RESEARCH ARTICLE

WILEY Business Strategy and Development

The interaction between institutional and stakeholder pressures: Advancing a framework for categorising carbon disclosure strategies

David M. Herold[1] [iD] | Ben Farr-Wharton[2] [iD] | Ki-Hoon Lee[1] | Wolfram Groschopf[3]

[1] Business Strategy and Innovation, Griffith University, Southport, Queensland, Australia

[2] Management Discipline Group, University of Technology Sydney, Ultimo, Sydney, Australia

[3] Institute for Transport and Logistics Management, WU—Vienna University of Economics and Business, Vienna, Austria

Correspondence
David M. Herold, Griffith Business School, Griffith University, Parklands Drive, Southport, QLD 4215, Australia.
Email: d.herold@griffith.edu.au

Abstract

Multiple institutional and stakeholder demands have led to different strategies in the measurement and disclosure of carbon-related information. Although scholars acknowledge the prevalence of competing institutional logics as being a driver of different outcomes, existing research offers conflicting views on their implications, thus lacking clarity. In response, this paper proposes two frameworks (a) to clarify the institutional and stakeholder influences on carbon disclosure and (b) to depict four different types of carbon disclosure strategies to assess a company's "true" carbon position. We identify various concepts of institutional fields, organisations, and stakeholders that influence disclosure and combine the two critical concepts of logic centrality and stakeholder salience to categorise the multiple institutional and stakeholder pressures on carbon disclosure. Whereas the first framework proposes that institutional theory and stakeholder theory both provide, on different levels, a theoretical foundation to examine the influences on carbon disclosure, the second model categorises carbon disclosure outcomes in terms of logic centrality and stakeholder salience. Both frameworks advance the understanding of the interaction between firm-level agency and field-level pressures and synthesise the current literature to offer conceptual clarity regarding the varied implications and outcomes linked to carbon disclosure practices and strategies.

KEYWORDS

carbon disclosure strategy, carbon management practices, institutional logics, stakeholder salience

1 | INTRODUCTION

Climate change is a major environmental issue of concern for the global community and is increasingly recognised by corporate managers as one of the most important business challenges in the 21st century (Haque & Deegan, 2010). Evidence shows that multinational companies are facing pressures from multiple stakeholders to disclose information about their carbon-related activities (de Villiers & Alexander, 2014; Hahn, Reimsbach, & Schiemann, 2015; Kolk, Levy, & Pinkse, 2008). In response to this pressure, companies have increasingly implemented carbon management practices (Borghei, Leung, & Guthrie, 2016; Herold & Lee, 2017a; KPMG, 2014; Welbeck, 2017);

however, the carbon management practices and the associated disclosure strategies vary extensively between companies (Herold, 2018a; Hrasky, 2011; Kolk et al., 2008).

The differences in organisational responses have long been subject to scholarly investigation (e.g., Adams, 2017; Besharov & Smith, 2014; Breitbarth & Herold, 2018; Delmas & Toffel, 2004; Gibassier & Schaltegger, 2015; Herold, Manwa, Sen, & Wilde, 2016; Lee & Herold, 2016; Luo, Wang, & Zhang, 2017; Michelon, Pilonato, Ricceri, & Roberts, 2016; Oliver, 1991), and research often draws on the concept of institutional logics to explore the implications of these different responses. Institutional logics, according to Scott (2012), reflect "values and norms, ideas, beliefs, and meaning systems that guide

the behaviour of actors" (p. 32). In other words, institutional logics provide the organising principles for an organisational field that shape cognition and behaviour in an industry (Besharov & Smith, 2014).

In fact, the presence of carbon disclosure can be attributed to the adoption of the sustainability logic (Herold & Lee, 2017b; Herold, 2018b; Schaltegger & Hörisch, 2015). The sustainability logic reflects the integration of "sustainability" and "climate change" principles into a company's value system due to a potential legitimacy gap, which can be defined as "where corporate performance remains unchanged, but societal expectations about that performance have changed" (Hrasky, 2011, p. 177). In the case of climate change, the issue of global warming heightened societal interest, and companies responded by adopting the sustainability logic to reflect the concern about climate change. The adoption of the sustainability logic provides actors with templates for action, such as the implementation of carbon disclosure, to communicate these values and convince stakeholder audiences that the company's existence and its operations are legitimate.

Companies, however, are subject to multiple influences and thus to multiple logics, reflecting the *institutional complexity* within the organisational field, which is characterised by stakeholders with multiple views and interests. For example, companies are also driven by the logic of the market (Greenwood, Díaz, Li, & Lorente, 2010). The market logic represents a purely market driven view, characterised by an absolute focus towards reducing costs and increasing profits, where the sustainability logic is regarded as a trade-off and as a problem in regard to the pursuit of competitive advantage (Dobrovnik, Herold, Fürst, & Kummer, 2018; Glover, Champion, Daniels, & Dainty, 2014; Oberhofer & Dieplinger, 2014). As such, the logic of the "market" and the logic of "sustainability" reflect different values and beliefs within companies and are known in the literature as "competing logics" (e.g., Lander, Koene, & Linssen, 2013; Pache & Santos, 2013; Styhre, 2011). But although the market logic represents a central or "core logic" (Ansari, Wijen, & Gray, 2013, p. 1017) in business organisations, the position of the sustainability logic varies between organisations. These two different logics and their relative influence impose conflicting demands on organisational stakeholders and consequently lead to different carbon management practices and disclosure strategies within organisations.

Although prior studies acknowledge the prevalence of competing logics, they are limited when it comes to describing the determinants of stakeholder influences that lead to different organisational responses within the same organisational field. In particular, the issue of whether the interaction between field-level pressures and firm-level influences can play an important role in carbon disclosure strategies remains to be explored. In this study, we aim to fill this void. We specifically set the following research question: *How does the interaction between institutional and stakeholder pressures influence carbon disclosure strategies?*

In this paper, we theorise about institutional and stakeholder influences that lead to the adoption of logics and their implications for organisations and institutional fields. The goal of this paper is twofold. First, this study will illustrate how the interaction of institutional and stakeholder pressures can not only influence a company's carbon disclosure on a firm level but also how these pressures can shape organisational practices on a field level. To do so, we integrate

stakeholder theory into institutional theory and consolidate the critical concepts of both theories into an institutional framework that presents the influences on carbon disclosure strategies. We argue that institutional theory is limited to categorising the salience of stakeholders, and the inclusion of stakeholder theory provides a theoretical foundation that can complement institutional theory in order to categorise these influences. We identify various concepts within institutional fields, organisations, and stakeholders that impact disclosure strategies in companies.

Second, we use the main concepts in the framework to build an integrative model that depicts four types of carbon disclosure strategies. Although researchers acknowledge the importance of voluntary carbon disclosure, the issue of the credibility of the disclosed information remains unanswered. This inherent uncertainty, which is due to a firm's discretion over the release of carbon-related information, makes it difficult to assess a company's "true" carbon position. We combine two critical dimensions in institutional and stakeholder theory to categorise carbon disclosure strategy types on the basis of multiple institutional and stakeholder pressures. The first dimension represents the "centrality" of the sustainability logic, which describes "the extent to which (…) logics manifest in core features that are central to organisational functioning" (Besharov & Smith, 2014, p. 365). The second dimension represents the "salience" of stakeholders (Mitchell, Agle, & Wood, 1997) with regard to climate change, which is defined here as the extent to which managers give priority to stakeholder's carbon disclosure claims for full disclosure.

By expanding insight into the concepts and implications of institutional and stakeholder influences within the organisational field, this paper provides several important contributions to the literature. First, we present a conceptual model, which proposes that both institutional theory as well as stakeholder theory provide, on different levels, a theoretical foundation on which to examine the influences on carbon disclosure. This model thereby links the categorisation of stakeholder pressures at a firm level to the outcomes at a field level that affect a company's carbon disclosure strategy. Second, by categorising the pressures in terms of their centrality and salience, our model proposes four types of carbon disclosure strategies, providing an understanding of the different corporate carbon disclosure positions. This study thereby addresses the inherent uncertainty associated with carbon-related information and provides clarity about a company's true carbon position.

Third, the combination and the interaction of these concepts allow the identification and categorisation of various pressures on different levels in order to gain an understanding of the variances in carbon disclosure. In this regard, the framework advances the growing body of research on institutional complexity, which to date has been limited in providing an explanation of the influences of individual actors. Lastly, by categorising stakeholder influences on organisational outcomes, our framework points to practices through which management can exert agency to influence its preferred logics. In this respect, we provide important insight into how stakeholder influences and institutional logics interact in order to influence carbon disclosure strategies, and we further develop research on competing logics by exploring how organisations are impacted by both firm-level agency and field-level pressures.

This paper is structured as follows: the next section introduces a framework that clarifies the institutional and stakeholder pressures and discusses critical assumptions for this research. Sections 3 and 4 deal with the concepts and theories of institutional pressures. In particular, these sections discuss the adoption of carbon disclosure due to isomorphic pressures and describe, under the premise of institutional complexity, the concept of competing logics. This is followed by the introduction of the first key dimension in categorising carbon disclosure strategy at the field level: the logic centrality within organisations. As institutional concepts are limited in describing the determinants of stakeholder influences at the firm level, Section 3.3 introduces the critical concepts of stakeholder theory and the second key dimension in categorising carbon disclosure strategies at the firm level: the salience of stakeholders. A combination of these two key dimensions is illustrated in Section 7, where four strategy types of carbon disclosure are described and presented in a model. Finally, the conclusion highlights the contributions of this paper and discusses future research.

2 | THE ASSUMPTIONS OF THE INSTITUTIONAL FRAMEWORK

In this section, we present our institutional framework and the assumptions that link institutional pressures with stakeholder pressures to illustrate the impact of these influences on a company's carbon disclosure and the organisational field (see Figure 1). Of particular interest for this paper is the role of institutional logics in the field, which Friedland and Alford (1991, p. 248) define as sets of "materials practices and symbolic constructions which constitute organising principles and which are available to organisations and individuals to elaborate." In other words, these "logics are the cognitive maps, the belief systems carried by participants in the field to guide and give meaning to their activities" (Scott, Ruef, Mendel, & Caronna, 2000, p. 20), and each logic is associated with different organising principles, and each requires a different set of behaviours from actors (Schaltegger & Hörisch, 2015).

This description of institutional logics leads to four assumptions that are crucial to our framework. First, we assume that carbon disclosure has been institutionalised at a field level. As such, carbon disclosure represents an established "social fact," which companies take into account when determining what is considered to be an appropriate action (Meyer & Rowan, 1977; Zucker, 1977). Second, we assume companies operate in an organisational field with similar or the same institutional pressures—that is, the field consists of "those organisations that, in the aggregate, constitute a recognised area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organisations that produce similar services or products" (DiMaggio & Powell, 1983, p. 148).

Third, we assume that, at a firm level, the differences in carbon disclosure within companies are attributed to the competing logics of the "sustainability" and "market" logic and their relative dominance. Companies are frequently engaged in environments in which competing logics are present and thus reflect these in their organisational practices (Kraatz & Block, 2008). The market logic assumes that companies address carbon issues only if this positively affects their financial performance (Greenwood et al., 2010; Schaltegger & Hörisch, 2015). The market logic represents a core element within companies, and pure compliance will avoid unnecessary costs for sustainability measures such as carbon disclosure (Oberhofer & Dieplinger, 2014).

Fourth, we assume that stakeholders can influence how logics and their organisational outcomes are shaped. On one hand, institutional logics consist of various sets of cultural justifications upon which stakeholders are deciding what organisational practices to support (Friedland & Alford, 1991). On the other hand, stakeholders are constantly challenging the assumptions, values, beliefs, and rules considered to be appropriate and thus play a central role in shaping institutional logics and organisational outcomes and behaviour (Powell & DiMaggio, 1991; Thornton & Ocasio, 2008). This argument is critical not only because it emphasises the agency of companies and stakeholders but also because it helps to understand how stakeholders' influences contribute to the relative dominance of logics and thus to different carbon management practices and disclosure strategies.

3 | INSTITUTIONAL PRESSURES

The adoption of institutional logics can be viewed as a reaction to multiple institutional pressures to maintain or gain legitimacy. Legitimacy is "a 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,
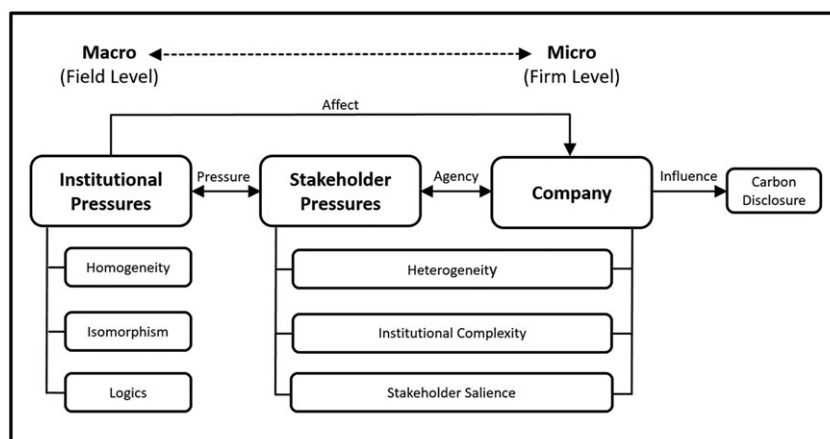

FIGURE 1 Institutional framework

1995, p. 274). Organisational legitimacy can be linked to a "social contract," where organisations agree to perform various desired actions in return for approval of its objectives, other rewards, and its ultimate survival (e.g., Dowling & Pfeffer, 1975; Guthrie & Parker, 1989).

In the context of climate change, companies face a heightened legitimacy gap and are increasingly under pressure from multiple institutions and stakeholders to reduce the negative impact on the environment (Hrasky, 2011). In the traditional view of institutional theory, organisations respond to this potential legitimacy gap by isomorphic behaviour, in particular within the same organisational field (Powell & DiMaggio, 1991). In a single organisational field, companies increasingly resemble each other and have converging perceptions of how to respond to climate change (Kolk et al., 2008; Lenssen et al., 2008). These responses, however, are not choices among unlimited possibilities, but rather present a choice between a specific defined set of legitimate options (see DiMaggio & Powell, 1983; Wooten & Hoffman, 2008). In particular, companies facing similar institutional pressures will eventually adopt similar strategies or organisational practices to gain or maintain legitimacy (DiMaggio & Powell, 1983; Scott, 1991; Thornton, Ocasio, & Lounsbury, 2012).

Institutional scholars argue that companies reacted to the pressures arising from climate change with the implementation of carbon disclosure, which could be related to some sort of power exerted by the industry or which must have been based upon an already existing successful model of carbon disclosure that can be reproduced (DiMaggio & Powell, 1983). Whereas the former mechanism leads to normative isomorphism (i.e., induced by the industry), the latter—the presence of successful models—leads towards mimetic isomorphism (i.e., induced by competitors). Moreover, the implementation of carbon disclosure might also be induced by regulatory pressures. These coercive pressures are defined by influences carried out by those in power —for example, through pressure from regulators and actors on which the organisation is dependent for resources. One example of coercive isomorphism is the influence of governmental pressure. Governments are legitimate and usually powerful stakeholders who can exert pressure through legislation, regulation, and policies (Sarkis, Gonzalez-Torre, & Adenso-Diaz, 2010; Schmidt, Schneider, Rogge, Schuetz, & Hoffmann, 2012). This pressure, in the form of "authority requirements" from governmental organisations, is often codified in laws and regulations, and increasing government regulations and disclosure requirements can be interpreted as being a threat for businesses (Bolton & Foxon, 2015; Summerhays & de Villiers, 2012). Many previous studies suggest that increasing regulatory enforcement and growing numbers of policy guidelines on environmental protection and disclosure create direct pressure on companies to adopt carbon disclosure (Qian, Burritt, & Chen, 2015).

In industries with the same institutional pressures, the implementation of certain organisational practices such as carbon disclosure is often related to mimetic or normative isomorphism (Delmas & Toffel, 2004; Powell & DiMaggio, 1991). Mimetic isomorphism occurs when companies replicate their competitors' successful behaviour (Aerts, Cormier, & Magnan, 2006). More importantly, institutional researchers have found that companies are more likely to mimic the organisational practices of other companies that are tied to them through networks, and this indicates normative isomorphism (Guler, Guillén, &

Macpherson, 2002). Normative isomorphism can be defined as pressures arising from social institutions such as industry associations, nongovernment organisations (NGOs), or media. In particular, industry pressures appear to play a significant role with regard to carbon disclosure (Kollman & Prakash, 2002). For example, senior managers in global companies in various industry associations interacted in determining actions to be taken to mitigate climate change, making this "issue arena" of climate change itself an important institutional influence within companies (Levy & Kolk, 2002). As a consequence, some industry associations, such as the Carbon Disclosure Project (CDP), are considered by companies to be serious partners in maintaining or gaining legitimacy (Anderies, Folke, Walker, & Ostrom, 2013; CDP, 2010; CDSB, 2014).

Other industry associations, such as the World Business Council for Sustainable Development (WBCSD), developed guidelines for carbon disclosure (The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard), and the majority of the global companies follow their guidelines (WRI/WBCSD, 2011). Delmas and Toffel (2004) argue that the pressure to adopt these guidelines is affected by market concentration; thus, if an industry is dominated by a few big players, environmental practices such as carbon disclosure lead to a greater degree of diffusion than it would have had the industry been more fragmented.

In line with Rose, Mollenkopf, Autry, and Bell (2016), normative isomorphism in combination with mimetic processes appears to have led to a convergence in the perception of the climate issue within companies. As a consequence, these pressures triggered the implementation of carbon disclosure in order to demonstrate to government and to the broader community that companies are also "good citizens" (Lee, 2012; Schaltegger & Csutora, 2012).

3.1 | Institutional complexity and competing logics

The main argument of isomorphism is that corporations that face similar institutional pressure will eventually adopt similar strategies in order to gain legitimacy. Therefore, isomorphic behaviour can be regarded as the critical process at the field level, illustrating why companies implement or "institutionalise" carbon disclosure as an organisational practice. But isomorphism has two major limitations: First, according to this traditional notion of institutional theory, the corporate disclosure behaviours of organisations should converge over time, that is, no significant differences in carbon disclosure should be observed (Cormier, Magnan, & Van Velthoven, 2005; Luo, Lan, & Tang, 2012; Matisoff, Noonan, & O'brien, 2013). Second, isomorphic pressures lead only to a fulfilment but not to an excess of the requirement (Pålsson & Kovács, 2014). In other words, due to the same institutional pressures, the disclosure of carbon-related information leads only to a predetermined point (the actual requirement). A first glance at the carbon disclosure within companies proves the contrary, as it varies greatly in extent and detail (Herold & Lee, 2018a; Kolk et al., 2008). In particular, these two key assertions neglect the difference in organisational responses to multiple institutional demands. Isomorphism is only valid within the field to a certain extent, and as such, the depth of response to institutional pressures,

as well as the extensiveness of conformity, varies across organisations (Herold & Lee, 2018b; Scott, 2008).

Existing research acknowledges that organisations must frequently deal with multiple demands in their environment. These demands lead to an environment of "institutional complexity" in which multiple logics are present and organisations are guided by different logics at the firm level (Battilana & Dorado, 2010) or the field level (Thornton et al., 2012), depending on the contexts in which they are embedded. In a sustainability context, managers are constantly challenged to deal with sustainability practices while at the same time being responsible for the well-being of their organisation (Oliver, 1997; Schaltegger & Hörisch, 2015). Thus, different logics in a complex institutional environment may impose conflicting demands on organisational stakeholders within the field (Kostova, Roth, & Dacin, 2008; Luo, 2017). For example, in a purely market-driven view, the sustainability logic is regarded as a trade-off and as a problem regarding the pursuit of competitive advantages, in particular in industries characterised by high competition and price sensitivity (Glover et al., 2014; Oberhofer & Dieplinger, 2014).

Each logic is associated with different organising principles and is not only influenced by diverse and multilevel political, cultural, and social aspects but is also characterised by a distinct institutional process and degree of determinism in shaping organisational practices and structures (Greenwood et al., 2010). In other words, the organisational field can be seen as being dynamic, or even as being a "field of struggles" (Bourdieu & Wacquant, 1992, p. 97), where stakeholders are engaged in "a war or, if one prefers, a distribution of the specific capital which, accumulated in the course of previous wars, orients future strategies" (Calhoun, 1993, p. 86). The organisation field therefore becomes a locale of "institutional complexity" in which stakeholders' relationships determine the relative dominance of conflicting logics (Kostova et al., 2008; Luo, 2017; Wooten & Hoffman, 2008).

The dominance of conflicting logics, such as the logic of the "market" and the logic of "sustainability," is influenced by their position in the field. Within the field of business organisations, the market logic can be considered to be a "core logic" (Ansari et al., 2013, p. 1017), as the company's existence in a competitive environment relies on reducing costs and increasing profits. Recently however, increasingly stakeholders with environmental interests and powers are asking for more transparency with regard to carbon emissions disclosure (Hörisch, Freeman, & Schaltegger, 2014; Kolk et al., 2008). These interests have become more powerful and more widespread in recent years, indicating a shift of the sustainability logic to a more central function in companies, thus challenging the dominant market logic.

As such, the influence on the company's carbon disclosure through the increasing shift towards sustainability depends on the extent to which the sustainability logic is integrated or central to the organisational functioning. In other words, the closer the sustainability logic is to the company's core function, the more it is treated as being valid and relevant to the market logic. This positioning around a central function in an organisation is what Besharov and Smith (2014) call the "centrality" of institutional logics in the field, which represents our first key function in determining the implications on carbon disclosure within companies.

3.2 | Logic centrality

The current literature suggests that companies under conditions of institutional complexity often respond to institutional pressures by differentiating between those pressures that are considered core tasks in a company and those pressures that are more peripheral to organisational functioning (Meyer & Rowan, 1977). The influence of logics depends therefore on how centrally they are positioned within a company. Existing research in institutional theory considers the market logic as a "core" function within any business organisation (e.g., Ansari et al., 2013); thus, the positioning of the market logic can be regarded as being central to any company. The positioning of sustainability logic, however, varies between companies, as the differences in carbon management practices indicate (Herold & Lee, 2017a).

Whereas some companies have integrated climate change into their strategy to reduce carbon emissions, others are more restrictive in their provision of carbon-related information and rely more on symbolic management behaviour (Hrasky, 2011). The integration of climate change policies into a company's strategy indicates a closer position of the sustainability logic to a company's core functioning, whereas a more symbolic approach indicates a more peripheral position of the sustainability logic. Thus, centrality is high when the sustainability logic is integrated and represents a central function in a company's operations, and it is lower when the sustainability logic is manifest in peripheral activities not directly linked to a company's operations.

The logics centrality can be influenced by features of the organisational field, such as institutions and organisations. Organisational characteristics such as a company's strategy and mission statement can interact with the field characterises that indicate the centrality of certain logics within the company. Corporate statements can be related to the concept of the *institutional statement*, which Crawford and Ostrom (1995, p. 583) describe as "a shared linguistic constraint or opportunity that prescribes, permits, or advises actions or outcomes for actors (both individual and corporate)." Thus, a mission statement can be regarded as a reflection of the corporate strategy that situates a company in a particular location and thereby exposes it to different logics within the field (Suddaby & Greenwood, 2005). A change in institutional pressures can also lead to a change in mission statements in an effort to reduce uncertainty, which indicates an increase in centrality (Thornton, Jones, & Kury, 2005). As such, climate change statements may indicate the importance of the sustainability logic and its relative position within a company (Purdy & Gray, 2009).

For example, the mission statements on climate change of the multinational company DHL indicate a shift of the sustainability logic to a closer position to the company's functioning in recent years (Herold & Lee, 2017b). In 2011, the statements DHL issued regarding climate change stated that "carbon efficiency is (…) directly related to (…) cost efficiency" (CDP, 2011, p. 3), indicating a focus on the market logic (Schaltegger & Burritt, 2015). In 2013, however, the climate change statement changed and included statements seeking an increase in legitimacy, such as to "share (…) expertise (…) with our customers" (CDP, 2014, p. 3), which indicates a shift to the sustainability logic. As companies are subject to complex operations and several

areas of expertise, they must draw from the logics associated with each area of expertise that increases centrality (Besharov & Smith, 2014). The change in statements regarding climate change indicates a stronger focus on expertise in the area of carbon management and thus represents a shift of the sustainability logic to a more central position in the company's functioning.

Whereas the previous discussion shows that the relative position of sustainability logic in a company's core functions influences the extent of carbon disclosure, the current literature on institutional logics provides only limited insight into the conditions under which these different outcomes arise. Although existing research acknowledges that stakeholders affect institutional logics (see, e.g., Greenwood & Kamoche, 2013; Kim, Bach, & Clelland, 2007), it is limited in describing the salience of stakeholder influences within the same organisational field, which represents our second key function in determining carbon disclosure strategies.

3.3 | Stakeholder salience

The most significant distinction between institutional and stakeholder theory is that in institutional theory the unit of analysis is the company itself, whereas stakeholder theory focuses on the relationships between the company and its stakeholders. To identify the pressures in the relationship between stakeholders and companies, stakeholder theory provides a theoretical foundation to categorise the multilevel and multidimensional perspectives of stakeholders (Freeman, 1983). As such, stakeholder theory is often used to examine environmental practices in companies, as it considers a complex business environment that is influenced by multiple stakeholders described as "any group or individual who can affect or is affected by the achievement of an organisation's objectives" (Freeman, 1983, p. 46). From a corporate sustainability perspective, Stead and Stead (2013) identify a large cadre of stakeholders with environmental interests, including shareholders, consumers, financiers, employees, NGOs, and regulators, as well as standard setters such as business associations. In particular, NGOs, in concert with the media, can be regarded as having played an important role in increasing transparency in environmental practices, as increased transparency encourages businesses and stakeholders to jointly find innovative approaches to sustainability (Awaysheh & Klassen, 2010). For example, the GRI reporting guidelines connect reporting of sustainability practices to stakeholder engagement. The goal of this approach is not only to inform stakeholders but also to increase exchanges between stakeholders and create mutual interests (GRI, 2016). Examples like this shape sustainability-oriented mindsets and reflect the ongoing trend of companies to integrate environmental practices due to heightened societal sensibilities to climate change.

One main task of stakeholder management from a company perspective is to convince stakeholder audiences that the existence of an organisation is legitimate. However, perceptions of legitimacy vary between companies and stakeholders. Companies have to seek legitimacy from stakeholders, whereas stakeholders need to perceive the company's behaviour as being acceptable in order to legitimise the organisation (Hrasky, 2011). Managers are influenced by multiple

factors such as organisational values, principles, and strategies as well as personal beliefs and self-serving interpretations (Gioia & Chittipeddi, 1991; Weick, Sutcliffe, & Obstfeld, 2005). In this vein, Santana (2012) argues that the assessment of a stakeholders' legitimacy is a social construction of reality, and the way a company's management perceives the legitimacy of a stakeholder may or may not be in accordance with the stakeholder's perception of legitimacy, which is, in turn, another social construction.

In the case of climate change, it is therefore crucial for companies to persuade stakeholders that the company's operations are legitimate and that it is operating in an environmentally responsible manner (Hrasky, 2011). To do so, companies need to understand or categorise stakeholders' claims according to their influences. Mitchell et al. (1997) developed the most frequently used concept to define the degree of influences in stakeholders' relations, and this concept has since been used regularly by practitioners and research alike. We adopt their concept of stakeholder salience, which is defined as "the degree to which managers give priority to competing stakeholders' claims" Mitchell et al. (1997, p. 854). In particular, Mitchell and colleagues argue that stakeholder salience is a function of the stakeholder possessing one or more of three relationship attributes: (a) the stakeholder's power to influence the firm, (b) the legitimacy of the stakeholder's relationship with the firm, and (c) the urgency of the stakeholder's claim on the firm.

Stakeholders' power refers to the influence of those who control the company's critical resources, which means that these stakeholders have the power, or access to material or financial resources, to enforce their will within the relationship. These powerful stakeholders are not contractually bound with the company to exert pressure—for example, through regulations and policies. The second factor, legitimacy, refers to those stakeholders who achieve legitimacy when they have legitimate claims over the company, where the basis of the legitimacy of the relationship may derive from a contract, exchange, legal or moral right, legal title, or at-risk status (Hill & Jones, 1992). However, a legitimate claim can only be regarded as salient if the stakeholder has the power to impose its will, or if the claim is perceived as urgent. The third factor, urgency, is related to the level of importance and attention attributed to the claim. Mitchell et al. (1997) characterise this factor as time sensitivity (claims that need to be given immediate attention) and necessity (claims that are vital and highly important).

Under the assumption that the sustainability logic has been adopted, the degree of salience depends on the extent to which stakeholders can hold companies accountable for carbon disclosure-related practices. To increase the salience of their claims, stakeholders may coordinate their goals and actions with organisations that are involved in carbon-related information gathering, monitoring, or analysis, such as NGOs (e.g., the CDP), business associations (e.g., the World Business Council for Sustainable Development), and consulting companies (e.g., auditing firms such as KPMG or PWC). Such engagement with already legitimate and powerful organisations may lead to higher stakeholder salience and thus to greater pressure on companies to give priority to stakeholders' claims for full carbon disclosure (Hill & Jones, 1992). As such, stakeholder salience is high when companies have implemented an open and transparent approach with the aim of full disclosure, and it is lower when stakeholder pressure is

uncoordinated or can be neglected with no serious implications for the company's legitimacy.

The attribute of power within Mitchell et al. (1997) salience framework, however, appears to be a crucial factor with regard to its influence on carbon disclosure strategies. For example, the extent of disclosed carbon-related information in companies depends on the relative power of internal and external stakeholders. External stakeholders' power, however, is subject to "power differentials" (Hill & Jones, 1992), which reflects the information asymmetry between the company's management and external stakeholders. Management has control over the decision-making mechanisms within the company, which puts them in a better position to exert power over stakeholders (Hawn & Ioannou, 2016). In other words, the company's management can be regarded as the most powerful and the most legitimate stakeholder of any company (Pålsson & Kovács, 2014), and that is because the top management eventually decides on the design of the carbon report and the amount of carbon emissions reported.

A good example to illustrate the impact of corporate decision-making on reported carbon emissions is the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)," in which companies can choose different carbon measurement and reporting schemes. These different schemes provide guidelines to set boundaries for carbon emissions reporting and companies can choose between two different control approaches, namely, either "financial" control or "operational" control. In the financial approach, companies need only to report emissions from ventures in which they hold more than 50% interest (WRI/WBCSD, 2011). In other words, companies that follow the financial approach do not need to report carbon emissions created within partnerships, if they do not own more than 50% of the partner's company. Compared with the "operational" approach, this may lead to less complete reporting, because when an operational control is applied, the measurement and reporting of carbon emissions "is not limited to majority-held ventures, it also applies to minority ventures" (IPIECA, 2011, pp. 3–5). Thus, an operational approach increases the amount of carbon emissions, as it tries to capture emissions from the entire operational network.

Another example is a company's decision whether to outsource services or to perform activities in-house. This initial difference in choosing a certain approach has a significant impact with regard to carbon emissions disclosure purposes. Companies that use an in-house approach are required to report their carbon output under Scope 1 emissions, whereas all outsourced activity falls under the Scope 3 category, where disclosure is voluntary and thus is not a requirement. Although institutional and stakeholder pressure may influence and affect a company's decision about what kind of carbon information is disclosed, both examples show that the eventual decision lies with the company's management. Our conceptual framework depicts this process with the company as being a bottleneck (see Figure 1), where all pressures are consolidated and filtered.

In other words, institutional pressures alone cannot provide answers to questions about the extent to which carbon-related information is disclosed. Relevant internal stakeholders, in particular corporate managers, have a direct influence on a company's carbon report, whereas external stakeholders have only indirect influence by applying external pressure. The shift in companies towards the sustainability logic to maintain legitimacy, however, puts increasing pressure on companies to disclose relevant carbon-related information. Thus, these dynamics of the relationship represent a constant fight for power between management and stakeholders outside of the company regarding the extent of disclosure of carbon-related information. Therefore, we argue that both dimensions—the "centrality" of the sustainability logic on one hand, and the "salience" of stakeholders on the other—are critical in determining a company's carbon disclosure strategy.

4 | TYPES OF CARBON DISCLOSURE STRATEGIES

Taken together, the dimensions of logic centrality and stakeholder salience provide an integrative model that allows to categorise carbon disclosure strategies. Whereas the centrality reflects the degree to which the sustainability logic is central to the company's organisational functioning, the salience of stakeholders represents the extent to which carbon disclosure claims are given priority. To establish a clear distinction between those dimensions, it is assumed that centrality reflects the degree of the *internal* dissemination of the sustainability logic, that is, how the values and principles of climate change are exhibited by top corporate management and how these values are shared by organisational members to commit to common corporate environmental goals and aspirations (Linnenluecke & Griffiths, 2010). From the perspective of the stakeholders, it is assumed that salience represents the degree of *external* pressure they are able to exert regarding climate change—that is, how much relevant carbon-related information is disclosed to relevant external stakeholders.

In this section, we combine these dimensions to propose four types of carbon disclosure strategies: substantial, symbolic, transparent, and engaged. Figure 2 depicts the four types of strategies and we elaborate on each below. We used dashed rather than solid lines between the types to emphasise that centrality and salience are continuous dimensions and that carbon disclosure can therefore vary between the types; however, all four disclosure types can be regarded as useful legitimation strategies. Our framework reveals that the extent of carbon-related information depends on the centrality of logics as well as on the salience of stakeholders. Our model below (see Figure 2) describes each type and explains how each type implies a distinct level of carbon disclosure. We illustrate our argument with examples from the literature.

4.1 | Substantial disclosure

The first type of carbon disclosure behaviour in companies exhibits high centrality and low salience. In these companies, high centrality positions the sustainability logic as being relevant to the company's functioning, leading to a convergence of market and sustainability goals. Low salience means inconsistent demands from stakeholders, confronting companies with divergent goals and means and therefore having little impact on the organisation. As a result, companies align their carbon measures with the market-driven perspective, which results in substantial carbon emission reduction initiatives with the
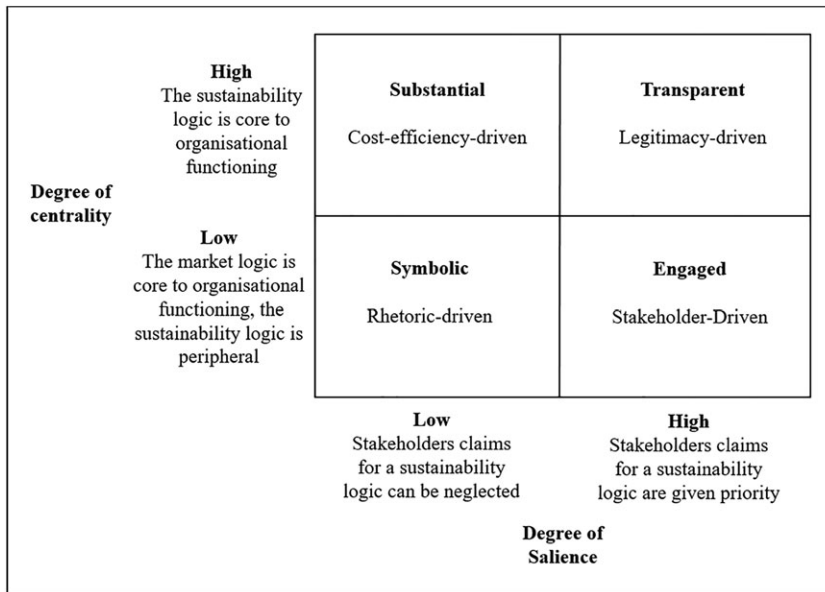
FIGURE 2 Types of carbon disclosure strategies

aim of reducing costs and increasing profits. We therefore label this type *substantial*.

Substantial activities reflect the corporate actions taken by a company to achieve carbon reduction-related accomplishments in order to reduce its carbon footprint in line with cost reductions (Hrasky, 2011; Schaltegger & Hörisch, 2015). Because companies have a high centrality, the sustainability logic is integrated in their strategies, as well as in their organisational structures, thus climate change values are shared by all organisational members. Moreover, because these companies face low salience, there is no need for the company's management to include demands from stakeholders for carbon disclosure beyond the market logic requirements. Together, these factors result in an expectation about aligned sustainability and market goals to proactively and publicly manage institutional pressures and processes by, for example, implementing carbon efficiency initiatives to enhance the "economic fitness" (Oliver, 1991, p. 161) of a company.

An investigation into carbon emission reduction activities from a corporate perspective reveals that the majority of substantial initiatives are related to operational excellence (CDP, 2010; Oberhofer & Dieplinger, 2014). In other words, most reductions in carbon footprint are directly linked to improving operational efficiency and are often expressed in form of energy-efficiency or carbon reduction policies.

Busch and Schwarzkopf (2013) study of carbon disclosure strategies in the car manufacturer industry provides an illustration how high centrality and low salience reflect a cost-efficiency approach. The study found that the carbon reduction efforts could be explained by companies seeking to achieve a competitive advantage, that is, initiatives to increase the company's carbon efficiency resulting in a decrease in operational costs, informed by an alignment between the market and the sustainability logic, thus high centrality. In contrast, the authors found also indicators of low salience, for example, a limited engagement towards regulatory approaches, namely, the European Trading System (EU ETS), as the car manufacturers doubted that activities that are simultaneously pursued by their competitors can actually lead to a competitive advantage. Orsato (2006) proposes that such an advantage can only be generated, if a company embarks

on a unique strategy, for example, being the first to establish an environmental management system.

Although these substantial activities indicate that a company's carbon disclosure mirrors action, Hoffman (2006), in his analysis of corporate climate change strategy, notes that operational efficiency driven activities reflect the tendency of companies to pick the "low-hanging" fruit by disclosing easily identified low cost and/or low risk actions without really embracing ongoing organisational adaption strategies for climate change. Ultimately, the focus on carbon efficiency initiatives indicates a company's internal decision to position the sustainability logic as a central function, but this focus neglects the pressure of stakeholders, leading to a potential external demand for an increase in other carbon-related activities in addition to pure cost-saving initiatives.

4.2 | Symbolic disclosure

The symbolic type of carbon disclosure in companies embodies low centrality and low salience. These companies, as in the substantial type, have to deal with uncoordinated actions taken by stakeholders, and thus, these stakeholders have little influence in demanding full carbon disclosure. Unlike the substantial driven companies, however, low centrality indicates that the sustainability logic is integrated into the company's strategy to a lesser extent, leading to the market logic exerting a primary influence over the company's functioning. As a result, these companies are neither under pressure to give priority to stakeholder claims nor to implement any carbon-related initiatives that lead to a reduction of their carbon footprint. However, to close the legitimacy gap created by heightened societal concerns about climate change, companies of this type focus on symbolic management, using rhetorical statements designed to create an impression of environmental responsibility. We therefore label this type *symbolic*.

Symbolic disclosure is a strategic option, which according to Oliver (1991) can be described as "window dressing" (p. 154), representing rather a symbolic acceptance of institutional norms,

thereby ignoring authority or cultural expectations. A symbolic strategy can also be related to reputation management, which Schaltegger and Burritt (2015) describe as a company's focus on societal, political, and media attention. Because these companies have low centrality of the sustainability logic, carbon-related activities and their disclosure may be closely linked to the company's PR department to gain the support of its most immediate audience (Hrasky, 2011). Moreover, because these companies face low salience, management may employ self-interested or narcissist behaviour with claims of carbon-related achievements, which are not accompanied by corporate action (Schaltegger & Burritt, 2015). Together, these factors result in low expectations about the relevance of carbon-related information, as well as limiting the company's strategy and organisational structure to the dominant market logic.

An investigation to identify rhetoric-driven behaviour from a corporate perspective reveals that companies from a carbon-intensive industry sectors appear to be responding differently from those in less carbon-intensive industry sectors. Hrasky's (2011) study of legitimation strategies in the context of carbon disclosure illustrates the symbolic type. It was found that carbon disclosure in less intensive sectors tend to be symbolic rather than representative of underlying substantial action to reduce either the company's carbon footprint or that of those with whom it interacts. In particular, the author highlights the financial sector, which has little motivation, and less urgent need, to take substantial action to reduce carbon footprints, thus reflecting low centrality. Moreover, the study illustrated, although an engagement with external stakeholders is part of a successful climate change strategy (Hoffman, 2006), the average carbon disclosure rate to external parties in the financial sector was six times lower compared with all other sectors.

The author suggested a regulatory response to facilitate cooperation with external stakeholder groups to overcome the low salience and initiate carbon footprint reductions. Arguing for a market response, Smith, Morreale, and Mariani (2008) and Marshall and Brown (2003) found that symbolic disclosure is insufficient to promote informed decisions, so companies eventually increase the centrality of the sustainability logic to seek opportunities to improve their operational efficiency for economic gains. Ultimately, a focus on symbolic strategies may neglect market forces, leading to a potential convergence of the sustainability logic towards the market logic for profit reasons.

4.3 | Transparent disclosure

In the third type of carbon disclosure strategies, companies are characterised by high centrality and high salience. These companies have the sustainability logic integrated in their organisations; therefore, the sustainability values are reflected in their strategies and in their organisational structures. In addition, stakeholders' claims are given priority, as stakeholders can exert pressure to demand relevant information. As a result, a combination of the sustainability logic as an integrated function and the stakeholders' legitimate claim leads to an extensive disclosure of relevant carbon-related information. We therefore label this type *transparent*.

Companies with transparent carbon disclosure strategies rely on the assumption that climate change values and principles as exhibited

by top management will be widely shared and held by all organisational members, leading to unity between organisational members that fosters a sense of identity and commitment to common corporate carbon-related goals and aspirations (Linnenluecke & Griffiths, 2010). Because these companies have a high centrality, the transparency in carbon disclosure indicates full accountability, that is, a strategic design of internal information systems to collect carbon emissions accounting information to calculate key performance indicators (Schaltegger & Csutora, 2012). From a stakeholder perspective, high salience lead to an approach in which companies agree to substantial changes in practices (Reid & Toffel, 2009). In the case of carbon disclosure, this reflect actions to make carbon-related information accountable and comparable by the adoption of international technical and industry procedures, following official international guidelines (e.g., GRI).

The study of Kolk (2008) about accountability and corporate governance illustrates high centrality and high salience using the example of Shell. Shell was situated in a field where its core operations and practices were infused by a sustainability logic that emphasised governance through specific board committees and internal assurance systems. For example, the sustainability report states that "executives responsible for each Shell Business and country operation must provide annual assurance that their operations comply with our policies and standards" (Shell, 2004, p. 8). Moreover, Shell resorts to external verification, not only referring to international or national standards such as the Global Reporting Initiative (GRI) but also explaining their reporting procedures and indicators in detail. Having been in the spotlight of public attention since the Brent Spar incident illustrates high salience and in turn the company's effort for more transparency and accountability. As such, the implementation of internal oversight and the scrutiny of external stakeholders reflects both high centrality and high salience.

However, the combination of the sustainability logic as a central function and the stakeholders' claim for full carbon disclosure indicates that companies exhibiting transparent behaviour are also driven by normative actions (see Hopwood, 2009; Suchman, 1995) that go beyond pure carbon efficiency initiatives. As such, a transparent disclosure approach is also reflective of active external stakeholder engagement that works on the standards and guidelines of carbon-related activities (UNEP/SustainAbility, 2002). Companies of this type are engaged in public policy climate change activities and work directly with policy makers and trade associations, as well as research organisations and nonprofit organisations. Ultimately, the sustainability logic as a central function represents the company's actions in developing an organisational culture that reflects climate change values. Moreover, high salience represents a company's approach to give priority to stakeholder claims that go beyond market driven initiatives, leading to transparency and full carbon disclosure.

4.4 | Engaged disclosure

The fourth type of carbon disclosure strategies in companies exhibits low centrality and high salience. These companies have not integrated the sustainability logic into their operations, which is thus dominated

by the market logic. Unlike the symbolic type, however, these companies face high salience where stakeholders' goals and actions are coordinated and demand the relevant information. As a result, and in contrast with companies where the sustainability is peripheral to the organisation's function, they have to engage in consultation with well-structured and well-organised stakeholders to discuss the company's carbon disclosure-related practices. We therefore label this type *engaged*.

Engaged companies work with stakeholders in discussing carbon issues mainly in order to garner support of the organisation's most immediate audiences by sharing and promoting the values that the audience also values (Hrasky, 2011). Due to the high salience, however, stakeholders will continually demand accountability with regard to carbon emissions, and this may include claims of adopting international technical and industry procedures and to follow official international guidelines. But because these companies have a low centrality, they face an "external expectation conflict" (Oliver, 1991, p. 153), leading only to a modification of practices more consonant with those espoused by the stakeholders (Reid & Toffel, 2009), thus resisting organisational adaption strategies for climate change. As such, these companies are more active in promoting their own interests and will devote most of its resources to appease or placate stakeholder claims (Oliver, 1991). Together, these factors result in minimal internal actions directed to the challenges arising from climate change.

An investigation to identify engaged behaviour has resulted in a focus on external stakeholder engagement. Damert and Baumgartner (2017) study of climate change strategies about the automotive industry illustrates low centrality and high salience in an engaged organisation. The authors found that corporate climate action is rather linked to reputational concerns than to compliance issues. They point out that actions focus on end consumers, as these are more visible to the public than those of suppliers. It therefore exhibited high salience. From an industry view, the demonstration of initiatives on climate change to this specific group reflects a way to legitimatise a company's business operations and emphasises an engaged approach. In contrast, the authors also found that climate change policies that further upstream the supply chain are underdeveloped, indicating low centrality.

Although companies in the substantial type proactively engage with NGOs and business associations to reduce carbon emissions, companies in the engaged type react and fulfil only the minimum carbon disclosure requirements (Pålsson & Kovács, 2014). Moreover, although the high salience indicates that stakeholders provide conditional support and may sit on advisory panels, managers of companies decide on the extent of conformity and may limit their involvement in sustainability to appease stakeholders (Friedman & Miles, 2006). However, institutional demands for climate change activities have become more powerful and more widespread and thus deemphasise the exercise of individual agency. This agency shifts from "actorhood to otherhood" (Meyer & Jepperson, 2000, p. 107) in these companies may lead to lower levels of resistance to the integration of the sustainability logic into their operations. Ultimately, climate change pressures will lead to organisational change, with the sustainability logic shifting from the periphery and becoming an integral part within companies.

5 | CONCLUSION

If institutional and stakeholder pressures affect carbon disclosure strategies in companies, then frameworks that describes these influences and eventually categorise the strategies based on these influences expand insight into the concepts and implications and thus advance organisational research. Although institutional theory provides an explanation of institutional pressures at a field level, it is limited in its ability to categorise stakeholders' influences on the organisational field and on the organisation. This paper's intention has been to overcome these limitations and build frameworks that help to describe the interaction between stakeholders and institutional influences. To provide insight into the nature of these influences on carbon disclosure strategies, we developed two frameworks. The first framework showed that carbon disclosure is eventually influenced only by the company, but the company's decision about what type of carbon disclosure strategy is pursued is related to the function of stakeholders' pressure as well as to a managers' perceptions of institutional pressure. We have clarified the conceptual and theoretical elements and processes in the organisational field and illustrated how influences from these concepts affect a company's carbon disclosure. In order to address the firm-level influences of stakeholders on carbon disclosure, we developed a model that combined pressure from institutions and from stakeholders' claims. We proposed centrality and salience as being two key dimensions and built an integrative model that includes four types of carbon disclosure strategies.

As such, our framework makes several contributions to the literature on institutional theory and its interaction with stakeholder theory. First, it provides a conceptual model that shows that institutional theory as well as stakeholder theory provide, on different levels, a theoretical foundation on which to examine the influences on carbon disclosure. We show that stakeholders' claims at the firm level can influence the extent of carbon-related information, depending on the degree to which the sustainability logic is integrated as a central feature of a company's functioning. The model also shows that institutional pressure at the field level affects carbon-related activities, depending on the salience of stakeholders' claims. It thereby links stakeholders' pressure at the firm level to the outcomes at the field level that affect a company's carbon disclosure strategy. Second, the clarification of institutional and stakeholder concepts and process with regard to carbon disclosure advances the body of research on institutional complexity, thereby expanding knowledge to enable the categorisation of firm-level influences that have field-level impacts. We showed that organised stakeholders can increase their salience when they support institutions that monitor and analyse carbon-related information. This "building" of "collective governance," in the absence of an overarching authority, offers insight into how stakeholders, under the conflicting logics of the market and of sustainability, may rethink their position and shift the sustainability logic more towards a company's central function.

Third, by categorising the pressures in terms of their centrality and salience, our model provides a basis for understanding the varied implications of these influences on carbon disclosure strategies. For example, high centrality and lower stakeholder salience lead to a convergence of the market logic and the sustainability logic, whereas low

centrality and high stakeholder salience indicates a conflict. Assuming an increase in pressure with regard to climate change, this conflict may foster change of the sustainability logic at a field level. Fourth, by categorising stakeholders' influence regarding organisational outcomes, our four-type model points to practices through which management can exert agency to influence carbon disclosure strategies. For example, our categorisation of influences shows that mission statements and strategic decisions can create agency and influence the relative power of stakeholders.

These findings have to be viewed in the light of the model's limitations. Although our findings may be applied to other fields, the particular case of carbon disclosure might be heavily influenced by regulations over the long term; thus, more transparency in carbon disclosure in the future might be reached through coercive pressure rather than through firm-level influences. Moreover, we assumed that the differences in carbon disclosure are related to the conflicting logics of the market and of sustainability. In practice, however, companies are confronted by diverse logics and influences. We encourage future researchers to extend our framework by expanding on other key dimensions or logics. Companies are subject to complex processes and multiple institutional demands. The market logic and the sustainability logic are only two of many institutional logics within this organisational field. Further research may include other logics to test the influence on carbon disclosure.

Future research may also test the frameworks and use specific carbon management practices from databases such as the CDP to categorise companies according to the model. In addition, this could include datasets that provide data over a longer period, thus providing the opportunity to examine if carbon disclosure strategies have changed and identify the drivers behind the change. The framework can also be used by future researchers to examine how carbon disclosure strategies influence carbon emissions or how carbon disclosure impacts financial performance. Overall, research in the field of carbon disclosure is still in its infancy, and the industry is increasingly affected by institutional and regulatory changes. Future research will help to understand how these influences affect organisations.

ORCID

David M. Herold https://orcid.org/0000-0002-4023-2282
Ben Farr-Wharton https://orcid.org/0000-0001-9987-934X

REFERENCES

Adams, C. A. (2017). Conceptualising the contemporary corporate value creation process. *Accounting, Auditing & Accountability Journal*, *30*, 906–931. https://doi.org/10.1108/AAAJ-04-2016-2529

Aerts, W., Cormier, D., & Magnan, M. (2006). Intra-industry imitation in corporate environmental reporting: An international perspective. *Journal of Accounting and Public Policy*, *25*, 299–331. https://doi.org/10.1016/j.jaccpubpol.2006.03.004

Anderies, J. M., Folke, C., Walker, B., & Ostrom, E. (2013). Aligning key concepts for global change policy: Robustness, resilience, and sustainability. *Ecology and Society*, *18*, 26–41.

Ansari, S., Wijen, F., & Gray, B. (2013). Constructing a climate change logic: An institutional perspective on the "tragedy of the commons". *Organization Science*, *24*, 1014–1040. https://doi.org/10.1287/orsc.1120.0799

Awaysheh, A., & Klassen, R. D. (2010). The impact of supply chain structure on the use of supplier socially responsible practices. *International Journal of Operations & Production Management*, *30*, 1246–1268.10.1108/01443571011094253. https://doi.org/10.1108/01443571011094253

Battilana, J., & Dorado, S. (2010). Building sustainable hybrid organizations: The case of commercial microfinance organizations. *Academy of Management Journal*, *53*, 1419–1440. https://doi.org/10.5465/amj.2010.57318391

Besharov, M. L., & Smith, W. K. (2014). Multiple institutional logics in organizations: Explaining their varied nature and implications. *Academy of Management Review*, *39*, 364–381. https://doi.org/10.5465/amr.2011.0431

Bolton, R., & Foxon, T. J. (2015). A socio-technical perspective on low carbon investment challenges: Insights for UK energy policy. *Environmental Innovation and Societal Transitions*, *14*, 165–181. https://doi.org/10.1016/j.eist.2014.07.005

Borghei, Z., Leung, P., & Guthrie, J. (2016). The nature of voluntary greenhouse gas disclosure—An explanation of the changing rationale: Australian evidence. *Meditari Accountancy Research*, *24*, 111–133. https://doi.org/10.1108/MEDAR-02-2015-0008

Bourdieu, P., & Wacquant, L. J. (1992). *An invitation towards a reflexive sociology*. Cambridge, UK: Policy Press.

Breitbarth, T., & Herold, D. M. (2018). Closing the academia-practice gap in corporate sustainability management research: Challenges and bridges. *Journal of Environmental Sustainability*, *6*, 4.

Busch, T., & Schwarzkopf, J. (2013). Carbon management strategies—A quest for corporate competitiveness. *Progress in Industrial Ecology, an International Journal*, *8*, 4–29. https://doi.org/10.1504/PIE.2013.055053

Calhoun, C. (1993). Nationalism and ethnicity. *Annual Review of Sociology*, *19*, 211–239. https://doi.org/10.1146/annurev.so.19.080193.001235

CDP (2010). *Transport report*. London: Carbon Disclosure Project.

CDP (2011). *Investor CDP 2011 Information Request—Deutsche Post AG*. London: Carbon Disclosure Project.

CDP (2014). *Investor CDP 2014 Information Request—Deutsche Post AG*. London: Carbon Disclosure Project.

CDSB. (2014). Climate Disclosure Standards Board [Online]. London. Available: http://www.cdsb-global.org/ [Accessed].

Cormier, D., Magnan, M., & Van Velthoven, B. (2005). Environmental disclosure quality: Do firms respond to economic incentives, public pressures or institutional conditions. *The European Accounting Review*, *14*, 1–37.

Crawford, S. E., & Ostrom, E. (1995). A grammar of institutions. *American Political Science Review*, *89*, 582–600. https://doi.org/10.2307/2082975

Damert, M., & Baumgartner, R. J. (2017). External pressures or internal governance—What determines the extent of corporate responses to climate change? Corporate social responsibility and environmental management.

de Villiers, C., & Alexander, D. (2014). The institutionalisation of corporate social responsibility reporting. *The British Accounting Review*, *46*, 198–212. https://doi.org/10.1016/j.bar.2014.03.001

Delmas, M., & Toffel, M. W. (2004). Stakeholders and environmental management practices: An institutional framework. *Business Strategy and the Environment*, *13*, 209–222. https://doi.org/10.1002/bse.409

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48*, 147–160. https://doi.org/10.2307/2095101

Dobrovnik, M., Herold, D., Fürst, E., & Kummer, S. (2018). Blockchain for and in logistics: What to adopt and where to start. *Logistics*, *2*, 18. https://doi.org/10.3390/logistics2030018

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *The Pacific Sociological Review*, *18*, 122–136. https://doi.org/10.2307/1388226

Freeman, R. E. (1983). Strategic management: A stakeholder approach. *Advances in Strategic Management*, 1, 31–60.

Friedland, R., & Alford, R. R. (1991). Bringing society back in: Symbols, practices and institutional contradictions. In *The new institutionalism in organizantial analysis*. Chicago: University of Chicago Press.

Friedman, A. L., & Miles, S. (2006). *Stakeholders: Theory and practice*. Oxford: Oxford University Press.

Gibassier, D., & Schaltegger, S. (2015). Carbon management accounting and reporting in practice: A case study on converging emergent approaches. *Sustainability Accounting, Management and Policy Journal*, 6, 340–365. https://doi.org/10.1108/SAMPJ-02-2015-0014

Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12, 433–448. https://doi.org/10.1002/smj.4250120604

Glover, J., Champion, D., Daniels, K., & Dainty, A. (2014). An institutional theory perspective on sustainable practices across the dairy supply chain. *International Journal of Production Economics*, 152, 102–111. https://doi.org/10.1016/j.ijpe.2013.12.027

Greenwood, M., & Kamoche, K. (2013). Social accounting as stakeholder knowledge appropriation. *Journal of Management and Governance*, 17, 723–743. https://doi.org/10.1007/s10997-011-9208-z

Greenwood, R., Díaz, A. M., Li, S. X., & Lorente, J. C. (2010). The multiplicity of institutional logics and the heterogeneity of organizational responses. *Organization Science*, 21, 521–539. https://doi.org/10.1287/orsc.1090.0453

GRI. (2016). Initiatives Worldwide [Online]. Global Reporting Initiative. Available: https://www.globalreporting.org/information/policy/initiatives-worldwide/Pages/default.aspx [Accessed].

Guler, I., Guillén, M. F., & Macpherson, J. M. (2002). Global competition, institutions, and the diffusion of organizational practices: The international spread of ISO 9000 quality certificates. *Administrative Science Quarterly*, 47, 207–232. https://doi.org/10.2307/3094804

Guthrie, J., & Parker, L. D. (1989). Corporate social reporting: A rebuttal of legitimacy theory. *Accounting and Business Research*, 19, 343–352. https://doi.org/10.1080/00014788.1989.9728863

Hahn, R., Reimsbach, D., & Schiemann, F. (2015). Organizations, climate change, and transparency: Reviewing the literature on carbon disclosure. *Organization and Environment*, 28, 80–102. https://doi.org/10.1177/1086026615575542

Haque, S., & Deegan, C. (2010). Corporate climate change-related governance practices and related disclosures: Evidence from Australia. *Australian Accounting Review*, 20, 317–333. https://doi.org/10.1111/j.1835-2561.2010.00107.x

Hawn, O., & Ioannou, I. (2016). Mind the gap: The interplay between external and internal actions in the case of corporate social responsibility. *Strategic Management Journal*, 37, 2569–2588. https://doi.org/10.1002/smj.2464

Herold, D. M. (2018a). Has carbon disclosure become more transparent in the global logistics industry? An investigation of corporate carbon disclosure strategies between 2010 and 2015. *Logistics*, 2, 13. https://doi.org/10.3390/logistics2030013

Herold, D. M. (2018b). The influence of institutional and stakeholder pressures on carbon disclosure strategies: An investigation in the global logistics industry. Doctoral Dissertation, Griffith University.

Herold, D. M., & Lee, K.-H. (2017a). Carbon management in the logistics and transportation sector: An overview and new research directions. *Carbon Management*, 8, 79–97. https://doi.org/10.1080/17583004.2017.1283923

Herold, D. M., & Lee, K.-H. (2017b). The influence of the sustainability logic on carbon disclosure in the global logistics industry: The case of DHL, FDX and UPS. *Sustainability*, 9, 601. https://doi.org/10.3390/su9040601

Herold, D. M., & Lee, K.-H. (2018a). Carbon disclosure strategies in the global logistics industry: Similarities and differences in carbon measurement and reporting. In M. Hossain, R. Hales, & T. Sarker (Eds.), *Pathways to a sustainable economy: Bridging the gap between Paris climate change commitments and net zero emissions*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-67702-6_6

Herold, D. M., & Lee, K.-H. (2018b). The influence of internal and external pressures on carbon management practices and disclosure strategies. *Australasian Journal of Environmental Management*, 1–19. https://doi.org/10.1080/14486563.2018.1522604

Herold, D. M., Manwa, F., Sen, S., & Wilde, S. J. (2016). It's the yeast we can do: Untapping sustainability trends in Australian craft breweries. *Journal of Asia Entrepreneurship and Sustainability*, 12, 82–110.

Hill, C. W., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies*, 29, 131–154. https://doi.org/10.1111/j.1467-6486.1992.tb00657.x

Hoffman, A. J. (2006). *Getting ahead of the curve: Corporate strategies that address climate change*. Airlington, VA: Pew Center on Global Climate Change.

Hopwood, A. G. (2009). Accounting and the environment. *Accounting, Organizations and Society*, 34, 433–439. https://doi.org/10.1016/j.aos.2009.03.002

Hörisch, J., Freeman, R. E., & Schaltegger, S. (2014). Applying stakeholder theory in sustainability management: Links, similarities, dissimilarities, and a conceptual framework. *Organization and Environment*, 27, 328–346.10.1177/1086026614535786. https://doi.org/10.1177/1086026614535786

Hrasky, S. (2011). Carbon footprints and legitimation strategies: Symbolism or action? *Accounting, Auditing & Accountability Journal*, 25, 174–198. https://doi.org/10.1108/09513571211191798

IPIECA (2011). *Petroleum industry guidelines for reporting greenhouse gas emissions*. London: International Petroleum Industry Environmental Conservation Association.

Kim, J.-N., Bach, S. B., & Clelland, I. J. (2007). Symbolic or behavioral management? Corporate reputation in high-emission industries. *Corporate Reputation Review*, 10, 77–98. https://doi.org/10.1057/palgrave.crr.1550042

Kolk, A. (2008). Sustainability, accountability and corporate governance: Exploring multinationals' reporting practices. *Business Strategy and the Environment*, 17, 1–15. https://doi.org/10.1002/bse.511

Kolk, A., Levy, D., & Pinkse, J. (2008). Corporate responses in an emerging climate regime: The institutionalization and commensuration of carbon disclosure. *The European Accounting Review*, 17, 719–745. https://doi.org/10.1080/09638180802489121

Kollman, K., & Prakash, A. (2002). EMS-based environmental regimes as club goods: Examining variations in firm-level adoption of ISO 14001 and EMAS in UK, US and Germany. *Policy Sciences*, 35, 43–67. https://doi.org/10.1023/A:1016071810725

Kostova, T., Roth, K., & Dacin, M. T. (2008). Institutional theory in the study of multinational corporations: A critique and new directions. *Academy of Management Review*, 33, 994–1006. https://doi.org/10.5465/amr.2008.34422026

KPMG (2014). *Corporate sustainability—A progress report*. Amsterdam: KPMG Netherlands.

Kraatz, M. S., & Block, E. S. (2008). Organizational implications of institutional pluralism. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin (Eds.), *The sage handbook of organizational institutionalism*. London: Sage Publications Ltd. https://doi.org/10.4135/9781849200387.n10

Lander, M. W., Koene, B. A., & Linssen, S. N. (2013). Committed to professionalism: Organizational responses of mid-tier accounting firms to conflicting institutional logics. *Accounting, Organizations and Society*, 38, 130–148. https://doi.org/10.1016/j.aos.2012.11.001

Lee, K.-H. (2012). Carbon accounting for supply chain management in the automobile industry. *Journal of Cleaner Production*, 36, 83–93. https://doi.org/10.1016/j.jclepro.2012.02.023

Lee, K.-H., & Herold, D. M. (2016). Cultural relevance in corporate sustainability management: A comparison between Korea and Japan. *Asian*

Journal of Sustainability and Social Responsibility, 1, 1–21. https://doi.org/10.1186/s41180-016-0003-2

Lenssen, G., Arenas, D., Lacy, P., Pickard, S., Kolk, A., & Pinkse, J. (2008). Business and climate change: Emergent institutions in global governance. *Corporate Governance: The International Journal of Business in Society*, 8, 419–429.

Levy, D. L., & Kolk, A. (2002). Strategic responses to global climate change: Conflicting pressures on multinationals in the oil industry. *Business & Politics*, 4, 275–300. https://doi.org/10.2202/1469-3569.1042

Linnenluecke, M. K., & Griffiths, A. (2010). Corporate sustainability and organizational culture. *Journal of World Business*, 45, 357–366. https://doi.org/10.1016/j.jwb.2009.08.006

Luo, L. (2017). The influence of institutional contexts on the relationship between voluntary carbon disclosure and carbon emission performance. *Accounting and Finance*. https://doi.org/10.1111/acfi.12267

Luo, L., Lan, Y. C., & Tang, Q. (2012). Corporate incentives to disclose carbon information: Evidence from the CDP Global 500 Report. *Journal of International Financial Management and Accounting*, 23, 93–120. https://doi.org/10.1111/j.1467-646X.2012.01055.x

Luo, X. R., Wang, D., & Zhang, J. (2017). Whose call to answer: Institutional complexity and firms' CSR reporting. *Academy of Management Journal*, 60, 321–344. https://doi.org/10.5465/amj.2014.0847

Marshall, R. S., & Brown, D. (2003). Corporate environmental reporting: What's in a metric. *Business Strategy and the Environment*, 12, 87–106. https://doi.org/10.1002/bse.354

Matisoff, D. C., Noonan, D. S., & O'brien, J. J. (2013). Convergence in environmental reporting: assessing the Carbon Disclosure Project. *Business Strategy and the Environment*, 22, 285–305. https://doi.org/10.1002/bse.1741

Meyer, J. W., & Jepperson, R. L. (2000). The 'actors' of modern society: The cultural construction of social agency. *Sociological Theory*, 18, 100–120. https://doi.org/10.1111/0735-2751.00090

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83, 340–363. https://doi.org/10.1086/226550

Michelon, G., Pilonato, S., Ricceri, F., & Roberts, R. W. (2016). Behind camouflaging: traditional and innovative theoretical perspectives in social and environmental accounting research. *Sustainability Accounting, Management and Policy Journal*, 7, 2–25. https://doi.org/10.1108/SAMPJ-12-2015-0121

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22, 853–886. https://doi.org/10.5465/amr.1997.9711022105

Oberhofer, P., & Dieplinger, M. (2014). Sustainability in the transport and logistics sector: Lacking environmental measures. *Business Strategy and the Environment*, 23, 236–253. https://doi.org/10.1002/bse.1769

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16, 145–179. https://doi.org/10.5465/amr.1991.4279002

Oliver, C. (1997). Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, 18, 697–713. https://doi.org/10.1002/(SICI)1097-0266(199710)18:9<697::AID-SMJ909>3.0.CO;2-C

Orsato, R. J. (2006). Competitive environmental strategies: When does it pay to be green? *California Management Review*, 48, 127–143. https://doi.org/10.2307/41166341

Pache, A.-C., & Santos, F. (2013). Embedded in hybrid contexts: How individuals in organizations respond to competing institutional logics. *Research in the Sociology of Organizations*, 39, 3–35.

Pålsson, H., & Kovács, G. (2014). Reducing transportation emissions: A reaction to stakeholder pressure or a strategy to increase competitive advantage. *International Journal of Physical Distribution and Logistics Management*, 44, 283–304. https://doi.org/10.1108/IJPDLM-09-2012-0293

Powell, W. W., & DiMaggio, P. J. (1991). *The new institutionalism in organizational analysis*. Chicago, IL: University of Chicago Press.

Purdy, J. M., & Gray, B. (2009). Conflicting logics, mechanisms of diffusion, and multilevel dynamics in emerging institutional fields. *Academy of Management Journal*, 52, 355–380. https://doi.org/10.5465/amj.2009.37308255

Qian, W., Burritt, R., & Chen, J. (2015). The potential for environmental management accounting development in China. *Journal of Accounting and Organizational Change*, 11, 406–428. https://doi.org/10.1108/JAOC-11-2013-0092

Reid, E. M., & Toffel, M. W. (2009). Responding to public and private politics: Corporate disclosure of climate change strategies. *Strategic Management Journal*, 30, 1157–1178. https://doi.org/10.1002/smj.796

Rose, W. J., Mollenkopf, D. A., Autry, C. W., & Bell, J. E. (2016). Exploring urban institutional pressures on logistics service providers. *International Journal of Physical Distribution and Logistics Management*, 46, 153–176. https://doi.org/10.1108/IJPDLM-03-2015-0068

Santana, A. (2012). Three elements of stakeholder legitimacy. *Journal of Business Ethics*, 105, 257–265. https://doi.org/10.1007/s10551-011-0966-y

Sarkis, J., Gonzalez-Torre, P., & Adenso-Diaz, B. (2010). Stakeholder pressure and the adoption of environmental practices: The mediating effect of training. *Journal of Operations Management*, 28, 163–176. https://doi.org/10.1016/j.jom.2009.10.001

Schaltegger, S., & Burritt, R. (2015). Business cases and corporate engagement with sustainability: Differentiating ethical motivations. *Journal of Business Ethics*, 1–19. https://doi.org/10.1007/s10551-015-2938-0

Schaltegger, S., & Csutora, M. (2012). Carbon accounting for sustainability and management. Status Quo and Challenges. *Journal of Cleaner Production*, 36, 1–16. https://doi.org/10.1016/j.jclepro.2012.06.024

Schaltegger, S., & Hörisch, J. (2015). In search of the dominant rationale in sustainability management: Legitimacy-or profit-seeking? *Journal of Business Ethics*, 145, 1–18.https://doi.org/10.1007/s10551-015-2854-3.

Schmidt, T. S., Schneider, M., Rogge, K. S., Schuetz, M. J., & Hoffmann, V. H. (2012). The effects of climate policy on the rate and direction of innovation: A survey of the EU ETS and the electricity sector. *Environmental Innovation and Societal Transitions*, 2, 23–48. https://doi.org/10.1016/j.eist.2011.12.002

Scott, W., Ruef, M., Mendel, P., & Caronna, C. (2000). *Institutional change and healthcare organizations: From professional dominance to managed care*. Chicago, IL: University of Chicago Press.

Scott, W. R. (1991). Unpacking institutional arguments. In W. W. Powell, & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.

Scott, W. R. (2008). Approaching adulthood: The maturing of institutional theory. *Theory and Society*, 37, 427–442. https://doi.org/10.1007/s11186-008-9067-z

Scott, W. R. (2012). Embedding the examination of multilevel factors in an organization field context. *JNCI Monographs*, 2012, 32–33. https://doi.org/10.1093/jncimonographs/lgs007

Shell (2004). The Shell report 2003. Meeting the Energy Challenge - Our Progress in Contribution to Sustainable Development. The Hague.

Smith, J. A., Morreale, M., & Mariani, M. E. (2008). Climate change disclosure: Moving towards a brave new world. *Capital Markets Law Journal*, 3, 469–485. https://doi.org/10.1093/cmlj/kmn021

Stead, J. G., & Stead, W. E. (2013). *Sustainable strategic management*. Armonk, NY: ME Sharpe.

Styhre, A. (2011). Competing institutional logics in the biopharmaceutical industry: The move away from the small molecules therapies model in the post-genomic era. *Creativity and Innovation Management*, 20, 311–329. https://doi.org/10.1111/j.1467-8691.2011.00615.x

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20, 571–610. https://doi.org/10.5465/amr.1995.9508080331

Suddaby, R., & Greenwood, R. (2005). Rhetorical strategies of legitimacy. *Administrative Science Quarterly*, *50*, 35–67. https://doi.org/10.2189/asqu.2005.50.1.35

Summerhays, K., & de Villiers, C. J. (2012). Oil company annual report disclosure responses to the 2010 Gulf of Mexico oil spill. *Journal of the Asia-Pacific Centre for Environmental Accountability*, *18*, 103–130.

Thornton, P. H., Jones, C., & Kury, K. (2005). Institutional logics and institutional change in organizations: Transformation in accounting, architecture and publishing. *Research in the Sociology of Organizations*, *23*, 125–170. https://doi.org/10.1016/S0733-558X(05)23004-5

Thornton, P. H., & Ocasio, W. (2008). Institutional logics. In R. Greenwood, C. Oliver, R. Suddaby, & A. Sahlin (Eds.), *The sage handbook of organizational institutionalism*. London: Sage. https://doi.org/10.4135/9781849200387.n4

Thornton, P. H., Ocasio, W., & Lounsbury, M. (2012). *The institutional logics perspective: A new approach to culture, structure, and process*. Oxford: Oxford University press.

UNEP/SustainAbility (2002). *Trust us: The global reporters 2002 survey of corporate sustainability reporting*. London: UNEP.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, *16*, 409–421. https://doi.org/10.1287/orsc.1050.0133

Welbeck, E. E. (2017). The influence of institutional environment on corporate responsibility disclosures in Ghana. *Meditari Accountancy Research*, *25*, 216–240. https://doi.org/10.1108/MEDAR-11-2016-0092

Wooten, M., & Hoffman, A. J. (2008). Organizational fields: Past, present and future. In R. Greenwood, C. Oliver, K. Shalin-Andersson, & R. Suddaby (Eds.), *The sage handbook of organizational institutionalism*. London: Sage. https://doi.org/10.4135/9781849200387.n5

WRI/WBCSD (2011). *The greenhouse gas protocol: A corporate accounting and reporting standard* (Revised ed.). Washington, DC: World Resources Insititue.

Zucker, L. G. (1977). The role of institutionalization in cultural persistence. *American Sociological Review*, *42*, 726–743. https://doi.org/10.2307/2094862