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Legitimacy in the Literature: Distinguishing Between Perceived and Actual Value Congruence in Carbon Reduction Initiatives

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ABSTRACT

Academic and social concerns regarding the management of carbon emissions are pressing due to the importance of carbon reduction in the fight against climate change and the strategic implications of the various approaches. In particular, the relationship between carbon reduction and legitimacy has received significant attention, with academics noting both the positive relationship between the two and the risk of ‘greenwashing’. Here, we review the extant literature on carbon reduction and legitimacy, presenting insights into the current academic discourse and highlighting an important distinction between ‘legitimacy’ as it relates to perception and ‘legitimacy’ as it relates to actual congruence between the actions of the company and social expectations. Our review demonstrates that legitimacy as perception is the dominant application of the concept in the literature, and we highlight the importance of more academic consideration of the way in which companies’ carbon reduction efforts actually cohere with relevant norms and values.

1 | Introduction

Businesses across industries have a significant impact on fundamental aspects of sustainability, such as carbon emissions affecting climate change, resource depletion and the ‘livability’ of global and local environments. Unsurprisingly, therefore, there is a growing interest in the impact of firms in this regard. These concerns are often expressed with reference to the legitimacy of firms’ environmentally relevant actions, with firms deemed to be involved in illegitimate acts at risk of being accused of ‘greenwashing’ (Seele and Gatti 2017). The many meanings of ‘legitimacy’ have received significant attention in the management literature (e.g., Suchman 1995; Suddaby et al. 2017), and it is well recognised that the term can be employed to refer to quite different properties and processes. Broadly speaking, the various categorisations touch on two aspects of what it may mean for

an action or actor to be legitimate: (1) It is perceived by relevant stakeholders to be congruent with their normative expectations and (2) the action or actor is congruent with the normative expectations of the relevant stakeholders. There is a significant distinction between these two positions, namely, that the locus of legitimacy differs—in the first conception, legitimation occurs at the point of perception and in the second conception, legitimation occurs at the point of value congruence. While it may often be the case that actual congruence confers perceived congruence, or that perceived congruence indicates actual congruence, it is certainly not necessarily or always the case. In this paper, we present a review of literature relating to the legitimacy of carbon reduction initiatives in the field of business and management, with a view to better understanding the distinction between these two concepts of legitimacy and the way in which the concept is used in this context.

Dr Satkeen Azizzadeh and Dr Wee Chan Au should be considered joint second authors.

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Stated firm alignment with the UNSDGs or other kinds of sustainability benchmarks is increasingly common. Carbon reduction is a particularly tangible commitment for firms, as meeting this commitment is measurable, and the sustainability impact of such reductions is relatively uncontested. Thus, carbon reduction initiatives are sound indicators of the relationship between businesses and the notion of sustainability more generally, and the body of research which relates to these initiatives offers valuable insight into sustainability in businesses more generally. Questions of the legitimacy of sustainability initiatives abound, both in academic literature and in more public discourses, for example, those relating to greenwashing. There is some contestation regarding the proper definition of the concept of legitimacy, and the nature of the value of legitimacy in relation to sustainability and carbon reduction initiatives depends somewhat on how the term 'legitimacy' is used. Broadly, however, 'legitimacy' is important as it indicates that an act is sincere and appropriate. Perhaps the value of legitimacy in this sense can, in fact, be better understood with reference to the implications of illegitimacy; an illegitimate approach to carbon reduction would be one which was insincere and/or inappropriate, thus suggesting at the very least a missed opportunity to make a significant and positive contribution to a firm's environmental impact.

The purpose of the systematic literature review presented here is first to identify academic knowledge of the legitimacy of carbon reduction in the literature relating to business and management. The second purpose is to identify the implications of the nature and scope of this knowledge. The scope of the search employed accommodates a broad sample of papers relating to a consideration of whether and how carbon reduction initiatives were legitimate. However, the majority of the papers identified relate to carbon accounting disclosure as a tool of legitimation, most closely affiliated with a definition of legitimacy as perception. There are notable exceptions to this, such as Abraham (2021), who considers the role of ideology in carbon reduction initiatives, and Baledon et al. (2021), who investigate stakeholder perceptions of alternative jet fuels for carbon reduction. Nonetheless, the bulk of the literature relates to reporting and relies on the analysis of data shared by firms. Some of this is done with a critical lens; for example, Hrasky (2012) and Wu et al. (2022) explore whether firms' legitimation strategies are symbolic or substantial, but specific consideration of what cannot be accounted for is directly addressed by only one paper (Blakely 2021). There is a robust body of literature addressing the role of accounting and reporting in establishing the legitimacy of carbon reduction initiatives, but there is considerable scope for consideration of legitimation factors beyond what is reported by firms and, indeed, beyond a conception of 'legitimacy as perception'. Drawing on Suddaby et al.'s (2017) tripartite categorisation, we can identify particular opportunities for research considering legitimacy as property and legitimacy as a process, which is to say legitimacy is derived from alignment between a firm's actions and expectations, and experiences of relevant actors and stakeholders.

2 | Conceptual Background

In its conceptual origins, 'legitimacy' has been thought of as a property which can belong to power or the powerful. Weber

(1968) offers his tripartite account of legitimacy as it relates to authority or domination and describes three grounds for legitimate authority: rational, traditional and charismatic. Legitimacy on rational grounds is where domination is legitimate if there is belief in the legality of the process that bestowed the authority; legitimacy on traditional grounds is where domination is legitimate if there is a belief in the sanctity of the traditions and the legitimacy of those operating within them, to bestow authority and legitimacy on charismatic grounds is where domination is legitimated by a devotion inspired by the personal qualities of the person in authority. All three grounds rest on the perceptual beliefs of those contemplating the legitimacy of a power-exerter, and not on any particular quality of the powerful act or actor (even charismatic grounds rely on the devotion of the 'follower' – not on an objective quality of the authority) (Graftstein 1981; Matheson 1987). Hinsch (2010) identifies this kind of legitimacy as 'empirical' legitimacy, characterised by the approval of the relevant group.

2.1 | Legitimacy, Power and Business

Literature exploring legitimacy, as it applies to businesses, tends not to explicitly refer to power, authority or domination, but nonetheless, it is this aspect of the business to which legitimacy as a property is being attached. Questions of the legitimacy of businesses have arisen because businesses are now understood to be exerts of power, and, therefore, are open to questions of legitimacy similar to those of other powerful institutions. When considering corporate initiatives to reduce carbon emissions, the question of legitimacy is raised because there is a general awareness that, given the global consequences, the emission of carbon is an exertion of power—that is, the action has a deliberate and significant effect. The effect is deliberate in the sense that the action is voluntary, and the effect is predictable. The emission, or reduction, of carbon emission, is, therefore, an exertion of power to which the challenge of legitimacy applies.

Weber's account of legitimate power was an exploration of political power and the conditions under which it can gain the necessary support to exist and thrive. In this context, legitimacy-as-perception is highly relevant; political power obtains, at least in part, for as long as it is perceived that the exorter is morally justified and truthful. When the powerful cease to be perceived as legitimate, they are often in trouble, and their position of power is at risk. However, suppose we are applying legitimacy as a critical lens and using it to evaluate the actions of companies whose continued existence does not rely, to such an immediate and obvious extent, on the perceptions and support of the public. In that case, it makes sense to evaluate more than just the extent to which the companies' actions are seen to be congruent with social values; we must also consider both what the values of the relevant societies are, and the extent to which companies' actions are actually congruent with these values. The concept of legitimacy as actual-value-congruence is similar to Hinsch's conception of normative legitimacy, whereby an institutional arrangement is legitimate when it conforms with stated criteria for legitimacy which have normative authority—that is, its advocates can explain *why* the stated criteria should be adhered to. This view of legitimacy is also broadly consistent with legitimacy as a process and a property (Suddaby et al. 2017), as legitimacy belongs to actual rather than perceived properties of the 'legitimate thing'. It

should be noted that in the context of business and society, the relevant norms or properties will most likely not be codified or expressed by a formal authority. They will be held by the people affected by the company's actions, who may not all hold the same values. There is, therefore, the challenge of identifying the criteria against which companies' actions can be judged. This poses a challenge to the determination of a company's legitimacy, but it does not undermine the conceptual underpinnings of this version of legitimacy, which are to do with the legitimating mechanism rather than the process of judging legitimacy.

2.2 | Legitimacy and Conceptual Variance in the Literature

In much of the literature on organisational legitimacy, the distinction between perceived congruence and actual congruence is not noted, but there is generally an emphasis on perception or 'evaluation' (e.g., Suchman 1995; Thomas and Lamm 2012). This is likely due to an understanding that where a judgement of legitimacy is to be made, there must be a judge, and therefore, even when considering relatively objective properties, we are always, to some extent, addressing our perceptions. However, there does seem to be an important distinction to be made between a belief that an action is legitimate and the actual legitimacy of the action. This distinction can perhaps be best understood in comparison to the concept of 'legal', where we would feel it was possible and indeed important to distinguish between the seeming compliance of an act with the law and the actual compliance of an act with the law – even where the evaluation of whether an act is legally compliant is the result of a literal judgement. The judgement is subjective, and the role of the judge is to report their belief (or perception) of whether or not the relevant act complies with the relevant rule. However, it is understood in these circumstances that what determines an act's legality is its actual compliance with the law. The judge's role is to consider and report on this compliance, but legality is not determined by the judge's perception; for example, it is illegal to speed whether or not the offender is caught and convicted. Similarly, it is possible to consider whether a company's actions actually comply with the norms and values of relevant communities, and such a consideration would be importantly different to an investigation into whether the communities perceive a company's actions to be normatively compliant. Identifying who the relevant stakeholders are, and what the relevant norms and values are, is not straightforward, and therefore, such research would include both a consideration of what the relevant norms and values are, as well as an account of whether or not (or the extent to which) companies' actions comply with these expectations. Research into both actual compliance and perceived compliance is of value but is researching different phenomena. It is therefore worth noting the way in which much of the academic discussion of legitimacy to date conflates two distinguishable aspects of legitimacy, despite there being a significant distinction between legitimacy-as-perception and legitimacy-as-actual-congruence.

2.3 | Levels of Perception

The legitimacy-as-perception approach views legitimacy as occurring between 'traditional levels of analysis as a cross-level

process of perceptions, judgements of appropriateness, and actions that occur in interactions between the collective and the individual' (Suddaby et al. 2017, 451). Therefore, within work that focuses on legitimacy-as-perception, analyses of the 'level of perception' of the evaluators are broadly divided into the individual and the collective levels. At the individual level, judgements are formed on socially constructed categorical norms, which are then aggregated into socially constructed shared beliefs that reflect and reinforce institutional order (Berger and Luckman 1967; Alexiou and Wiggins 2019). Therefore, within the legitimacy as perception concept, the notion of legitimacy is based on the key constructs of perceptions of the legitimacy object, the individual's own judgement, collective validity judgement and the individual's validity opinions of the collective validity judgement (Suddaby et al. 2017).

Although the legitimacy as perception standpoint sees legitimacy as multilevel, occurring between the individual and collective evaluators, it leans towards the micro-level in terms of the formation of perception by focusing on the role of individuals in the process of the social construction of legitimacy (Suddaby et al. 2017). While ontologically, it is the individual stakeholders that evaluate and make judgements, it is usually the collective actors, such as organisations, interest groups, judicial authorities and governments, that act upon the collective legitimacy perception (Bitekine and Haack 2015). Therefore, legitimacy judgements and perception formations do not only take place at the individual (micro level) but also involve the sensemaking of collective actors, as they act upon the collective (macro level) legitimacy judgements as relationships, policies and procedures are formed and disseminated as official verdicts (Daft and Weick 1984; Bitekine and Haack 2015). In the broader management field, it is suggested that the majority of studies focus on the collective level (Alexiou and Wiggins 2019), although there are a number of studies which investigate perceptions of legitimacy at the individual level (Alexiou and Wiggins 2019), the way in which collective perceptions suppress individual evaluations (Bitekine and Haack 2015). Therefore, within the legitimacy-as-perception literature, there is evidence that the perceptions of legitimacy are contingent on both individual subjectivity and the influence of inter-group and intra-group dynamics. This adds evidence to our claims that legitimacy-as-perception and legitimacy-as-actual-congruence refer to different phenomena. Both are worthy of consideration; the interplay between individual and collective perceptions of legitimacy allows for an understanding of the interaction between businesses and society at the local level and will highlight how policies and practices at institutional and organisational levels are (re)shaped by the perceptions of the local communities and in turn impact these perceptions. In addition, an understanding of the extent to which the actions of companies actually cohere with the rules and norms of the societies in which they operate is crucial as we navigate global existential challenges such as climate change.

2.4 | Carbon Reduction and Legitimacy

In this paper, we focus on the application of legitimacy to the reduction of carbon emissions in the business and management literature.

Much of the conceptual literature relating to management issues and legitimacy considers the broadest implications of the term, that is, organisational legitimacy in general. Organisational legitimacy (as perception) as a concept is usually applied to mean something like 'The generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.' (Suchman 1995, 574). This can apply to any aspect of the firm's operational activity, from its relationship with suppliers to the content of its marketing. Whether considering legitimacy as perception or legitimacy-as-actual congruence, the criteria against which the action is being measured depends significantly on what the activity is; if it is the firm's relationship with its suppliers, then the relevant standards will be something like 'how other similar firms do it', 'codified industry standards' and maybe the expectations of those in the supply chain, other internal stakeholders and consumers. For example, in the case of fast fashion, the actions of those firms implicated in the Rana Plaza factory collapse were considered illegitimate because they were contrary to the expectations of external stakeholders like consumers, even though they were relatively consistent with the practised standards of the industry as a whole. Similarly, the criteria against which the legitimacy of a marketing campaign is judged will be specific to the context of marketing, the specific industry practices and standards will be relevant to marketing (and different to supply chain management), and the expectations of consumers will similarly be specific to marketing.

Therefore, although there is value in examining the concept of organisational legitimacy in the broadest sense, it is also the case that the context of the action or aspect being considered matters and that there is much to be gained by looking at specific aspects of organisational activity when considering what it means to be legitimate.

The subject focus for this review was determined by the key search terms 'Carbon Reduction' OR 'Net Zero'. The reasons for this focus are as follows: The environmental impact of firms is an urgent issue; companies' decisions about how to measure and reduce the effect they have on the environment are of crucial importance to all of us. A commitment to carbon reduction is a particular kind of commitment, primarily because it is measurable. This has two important consequences—it is easy for stakeholders to understand and engage with as an issue, and the extent to which the promise has been kept can be evaluated. The centrality of measurement (or accounting) to issues of carbon reduction means that much of the literature on carbon reduction is in the accounting field. However, accounting is not the focus of our review, which includes all papers with a subject focus on carbon reduction (and not just those with a focus on the accounting of carbon reduction).

3 | Method

The aim of this review is to contribute to a comprehensive understanding of the way in which the concept of legitimacy is applied to carbon reduction initiatives in the business and management literature and to map the way in which the two conceptions of legitimacy, as perceived, and actual congruence with social norms, is applied in the field. We employed a systematic

review literature review, synthesising research in a systematic, transparent and reproducible manner (Tranfield et al. 2003), as employed in other reviews, for example, Ibrahim et al. (2022) and Nguyen et al. (2020). Drawing on the work of Denyer and Tranfield (2009), the following steps of the systematic review process were adopted: material collection, categorisation and synthesis.

3.1 | Material Collection

Scopus was selected as an appropriate database to generate the list of articles as it includes an extensive collection of environmental sustainability-related journals (Ansari and Kant 2017; Balasubramanian et al. 2020). At the initial stage, only articles from peer-reviewed journals were considered. Conference papers, book reviews and comments were excluded. The following combination of keywords was used for the search: ('Legitima*' OR 'Social License to Operate') AND ('Carbon Reduction' OR 'Net Zero'). An asterisk was included at the end of the word 'Legitima' to ensure greater search outreach to include a wider range of spelling variations such as legitimate and legitimacy. In order to capture literature relating to legitimacy, we also included 'social license to operate' (SLO) in our search terms. The SLO concept is often used within the business and management field to refer to something very similar, at times identical to, legitimacy (Gehman et al. 2017). However, the SLO concept can also be used to capture a particular kind of legitimacy, in that the SLO is to some extent empirically observable as the ongoing consent of communities for an operation (Prno and Slocumbe 2012) and is considered to be indicative of a contract between communities and business operators (Demuijnck and Fasterling 2016). The concept is most often used in the context of mining or other environmentally disruptive operations (Stephens and Robison 2021) in contexts where the consent of communities cannot be assumed and, therefore, must be earned. The concept does not invite the same distinction between actual and perceived congruence with social values as the concept of legitimacy because the SLO is something which exists essentially where there is the absence of community opposition, whether this is due to the beliefs of a community or the actual actions and values of a company does not matter here. The SLO concept, therefore, adds another valuable dimension to our understanding of companies' legitimacy, allowing for a description of situations where there is social acceptance of a company's actions.

The research team refined the search within the subject areas of business management and accounting, environmental science and social sciences, excluding articles on engineering, medicine, agricultural and biological sciences. The search was also limited to peer-reviewed articles written in English.

We did not specify the base year during the search, and the initial search generated 251 articles (ranging from 2011 to 2022). Subsequently, a search alert was set, and 187 additional articles were identified (cut-off date: 02 December 2024). In total, 438 articles were identified for further screening. We screened the retrieved articles according to the following questions: (a) Does the article focus on carbon reduction? (b) Is the article related to legitimacy? Articles that did not meet the inclusion criteria were not included in the review.

These articles were first screened through title and abstract analyses, whereby the authors read the title and abstracts of papers identified at this stage to establish the primary focus of the papers. Only those with a primary focus on both legitimacy and carbon reduction were kept. In this screening procedure, 307 articles were excluded. The remaining 131 articles were subjected to another round of meticulous content analysis, whereby the authors read each paper to confirm the primary focus; where it was determined that if the primary focus of the paper was not both legitimacy and carbon reduction, the paper was excluded. At this stage, another 75 articles were eliminated. Thus, the final sample set for the current review comprised a corpus of 56 articles (Table 1 presents a list of the articles). A summary of the selection process is represented in Figure 1, considering Moher et al. (2009) style of selection procedure for systematic literature review.

4 | Findings

4.1 | Overview of Reviewed Studies

The findings of the review can be found in Table 1. In the course of our review we categorised the sample papers according to the type of data (primary and/or secondary), type or study (qualitative and/or quantitative), the data sampled in the paper, the country (or a number of countries) present in the papers' sample and the relevant industry. In reviewing these aspects of the relevant papers, we are able to provide an overview of the extant academic field and identify under-utilised methodological approaches and under-explored areas and aspects. In order to explore the applications of legitimacy in this field, we also categorised the conceptual application of legitimacy in each relevant paper, that is, as either perceived or actual congruence, and the level of perception, that is, the micro or collective level. The former was determined through careful reading of the discussion and application of the concept of legitimacy in the paper; most offer a clear definition of legitimacy, which informed the categorisation. In seven instances, the definition and application of legitimacy as a concept were

not clear, and the papers were left uncategorised. In order to determine the level of perception, the approach of Suddaby et al. (2017) was followed, and the articles were reviewed to see whether they explored the appropriateness of a legitimacy object (an authority, a practice or an organisation) based on an evaluator's assessment (the individual level), or if they explore legitimacy at the collective (group/organisation/society/field) level. At the collective level, legitimacy exists as validity, which is the shared judgement of the majority of stakeholders and/or by a recognised authority (Suddaby et al. 2017). Levels of perception were investigated in articles that focused fully or partially on legitimacy as perception.

4.2 | Scope of the Extant Literature on Legitimacy and Carbon Reduction

The earliest article with a combined focus on legitimacy and carbon reduction was published in 2012. This suggests that legitimacy and environmental protection began to gain importance starting around this time. With growing awareness and the importance of carbon reduction as a key greening initiative, this review is timely. Seventeen of the empirical studies involved multiple countries; two studies did not specify the country context; and the rest are single-country studies. Most studies were conducted in high-income and developed countries,¹ including the United Kingdom ($n=7$), United States ($n=7$), Japan ($n=1$), Australia ($n=2$), Canada ($n=1$), Denmark ($n=1$), Germany ($n=1$), Norway ($n=1$), New Zealand ($n=1$) and Netherlands ($n=1$). Three upper-middle-income countries: China ($n=5$), Brazil ($n=1$) and South Africa ($n=1$); one in lower-middle-income economies: Egypt; and one in low-income countries: Uganda. One may observe increased research attention in China, where the country issued its first regulation on environmental disclosure in 2003, which has had multiple updates, with the latest being the Measures for the Administration of Legal Disclosure of Enterprise Environmental Information issued on 18 December 2021 (Song 2022). The move to mandate companies to disclose environmental information is facilitating research in the subject matter.

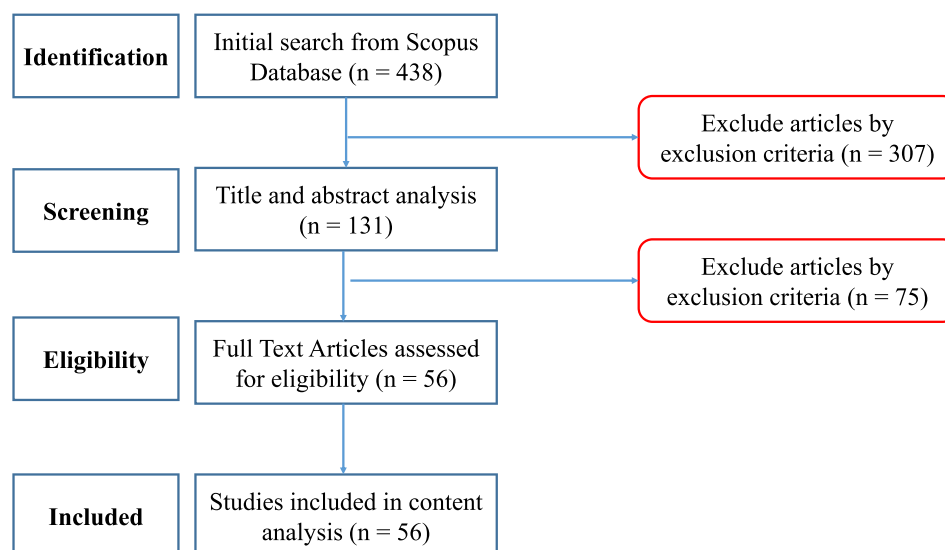


FIGURE 1 | Summary of the selection process.

TABLE 1 | Preview of the reviewed studies.

| | Authors and year | Type of data | Type of study | Sample | Country | Industry | Perceived or actual congruence | Level of perception |
|----|------------------------------|----------------------------|------------------------------|---|---------------------------|--|--------------------------------|---------------------|
| 1 | (Abraham 2021) | Secondary data | Qualitative | 1 company | Denmark | Oil and gas | Actual | Uncategorised |
| 2 | (Abraham 2021) | Primary and secondary data | Quantitative and qualitative | 389 projects associated with reducing emissions from deforestation and forest degradation | 55 countries | Forest-related | Actual | Uncategorised |
| 3 | (Blakely 2021) | Primary and secondary data | Qualitative | 1 airport | United Kingdom | Air transport | Perceived | Collective |
| 4 | (Blum 2020) | Primary and secondary data | Qualitative | 1 project | Uganda | Forest-related | Actual | Uncategorised |
| 5 | (Buck 2021) | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | Actual | Uncategorised |
| 6 | (Bui and Fowler 2019) | Primary and secondary data | Qualitative | 2 companies | New Zealand | Power generation (electricity) | Actual | Uncategorised |
| 7 | (Burger et al. 2015) | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | Actual | Uncategorised |
| 8 | (Busch and Schwarzkopf 2013) | Secondary data | Qualitative | 5 companies | Germany, France and Japan | Automotive manufacturing | Actual | Uncategorised |
| 9 | (Clery et al. 2021) | Primary data | Qualitative | 26 stakeholders from industry, non-governmental organisations (NGOs) and policy | United Kingdom | Bioenergy and forestry, carbon capture and storage | Uncategorised | Uncategorised |
| 10 | (Datt et al. 2018) | Secondary data | Quantitative | 5184 firm-year observations between 2010 and 2014. | 44 countries | Mixed | Perceived | Collective |
| 11 | (Datt et al. 2020) | Secondary data | Quantitative | 3635 firm-year observations for the period of 2010–2014 | 42 countries | Mixed | Perceived | Collective |
| 12 | (Datt et al. 2021) | Secondary data | Quantitative | 13,419 firm-year observations between 2010 and 2017 | 58 countries | Mixed | Uncategorised | Uncategorised |

(Continues)

TABLE 1 | (Continued)

| | Authors and year | Type of data | Type of study | Sample | Country | Industry | Perceived or actual congruence | Level of perception |
|----|--------------------------|----------------|------------------------------|---|-----------------------|--------------------------------|--------------------------------|---------------------|
| 13 | (Delafield et al. 2021) | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | Actual | Uncategorised |
| 14 | (Dzhengiz 2018) | Secondary data | Qualitative | 16 companies | United Kingdom | Power generation (electricity) | Perceived | Collective |
| 15 | (Feeney et al. 2024) | Secondary data | Qualitative | 10 companies | 8 European countries | Energy | Perceived | Collective |
| 16 | (Feng et al. 2024) | Secondary data | Quantitative | 5304 companies between 204 and 2016 | 28 countries | Mixed | Perceived and actual | Collective |
| 17 | (He et al. 2016) | Secondary data | Quantitative | 620 companies | United State | Mixed | Perceived | Collective |
| 18 | (Herman et al. 2024) | Secondary data | Quantitative | 594 companies | 5 countries | Mixed | Perceived | Collective |
| 19 | (Herold and Lee 2019) | Secondary data | Quantitative and qualitative | 50 companies | Not specified | Logistics | Perceived and actual | Collective |
| 20 | (Herold and Lee 2019) | N/A conceptual | N/A conceptual | N/A Conceptual | N/A conceptual | N/A conceptual | Perceived and actual | Collective |
| 21 | (Hickman and Cote 2019) | Primary data | Qualitative | 1 case (1 company and its client) | United State | Accounting | Perceived | Collective |
| 22 | (Hrasky 2012) | Secondary data | Quantitative and qualitative | 50 companies | Australia | Mixed | Perceived and actual | Collective |
| 23 | (Issa and Hanaysha 2023) | Secondary data | Quantitative | 1397 observations of non-financial firms listed in the STOXX Europe 600 index | 17 European countries | Non-financial industries | Actual | Uncategorised |
| 24 | (Khalid et al. 2023) | Secondary data | Quantitative | 500 firms listed on the US S&P | Various | Mixed | Perceived | Collective |
| 25 | (Kuo and Chen 2013) | Secondary data | Quantitative and qualitative | 208 companies | Japan | Mixed | Perceived | Collective |

(Continues)

TABLE 1 | (Continued)

| | Authors and year | Type of data | Type of study | Sample | Country | Industry | Perceived or actual congruence | Level of perception |
|----|--------------------------------------|----------------------------|------------------------------|--|-----------------------|---|--------------------------------|---------------------------|
| 26 | (L'Abate et al. 2023) | Secondary data | Quantitative and qualitative | 145 airports | 38 European countries | Air transport | Perceived | Collective |
| 27 | (Lei and Yu 2023) | Secondary data | Quantitative | 4035 Chines A-Share listed companies, with 30,242 firm year observations | China | Mixed | Actual | Uncategorised |
| 28 | (Long et al. 2021) | Secondary data | Quantitative and qualitative | 1 industry | Ireland and China | Dairy manufacturing (milk powder) | Perceived | Collective |
| 29 | (Luo 2019) | Secondary data | Quantitative | 1956 observations between 2008 and 2015 | 32 countries | Mixed | Perceived | Collective |
| 30 | (Maddy et al. 2022) | Primary data | Quantitative | 176 SMEs | Egypt | Manufacturing | Actual | Uncategorised |
| 31 | (Mezger et al. 2020) | Primary data | Quantitative | 787 consumers | Germany | Power generation (electricity) | Perceived | Individual and collective |
| 32 | (Ngwakwe 2013) | Secondary data | Quantitative | 44 companies | South Africa | Mixed | Perceived | Collective |
| 33 | (Nimer et al. 2024) | Secondary data | Quantitative | 6528 records from publicly traded firms listed in the Thomson Reuters Eikon database | Various | Basic materials | Perceived | Collective |
| 34 | (Fracarolli Nunes and Lee Park 2017) | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | N/A conceptual | Perceived | Collective |
| 35 | (O'Beirne et al. 2020) | Primary and secondary data | Qualitative | 1 town | United Kingdom | Bioenergy with carbon capture and storage | Actual | Uncategorised |
| 36 | (Omran and Yaaqbeh 2023) | Secondary data | Quantitative | 3322 firms listed on the Refinitiv ESG Database | 73 countries | Mixed | Perceived | Collective |
| 37 | (Orr et al. 2019) | Primary data | Quantitative | 500+ tourism professionals | United State | Tourism | Perceived | Individual and collective |
| 38 | (Pan et al. 2022) | Secondary data | Quantitative | 217 companies | United State | Mixed | Perceived and actual | Collective |

(Continues)

TABLE 1 | (Continued)

| | Authors and year | Type of data | Type of study | Sample | Country | Industry | Perceived or actual congruence | Level of perception |
|----|------------------------------|----------------------------|---------------|--|--------------------------------|---------------------------------|--------------------------------|---------------------|
| 39 | (Pellegrino and Lodhia 2012) | Secondary data | Qualitative | 2 companies and 2 industry bodies | Australia | Mining | Perceived | Collective |
| 40 | (Peng et al. 2023) | Secondary data | Quantitative | 1403 observations from 199 firms listed on the 2021 Fortune Global 500 list | Various | Mixed | Uncategorised | Uncategorised |
| 41 | (Royston et al. 2021) | Primary and secondary data | Qualitative | 4 universities and 4 hospitals | United Kingdom | Higher education and healthcare | Perceived | Collective4 |
| 42 | (Saha et al. 2021) | Secondary data | Quantitative | 135 higher education institutions | United Kingdom | Higher education | Perceived | Collective |
| 43 | (Schupfer and Soppe 2024) | Primary and secondary data | Qualitative | 1 Company and 5 individuals | Norway | Oil | Perceived and actual | Collective |
| 44 | (Sebastianelli et al. 2025) | Secondary | Qualitative | 500 companies | USA | Mixed | Perceived and actual | Collective |
| 45 | (Shaw et al. 2015) | Primary and secondary data | Qualitative | 4 projects | Canada | Power generation (energy) | Perceived | Collective |
| 46 | (Silva et al. 2021) | Primary and secondary data | Qualitative | 33 supply chain players (farmers, processing firms and 3 rd -party organisations) | Brazil | Agriculture produce (cashew) | Uncategorised | Uncategorised |
| 47 | (Soria Baledón et al. 2021) | Primary and secondary data | Qualitative | Four aviation global events | Not specified | Aviation | Uncategorised | Uncategorised |
| 48 | (Tan et al. 2020) | Secondary data | Quantitative | 356 firm-year observations between 2012 and 2018 | China | Power generation (electricity) | Uncategorised | Uncategorised |
| 49 | (Treepongkaruna et al. 2024) | Secondary | Quantitative | 5170 | USA | Mixed | Perceived and actual | Collective |
| 50 | (Trencher et al. 2021) | Primary and secondary data | Qualitative | 3 countries | China, Japan and United States | Automotive | Uncategorised | Uncategorised |
| 51 | (Walker et al. 2021) | Primary and secondary data | Qualitative | 3 projects | UK | Power generation (energy) | Perceived | Collective |

(Continues)

TABLE 1 | (Continued)

| | Authors and year | Type of data | Type of study | Sample | Country | Industry | Perceived or actual congruence | Level of perception |
|----|------------------------|----------------------------|------------------------------|---|-------------|------------------------------------|--------------------------------|---------------------|
| 52 | (Warbroek et al. 2019) | Primary and secondary data | Qualitative | 14 projects in 1 province | Netherlands | Power generation (energy) | Actual | Uncategorised |
| 53 | (Wu et al. 2022) | Primary data | Quantitative | 2977 organisations | China | Mixed | Perceived | Collective |
| 54 | (Yu et al. 2020) | Secondary data | Quantitative and qualitative | 15,484 observations between 2008 and 2015 | China | Mixed | Uncategorised | Uncategorised |
| 55 | (Zhou et al. 2020) | Secondary data | Quantitative | 12 industries | China | Mixed (heavy-polluting industries) | Perceived | Collective |
| 56 | (Zhu et al. 2023) | Primary data | Quantitative | 189 participants recruited from the Amazon Mechanical Turk platform | USA | Mixed | Uncategorised | Uncategorised |

While some studies focus on high carbon-emitting industries (e.g., Yu et al. 2020), heavy-polluting industries (e.g., Zhou et al. 2020) or environmentally sensitive industries, many studies also cover non-environmentally-sensitive industries (e.g., Datt et al. 2020; Hrasky 2012; Kuo and Chen 2013).

4.3 | Methodological Approaches of Reviewed Literature

Forty-seven percent of the 51 empirical studies adopted a quantitative methodology, 39% were qualitative, and seven papers employed a mix of qualitative and quantitative methods. The majority of the studies relied on secondary data only ($n = 31$), such as corporate sustainability report (e.g., Dzhengiz 2018; Ngwakwe 2013; Tan et al. 2020), companies websites and annual reports (e.g., Hrasky 2012; L'Abate et al. 2023; Walker et al. 2021), carbon-related data from Carbon Disclosure Project (CDP) (e.g., Busch and Schwarzkopf 2013; Datt et al. 2018, 2021; Herold and Lee 2019; Luo 2019; Pan et al. 2022)—which runs one of the largest not-for-profit global environmental disclosure systems.

4.4 | Conceptions of Legitimacy

The findings demonstrate that the legitimacy of sustainability initiatives is a current and pressing concern among business and management scholars. Within the literature is evidence of an emerging consensus that legitimacy is a necessary condition for effective and long-lasting change with regard to carbon reduction, as well as some evidence that firms are sufficiently aware of this to pursue some kind of legitimization in tandem with carbon reduction initiatives (or communication relating to carbon emissions). However, even with our sample of papers, which have been selected for an explicit consideration of legitimacy, there is an evident lack of clarity regarding the meaning and application of the term.

Nine of the papers included in our review do not define the term in a way that has allowed for a classification of their understanding of legitimacy, nor was it possible to infer which version of legitimacy was being applied in the research. It is perhaps the case that in some instances it is understood that legitimacy is such an important concept that it must be name-checked, coupled with either a poor understanding of what the term is or why it is important—or such a strong understanding of what the term is and why it is important that no further discussion is deemed necessary.

A minority of papers within our sample (four) are concerned with exploring both the nature of the legitimacy being sought by firms as well as the actions being taken to pursue legitimacy. For example, Hrasky (2012) reports on research investigating whether firms adopt 'pragmatic or moral legitimization approaches' (p. 174), the former referring to actions designed specifically to bolster support for the firm (rather than to pursue actual change, which may lead to support for the firm) and the latter to actions which are deemed by a broad set of stakeholders to be truly congruent with the stakeholders' values. Herold and Lee (2019) consider the influences on firms' attempts to close the 'legitimacy gap', where companies' practices and the relevant

social expectations are incongruent. The paper presents consideration of both internally focused actions and externally focused actions, the former being actual changes in the firm and the latter consisting of efforts to gain external approval from relevant stakeholder groups.

4.4.1 | Legitimacy as Perception

The majority of the papers in our sample apply a single conceptualisation of legitimacy, indicating that most authors grappling with the concept have confidence in the terms' meaning and application. The most common understanding of legitimacy present in the papers presented here is one of legitimacy as an issue of perception, consistent with Suchman's definition of legitimacy as a generalised perception (1995, p. 574) and with Suddaby et al.'s (2017) categorisation of 'legitimacy as perception' (see also Alexiou and Wiggins 2019).

Such a conception of legitimacy is present in 24 papers in our sample, and within this sample, legitimacy as perceived value congruence is not universally considered a 'good' thing. Indeed, some strong scepticism of the legitimacy of legitimacy itself is present here. For example, Long et al. (2021) note that the perceived legitimacy of carbon reduction may 'rub off' on the associated product, for example, reducing the carbon emissions of breastmilk substitutes might lend legitimacy to the ethically dubious practice of encouraging breastmilk substitution. Ngwakwe (2013) explores the extent to which disclosures of firms listed on the Johannesburg Stock Exchange (JSE) comply with independent external assurance and concludes '... the JSE seems to have established a pedigree suggesting that its SRI is neither political image laundering nor mere legitimisation'. The majority of the papers on legitimacy-as-perception take a strategic approach, presenting legitimacy as something which firms pursue to achieve strategic aims and/or competitive advantage. For example, Datt et al. (2019) present research investigating the way in which carbon disclosure is used by well-performing firms to promote good relationships with stakeholders. Hickman and Cote (2019) present findings that accountants and assurers pursue 'legitimate' CSR reporting in order to achieve specific professional objectives, and Saha et al. (2021) argue that UK Higher Education Institutes use environmental and social disclosures to legitimise their activities and gain the good opinion of key stakeholders.

4.4.2 | Legitimacy as Coherence With Norms and Values

A smaller number of papers in our sample ($n = 13$) apply a single definition of legitimacy to their work and conceptualise legitimacy as something which is gained when firms' actions and values *actually* cohere with the expectations and values of their stakeholders. For example, Mady et al. (2022) explore the role of institutional pressures on firms to gain legitimacy through socially acceptable environmental practices. Bui and Fowler (2019) present findings that firms respond to changing institutional demands regarding sustainability with strategies that balance legitimacy and competitive advantage, the former being achieved through substantive changes in accordance with institutional expectations. Warbroek et al. (2019) identify legitimacy gained

through alignment with local values as a contributor to the success of local low-carbon initiatives.

4.4.3 | Theory Application

Within the legitimacy-as-perception papers, Legitimacy Theory is the most common framework; within the legitimacy-as-actual-congruence papers, Institutional Theory is the most common. Despite the shared ancestry of the theories, the two definitions of legitimacy differ. Within the Institutional Theory, legitimacy is obtained when practice conforms with the values and norms, or 'myths' of the relevant relational network (Meyer and Rowan 1977); that is, a firm's action may be legitimate if it conforms with what is believed to be right by other firms in its sphere. Legitimacy Theory, however, maintains that in order to be legitimate, organisations must *appear* to be consistent with societies' expectations (Deegan 2019, 2002). That is, according to Institutional Theory, a company's action is legitimate if it conforms to what is believed to be the relevant norm, and according to Legitimacy Theory, a company's action is legitimate if it is believed to conform to the relevant norms. The two conceptualisations both involve belief (or perception), but the source of legitimacy is different—for legitimacy theory, it is the belief itself, while for institutional theory, it is the conformity which bestows legitimacy.

The dominance of the legitimacy-as-perception definition in our sample suggests that one definition has gained traction more successfully than the other and is perhaps indicative of a shared belief that firms are more interested in seeming to do the right thing than actually doing the right thing. However, given the urgency of the issues relating to climate change, such as carbon reduction, it is equally important to investigate why and when firms actually do the right thing, and given that doing the right thing makes it much easier to be seen to do the right thing, this is a very valuable avenue for future research.

4.5 | Levels of Perception

Our findings reveal that none of the articles explored perceptions at the individual level only, and only two articles studied it at the individual and collective levels, while 29 articles examined legitimacy perceived at the collective level. For instance, Blakely (2021) studies the relationship between accounting, standardisation and politics by exploring the case of a protest about the City of Manchester's carbon accountability. The study looks at the perceived legitimacy at the collective level—a group in the society brought together by their supposedly shared opinion.

At the collective level, legitimacy in the form of validity is also illustrated through the opinion of a recognised authority, such as the Global Industry Classification Standards (Datt et al. 2018) or assurance providers of accounting firms and non-accounting firms (Datt et al. 2020).

Within the literature, only two articles explore perceptions of legitimacy both at the individual and collective levels. An instance of this is the case of switching behaviour of German electricity consumers to a green electricity supplier due to trust, reputation and perceived environmental impact (Mezger et al.

2020). Or, assessing tourism professionals' perceptions of the limitations and advantages of sustainable practices and their actual implementation over 6 years in the Midwestern US (Orr et al. 2019). While recent studies have proposed a series of basic socio-cognitive processes fundamental to the construction of legitimacy at the individual level (Suddaby et al. 2017; Bitektine 2011), our review has shown that literature applying these insights to the context of carbon reduction is lacking. Given the emphasis in the reviewed literature on the conceptualisation of legitimacy-as-perception, further exploration of how these perceptions are formed at the individual level would be valuable, in particular, as it informs our understanding of the dynamics between individual and collective perceptions of legitimacy. Such an understanding might, for example, allow greater insight into the ways in which institutions shape or reflect individual perceptions of legitimacy, thus deepening our understanding of what it means when we describe a company's action as (seemingly) legitimate.

5 | Discussion and Conclusion

The review of the literature presented here reveals that concerns regarding the legitimacy of companies' engagement in carbon reduction initiatives are receiving a considerable amount of academic attention, particularly in high-income and developed countries. Balasubramanian et al. (2020) concluded from their review of literature relating to firm characteristics and environmental sustainability that evidence suggested firms of different sizes and origins (i.e., foreign or local) pursue different kinds of legitimacy; large firms and foreign firms pursue legitimacy-as-perception while small firms pursue actual value congruence. There is, therefore, the risk that due to the current academic focus on legitimacy-as-perception, we are missing opportunities to explore the legitimisation strategies of smaller firms and of local firms—particularly companies in low-income and/or developing countries. As with similar reviews of the literature on CSR in the tourism sector (Alatawi et al. 2023) and literature on corporate board committees and corporate outcomes (Alhossini et al. 2021), our review suggests a need for further cross or multi-country studies, which would further our understanding of legitimating criteria for communities across the globe.

Most of the papers in the sample used secondary data, and there is evidence of a reliance on firm-provided data to address questions of legitimacy. This is perhaps consistent with the prevalence of the application of the concept of legitimacy as the perceived congruence between a company's actions and relevant values and norms, and with the prevalence of Legitimacy Theory as a framework. According to Legitimacy Theory, companies share information in order to be seen as consistent with society's expectations, thus gaining legitimacy; legitimacy is obtained when a company's actions are perceived as consistent with the relevant norms and companies share information about their actions in order to create this impression (Deegan 2019; Deegan et al. 2002). From the review presented here, we may conclude that the mechanisms of this are well-explored (e.g., Kuo and Chen 2013; Saha et al. 2021; Khalid et al. 2023), although there is certainly scope for greater consideration of perception at the individual level and the mechanisms by which this interacts with perception at the collective level. Further, we

have seen the extent to which target setting and reporting correspond with improved environmental performance, for example, Hickman and Cote (2019), Luo (2019) and Nimer et al. (2024). These are important considerations, and research that reveals the way in which companies appear to cohere with social values and expectations can also be used to inform our understanding of the relevant values and expectations, as well as to deepen our understanding of the relationship between companies and the communities in which they operate. The way in which stakeholders perceive business' actions is itself worthy of research, and in reflecting on what we perceive to be legitimate or not we may better identify the relevant norms and values which we hold. What may be lacking in the extant literature, however, is a thorough consideration of the extent to which a company's actions actually cohere with these values and norms, including research examining legitimacy-as-a-process and legitimacy-as-a-property as classified by Suddaby et al. (2017). Such work would be complemented by research aiming to identify communities' norms and values so that there are well-understood criteria against which to measure companies' actions. In particular, research which considers how to reflect on the diversity of values and norms rather than those of the loudest or most powerful voices will be of value in ensuring companies' actions are held to the most appropriate account.

Research exploring the relationship between a company's actions and social expectations will be of less instrumental value to businesses than that which presents the ways in which perceptions can be influenced, but it is nonetheless of significant social and academic value. The papers in our sample which apply a conception of legitimacy as actual value congruence each tell us something useful about how companies operate and their relationship with the societies in which they exist; for example, Warbroek et al. (2019) provide an insight into the factors which contribute to the success of local low-carbon initiatives in the Netherlands, and Blum (2020) contributes to our understanding of how legitimacy might be lost with the case study of a contested carbon forestry project in Uganda where the actual implementation of a certification programme did not cohere with local expectations. Work such as this contributes to our knowledge of social expectations as they relate to companies and the mechanisms by which these can be met by the actions of business. We, therefore, encourage future research which applies the concept of legitimacy as actual value congruence to the field of sustainability and carbon reduction. Further, we suggest there may be scope for further theoretical development of the way in which we apply legitimacy to business' relationship with society and further consideration of the distinction between legitimacy as perception and legitimacy as actual congruence, perhaps with a view to more clearly distinguishing between the two in both terminology and application. We would also encourage research which considers the relationship between these two kinds of legitimacy, for example, investigating instances where one kind of legitimacy obtains but the other does not; where a company's actions are perceived to be congruent with local norms, but are in fact inconsistent with these norms.

This review considers only papers focussed on the legitimacy of carbon reduction initiatives. This narrow focus allows us to consider the application of legitimacy as a concept to an issue of significant importance. However, there are limitations to such an approach; in particular, the focus on carbon reduction

may somewhat skew the results towards accounting literature within which the legitimacy-as-perception conceptualisation is likely to be more prevalent, as legitimacy theory is a theory which has been widely applied in this field. We therefore recommend further investigation of the literature on legitimacy as it relates to other aspects of business activities and performance, for example environmental impact more broadly or treatment of employees. This literature may apply the concept of legitimacy-as-actual-congruence more, and there may, therefore, be valuable insights into the ways in which this can be operationalised in empirical research.

This review has allowed an exploration of an important distinction between two conceptions of legitimacy, and highlighted opportunities for further research, which will deepen our understanding of what it is for a company's actions to be legitimate. Understanding and articulating the distinction between perceived value congruence and actual value congruence will allow communities, governments and other stakeholders—as well as companies themselves—to better examine the relationship between what companies do and what affected groups want them to do. Such an understanding may be used by companies to ensure that their efforts are understood and appreciated, while improved abilities to articulate what is required of companies by their local communities will help to ensure that companies are held to account.

Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

¹ Categorization of countries is as per World Bank Country Classification (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>)

References

- Abraham, B. M. 2021. "Ideology and Non-State Climate Action; Partnering and Design of REDD+ Projects." *International Environmental Agreements* 21: 669–690.
- Alatawi, I. A., C. G. Ntim, A. Zras, and M. H. Elmagrhi. 2023. "CSR, Financial and Non-Financial Performance in the Tourism Sector: A Systematic Literature Review and Future Research Agenda." *International Review of Financial Analysis* 89: 102734. <https://doi.org/10.1016/j.irfa.2023.102734>.
- Alexiou, K., and J. Wiggins. 2019. "Measuring Individual Legitimacy: Scale Development and Validation." *Strategic Organization* 17, no. 4: 470–496.
- Alhossini, M. A., C. G. Ntim, and A. M. Zalata. 2021. "Corporate Board Committees and Corporate Outcomes: An International Systematic Literature Review and Agenda for Future Research." *International Journal of Accounting* 56, no. 1: 2150001. <https://doi.org/10.1142/s1094406021500013>.
- Ansari, Z. N., and R. Kant. 2017. "A State-Of-Art Literature Review Reflecting 15 Years of Focus on Sustainable Supply Chain Management." *Journal of Cleaner Production* 142, no. 4: 2524–2543. <https://doi.org/10.1016/j.jclepro.2016.11.023>.
- Balasubramanian, S., V. Shukla, S. Mangla, and J. Chanchaichujit. 2020. "Do Firm Characteristics Affect Environmental Sustainability? A Literature Review-Based Assessment." *Business Strategy and the Environment* 30, no. 2: 1389–1416. <https://doi.org/10.1002/bse.2692>.
- Baledon, M. S., M. Trudel, and N. Kosoy. 2021. "Alternative Jet Fuels and Climate Geopolitics: What Why Does It and Who Matters in the Environmental Policy-Making Process." *International Journal of Sustainable Transportation* 16, no. 6: 541–557.
- Berger, P., and T. Luckmann. 1967. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. Doubleday.
- Bitektine, A. 2011. "Toward a Theory of Social Judgments of Organizations: The Case of Legitimacy, Reputation, and Status." *Academy of Management Review* 36, no. 1: 151–179. <https://doi.org/10.5465/amr.2009.0382>.
- Bitektine, A., and P. Haack. 2015. "The "Macro" and the "Micro" of Legitimacy: Towards a Multilevel Theory of the Legitimacy Process." *Academy of Management* 40, no. 1: 49–75.
- Blakely, J. 2021. "Accounting for Elephants: The (Post) Politics of Carbon Omissions." *Geoforum* 121: 1–11.
- Blum, M. 2020. "Whose Climate? Whose Forest? Power Struggles in a Contested Carbon Forestry Project in Uganda." *Forest Policy and Economics* 115: 102137. <https://doi.org/10.1016/j.forpol.2020.102137>.
- Buck, H. J. 2021. "Social Science for the Next Decade of Carbon Capture and Storage." *Electricity Journal* 34, no. 7: 107003. <https://doi.org/10.1016/j.tej.2021.107003>.
- Bui, B., and C. J. Fowler. 2019. "Strategic Responses to Changing Climate Policies: The Role Played by Carbon Accounting." *Australian Accounting Review* 29, no. 2: 360–375.
- Burger, P., V. Bezençon, B. Bornemann, et al. 2015. "Advances in Understanding Energy Consumption Behavior and the Governance of its Change - Outline of an Integrated Framework." *Frontiers in Energy Research* 3. <https://doi.org/10.3389/fenrg.2015.00029>.
- Busch, T., and J. Schwarzkopf. 2013. "Carbon Management Strategies - A Quest for Corporate Competitiveness." *Progress in Industrial Ecology - An International Journal* 8, no. 1–2: 4–29.
- Clery, D. S., N. E. Vaughan, J. Forster, et al. 2021. "Bringing Greenhouse Gas Removal Down to Earth: Stakeholder Supply Chain Appraisals Reveal Complex Challenges." *Global Environmental Change* 71: 102369. <https://doi.org/10.1016/j.gloenvcha.2021.102369>.
- Daft, R. L., and K. E. Weick. 1984. "Toward a Model of Organizations as Interpretation Systems." *Academy of Management Review* 9, no. 2: 284–295.
- Datt, R., L. Luo, Q. Tang, and G. Mallik. 2018. "An International Study of Determinants of Voluntary Carbon Assurance." *Journal of International Accounting Research* 17, no. 3: 1–20. <https://doi.org/10.2308/jiar-52221>.
- Datt, R. R., L. Luo, and Q. Tang. 2019. "Corporate Voluntary Carbon Disclosure Strategy and Carbon Performance in the USA." *Accounting Research Journal* 32, no. 3: 417–435.
- Datt, R., L. Luo, and Q. Tang. 2020. "Corporate Choice of Providers of Voluntary Carbon Assurance." *International Journal of Auditing* 24, no. 1: 145–162. <https://doi.org/10.1111/ijau.12184>.
- Datt, R., P. Prasad, C. Vitale, and K. Prasad. 2021. "International Evidence of Changing Assurance Practices for Carbon Emissions Disclosures." *Meditari Accountancy Research* 30, no. 6: 1594–1628. <https://doi.org/10.1108/medar-09-2020-1005>.
- Deegan, C. 2002. "Introduction: The Legitimising Effect of Social and Environmental Disclosures - A Theoretical Foundation." *Accounting, Auditing & Accountability Journal* 15, no. 3: 282–311.
- Deegan, C., M. Rankin, and J. Tobin. 2002. "An Examination of the Corporate Social and Environmental Disclosures of BHP From 1983–1997: A Test of Legitimacy Theory." *Accounting, Auditing & Accountability Journal* 15, no. 3: 312–343.

- Deegan, C. M. 2019. "Legitimacy Theory: Despite Its Enduring Popularity and Contribution, Time Is Right for a Necessary Makeover." *Accounting, Auditing & Accountability Journal* 32, no. 8: 2307–2329.
- Delafield, G., C. Donnison, P. Roddis, et al. 2021. "Conceptual Framework for Balancing Society and Nature in Net-Zero Energy Transitions." *Environmental Science & Policy* 125: 189–201. <https://doi.org/10.1016/j.envsci.2021.08.021>.
- Demuijnck, G., and B. Festerling. 2016. "The Social License to Operate." *Journal of Business Ethics* 136: 675–685.
- Denyer, D., and D. Tranfield. 2009. "Producing A Systematic Review." In *The Sage Handbook of Organizational Research Methods*, edited by D. A. Buchanan and A. Bryman, 671–689. Sage Publications Ltd.
- Dzhengiz, T. 2018. "The Relationship of Organisational Value Frames With the Configuration of Alliance Portfolios: Cases From Electricity Utilities in Great Britain." *Sustainability* 10, no. 12: 1–29.
- Feeney, M., J. Ormiston, W. Gijssels, P. Martens, and T. Grohnert. 2024. "Framing Collective Moral Responsibility for Climate Change: A Longitudinal Frame Analysis of Energy Company Climate Reporting." *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-024-05801-0>.
- Feng, Z.-Y., Y.-C. Wang, and W.-G. Wang. 2024. "Corporate Carbon Reduction and Tax Avoidance: International Evidence." *Journal of Contemporary Accounting & Economics* 20, no. 2: 100416. <https://doi.org/10.1016/j.jcae.2024.100416>.
- Fracaroli Nunes, M., and C. Lee Park. 2017. "Self-Claimed Sustainability: Building Social and Environmental Reputations With Words." *Sustainable Production and Consumption* 11: 46–57. <https://doi.org/10.1016/j.spc.2016.04.002>.
- Gehman, J., L. M. Lefsrud, and S. Fast. 2017. "Social License to Operate: Legitimacy by Another Name." *Canadian Public Administration* 60, no. 2: 293–317.
- Graftstein, R. 1981. "The Failure of Weber's Conception of Legitimacy: Its Causes and Implications." *Journal of Politics* 43, no. 2: 456–472.
- He, Y., Q. Tang, and K. Wang. 2016. "Carbon Performance Versus Financial Performance." *China Journal of Accounting Studies* 4, no. 4: 357–378. <https://doi.org/10.1080/21697213.2016.1251768>.
- Herman, K. S., C. Schiavoni, and G. Guastella. 2024. "Walking, Talking, or Standing Still? Climate Commitment and Performance in Publicly Listed Firms in Five Major Economies." *Business & Society* 64, no. 4: 713–756. <https://doi.org/10.1177/00076503241255954>.
- Herold, D. M., and K.-H. Lee. 2019. "The Influence of Internal and External Pressures on Carbon Management Practices and Disclosure Strategies." *Australasian Journal of Environmental Management* 26, no. 1: 63–81.
- Hickman, L. E., and J. Cote. 2019. "CSR Reporting and Assurance Legitimacy: A Client-Assurance Dyad Investigation." *Journal of Applied Accounting Research* 20, no. 4: 372–393.
- Hinsch, W. 2010. "Justice, Legitimacy, and Constitutional Rights." *Critical Review of International Social and Political Philosophy* 13, no. 1: 39–54.
- Hrasky, S. 2012. "Carbon Footprints and Legitimation Strategies: Symbolism or Action?" *Accounting, Auditing & Accountability Journal* 25, no. 1: 174–198.
- Ibrahim, A. E. A., K. Hussainey, T. Nawaz, C. Ntim, and A. Elamer. 2022. "A Systematic Literature Review on Risk Disclosure Research: State-Of-The-Art and Future Research Agenda." *International Review of Financial Analysis* 82: 102217. <https://doi.org/10.1016/j.irfa.2022.102217>.
- Issa, A., and J. R. Hanaysha. 2023. "Achieving Sustainable Business: The Nexus Between External Sustainability Assurance, CSR Strategy and Emission Reduction." *Corporate Social Responsibility and Environmental Management* 30, no. 6: 3095–3109. <https://doi.org/10.1002/csr.2540>.
- Khalid, F., J. Sun, J. Guo, and M. Srivastava. 2023. "Green Corporate Image: Assessing the Effects of Climate Change Management Practices on Corporate Reputation." *Corporate Social Responsibility and Environmental Management* 3, no. 3: 1786–1801. <https://doi.org/10.1002/csr.2663>.
- Kuo, L., and V. Yi-Ju Chen. 2013. "Is Environmental Disclosure an Effective Strategy on Establishment of Environmental Legitimacy for Organization?" *Management Decision* 51, no. 7: 1462–1487. <https://doi.org/10.1108/md-06-2012-0395>.
- L'Abate, V., F. Vitolla, P. Esposito, and N. Raimo. 2023. "The Drivers of Sustainability Disclosure Practices in the Airport Industry: A Legitimacy Theory Perspective." *Corporate Social Responsibility and Environmental Management* 30, no. 4: 1903–1916. <https://doi.org/10.1002/csr.2462>.
- Lei, X., and J. Yu. 2023. "Striving for Sustainable Development: Green Financial Policy, Institutional Investors, and Corporate ESG Performance." *Corporate Social Responsibility and Environmental Management* 31, no. 2: 1177–1202. <https://doi.org/10.1002/csr.2630>.
- Long, A., K. Mintz-Woo, H. Daly, M. O'Connell, and B. Smyth. 2021. "Infant Feeding and the Energy Transition: A Comparison Between Decarbonising Breastmilk Substitutes With Renewable Gas and Achieving the Global Nutrition Target for Breastfeeding." *Journal of Cleaner Production* 324: 129280.
- Luo, L. 2019. "The Influence of Institutional Contexts on the Relationship Between Voluntary Carbon Disclosure and Carbon Emission Performance." *Accounting & Finance* 59, no. 2: 1235–1264. <https://doi.org/10.1111/acfi.12267>.
- Mady, K., M. Abdul Halim, K. Omar, A. S. Reda, and M. Battour. 2022. "Institutional Pressure and eco-Innovation: The Mediating Role of Green Absorptive Capacity and Strategically Environmental Orientation Among Manufacturing SMEs in Egypt." *Cogent Business and Management* 9: 2064259.
- Matheson, C. 1987. "Weber and the Classification of Forms of Legitimacy." *British Journal of Sociology* 38, no. 2: 199–215.
- Meyer, J. W., and B. Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83: 340–363.
- Mezger, A., P. Cabanelas, M. J. López-Miguens, F. Cabiddu, and K. Rüdiger. 2020. "Sustainable Development and Consumption: The Role of Trust for Switching Towards Green Energy." *Business Strategy and the Environment* 29, no. 8: 3598–3610. <https://doi.org/10.1002/bse.2599>.
- Moher, D., A. Liberati, J. Tetzlaff, and D. G. Altman. 2009. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement." *PLoS Medicine* 6, no. 7: e1000097. <https://doi.org/10.1371/journal.pmed.1000097>.
- Nguyen, T. H. H., C. G. Ntim, and J. K. Malagila. 2020. "Women on Corporate Boards and Corporate Financial and Non-Financial Performance: A Systematic Literature Review and Future Research Agenda." *International Review of Financial Analysis* 71: 101554. <https://doi.org/10.1016/j.irfa.2020.101554>.
- Ngwakwe, C. C. 2013. "Independent Assurance Compliance of Sustainable Development Disclosures in the Johannesburg Stock Exchange Firms." *Corporate Ownership & Control* 10: 226–240.
- Nimer, K., M. Abdelqader, C. Kuzey, and A. Uyar. 2024. "Emission Targeting and Carbon Emissions: The Moderating Effect of Female Directors." *Business Strategy and the Environment* 33, no. 4: 3480–3504. <https://doi.org/10.1002/bse.3669>.
- O'Beirne, P., F. Battersby, A. Mallett, et al. 2020. "The UK net-Zero Target: Insights Into Procedural Justice for Greenhouse Gas." *Environmental Science and Policy* 112: 264–274.

- Omran, M. S. Y., and M. N. S. Yaaqbeh. 2023. "Climate Change and Business Accountability, Empirical Evidence on the Roles of Environmental Strategy and Environmental Accounting." *Business Ethics, the Environment & Responsibility* 32, no. 4: 1592–1608. <https://doi.org/10.1111/beer.12591>.
- Orr, M., X. Qian, I. Schneider, M. Heyn, and P. Simmons. 2019. "Perceptions vs. Practice: A Longitudinal Analysis of Energy-Efficient and Energy Conservation Practices in Minnesota's Tourism Industry." *Sustainability* 11, no. 23: 6741. <https://doi.org/10.3390/su11236741>.
- Pan, L., W. Han, Y. Li, and H. Wu. 2022. "Legitimacy or Efficiency? Carbon Emissions Transfers Under the Pressure of Environmental Law Enforcement." *Journal of Cleaner Production* 365: 132766. <https://doi.org/10.1016/j.jclepro.2022.132766>.
- Pellegrino, C., and S. Lodhia. 2012. "Climate Change Accounting and the Australian Mining Industry: Exploring the Links between Corporate Disclosure and the Generation of Legitimacy." *Journal of Cleaner Production* 36: 68–82. <https://doi.org/10.1016/j.jclepro.2012.02.022>.
- Peng, X., J. Li, Q. Tang, Y. Lan, and X. Cui. 2023. "Do Environmental Scores Become Multinational Corporations' Strategic 'Greenwashing' Tool for Window-Dressing Carbon Reduction? A Cross-Cultural Analysis." *Business Strategy and the Environment* 33, no. 3: 2084–2115. <https://doi.org/10.1002/bse.3586>.
- Prno, J., and S. D. Slocumbe. 2012. "Exploring the Origins of 'social License to Operate' in the Mining Sector: Persepectives From Governance and Sustainability Theories." *Resources Policy* 37, no. 3: 346–357.
- Royston, S., J. Selby, and S. Kesidou. 2021. "Governing Energy in Organisations: Energy Management Professionals, Marginalised Practices, and the Limits to Change." *Energy Policy and Governance* 31, no. 1: 60–75.
- Saha, A. K., T. Dunne, and R. Dixon. 2021. "Carbon Disclosure, Performance and the Green Reputation of Higher Educational Institutions in the UK." *Journal of Accounting and Organizational Change* 17: 604–632.
- Schupfer, H., and B. Soppe. 2024. "Greening From Within: The Role of Organisational Purpose Shift in Building Internal Legitimacy for Fossil Fuel Incumbents' Green Innovation." *Industry and Innovation* 32, no. 1: 84–107. <https://doi.org/10.1080/13662716.2024.2379995>.
- Sebastianelli, R., N. Tamimi, O. Isil, and V. Rocco. 2025. "Insights From Analyzing Corporate Environmental and Social Disclosure." *Management Decision* 63, no. 3: 803–823.
- Seele, P., and L. Gatti. 2017. "Greenwashing Revisited: In Search of a Typology and Accusation-Based Definition Incorporating Legitimacy Strategies." *Business Strategy and the Environment* 26, no. 2: 239–252.
- Silva, M. E., B. S. Silvestre, R. C. Del Vecchio Ponte, and J. E. O. Cabral. 2021. "Managing Micro and Small Enterprise Supply Chains: A Multi-Level Approach to Sustainability, Resilience and Regional Development." *Journal of Cleaner Production* 311: 127567. <https://doi.org/10.1016/j.jclepro.2021.127567>.
- Stephens, S., and B. M. Robison. 2021. "The Social License to Operate in the Onshore Wind Energy Industry: A Comparative Case Study of Scotland and South Africa." *Energy Policy* 148: 111981.
- Shaw, K., S. D. Hill, A. D. Boyd, L. Monk, J. Reid, and E. F. Einsiedel. 2015. "Conflicted or Constructive? Exploring Community Responses to New Energy Developments in Canada." *Energy Research & Social Science* 8: 41–51. <https://doi.org/10.1016/j.erss.2015.04.003>.
- Song, K. 2022. "How Should Businesses in China React to New Environmental Disclosure Requirements?" *China Dialogue*. <https://chinadialogue.net/en/business/how-should-businesses-in-china-react-to-new-environmental-disclosure-requirements/>.
- Soria Baledón, M., M. Trudel, and N. Kosoy. 2021. "Alternative Jet Fuels and Climate Geopolitics: What, Why Does It and Who Matters in the Environmental Policy-Making Process." *International Journal of Sustainable Transportation* 16, no. 6: 541–557. <https://doi.org/10.1080/15568318.2021.1912225>.
- Suchman, M. C. 1995. "Managing Legitimacy: Strategic and Institutional Approaches." *Academy of Management Review* 20, no. 3: 571–610. <https://doi.org/10.5465/amr.1995.9508080331>.
- Suddaby, R., A. Bitektine, and P. Haack. 2017. "Legitimacy." *Academy of Management Annals* 11, no. 1: 451–478.
- Tan, D., Bilal, S. Gao, and B. Komal. 2020. "Impact of Carbon Emission Trading System Participation and Level of Internal Control on Quality of Carbon Emission Disclosures: Insights From Chinese State-Owned Electricity Companies." *Sustainability* 12, no. 5: 1788. <https://doi.org/10.3390/su12051788>.
- Thomas, T. E., and E. Lamm. 2012. "Legitimacy and Organizational Sustainability." *Journal of Business Ethics* 110: 191–203.
- Tranfield, D., D. Denyer, and P. Smart. 2003. "Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review." *British Journal of Management* 14, no. 3: 207–222. <https://doi.org/10.1111/1467-8551.00375>.
- Treepongkaruna, S., H. H. Au Yong, S. Thomsen, and K. Kyaw. 2024. "Greenwashing, Carbon Emission, and ESG." *Business Strategy and the Environment* 33 no. 8: 8526–8539. <https://doi.org/10.1002/bse.3929>.
- Trencher, G., N. Truong, P. Temocin, and M. Duygan. 2021. "Top-Down Sustainability Transitions in Action: How Do Incumbent Actors Drive Electric Mobility Diffusion in China, Japan, and California?" *Energy Research & Social Science* 79: 102184. <https://doi.org/10.1016/j.erss.2021.102184>.
- Walker, C., P. Devine-Wright, M. Rohse, L. Gooding, H. Devine-Wright, and R. Gupta. 2021. "What is 'Local' About Smart Local Energy Systems? Emerging Stakeholder Geographies of Decentralised Energy in the United Kingdom." *Energy Research & Social Science* 80: 102182. <https://doi.org/10.1016/j.erss.2021.102182>.
- Warbroek, B., T. Hoppe, T. Bressers, and F. Coenen. 2019. "Testing the Social, Organizational, and Governance Factors for Success in Local low Carbon Energy Initiatives." *Energy Research & Social Science* 58: 101269.
- Weber, M. 1968. *Economy and Society: An Outline of Interpretive Sociology*. Bedminster Press.
- Wu, B., A. Monfort, C. Jin, and X. Shen. 2022. "Sustainable Response or Impression Management? Compliance Strategies for Sustainable Development Responsibility in Family Firms." *Technological Forecasting and Social Change* 174: 121214.
- Yu, H. C., L. Kuo, and B. Ma. 2020. "The Drivers of Carbon Disclosure: Evidence From china's Sustainability Plans." *Carbon Management* 11, no. 4: 399–414. <https://doi.org/10.1080/17583004.2020.1796142>.
- Zhou, Z., L. Nie, H. Ji, H. Zeng, and X. Chen. 2020. "Does a firm's low-Carbon Awareness Promote low-Carbon Behaviors? Empirical Evidence From China." *Journal of Cleaner Production* 244: 118903. <https://doi.org/10.1016/j.jclepro.2019.118903>.
- Zhu, Q., Y. Duan, and J. Sarkis. 2023. "Supply Chain Carbon Transparency to Consumers via Blockchain: Does the Truth Hurt?" *International Journal of Logistics Management* 35, no. 3: 833–864. <https://doi.org/10.1108/IJLM-03-2023-0109>.