Köthke (2020b) showed that only 228 of the 540 surveyed operators were aware of the EUTR and their role as operators. A total of 197 operators were unaware of the fact that they had imported an EUTR-product; a further 113 operators had not heard about the EUTR before the survey (two operators did not answer the question). The unaware operators are significantly often small operators outside the timber-related sector (Köthke, 2020b). No analysis of the survey data has been conducted regarding compliance behaviour. In this study, the survey data were analysed in order to quantify the compliance behaviour associated with each hypothesis. This was done to verify whether theoretical explanations of (non-)compliance are manifested amongst operators and to what extent.

Operator responses were differentiated amongst compliant and non-compliant operators. This study defines compliance as the installation of a DDS, including documentation and risk assessment.

Statistical analyses of differences amongst compliant and non-compliant operators were conducted with a chi square analysis. Missing values due to unspecified responses were excluded, as the difference in non-responses is not the focus of this analysis. Pearson's *p*-values are given with each result, marked with stars according to the level of significance (* = 10%, ** = 5%, *** = 1%, n.s. = not significant at the 10% level).

IV. Results

Of the 540 responding operators in the quantitative survey, 21% self-reported complying with EUTR requirements by installing a DDS and performing documentation and risk

assessment, whilst the remaining confessed non-compliance. The compliant operators cover together 64%–72% of import values of EUTR-products. At the same time, the German competent authority found 59% of operators checked in factual audits not to have an appropriate DDS (UNEP-WCMC, 2017, 2018b). This rate remained relatively constant over 2017–2021 and is comparably high for Germany compared with other EUTR countries, which together identified 18%–41% of operator as non-compliant over the same time period (UNEP-WCMC, 2020, 2021, 2022).

The quantitative survey data revealed that 58% of surveyed operators did not comply with the EUTR due to unawareness (Köthke, 2020b). As the regulatory behaviour of only aware operators can be explained with the four pathways of compliance, compliance was quantitatively analysed amongst the 228 aware operators in the following. Of these, almost half ($n = 112$) were found to be compliant, whilst the other half ($n = 114$) were found to be non-compliant (two did not specify).

The Regulatory Pathway

During the qualitative interviews, the deterrence effect of sanctions and controls was perceived differently by the operators (Figure 1). The perceptions ranged from ‘the penalties are very high and the audits are very likely’ to ‘the penalties are ridiculous and the audits are not implemented’. Slightly more than half of all interviewed operators tend to believe that the penalties were low and the implementation and audits by the competent authority were weak or industry friendly. This view was shared by the civil society actors and partly by the regulatory agencies.

In the qualitative interviews, some companies rated the chance of being inspected as small, as they assume that they were compliant with their DDS and/or sourced from low-risk regions (e.g., the EU, Switzerland and the United States). Other companies said they were controlled given their higher trade volume from high-risk regions (e.g., Brazil, China, Russia and Ukraine). Almost all interviewees agreed that illegally harvested timber still entered the EU market due to rent-seeking companies using regulatory loopholes of a weak and/or incoherent law enforcement by EU countries.

The quantitative survey analysed compliance behaviour related to the risk-based factors applied for factual audits (Table 2), as exposure to a risk-based factor increases the

Figure 1: Actors’ Perception of the Deterrence Effect (Regulative Pathway) ($n = 52$ Qualitative Interviews, 5 Actor Categories Assigned to 3 Characteristics).

		Perception of the deterrence effect		
		High	Low	Not relevant
Actors	Timber trade	7	7	2
	Timber industry	6	8	1
	Timber retail	1	5	1
	Authorities	3	2	1
	Civil society	2	6	0

Table 2: Risk-Based Factors for Factual Audits – Influence on Compliance Behaviour.

	<i>Total</i>	<i>Compliant operators</i>	<i>Non-compliant operators</i>
	<i>n</i>		
	<i>226</i>	<i>112</i>	<i>114</i>
	<i>%</i>		
EUTR-product import value, € ($p < 0.0001^{***}$)			
<10,000	4.9	1.8	7.9
10,000–100,000	16.8	8.0	25.4
100,000–1 Mio	27.9	21.4	34.2
1–5 Mio	23.9	30.4	17.5
>5 Mio	14.2	23.2	5.3
No answer	12.4	15.2	9.6
Company size ($p < 0.0001^{***}$)			
Micro	13.7	6.3	21.1
Small	33.6	23.2	43.9
Medium	34.5	44.6	24.6
Big	17.7	25.9	9.6
No answer	0.4	0.0	0.9
Product group ($p = 0.7296$ n.s.)			
Raw	8.9	9.8	7.9
Semi-finished	39.8	41.1	38.6
Finished	50.9	48.2	53.5
No answer	0.4	0.9	0.0
Risk of sourcing country ($p = 0.0119^{**}$)			
Risky	85.4	92.0	78.9
Non-risky	13.7	8.0	19.3
No answer	0.9	0.0	1.8

Abbreviations: EUTR, European Union Timber Regulation; n.s., not significant at the 10% level. **Significant at the 5% level. ***Significant at the 1% level.

likelihood that an operator will be subject to a factual audit. The market relevance of the operators was determined by the annual value of imports of EUTR-products and the company size.¹ Table 2 shows that bigger companies and those importing a higher value of EUTR-products significantly more often reported complying with the EUTR.

As operators mostly imported diverse products, each operator was assigned to the most complex product group that they imported. The complexity would be low for (i) raw materials, medium for (ii) semi-finished products and high for (iii) finished composite products (see Table 2). However, our quantitative results detected no difference in compliance behaviour amongst operators that imported different product groups.

Sourcing countries were defined as high risk if they had a Corruption Perceptions Index (CPI) (Transparency International, 2018) below 50.² Table 2 shows that operators importing from risky countries significantly more often complied with the EUTR. No data were available for the factor ‘timber species’.

¹Company size is categorised as either micro, small and medium according to the definition of the European Commission Recommendation of 6 May 2003 concerning the definition of micro-, small- and medium-sized enterprises, OJ L124, 20 May 2003.

²Indonesia is considered a non-risky country as well, as FLEGT-licenced timber is available from this VPA country.

Between March and November 2017, the German competent authority conducted 159 factual audits on importing operators (UNEP-WCMC, 2017, 2018a, 2018b). Checks led to 80 notices of remedial action due to shortcomings of due diligence and nine imposed penalties, mostly fines (UNEP-WCMC, 2017, 2018b). As the UNEP-WCMC reports show, the number of factual audits varies greatly amongst EUTR countries, with Germany performing relatively high numbers of audits and detecting high percentages of infringements. All EUTR countries together performed between 1100 and 1600 factual audits per year, with no increase detectable over the years 2017–2021 (UNEP-WCMC, 2020, 2021, 2022).

The Economic Pathway

In the qualitative interviews, the majority of operators and state authorities perceived that EUTR compliance offered no economic advantages whilst causing competitive disadvantages. Disadvantages included higher administrative costs, shrinking market supply and competition from cheaper products from non-compliant companies. Interviewed actors felt that higher administrative burdens outweighed possible economic advantages. The bureaucracy in law compliance was also perceived as too high. In contrast, most civil society actors, regulatory agencies and some companies reported that EUTR compliance came with economic benefits, including lower administrative costs, improved market access and a level playing field (Figure 2).

Interviewed actors were divided on the impact of compliance on market competition. Many interviewees pointed to unresolved issues of inconsistent EUTR implementation across the EU countries and market-distorting requests to share economically sensitive information with competitors along the supply chains. Competitive disadvantages for EU operators were also identified in potential relocations of timber supplies within the EU market, but also in market leakage into non-EU consumer regions with no or weak timber legality policies (e.g., China and India). Most interviewees stressed that the economic benefits of EUTR compliance (Pathway 2) depend on successful law application and enforcement (Pathway 1).

The results of the quantitative survey largely confirm these findings from the qualitative interviews. Most survey respondents felt that the EUTR increases monetary costs and administrative burdens (Table 3). The compliant operators perceived significantly more often higher costs and administrative burdens than the non-compliant operators.

Out of the 226 survey respondents, 69.5% did not perceive any positive changes on the demand side arising from EUTR implementation and compliance. Only one operator perceived an increased willingness of the customers to pay. Furthermore, few operators believed that the EUTR had a positive effect on sales markets or sales profit (Table 4). No significant differences were found in the perceptions of compliant and non-compliant operators.

The majority of surveyed operators considered that burdens arising from compliance exceed the suspected market benefits (Table 5). Compared with the non-compliant operators, the compliant operators significantly more often reported that efforts exceeded benefits.

Figure 2: Actors' Perceptions of Economic Costs and Benefits (Economic Pathway) ($n = 52$ Qualitative Interviews, 5 Actor Categories Assigned to 3 Characteristics).

		Perception of economic benefits		
		Benefits exceed costs	Costs exceed benefits	No effect
Actors	Timber trade	4	10	2
	Timber industry	3	10	2
	Timber retail	2	4	1
	Authorities	2	4	0
	Civil society	6	1	1

Table 3: Perspective of Compliant and Non-compliant Operators on the Question 'To what extent do the following disadvantages of the EUTR [higher costs and higher administrative efforts] apply to your company?'

	<i>n</i>	<i>Agree</i>	<i>Somewhat agree</i>	<i>Somewhat disagree</i>	<i>Disagree</i>	<i>No answer</i>
		%				
Higher costs ($p = 0.0137^{**}$)						
Total	226	43.4	23.0	17.7	5.8	10.2
Compliant	112	55.4	25.9	13.4	3.6	1.8
Non-compliant	114	31.6	20.2	21.9	7.9	18.4
Higher administrative efforts ($p = 0.0004^{**}$)						
Total	226	63.3	23.5	4.0	3.5	5.8
Compliant	112	77.7	18.8	0.0	2.7	0.9
Non-compliant	114	49.1	28.1	7.9	4.4	10.5

Abbreviation: EUTR, European Union Timber Regulation. ** Significant at the 5% level.

The Normative Pathway

In the qualitative interviews, the majority of operators from timber trade and retail reported being exposed to high societal pressure, leading to a negative public image of the company (Pathway 3). This was also confirmed by all NGO and two public authority informants. Reputational losses can lead to market disadvantages due to concerned consumers and limited social licence to operate (Pathway 2). Operators had a clear assessment of the societal pressure on their companies, as summarized in a statement: 'Our brand is the most valuable thing we have. If it were to be damaged by any scandals, it would have a lasting negative effect.' One third of operators felt lower societal pressure to comply with the EUTR (Figure 3). Several interviewees stated that higher societal pressure was mainly directed at larger well-known companies. Interviewees agreed that the societal pressure came mainly from environmental NGOs and the mass media, whilst the influence of the general public and end consumers was considered negligible.

Table 4: Perspective of Compliant and Non-compliant Operators on the Question ‘To what extent do the following advantages of the EUTR [expansion of sales markets and sales profit] apply to your company?’.

	<i>n</i>	<i>Yes</i>	<i>Somewhat yes</i>	<i>Somewhat no</i>	<i>No</i>	<i>No answer</i>
		<i>%</i>				
Market expansion ($p = 0.4158$ n.s.)						
Total	226	1.3	4.9	29.6	50.0	14.2
Compliant	112	0.9	4.5	27.7	58.0	8.9
Non-compliant	114	1.8	5.3	31.6	42.1	19.3
Sales profit ($p = 0.6958$ n.s.)						
Total	226	0.4	4.4	26.1	54.9	14.2
Compliant	112	0.0	4.5	26.8	60.7	8.0
Non-compliant	114	0.9	4.4	25.4	49.1	20.2

Abbreviations: EUTR, European Union Timber Regulation; n.s., not significant at the 10% level.

Table 5: Agreement of Compliant and Non-compliant Operators to the Statement ‘Efforts for EUTR compliance exceed benefits’.

	<i>n</i>	<i>Yes</i>	<i>Somewhat yes</i>	<i>Somewhat no</i>	<i>No</i>	<i>No answer</i>
		<i>%</i>				
Efforts exceed benefits ($p = 0.0962^*$)						
Total	226	30.1	28.8	27.9	9.7	3.5
Compliant	112	36.6	32.1	22.3	8.9	0.0
Non-compliant	114	23.7	25.4	33.3	10.5	7.0

Abbreviation: EUTR, European Union Timber Regulation. *Significant at the 10% level.

External societal pressure was evident in the media attention paid to companies convicted or accused of non-compliance.³ The German competent authority received seven substantiated concerns between 2015 and 2017 (UNEP-WCMC, 2018a). Larger companies were often more exposed to public attention than smaller ones. This is evident in Table 2 (Pathway 1) where the compliance behaviour of large and small companies is quantitatively compared. Half of the interviewed operators (50.4%) had a positive perception of the image-supporting effect of EUTR compliance for the European timber trade sector, whilst 35.8% of operators had a negative perception (see Table 6). An image-supporting effect amongst customers, however, was perceived by only 23% of operators. The opinions about these potential advantages of the EUTR did not differ between compliant and non-compliant operators. Furthermore, Table 6 shows that about half of the respondents expected that the EUTR would raise society’s awareness of the problem of illegal logging and associated trade. Non-compliant operators were significantly more often positively inclined towards this potential advantage compared with compliant ones.

³For example, Earthsight (2022), Vaughan (2015) and Worth (2021).

Figure 3: Actors’ Perceptions of External Social Pressure (Normative Pathway) ($n = 52$ Qualitative Interviews, 5 Actor Categories Assigned to 3 Characteristics).

	External societal pressure		
	High pressure	Low pressure	Pressure for large enterprises (outside view)
Timber trade	9	5	2
Timber industry	4	6	5
Timber retail	6	0	1
Authorities	2	0	4
Civil society	4	4	0

Table 6: Agreement of Compliant and Non-compliant Operators to the Statements ‘The EUTR a) improves the image of the European timber trade sector b) improves the reputation among the customers c) raises society’s awareness for the problem of illegal logging and trade’.

	<i>Totally agree</i>	<i>Tend to agree</i>	<i>Tend to disagree</i>	<i>Totally disagree</i>	<i>No answer</i>	
<i>n</i>	<i>%</i>					
Improves sector image ($p = 0.2260$ n.s.)						
Total	226	12.8	37.6	20.8	15.0	13.7
Compliant	112	11.6	37.5	26.8	18.8	5.4
Non-compliant	114	14.0	37.7	14.9	11.4	21.9
Improves customer reputation ($p = 0.1364$ n.s.)						
Total	226	5.3	17.7	39.7	32.3	15.0
Compliant	112	4.5	14.3	32.1	40.2	8.9
Non-compliant	114	6.1	21.1	27.2	24.6	21.1
Raises society’s awareness ($p = 0.0361$ **)						
Total	226	15.9	29.7	28.3	18.1	8.0
Compliant	112	14.3	25.0	35.7	23.2	1.8
Non-compliant	114	17.5	34.2	21.1	13.2	14.0

Abbreviations: EUTR, European Union Timber Regulation; n.s., not significant at the 10% level. **Significant at the 5% level.

The Cultural-Cognitive Pathway

The qualitative interviews revealed that most operators complied with the EUTR out of a core belief in the abundance by the law. Many interviewees said they even went beyond the legal requirements as they also believed in the need to secure sustainability. However, sustainability beliefs differed amongst the different interviewees (Figure 4). The majority of operators felt obliged to comply with the EUTR as they also shared utilitarian core values of either economic sustainability (i.e., maintaining sustainable yields as a material basis for business activities) or economic and ecological sustainability

Figure 4: Internal Norms and Beliefs of Actors About Regulatory Targets (Cultural-Cognitive Pathway) ($n = 52$ Qualitative Interviews, 5 Actor Categories Assigned to 4 Characteristics).

		Internal norms			
		Beliefs of abundance by the law and...			Sole conviction to comply with the law
		...ecological sustainability	...economic sustainability	...ecological and economic	
Actors	Timber trade	2	5	3	6
	Timber industry	2	7	3	3
	Timber retail	1	2	3	1
	Authorities	3	1	1	1
	Civil society	4	0	3	1

(multifunctional forest use, including sustained timber yield and environmental protection on equal footing). A few operators also derived their motivation for law compliance from their core belief in ecological sustainability (tackling biodiversity loss, climate change and social rights), which was shared by NGOs and some regulatory actors. Many operators reported to have followed timber legality and sustainability beliefs before the EUTR came into force, using, for example, private sustainability certification under the Forest Stewardship Council (FSC) and/or Programme for the Endorsement of Forest Certification (PEFC) schemes. Economic operators also reported that the German regulatory agency accepted private sustainability certification as a risk mitigation measure. However, the EUTR does not legally provide for a 'green lane' to private sustainability certification; amongst others, corruption, illegalities and misuses in private sustainability certification have led to the EU not accepting them as proof of legal compliance with the EUTR (Dieguez and Sotirov, 2021).

The influence of internal values was also evident in the quantitative survey, which found that operators who can demonstrate corporate social responsibility and sustainable business activities were more likely to comply with the EUTR. Operators who had set up an internal auditing system for corporate social responsibility already before the EUTR was enforced, whose companies were Chain of Custody certified and who imported timber products with sustainability certification were significantly more often compliant (see Table 7).

V. Discussion

This article analyses the behaviour and motivations of importing operators in Germany with respect to compliance with the EUTR. Through this, we add value to EU studies that have so far provided the pragmatic but unsatisfactory explanation that 'the rule-compliant behavior of EU rules by citizens, companies or administrative agencies is even harder to analyse empirically than more general features of court systems or supervisory bureaucracies' (Treib, 2016, p. 29). Likewise, studies on the EUTR-related compliance behaviour, awareness and motivations of operators in the EU are sparse, most likely due to the

Table 7: Perspectives of Compliant and Non-compliant Operators on Three Questions Related to the Norm of Environmental Protection.

	<i>n</i>	<i>Yes</i>	<i>No</i>	<i>No answer</i>
		<i>%</i>		
Did your company have an internal social responsibility auditing system before the EUTR implementation in 2013 (e.g., department of sustainability/environmental department)? ($p = 0.0001^{***}$)				
Total	226	27.0	72.1	0.9
Compliant	112	38.4	60.7	0.9
Non-compliant	114	15.8	83.3	0.9
Is your company Chain of Custody certified? ($p = 0.0002^{***}$)				
Total	226	64.2	35.0	0.9
Compliant	112	76.8	23.2	0.0
Non-compliant	114	51.8	46.5	1.8
Did you import certified timber (products) from third parties in 2017? ($p = 0.0105^{**}$)				
Total	226	81.5	18.1	0.4
Compliant	112	88.4	11.6	0.0
Non-compliant	114	74.6	24.6	0.9

Abbreviation: EUTR, European Union Timber Regulation. **Significant at the 5% level. ***Significant at the 1% level.

limited budgets of national authorities for systematic monitoring, as well as the lack of data access for researchers, as publicly available identification of operators is not given (Norman, 2021). Through access to German customs data, we were able to identify and contact randomly selected operators from the basic population, including small companies not obviously connected to timber trade. As our quantitative survey is, to our knowledge, unique, we cannot directly compare our data with quantitative data of other points in time or other EUTR countries. Whilst EUTR countries are required to report regularly on enforcement actions, like the number of factual audits conducted, infringements detected and sanctions imposed (UNEP-WCMC, 2018b), assessment of the operator structure, awareness and behaviour is not mandatory. Therefore, this information is lacking, and no targeted enforcement measures are possible.

Some of our qualitative interviews were conducted in the beginning of EUTR implementation in 2013. They were useful in exploring the initial expectations, hopes and fears, besides experiences. To capture not only this early transposition stage but also the subsequent implementation stages of EUTR application and enforcement, further qualitative interviews were conducted in 2016–2017 and 2020–2021. We carried out the qualitative interviews with some key informants (e.g., trade and industry associations, regulators, scientists and NGOs) twice over time. This helped us control for possible changes in compliance behaviour due to new information and experience. Importantly, despite different time periods, most interviewees from different clusters provided similar answers regardless of whether they were interviewed once or twice. Path dependency and robustness in compliance pathways may provide an explanation for this stability of answers over time.

The quantitative survey from 2018, 5 years after the EUTR came into force, was used to validate the interviews and to connect operators' attitudes to their compliance behaviour.

Compliance and Awareness

The number of non-compliant operators detected in our survey (79%) was higher than those regularly detected in the factual audits (18%–59%). Presumably, this is because official audits did rarely inspect small companies outside the timber sector. We assessed compliance with the EUTR on information provided by operators, but not on the observation of the quality and comprehensiveness of their DDS as measured by factual audits. A potential bias in these self-reports cannot be neglected, as respondents might ‘whitewash’ their answers. However, given the high number of operators confessing non-compliance in the survey, a severe whitewashing is not likely. Whilst only few companies (21%) were compliant, they cover 64%–72% of import values. This also hints to the fact that larger companies were more often subject to factual audits.

As the survey data show, awareness as a prerequisite for compliance is not given to most operators, especially the small ones. It can be assumed that, in the meantime, some of the small operators have received information, for example, through random compliance audits or exchanges with other operators involved. However, we do not expect any significant improvement in the share of informed operators for several reasons. Several operators import only once or sporadically, meaning that new and unaware operators add up to the list of operators annually. Several of the small importers have no connection to timber trade and industry and therefore do not feel addressed by corresponding press releases or newsletters (Köthke, 2020b). Some EUTR countries performed awareness-raising activities in the past years but rarely actively approached operators (UNEP-WCMC, 2020). According to UNEP-WCMC (2020), this rarely reached more than 1000 operators, and in Germany, for example, no small- and medium-sized enterprises (SMEs) were reached. Other surveys on EUTR operators (e.g., Nermin and Francesco, 2022; Norman, 2021) did not include randomly selected operators, thus omitting small companies not directly linked to the timber sector. It is therefore not possible to draw comparative conclusions about the status of awareness and compliance from these surveys.

Compliance Pathways

Our findings show that many actors perceive a low deterrence effect due to weak enforcement and low penalties. This confirms the regulatory pathway in compliance theory (Scott, 2013) and is also in line with an empirical study informed by interviews with EU operators subject to a factual audit at least once (Norman, 2021). Our data suggest that the regulative pathway (Hypothesis 1) applies mostly for the compliance of large companies sourcing from risky regions, who were more likely to be inspected by authorities. For smaller operators, for whom the probability of being inspected is low, Hypothesis 1 is less decisive. The same principle was detected for the normative pathway, which also mostly influences well-known large companies under public scrutiny. Here, societal pressure driven by NGO activities and negative media strongly motivates operators to improve compliance behaviour; this confirms Hypothesis 3 and hence the normative pathway in compliance theory (Scott, 2003). No influence of social pressure from the public or customers could, however, be empirically detected. Non-compliant operators were more likely to believe in the positive impact of the EUTR on society’s awareness and the image of the wood sector. This, however, did not translate into positive compliance, which contradicts Hypothesis 3 and hence falsifies the normative pathway in compliance theory

(Scott, 2003). Likewise, the empirical results provide both a partial confirmation and a partial falsification of the hypotheses about Economic Pathway 2 and the underlying theory of transnational business regulation (Bernstein and Cashore, 2012; Eberlein et al., 2014). Whilst most operators perceived the compliance costs to exceed economic benefits, many operators reported to be compliant despite economic disadvantages and vice versa. This is contrary to Hypothesis 2b. An ad hoc explanation could be that non-compliant operators have a different expectation of costs and impacts, which they can only estimate and have not experienced. Importantly, our findings reveal that economic motivation plays a subordinate role for operators in EU law compliance.

Direct positive relations between law compliance and core internal beliefs in abidance by the law, as well as by sustainability values and practices, were confirmed by all qualitative interviews and the quantitative survey. This aggregated evidence about values and beliefs regardless of actors' different attitudes towards the EUTR's effectiveness, usefulness and economic advantageousness confirms Hypothesis 4 and the cultural-cognitive pillar of compliance theory (Scott, 2013).

In terms of theoretical and empirical contribution to EU studies, our research reveals that the cultural-cognitive pillar of compliance enabled by internal legality and/or sustainability norms plays the most important role in informed German operators' compliance with EU law. To a lesser extent, but still important, the normative pathway of external societal pressure has contributed to law compliance. These logics of compliance with EU law are followed by the moderate role of the regulative pillar and the least important market pathway. Our empirical data also show that several theory-derived motivations had no, little or unexpected effects on compliance behaviour. Rather, a discrepancy between attitudes and behaviour is evident (cf. Diekmann and Preisendörfer, 1992), as evidenced from the observation that non-compliant operators had a more positive attitude towards the EUTR than compliant operators. In short, our theory-informed hypotheses and empirical findings add to EU studies in that they help clarify the key role of businesses in EU policy implementation and explain how cognitive-cultural and normative behavioural logics, and less so regulatory and market behavioural logics, drive their compliance with EU law. This is an important contribution, given that compliance behaviour of economic operators receives little attention in EU studies. Our compliance pathway hypotheses and results can be well linked to the main theoretical claims about the role of EU and member states' institutions and norms (regulatory and normative pillars), countries' administrative capacities and economic interests (regulatory and market pillars) or cultural worlds of compliance (cognitive-cultural pillar) developed and tested in EU studies (see literature review above). Our hypotheses and results might also be transferrable to other EU countries, but the quantitative proportions of operator (non-)compliance are likely to vary depending on market and enforcement structures.

Conclusions

The present study analysed the regulatory, economic, normative and cultural-cognitive explanations of German economic operators' compliance with the EUTR, as well as the influence of information and awareness as a prerequisite for law compliance.

This study revealed that operators perceived the implementation, enforcement and impact of the EUTR very differently. Through empirical analyses, the study was able to show that

these divergent perceptions do not necessarily manifest in compliance behaviour. The greatest influence on compliance with the EUTR – besides awareness as a prerequisite – can be attributed to internal core beliefs of rule of law and sustainability, as well as the moral pressure and fear of societal scrutiny and loss of reputation due to bad press. Arguably, these motivations are related with the other two. A compliant behaviour in line with the cultural-cognitive and normative pillars can help decrease the likelihood of being controlled and help avoid sanctions under the regulative pillar, and it might offer some market benefits for legal and/or sustainable companies whilst causing costs under the economic pillar.

A better understanding of compliance and non-compliance with the EUTR is important not only for narrowing gaps in academic knowledge but also from a policy perspective. The new EU Deforestation Regulation aims to overcome some of the weaknesses of the EUTR. Lessons for compliance and law enforcement can be drawn from the study findings. Strong enforcement measures, including deterrent measures such as high audit density and dissuasive penalties, will not be sufficient. They will need to be complemented by public transparency exerting social pressure and reforming business cultures towards matching corporate socio-cultural values of rule of law and sustainability. This prioritisation of normative and socio-cultural drivers, in combination with regulatory scrutiny and market benefits, is likely to have greater impact on compliance with EU environmental trade law, such as the EU Deforestation Regulation.

In addition, there is a need to ensure that awareness is raised and information is available to achieve the basic requirements for compliance amongst all regulatory targets.

The specific results on EUTR compliance of German operators are likely to be reflected in other EUTR countries in different empirical distributions. Whilst compliance pathways are similar, operator characteristics (e.g., distribution of company sizes), external drivers (e.g., engagement of civil society actors) and enforcement factors (e.g., more or less audits or information) are likely to be distributed differently in other countries.

We therefore suggest future research to focus on the theory-driven and empirically sound investigation of compliance behaviour of operators and regulatory agencies, as well as the role of environmental NGOs and other societal parties in relation to EU policy and law. We also suggest EU studies to build on our theory-guided and empirically informed research to conceptually integrate the role of economic operators in EU law compliance frameworks, theories and models.

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Data Availability Statement

The data applied in the submitted manuscript are survey data from interviews with companies. Although the companies' responses were anonymized, it is possible to identify the companies behind them if one knows the sector (especially the larger and specialized companies). Because we assured anonymity to our interviewees, we consider the raw data as too sensitive for publication. However, the details of the survey, including the original questionnaire (in German) and a response distribution to each question, were published in Köthke (2020a).

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