



Certification dissonance: Contradictions between environmental values and certification scheme requirements in small-scale companies

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ABSTRACT

The importance of internalization and employee involvement in the greening of organizations is well-established; however, experiences of environmental certification processes in small-scale companies have largely been overlooked. The aim of this study was to examine the experiences of environmental certification in small-scale companies, and how certification may drive green change in these contexts. The study employed a qualitative approach and thematic analysis. Twenty-eight informants in seven small-scale companies were interviewed, via focus-group interviews with employees and leaders, and in individual interviews with leaders. The main theme that was identified from the reflexive thematic analysis was that certification gave rise to a back-and-forth process between drivers and hindrances, resulting in conflicting emotions and cognitive dissonance—which we denoted *certification dissonance*. Findings indicate that employees experienced conflicts between their own environmental values and the requirements imposed by the certification scheme. Four main categories of certification dissonance were identified: 1) *Company characteristics*, 2) the company's relationship with the *customers/market*, 3) characteristics of the *certification scheme*, and 4) *emotional reactions*. The participants struggled to choose between alternatives in different shades of green in what we denoted the 'eco grey zone'. Systems theory and cognitive dissonance theory provided a theoretical framework for analysis. Based on our findings, we propose a new process model of certification dissonance outcomes. This model illustrates how employees and managers feel trapped within categorical thinking, and experience dissonance between the poles of 'what is truly green and sustainable' and 'being certified'. This study may be of relevance to managers and stakeholders working on environmental sustainability.

1. Introduction

In response to increasing demands to go green, many companies enter into environmental certification schemes to communicate that they are environmentally responsible. Since the introduction of the ISO 14001 standard in 1996 (Boiral et al., 2018), there has been steady growth in certified organizations internationally, alongside the recent trend of decertification (Flaten et al., 2010; Mosgaard and Kristensen, 2020). In their literature review, Boiral et al. (2018) found that studies tend to focus on the impact of ISO 14001 on management practices, environmental indicators, environmental awareness and company image. Most (76%) focus on effectiveness and positive aspects (e.g. Erauskin-Tolosa et al., 2019), and Boiral et al. (2018) argue that this obscures potential undesirable effects. However, some studies point to drawbacks, including bureaucracy, organizational resistance, cost of implementation, lack of resources and lack of commitment from

managers (Boiral et al., 2018). Several recent studies question the overall impact of environmental certification schemes; these point to symbolic adoption of schemes, and question the impact on environmental performance and integration into the organizational climate (e.g. Boiral et al., 2018; Heras-Saizarbitoria et al., 2020; Testa et al., 2015). Thus, several studies seem to indicate that there may be problematic issues relating to certification (e.g. Valenciano-Salazar et al., 2021), highlighting the need to explore what happens within organizations that attempt to work towards environmental sustainability.

The use of eco-labels has also been increasing (Darnall and Aragón-Correa, 2014): these are designed to signal information about a product's sustainability qualities. Many eco-labels are one-dimensional, meaning that they focus on a specific environmental attribute of a product; however, customers are often unaware of other desirable (or undesirable) environmental qualities (Darnall and Aragón-Correa, 2014). The literature seems to acknowledge that there may be

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challenges related to the credibility of eco-labels (Delmas and Gergaud, 2021), and we need more knowledge on how eco-labels contribute to environmental sustainability.

Ultimately, certification schemes and eco-labels aim to *change* environmental practices, however, researchers have mainly focused on impact while the actual implementation has received less attention. Environmental psychologists highlight the importance of designing interventions that change employee behaviour; they need to go beyond external rewards or information campaigns, and foster internal motivation (Lülfes and Hahn, 2014; Steg and Vlek, 2009; Young et al., 2015). Relatedly, exploring user experiences with certification schemes—as we do in this article—provides a knowledge base for designing certification processes that engage employees.

1.1. Environmental certification in the context of small-scale Norwegian companies

In Norway, there are two eco-labels for products: producers of organic food are certified by Debio, and bio-dynamic producers are certified by Demeter (Debio, 2021). Furthermore, there are two main environmental certification schemes at the organizational level: the Eco-Lighthouse (2021) and the ISO 14001 scheme (International Organization for Standardization, 2019). The Eco-Lighthouse scheme targets companies with fewer than 100 employees, and the cost and resources involved in implementation is relatively low, compared to the ISO 14001 scheme (Granly and Welo, 2014). The Eco-Lighthouse scheme represents an alternative model for Environmental Management (AMEM), characterized by less bureaucracy, lower costs and better adaption to local circumstances and branch specific requirements (Granly and Welo, 2014; Heras and Arana, 2010). Interestingly, the motivation that drives implementation is different for AMEMs compared to ISO 14001, putting more emphasis on ‘substantive’ change within the company rather than external factors such as reputation (Heras and Arana, 2010).

Small-scale companies comprise 98.5% of enterprises in Norway (Statistisk sentralbyrå, 2021). Although implementing environmentally sustainable practices may improve their likelihood of success, the number of small-scale companies that embed environmental measures is limited. The challenges related to environmental certification in small-scale companies seem well-established in the literature (Mosgaard and Kristensen, 2020): these include lack of resources, competence and appropriate environmental management schemes (Granly and Welo, 2014). Moreover, while large organizations may have the skills and resources to implement all-encompassing environmental certification schemes, these schemes may not be tailored to promote environmental sustainability in small organizations (Granly and Welo, 2014; Graafland and Smid, 2016). Nevertheless, foregoing formal greening measures altogether may not be the best solution. In fact, a study by Graafland and Smid (2016) shows that simple environmental targets improve environmental performance in small organizations. Studies also document cross-cultural differences in the implementation of environmental certification (Orcos et al., 2018). This highlights both the need to explore different cultural contexts and the significance of the local context, which is especially relevant to small-scale companies.

1.2. Employee perspectives on environmental certification

Studies indicate that the implementation of environmental certification is often led by environmental managers; employees are seldom involved and tend to have little knowledge about the organization’s environmental policy (Boiral, 2007, 2011; Mosgaard and Kristensen, 2020). This is noteworthy, since employee involvement is considered

key to the internalization of environmental certification standards (Testa et al., 2018).

In a review by Boiral et al. (2018), the employee perspective was included in only 12% of the studies. One of these reported that employees perceived the ISO 14001 scheme to be costly, bureaucratic and cumbersome, and they had difficulties understanding its applicability (Boiral, 2007). Furthermore, employees were seldom involved in the implementation and monitoring of the ISO 14001 scheme, had only vague understandings of the scheme and their commitment tended to be low (Boiral, 2007). Boiral (2011) argued that employee understanding of the environmental objectives, involvement and motivation were crucial to the successful implementation of environmental certification. However, empirical studies are needed to establish how psychological processes may drive or hinder certification.

1.3. Reasons to decertify from environmental certification

A study of Norwegian organic farmers by Flaten et al. (2010) found that many terminated their certification due to excessive bureaucracy, as well as complicated and changing standards. Interestingly, a large number of those who decertified planned to continue their organic production and sell directly to the customers (Flaten et al., 2010). In a Danish study of companies that discontinued their environmental certification, the main reason was the negative outcome of a cost–benefit analysis; potential benefits did not justify the high economic cost and time-consuming documentation (Mosgaard and Kristensen, 2020). Though environmental managers intended to maintain the environmental focus after decertification, the focus on environmental practice dropped and they reverted to a focus on day-to-day operations (Mosgaard and Kristensen, 2020). These studies indicate a continuous dialogue—inter- and intrapersonal—on the advantages and challenges of certification and whether and how it contributes to sustainability.

1.4. Greening or greenwashing?

Most companies now communicate some level of greenness. However, certification processes give rise to a dynamic interplay between companies merely signalling greenness and their *actual* environmental performance.

Along with the rise of ecological consciousness, consumers increasingly request green products; companies are therefore eager to promote the greenness of their products. At the same time, there is a rise in greenwashing—a misleading communication practice regarding a company’s environmental performance or the environmental aspects of a product (Delmas and Burbano, 2011). Greenwashing undermines stakeholder and customer confidence in environmentally sustainable companies and products, which may further reduce willingness to invest in going green (Delmas and Burbano, 2011). Moreover, greenwashing has a deteriorating effect on employee green behaviour (Tahir et al., 2020).

Studies of environmental certification highlight growing concerns regarding its lack of effect on environmental performance; indeed, some companies use certification to strengthen their environmental legitimacy (Heras-Saizarbitoria et al., 2020). This kind of symbolic adoption is used to promote a green image, while internal practices within the company remain unchanged (Ferrón Vélchez, 2017; Heras-Saizarbitoria and Boiral, 2013; Martín-de Castro et al., 2017). Several studies document the discrepancy between daily practices and the written documentation required by the environmental standard, and how internalization of routines into a green organizational climate is seldom achieved (Heras-Saizarbitoria and Boiral, 2013; Martín-de Castro et al., 2017). Christmann and Taylor (2006) therefore argue that research

needs to go beyond using certification as a measure of environmental sustainability, and study how the schemes are implemented. Indeed, a review by Pham et al. (2019) suggests that, beyond certification, environmental management and the establishment of a green climate precede long-term environmental sustainability.

In contrast to symbolic adoption is the *internalization* of environmental practices and the establishment of a green organizational climate—defined as employees' shared perceptions of their organizations' pro-environmental procedures and practices (Norton et al., 2014). The internalization of greening measures into daily routines and the embedding of a green climate are key to achieving true sustainability (e.g. Erauskin-Tolosa et al., 2019; Mosgaard and Kristensen, 2020; Testa et al., 2018). The ISO 14001 certification aims to change the environmental processes within the company, not the results (Johnstone and Hallberg, 2020). Similarly, the Eco-Lighthouse certification aims to build a green organizational culture (Eco-Lighthouse, 2021). As such, these schemes should be positioned to contribute to a green climate. Yet, it is unclear exactly how the schemes attempt to achieve these goals. Psychological research may shed light on the procedures needed to achieve internalization of a green climate.

1.5. Gap in the literature: Employee voices

As noted above, approximately three-quarters of studies in this field rely on (environmental) management perspectives, while the employee perspectives are largely neglected (Boiral et al., 2018; Sartor et al., 2019; Todaro et al., 2019), thereby creating a potential management bias (Heras-Saizarbitoria and Boiral, 2013). Furthermore, the dominant literature on environmental management schemes mainly focuses on positive aspects, possibly creating a pro-certification bias (Boiral et al., 2018). The research is also primarily quantitative (Boiral et al., 2018), which has sparked a call for qualitative studies (Johnstone, 2020; Testa et al., 2018; Todaro et al., 2019). Finally, environmental certification processes seem to be context-dependent, and more studies are needed in 1) different cultural contexts, 2) organizations that are both certified and uncertified, and 3) small organizations (e.g. Granly and Welo, 2014; Heras-Saizarbitoria and Boiral, 2013; Johnstone and Hallberg, 2020). The present study addresses these gaps by diving into user experiences of certification processes. The psychological perspective may contribute to the research on certification, which has been traditionally conducted within engineering, management/business and organizational science framework.

Given that there is little research on psychological processes, this study aimed to examine the meaning and experience of environmental certification in small-scale companies. As previously discussed, small-scale businesses are commonplace in Norway and face several challenges related to certification. The first research question targets user experiences with the certification process: 1) How is environmental certification of products and organizations experienced in small-scale companies? The overall impact of environmental certification has been called into question in recent studies, and accordingly, the second research question addresses how certification may promote environmental sustainability: 2) Are these certification processes a driving force for greener organizations and greener production? The next section outlines the theoretical basis used to explore these questions.

2. Theoretical perspectives

The theoretical perspectives that informed this study are derived from social, organizational and environmental psychology (Clayton et al., 2016).

2.1. A systems model of environmental certification processes

Granly and Welo (2014) introduced a model of drivers, challengers and outcomes of ISO 14001 and Eco-Lighthouse certifications. In this model, market opportunities and customer demands were identified as drivers and employee buy-in as a challenge for both schemes. Environmental awareness and reduced environmental impact were also reported as outcomes for both schemes, but increased market opportunities was only associated with the ISO 14001 scheme. The absence of market increase was a challenge to the Eco-Lighthouse scheme, while time and resources were challenges related to the ISO 14001 scheme. In our study, we combined elements from Granly and Welo (2014) model with systems theory (Flagstad et al., 2021), to create a systems perspective on environmental certification (Fig. 1).

Based on Bronfenbrenner's (1979) ecological systems model of human development, Flagstad et al. (2021) developed a systems model of green changes in organizations. The model explores how individual behaviour in organizations is influenced by factors at different systems layers: the microsystem, the corposystem, the macrosystem and the surrounding context—as well as how these different systems interact. The drivers of greening processes involve exposure to proximal processes: duration, frequency, intensity and relevance of encounters between individuals at work (Flagstad et al., 2021). The outcome of such processes is the development of a green organizational climate. Extending this to environmental certification, we suggest that different system elements related to certification may create green development when they harmonize, and, correspondingly, may hinder greening processes when they are incongruent (Fig. 1).

At the centre of the model is an employee, with his/her values and attitudes. The next layer is the microsystem, comprising his/her colleagues and leader. The corposystem includes organizational climate and strategy, and in large companies this level also includes other departments and top-level management. In certified companies, the environmental certification is part of the corposystem; in uncertified companies, however, it is part of the macrosystem. When the employee's environmental values and attitudes are in line with the practices prescribed by the certification system—and harmonize with the organizational climate and strategy—the certification may contribute to organizational greening. By contrast, when the employee experiences conflict between his/her values and certification requirements, this tension leads to frustration and hinders organizational greening. The model may be constructed from the perspective of any employee or manager in the company and is used in the analysis of the data.

2.2. A cognitive dissonance perspective on certification

According to cognitive dissonance theory (Fig. 2), people holding conflicting beliefs (i.e., cognitions that do not fit together psychologically) experience a negative affective state, denoted dissonance (Festinger, 1959; Hinojosa et al., 2017). People go through four stages of dissonance arousal and reduction (Fig. 2): Conflicting beliefs create a cognitive discrepancy (1), this leads to emotional discomfort—dissonance (2), they are motivated to reduce the dissonance (3) and engage in different strategies to reduce the discrepancy and thereby reduce the dissonance (4) (Hinojosa et al., 2017).

Similarly to how ecosystems in nature strive to achieve equilibrium, Festinger (1959, 1962) hypothesized that humans seek to reduce dissonance and achieve a state of consonance. There are several ways to reduce dissonance: for instance, persuasion and justifications may increase the desirability of a chosen alternative (Festinger, 1962). If the dissonance is not resolved, the person remains in a negative affective

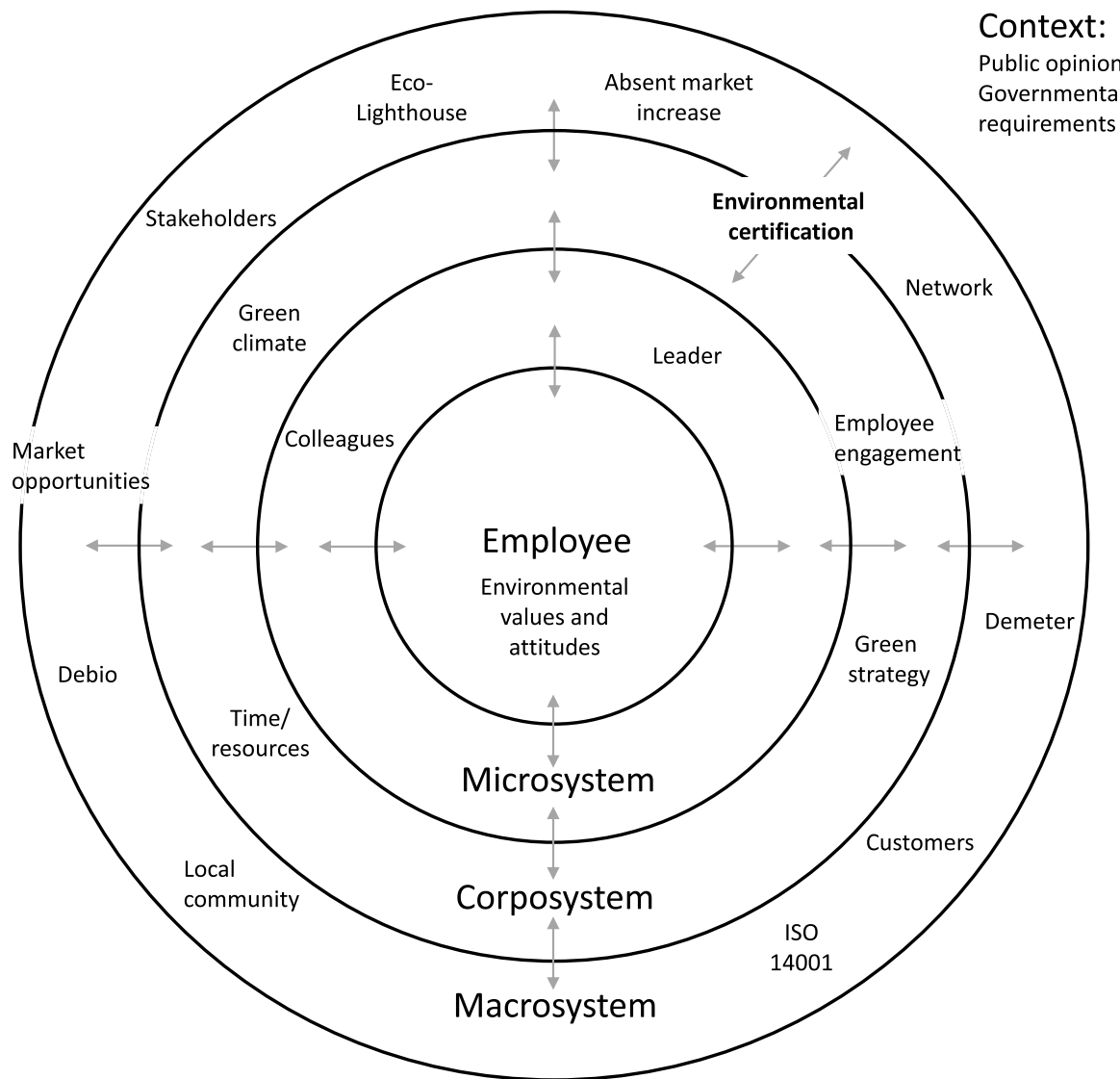


Fig. 1. Systems perspective on environmental certification. Adapted from Flagstad et al. (2021).

state, which may cause frustration (Hinojosa et al., 2017). In the following, this cognitive dissonance theory is viewed in relation to the interview results and further developed in the discussion. In the result and discussion section, we introduce the term certification dissonance to describe the frustration the participants experienced when their personal beliefs were not in line with requirements from the certification scheme. Furthermore, we develop a process model describing different outcomes of certification dissonance.

3. Material and methods

3.1. Focus group and follow-up interviews

Focus group interviews on greening organizations were conducted in the first months of 2017 in seven small-scale companies and included three to six participants in each interview. Environmental certification

was not a focus in the interview guide, but the topic made its way into the study, as the participants were eager to speak about it. Follow-up interviews were conducted in September 2018, enabling exploration of evolving aspects of the green focus. The focus group interviews were conducted in the field, directed by a moderator alongside an observer, and followed a semi-structured interview guide.

3.2. Companies and participants

The companies were selected using three criteria: 1) being certified according to an environmental certification (e.g., Eco-Lighthouse), or having a product that was certified (e.g., Debio); 2) using the word ‘green’, ‘environment’, ‘sustainable’, ‘ecology’, ‘organic’ or ‘care for nature’ when describing the company on the website; and 3) demonstrating awareness of environmental issues, describing ways to reduce pollution/energy consumption, and/or emphasizing the use of local

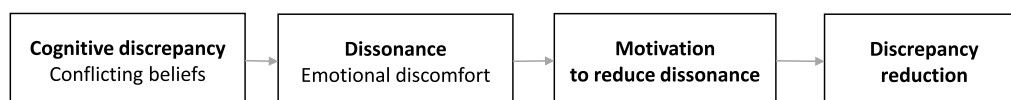


Fig. 2. Cognitive dissonance processes. Adapted from Hinojosa et al. (2017).

Table 1
Company descriptions (N = 7).

Company	Company type	Participants	Environmental Certification	Website
A	Family-based corporation	1 manager, 2 team members	Debio, Green point	Organic
B	Farm/family corporation	1 manager, 2 team members, 2 employees	Green point, Norwegian Eco-tourism, former Eco-Lighthouse	Sustainable
C	Entrepreneurial corporation	1 manager, 3 employees (1 intern)	Global Organic Textile Standard (GOTS)	Nature/Sustainable
D	Farm-based foundation	6 employees (3 interns), no manager, some seniors have areas of responsibility	Debio, Demeter	Organic/Biodynamic
E	Farm-based corporation	1 manager, 2 employees	Debio, Green point, Norwegian Eco-tourism	Organic/Sustainable
F	Family-based corporation	1 manager, 2 team members	Debio, Green point, Norwegian Eco-tourism	Organic
G	Farm-based sole tradership	1 manager, 2 employees (interns), 1 team member	Debio, Demeter, Norwegian Eco-tourism	Organic/Biodynamic

resources, reusing and recycling on their website (Table 1).

In total, 28 participants (14 males/14 females) in 7 companies were interviewed (Table 1). The organizational structures tended to be flat and informal; managers could be democratic coordinators and employees could hold influential roles. Furthermore, roles did not fit into a simple dualistic structure of managers and employees—the participants were family members, founders, seniors and interns. We use the term ‘team member’ to describe autonomous roles that were not clearly defined as a subordinate with an employment contract (e.g., a family member).

Five of the companies produced according to organic principles and sold Debio-certified products. Two of these also followed the Demeter guidelines for biodynamic agriculture. Company B had ceased their Eco-Lighthouse certification, and company E was planning to get certified. Additionally, the companies had several environmental-related certifications that were not mentioned in the interviews (Table 1).

3.3. Reflexive thematic analysis

The transcripts from the interviews were analysed via reflexive thematic analysis (Braun and Clarke, 2006, 2020) using a qualitative data analysis programme—MAXQDA (VERBI Software, 2019). Reflexive thematic analysis emphasizes the importance of researchers’ subjectivity as a resource, entailing that the researchers engage reflexively with theory, data and interpretation (Braun and Clarke, 2020). The approach in this study was empirically driven: certification was not a topic in the interview guide but was brought up as central to the participants. Furthermore, the analysis was conducted inductively, meaning that the themes were developed through the analytic process. In addition, existing research and theory were used to inform discussions around and interpretations of the data. Thematic analysis was selected because it enables active engagement in the analytic process, is suitable for a large sample of participants and allows interpretation within the wider socio-cultural context (Braun and Clarke, 2021).

The analysis was conducted through a six-phase process (Braun and Clarke, 2006), beginning with (1) transcribing and becoming familiarized with the material, (2) initial coding, and (3) gathering codes and

looking for overarching themes and patterns. The analysis focused on meaning in a straightforward way (e.g., positive reputation, rigid rules), but some underlying themes were identified (e.g., frustration, pride and motivation). (4) Themes were developed and divided into drivers, hindrances and some categories that were more independent. (5) These themes were evaluated critically, refined and related to the research questions. The final phase (6) of analysis was to report the findings (with quotations), and compare these with the existing literature. The analysis was mainly conducted by the first author; however, all three authors discussed the categories to ensure methodological integrity (Levitt et al., 2018).

3.4. Ethics

The study received approval from the Norwegian Social Science Data Services (NSD) and followed the guidelines of the National Committee for Research Ethics in the Social Sciences and Humanities. Written informed consent was obtained.

4. Results and discussion

The main theme was that certification gave rise to a back-and-forth process between drivers and hindrances, resulting in conflicting emotions and cognitive dissonance—which we denote *certification dissonance* (Table 2). Subthemes with the most weight are emphasized in bold in the table.

Several themes that were considered drivers of and hindrances to certification processes were identified, and grouped into themes that encompassed 1) internal characteristic of the company, 2) related to market and customers, 3) aspects of the certification scheme and 4) emotions evoked by the certification (Table 2). An overarching theme was the certification dissonance these drivers and hindrances produced. Finally, the overall theme—how certification contributed to greening processes—was analysed.

4.1. Experiences of dissonance in certification processes

4.1.1. How company characteristics shape certification processes

One theme was how characteristics of the company influenced the certification process. Being *small* was generally seen as a hindrance to certification: The time and resources needed for certification were challenging to small-scale companies, and they experienced that the certification process was *expensive*. One participant explained how the economic costs associated with recertification prompted a reconsideration of the scheme:

Table 2
Experiences of the drivers and hindrances in certification processes.

CERTIFICATION DISSONANCE	Drivers	Hinderances
COMPANY CHARACTERISTICS	Flexibility	Small size
CUSTOMERS/MARKET	Positive reputation Competitive advantages Expansion	Expensive Greenwashing No market changes
CERTIFICATION SCHEME	Trust Internal routines Quality mark	Personal relations Rigid rules/bureaucracy Being controlled No difference on green practice Internal motivation
EMOTIONS	Pride/identity Enthusiasm	Anger/frustration Discouragement/resignation

Yeah ... we were an Eco-Lighthouse enterprise until we had to be recertified after three years ... then some consultant or other had to come and inspect things, and they had to be paid a few tens of thousands. So just that makes you lose a bit of motivation for it. (Female manager, Company B)

This participant highlighted lack of motivation and economic costs as an important reason to decertify. Furthermore, the costs associated with certification are high relative to the size of the turnover in small-scale companies. Additionally, several participants pointed out that they lacked the time to discuss environmental improvements—practical tasks related to production dominated their work capacity. These findings are in line with the drawbacks of certification (Boiral et al., 2018; Mosgaard and Kristensen, 2020; Valenciano-Salazar et al., 2021), and challenges of certification specific to small-scale companies (Granly and Welo, 2014).

However, being small was seen as an advantage: specifically with regards to flexibility and the ability to rapidly adapt to changes and implement greening measures with immediate effect. As this participant pointed out: *'We still have the advantage of being very small, and we can make decisions very quickly'* (Male manager, Company C). Moreover, the participants experienced a high degree of autonomy. Several related flexibility to the ability to implement environmental measures; however, this was not linked specifically to environmental certification. These findings illustrate that size is an important factor to take into consideration when designing certification schemes. Note that although the Eco-Lighthouse certification is targeted at small and medium-sized companies, the small-scale companies in this study nevertheless experienced size-related challenges.

4.1.2. Customer and market drivers and hindrances

In addition to the internal characteristic of the companies, certification processes were also driven by external factors. Several participants experienced that the customers were interested in the environmental profile of their products. A *positive reputation* was identified as a driving force—participants reported that the customers cared about the environment and demanded ecological products. One participant recounted this customer statement: *'Wow, are you really an Eco-Lighthouse enterprise? That's so good to hear'* (Female manager, Company B). In this quote, the participant highlighted that the customer expressed positive surprise upon learning that the company was certified. The positive feedback from customers contributed to the motivation to become certified and stay certified. In contrast, several participants found that the certification led to *greenwashing*, which was considered a major hindrance. The participants stressed the importance of genuine environmental action and distanced themselves from 'other companies' that promoted the greenness of their products through marketing campaigns.

The participants experienced the stretch between certification requirements and their personal environmental values as a major hindrance. In some cases, the certification scheme required using eco-labelled ingredients that entailed long transport, which conflicted with the participants' ideals of true environmental sustainability. Thus, the participants felt that staying within the certification scheme entailed greenwashing their product. Following the scheme's rules and guidelines would provide the label, but also resulted in a product that was environmentally unsustainable. As one participant stated:

For us, there's one thing that trumps organic ingredients, and that's things I consider to be better overall than ingredients marked as organic. Debio only looks at one thing: that is whether something is certified or not. We were going to make a [beverage] with a particular type of chili. The farmers in Northern India who grow it, they don't even have a tractor, let alone know what pesticides are ... but we're not allowed to use it because it's not certified. (Male manager, Company A)

For this participant, conforming to the environmental standard would provide an eco-labelled product—however, it would also entail greenwashing the product since it would force them to use ingredients that were not seen as environmentally sustainable. Furthermore, the certification implied a simple categorization of products as either eco-labelled or not, contrasting the complex environmental evaluations in which they engaged (Darnall and Aragón-Correa, 2014). Finally, some participants felt that the certification entailed a threat to their reputation, as their environmental performance was at a much higher standard—this may be interpreted as active distancing from symbolic adoption (Ferrón Vélchez, 2017; Martín-de Castro et al., 2017; Heras-Saizarbitoria et al., 2020). The experience of a gap between a positive reputation and greenwashing gave rise to certification dissonance; one response was to decertify.

Some participants experienced that the certification provided a *competitive advantage*—that they were given opportunities because they were certified as organic. The following quote illustrates how the eco-label granted access to a new market:

Male manager: *We now have a contract with [name of wholesale grocery supply group] so from May our product will be in all the [name of supermarket chain] throughout Norway. And we have had to redo the labels ... and write 'Certified Organic' in front of it.*

Interviewer: *Did that have any bearing on why they gave you access?*

Male manager: *That we're organic? Yes, that's the reason why they gave us access.* (Company A)

Additionally, some participants related the use of eco-labels to the economy, arguing that it increased the product's selling price. Other participants, however, contested the idea that certification provided a market benefit. Some even reported *no market changes*. These participants were uncertain about the impact on their reputation; additionally, the costs were a burden, so they concluded that being certified did not pay off. One participant even stated that he was losing money on the eco-label: *'It isn't a magic money tree for us'* (Male manager, Company F). Some participants further reported that their customers did not know that they were certified. Finally, a few participants reported that the customers cared for other aspects of the production, such as producing locally or following traditions. In summary, the experiences regarding market effects varied from positive to uncertainty and no effect—and any gap between resources invested and lack of market effects gave rise to dissonance.

While *personal relations* with customers would normally be considered an advantage, in this context, close connections were a hindrance to certification. Many customers were familiar with the companies because of their local base, and had established personal relationships with the producers. As a result, they had sufficient knowledge about their production and did not need the quality stamp the certification could provide. In this quote, the participants underline the advantages of interacting directly with customers.

Female employee #4: *I think you can already feel it when you enter the shop, because it is much smaller ... everything is prepared well and ... the person selling has often time also to talk. It is, maybe this atmosphere mixed with a person you can see directly and know he or she is working here, like that combined also makes you like feel that it is more value maybe.*

Male employee #2: *So bigger companies put a lot of effort into ads. Here we hope that people just trust us.*

Male employee #1: *I think the important thing is it is not too big. You can have a personal relationship ... and that is building up that trust in them. I think that is important.* (Company D)

The participants highlighted the personal contact with customers as the basis for trust, and this was contrasted to larger companies that rely on advertising to build reputation. In addition, several companies cultivated close relationships with their suppliers to be able to trust the quality of the ingredients. Environmental certification may be seen as a substitute for trust based on personal relationships, and hence more relevant to large companies or companies without a local base.

However, *expansion* into new markets increased the necessity of certification. Therefore, expansion to sell products nationwide was considered a driver for certification. One participant explained this in the following way:

If you are going to say that something is organic, then you actually need to have it labelled, otherwise you're not permitted to say it's organic. Given that we sell things throughout the country and so on, then ... but if one only sold in the local area, it actually wouldn't be that important. (Male manager, Company G)

This participant related the importance of certification to the area of distribution: nationwide distribution increased the significance of certification.

In summary, the customers were driving certification processes by their demand and positive attitude towards certification. Being certified could be considered a competitive advantage—especially related to expansion. This is in line with [Valenciano-Salazar et al.'s \(2021\)](#) findings from Costa Rican companies, highlighting improved green image, recognition and increased market shares as important drivers. However, our findings indicated that customers and market factors were also hindering certification, as many customers were indifferent towards certification, and seemed to trust the company regardless of eco-labels. Furthermore, participants experienced a dissonance between their personal environmental values and certification requirements, and felt that conforming to the standard greenwashed their product.

4.1.3. Drivers and hindrances within the certification scheme

Rigid rules and bureaucracy were highlighted as a serious barrier to certification. Participants experienced that the certification scheme entailed categorical thinking. Moreover, lack of flexibility and practical solutions hindered staying within the certification scheme. The tendency to experience work on documentation as negative was common: *'There's an awful lot of bureaucracy! There's a frightful amount of it'* (Male manager, Company F). These experiences correspond to previous studies' findings that bureaucracy and documentation are disadvantages that may lead to decertification ([Flaten et al., 2010](#); [Mosgaard and Kristensen, 2020](#)). In contrast, one participant expressed that the certification aimed to contribute towards a green ideal, thereby creating trust:

The Debio regulations are really developed to ensure that everything should be, sort of, as good as it can be, from an environmental standpoint. So we are ... partly it's the case that you need to believe that the work put into it is sound, that you can trust it. (Male manager, Company G)

This quote indicates that the participant supported the work that was done to obtain an eco-label, but his use of qualifiers (e.g., 'kind of' and 'partly') devalues the strength of the statement.

Several participants experienced the certification scheme as an external *control*. They reported that they were monitored, and kept records in order to defend their practice: *'We are going to be checked'* (Female employee #2, Company E). Participants referred to the certification scheme as a controlling body; this resulted in practices aimed at satisfying the inspectors rather than substantially changing their organization. In contrast, a few participants experienced that the certification might help strengthen *internal routines* in the companies, which was considered a driver.

Female team member #1: *He [the manager] always makes every effort to obtain organic products, but when that doesn't happen he just has to take what he gets. But the aim is certainly for everything to be organic.*

Male manager: *That is the whole point of the Debio certification.*

Female team member #1: *It is what we strive for.* (Company F)

In this quote, the participants attributed their striving for green alternatives to the certification, indicating that it helped them establish internal environmental practices in the company. In relation to the systems perspective ([Fig. 1](#)), most participants indicated that the certification scheme was unsuccessful in establishing internal routines in the cosystem; rather, it was regarded as an external body located in the macrosystem.

The eco-label was considered a *quality mark*, which was a driver. The need for a quality mark to secure trust in the product and confidence regarding environmental aspects was related to expansion beyond the local market: *'It's like a quality stamp, but maybe we didn't really think that we would be able to ... that we would sell more because of that. But that maybe it was of positive benefit for our reputation, possibly ...'* (Female manager, Company B). This participant considered the eco-label a quality mark but was uncertain about the effect on sales and reputation. Several participants experienced that certification made *no difference on green practice*, which was a strong hindrance to certification. The Eco-Lighthouse scheme required recertification every third year: in one company, this prompted a dialogue on the pros and cons of staying certified versus decertifying:

We no longer wanted to be part of it, because I kind of felt that there was ... a bit too much bureaucratic nit-picking attached to it in a way. We were just as environmentally friendly in how we operated, whether we were certified or not. And there were some kind of yearly costs involved. If you wanted to be recertified. (Female manager, Company B)

In this participant's experience, the certification did not strengthen the environmental practices within the company—additionally, she questioned the overall value of the certification. This doubt regarding the significance of certification, and/or the belief that certification made no difference on environmental practice, gave rise to certification dissonance. In the case of company B, this dissonance was reduced by decertification.

Some of the companies were green at heart; as such, the certification did not contribute to greening. They had an *internal motivation* to go green that seemed to exist independently of external certification schemes. As one participant stated: *'That's not our motive—our motive is on a different level'* (Male manager, Company G). The internal motivation was considered a hindrance to certification, since the certification provided no additional value in these cases.

In summary, the certification scheme did spur processes within the companies, such as providing a quality mark and establishing trust. However, the rigid rules, bureaucracy and monitoring were experienced as drawbacks, as was the experience that certification did not affect environmental practices.

4.1.4. Emotional reactions to certification-imposed dissonance

The participants expressed strong emotions related to certification that may both drive certification and de-certification. Several participants expressed *anger and frustration* because of the rigid requirements imposed by the certification scheme.

They [Debio] only look at one thing, and that's whether something is certified or not ... if our beer is to be certified organic we would have to purchase oysters from France that are imported from Japan. That's, what ... where is the organic aspect in that? It is just as if the people working in Debio, they don't know what in the world 'organic' means! They just don't know—that's how I feel. (Male manager, Company A)

This quote illustrates the stretch between the participant's own sense of environmental soundness and the rigidity of the certification scheme—which then created dissonance and triggered negative emotions. Furthermore, working with the certification scheme also led to *discouragement and resignation*, as in this quote: *'I think it's very demotivating and difficult to work with Debio, who do the certification. As far as I'm concerned, they've completely lost the bird's-eye view'* (Male manager, Company A). This participant struggled with his motivation, because he felt that the requirements did not make sense. His solution to reduce the dissonance between the certification requirements and his own sense of what was environmentally sustainable was to produce some products outside the certification scheme. Other negative emotions occasionally expressed were sadness, disappointment and indifference. One participant explained that producing according to the eco-label is *'actually not problematic, but neither is it a source of inspiration'* (Male manager, Company G). This participant expressed indifference; handling the requirements from the certification agency was a necessity but did not stimulate green innovation. A few participants expressed disappointment that the certification did not live up to their green ideal.

However, participants also expressed strong positive emotions related to the certification. They expressed *pride and identity*, which were considered important drivers of their environmental measures in general but were also related to the certification. One participant was proud to mention that they were the first company to gain Eco-Lighthouse certification in their municipality. In addition, participants felt pride when presenting their products to customers:

Among our products we have eco-fleece, so our products are manufactured in an environmentally friendly way as possible, and as a salesperson it means that I can proudly travel around to shops and show them our products—it [the environmental profile] is something I tell them about. (Female employee #4, Company C)

This participant felt that her own environmental values and the company's environmental values were in congruence, which produced a positive emotion—namely, pride. The following quote illustrates the significance of this environmental consciousness: *'I sort of feel that taking the green route was maybe a natural choice for us in a way, that it was part of our identity'* (Female team member #1, Company B). This participant expressed that going green was central to the identity of the company. Overall, the participants in this study stressed the importance of a green profile. However, it is difficult to distinguish the environmental profile from the certification; pride and identity might just as well be a result of their greening measures as their certification.

Some participants also expressed *enthusiasm* related to certification. One participant mentioned environmental certification as an important element in the entrepreneurial phase: *'One thing that was important was to get the Debio certification, so we got it almost immediately'* (Male manager, Company F). This participant seemed to be both enthusiastic and proud of the eco-label. Thus, although the negative emotions were more pronounced, it is worth noting that the certification also evoked positive feelings. This raises the question: To what extent was the decision to certify based on rationality or emotions? Environmental decisions are often not guided by cognitive factors such as information and future perspectives, but rather emotions and social practice (Grolleau et al., 2016; Brach et al., 2018).

4.2. The 'eco grey zone'

This section discusses the outcome of these certification dissonance processes: Does certification lead to greening or greenwashing? The certification scheme inherently involves categorical thinking—a dichotomous outlook on companies or products as either green or not green. However, in the participants' experience, considering what is environmentally sustainable involves comparing a variety of factors. This is captured by the following quote: *'What is actually real green ... how*

to define what is green. There are many things to take into account' (Male employee #3, Company D). This quote illustrates how the participants had a complex understanding of what being green means, which is in line with Darnall and Aragón-Correa's (2014) critique of the one-dimensionality of many eco-labels. In the 'eco grey zone', different environmental considerations are often conflicting. In some cases, companies that were producing in accordance with the eco-label decided to make uncertified products.

We have a [beverage] containing raspberries. You can't get hold of organic raspberries in Norway, so if we were to have the Debio label on it, we would have needed to import them from France. Organic raspberries from France! But, just a short distance from here, there is a friend of mine who is a raspberry farmer, and I know that he sprays them as little as humanly possible. So this summer, we will produce with local raspberries, and it won't be certified organic. (Male manager, Company A)

For this participant, 'organic' and 'imported from France' were incompatible. In this case, the participant felt that a product based on local and uncertified raspberries was truly sustainable—which was considered more important than being able to use the eco-label. Thus, the drive to be green may lead companies out of the certification scheme. According to the systems perspective, elements close to the employee are more influential than peripheral elements. In Company A, the environmental values of the manager (microsystem) seemed key to the decision; the certification scheme, on the other hand, represented a peripheral element (corposystem).

A central discussion in the eco grey zone was the meaning of environmental sustainability. One participant expresses explicit disagreement with the definition provided by the eco-label:

That particular term, what is organic, that ... and Debio's definition, I, for one, disagree strongly ... Previously, Debio kind of set the guidelines ... but sometimes we actually see that there are more sustainable products if we do not relate to Debio. (Male manager, Company A)

This participant found it difficult to stay within the scheme, as his personal values and those represented by the eco-label were dissonant. This quote might also indicate a disappointment that the certification scheme is no longer considered to represent a green ideal. Several participants felt that they were truly sustainable, although they were outside the certification scheme: *'We didn't go down the organic route. But in fact, we were as organic as it was possible to be'* (Male team member #1, Company A). In this quote, the participant contrasted being eco-friendly with the eco-label. It is this sense of contradiction that gave rise to cognitive dissonance and negative emotions.

There seemed to be a hierarchy of certifications regarding how much they required and to what extent they spurred processes internally in the organization. For instance—the Demeter label was considered to require more pervasive changes than the Debio label: *'Demeter is an international label for biodynamic agriculture, which is also a lot more stringent, and even a more sort of holistic way of thinking, perhaps'* (Male manager, Company G). This quote demonstrates the comparison between different certifications and indicates an understanding of the eco grey zone as hierarchically ordered, consisting of different shades of green.

The quotes in this section illustrate that the participants struggled to evaluate what is—and is not—eco-friendly. They renegotiated the meaning of going green, thus leaving a categorical understanding and entering the eco grey zone. Regardless of how one conceptualizes nuances in the eco grey zone, both customers and companies had to navigate the complex landscape of an increasing number of certification schemes. This, and the fact that several participants found that certification made no difference on their green practice, challenges the overall greening effect of certification.

4.3. Theoretical and practical implications

The participants appeared to struggle with their evaluations of different environmental outcomes. The requirements required to produce a certified product forced them to make choices that they felt were not sustainable, such as importing airborne certified ingredients instead of using local, sustainable but uncertified alternatives. This seemed to give rise to cognitive dissonance (Festinger, 1962; Hinojosa et al., 2017); correspondingly, we have introduced the term *certification dissonance* to denote the gap between adhering to one’s environmental values and conforming to certification standards.

Combining elements from certification processes and cognitive dissonance theory, we propose a new process model to understand certification and organizational greening. The central proposition in this model is that the employee’s environmental values and the requirements of the certification scheme can cause incongruence, thus producing certification dissonance. The frustration associated with this dissonance forces the employee to do something. As the model suggests, and as our data support, an employee may reduce dissonance by: 1) changing their perception of the certification; 2) decertifying or making products without the eco-label; and 3) resigning and/or disengaging. When an employee’s values are in congruence with the requirements of the certification scheme, denoted *certification consonance*, the certification scheme may enforce green practice and produce organizational greening (Fig. 3).

Is certification relevant for small-scale companies? Small-scale companies tend to have more direct contact with customers and often operate locally—both factors that may outperform the added value of certification schemes. The resources required for certification are proportionally larger in small-scale companies: not only is the economic cost high, but the companies may also lack human resources. Finally, small-scale companies depend more on informal structures and seem able to follow through with their green agenda regardless of formalization in the form of certification. We therefore argue that small-scale companies be treated as special cases, that there may be several routes to greening, and that there be more flexibility in revision processes.

To avoid losing members, certification schemes must be based more on a holistic understanding of what greening means—and less on rigid rules and bureaucracy. To be sustainable, the schemes must consider the variety of factors that constitute true sustainability.

4.4. Study limitations

This is a small case study of seven small-scale companies in Norway; this must be taken into consideration when generalizing the findings to similar contexts. Nevertheless, many findings are likely also relevant for small-scale companies in other countries. The companies were selected because they had a green profile, which provided rich data on environmental sustainability, however the results must be understood in the context of purposive sampling (Levitt et al., 2018). Additionally, one of the researchers had a farming background, with engagement in environmental issues; this may have helped gain participants’ trust, but may also have influenced their responses. Environmental research is prone to social desirability bias (Vesely and Klöckner, 2020), which is especially relevant in focus groups because of the lack of anonymity. Future studies could include observation and field work to counterbalance possible biases. In addition, future studies should focus specifically on the certification process, and distinguish between the perspectives of employees versus managers.

5. Conclusions

How is environmental certification of products and organizations experienced in small-scale companies? In summary, participants engaged in a continuous dialogue around certification schemes’ and eco-labels’ contradictions. The dissonance between environmental sustainability and certification requirements precluded an easy path to certification, or straightforward benefits of being certified. The tension created at the intersection of the drivers and hindrances gave rise to strong emotions and we coined the term certification dissonance to describe this phenomenon. These contradictions were related to *characteristics of the companies*, as certification was expensive in small-scale companies. Furthermore, the *customers and market* were important: certification builds a positive reputation but the personal relationship with customers reduces the significance of the competitive advantage. The *certification scheme* provided a quality mark and promoted green development, but the experience of rigidity, excess bureaucracy and being controlled were a hindrance—especially when being certified made no difference on the company’s green practice. Finally, *emotional reactions* to certification were surprisingly strong, which was explained by the certification dissonance processes. Based on psychological theory,

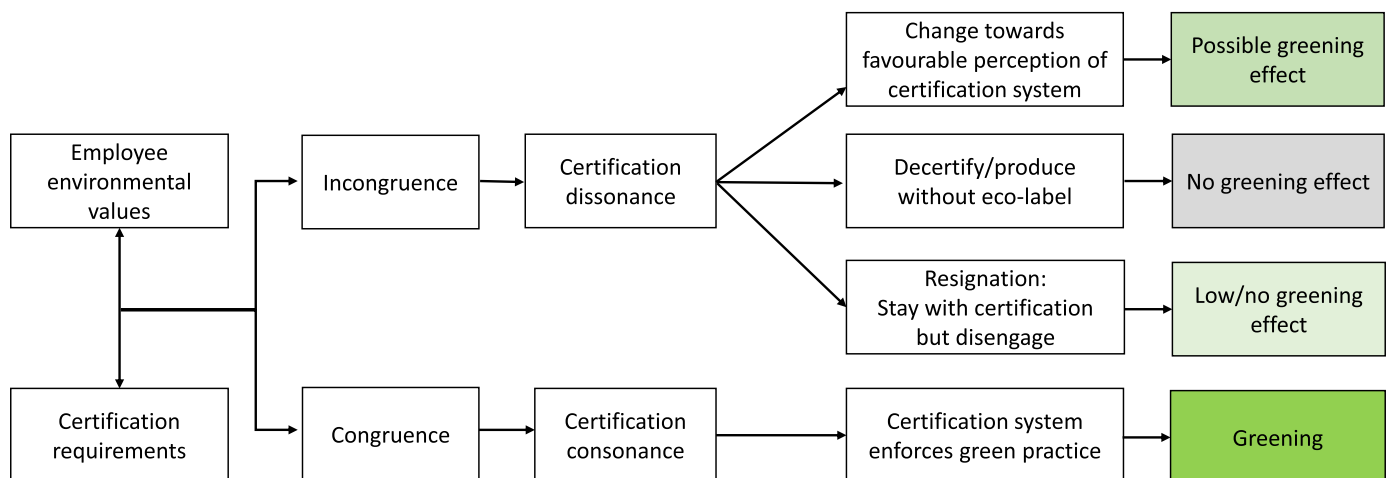


Fig. 3. A certification dissonance and consonance model of greening.

we developed a process model of certification dissonance to analyse how certification may lead to different outcomes. These outcomes may include no greening, low greening or a possible greening effect. The practical implication to those who run certification schemes is that they should avoid rigidity and embrace a holistic sustainability perspective to ensure that the certification process includes the pro-environmental values of employees—ultimately promoting environmental sustainability.

Although it was not an initial focus, the data indicated that there were some differences between the certification of products through eco-labels and the environmental certification of companies. Participants expressed strong emotions in relation to eco-labels; they experienced frustration related to dilemmas posed by the adoption of schemes, but also positivity about reputation, comparative advantages and new market possibilities. Regarding certification of companies, participants expressed more indifference—the certification was relatively easy to obtain, but provided less gain. In comparison, the eco-label was associated with larger wins, but at a higher cost.

Are these certification processes a driving force for greener production? The participants' accounts indicate a nuanced understanding of the meaning of greening. Thus, an understanding of green as an inclusive or exclusive category is not supported. The participants' understanding of pro-environmental behaviour is that it is complex, and that finding the best environmental solution is difficult: i.e., using certified ingredients in a product is good, but not if it necessitates long transport. The participants discussed pros and cons related to choices of different courses of action. In this way, the process of certification seems to lead to environmental awareness, but not always in the ways required by the schemes. We introduced a new concept—the 'eco grey zone'—to describe the complex and contradictory evaluations of environmental sustainability.

The systems perspective provides a novel framework to understand certification processes. The accounts in this study illustrates that environmental certification is often considered peripheral and may be placed in the macrosystem. However, both the Eco-Lighthouse and ISO 14001 schemes aim to internalize routines and establish a green organizational climate. This would have placed the certification system at a more central system layer, but our data do not support this. The certification schemes must therefore develop implementation processes that engage employees and contribute to substantially change practices. Future studies of user experiences may provide a knowledge-based foundation to improve such implementation processes.

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Ingeborg Flagstad: Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Visualization, Project administration. **Åshild Lappegaard Hauge:** Conceptualization, Formal analysis, Writing – review & editing, Visualization. **Svein Åge Kjøvs Johnsen:** Conceptualization, Validation, Formal analysis, Writing – review & editing, Visualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

- Boiral, O., 2007. Corporate greening through ISO 14001: a rational myth? *Organ. Sci.* 18 (1), 127–146. <https://doi.org/10.1287/orsc.1060.0224>.
- Boiral, O., 2011. Managing with ISO systems: lessons from practice. *Long. Range Plan.* 44 (3), 197–220. <https://doi.org/10.1016/j.lrp.2010.12.003>.
- Boiral, O., Guillaumie, L., Heras-Saizarbitoria, I., Tayo Tene, C.V., 2018. Adoption and outcomes of ISO 14001: a systematic review. *Int. J. Manag. Rev.* 20 (2), 411–432. <https://doi.org/10.1111/ijmr.12139>.
- Brach, S., Walsh, G., Shaw, D., 2018. Sustainable consumption and third-party certification labels: consumers' perceptions and reactions. *Eur. Manag. J.* 36 (2), 254–265. <https://doi.org/10.1016/j.emj.2017.03.005>.
- Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qual. Res. Psychol.* 3 (2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>.
- Braun, V., Clarke, V., 2020. One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qual. Res. Psychol.* 1–25 <https://doi.org/10.1080/14780887.2020.1769238>.
- Braun, V., Clarke, V., 2021. Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counsell. Psychother. Res. J.* 21 (1), 37–47. <https://doi.org/10.1002/capr.12360>.
- Bronfenbrenner, U., 1979. *The Ecology of Human Development – Experiments by Nature & Design*. Harvard University Press, Cambridge, MA.
- Christmann, P., Taylor, G., 2006. Firm self-regulation through international certifiable standards: determinants of symbolic versus substantive implementation. *J. Int. Bus. Stud.* 37 (6), 863–878. <https://doi.org/10.1057/palgrave.jibs.8400231>.
- Clayton, S., Devine-Wright, P., Swim, J., Bonnes, M., Steg, L., Whitmarsh, L., Carrico, A., 2016. Expanding the role for psychology in addressing environmental challenges. *Am. Psychol.* 71 (3), 199–215. <https://www.ncbi.nlm.nih.gov/pubmed/26147395>.
- Darnall, N., Aragón-Correa, J.A., 2014. Can ecolabels influence firms' sustainability strategy and stakeholder behavior? *Organ. Environ. Times* 27 (4), 319–327. <https://doi.org/10.1177/1086026614562963>.
- Debio, 2021. Regler for merker og merkebruk. <https://debio.no>. (Accessed 15 February 2021).
- Delmas, M.A., Burbano, V.C., 2011. The drivers of greenwashing. *Calif. Manag. Rev.* 54 (1), 64–87. <https://doi.org/10.1525/cmr.2011.54.1.64>.
- Delmas, M.A., Gergaud, O., 2021. Sustainable practices and product quality: is there value in eco-label certification? The case of wine. *Ecol. Econ.* 183, 106953. <https://www.sciencedirect.com/science/article/pii/S0921800921000112>.
- Eco-Lighthouse, 2021. The certification scheme. <https://eco-lighthouse.org/certificati-on-scheme>. (Accessed 15 February 2021).
- Erauskin-Tolosa, A., Zubeltzu-Jaka, E., Heras-Saizarbitoria, I., Boiral, O., 2019. ISO 14001, EMAS and environmental performance: a meta-analysis. *Bus. Strat. Environ.* 29 (3), 1145–1159. <https://doi.org/10.1002/bse.2422>.
- Ferrón Vilchez, V., 2017. The dark side of ISO 14001: the symbolic environmental behavior. *Eur. Res. Manag. Bus. Econ.* 23 (1), 33–39. <https://doi.org/10.1016/j.iadeen.2016.09.002>.
- Festinger, L., 1959. Cognitive consequences of forced compliance. *J. Abnorm. Soc. Psychol.* 58 (2), 203–210. <https://doi.org/10.1037/h0041593>.
- Festinger, L., 1962. Cognitive dissonance. *Sci. Am.* 207 (4), 93–106. <https://doi.org/10.1038/scientificamerican1062-93>.
- Flagstad, I., Johnsen, S.Å.K., Rydstedt, L., 2021. The process of establishing a green climate: face-to-face interaction between leaders and employees in the microsystem. *J. Val. Base. Leader.* 14 (1), 5. <https://doi.org/10.22543/0733.141.1343>.
- Flaten, O., Lien, G., Koelsing, M., Løes, A.-K., 2010. Norwegian farmers ceasing certified organic production: characteristics and reasons. *J. Environ. Manag.* 91 (12), 2717–2726. <https://doi.org/10.1016/j.jenvman.2010.07.026>.
- Granly, B.M., Welo, T., 2014. EMS and sustainability: experiences with ISO 14001 and Eco-Lighthouse in Norwegian metal processing SMEs. *J. Clean. Prod.* 64, 194–204. <https://doi.org/10.1016/j.jclepro.2013.08.007>.
- Grolleau, G., Ibanez, L., Mzoughi, N., Teisl, M., 2016. Helping eco-labels to fulfil their promises. *Clim. Pol.* 16 (6), 792–802. <https://doi.org/10.1080/14693062.2015.1033675>.
- Graafland, J., Smid, H., 2016. Environmental impacts of SMEs and the effects of formal management tools: evidence from EU's largest survey. *Corp. Soc. Responsib. Environ. Manag.* 23 (5), 297–307. <https://doi.org/10.1002/csr.1376>.
- Heras, I., Arana, G., 2010. Alternative models for environmental management in SMEs: the case of Ekoscan vs. ISO 14001. *J. Clean. Prod.* 18 (8), 726–735.

- Heras-Saizarbitoria, I., Boiral, O., 2013. ISO 9001 and ISO 14001: towards a research agenda on management system standards. *Int. J. Manag. Rev.* 15 (1), 47–65. <https://doi.org/10.1111/j.1468-2370.2012.00334.x>.
- Heras-Saizarbitoria, I., Boiral, O., Díaz de Junguitu, A., 2020. Environmental management certification and environmental performance: greening or greenwashing? *Bus. Strat. Environ.* 29 (6), 2829–2841. <https://doi.org/10.1002/bse.2546>.
- Hinojosa, A.S., Gardner, W.L., Walker, H.J., Cogliser, C., Gullifor, D., 2017. A review of cognitive dissonance theory in management research. *J. Manag.* 43 (1), 170–199. <https://doi.org/10.1177/0149206316668236>.
- International Organization for Standardization, 2019. The ISO Survey of Management System Standard Certifications. ISO, Geneva. <https://www.iso.org/the-iso-survey.html>. (Accessed 15 February 2021).
- Johnstone, L., 2020. The construction of environmental performance in ISO 14001-certified SMEs. *J. Clean. Prod.* 263 <https://doi.org/10.1016/j.jclepro.2020.121559>.
- Johnstone, L., Hallberg, P., 2020. ISO 14001 adoption and environmental performance in small to medium sized enterprises. *J. Environ. Manag.* 266, 110592. <https://www.ncbi.nlm.nih.gov/pubmed/32310124>.
- Levitt, H.M., Bamberg, M., Creswell, J.W., Frost, D.M., Josselson, R., Suarez-Orozco, C., 2018. Journal article reporting standards for qualitative primary, qualitative meta-analytic, and mixed methods research in psychology: the APA Publications and Communications Board task force report. *Am. Psychol.* 73 (1), 26–46. <https://www.ncbi.nlm.nih.gov/pubmed/29345485>.
- Lülfes, R., Hahn, R., 2014. Sustainable behavior in the business sphere: a comprehensive overview of the explanatory power of psychological models. *Organ. Environ.* 27 (1), 43–64. <https://journals.sagepub.com/doi/10.1177/1086026614522631>.
- Martín-de Castro, G., Amores-Salvadó, J., Navas-López, J.E., Balarezo-Núñez, R.M., 2017. Exploring the nature, antecedents and consequences of symbolic corporate environmental certification. *J. Clean. Prod.* 164, 664–675. <https://doi.org/10.1016/j.jclepro.2017.06.238>.
- Mosgaard, M.A., Kristensen, H.S., 2020. Companies that discontinue their ISO14001 certification – reasons, consequences and impact on practice. *J. Clean. Prod.* 260, 121052. <https://doi.org/10.1016/j.jclepro.2020.121052>.
- Norton, T.A., Zacher, H., Ashkanasy, N.M., 2014. Organisational sustainability policies and employee green behaviour: the mediating role of work climate perceptions. *J. Environ. Psychol.* 38, 49–54. <https://doi.org/10.1016/j.jenvp.2013.12.008>.
- Orcos, R., Pérez-Aradros, B., Blind, K., 2018. Why does the diffusion of environmental management standards differ across countries? The role of formal and informal institutions in the adoption of ISO 14001. *J. World Bus.* 53 (6), 850–861. <https://doi.org/10.1016/j.jwb.2018.07.002>.
- Pham, D.D.T., Paillé, P., Halilem, N., 2019. Systematic review on environmental innovativeness: a knowledge-based resource view. *J. Clean. Prod.* 211, 1088–1099. <https://doi.org/10.1016/j.jclepro.2018.11.221>.
- Sartor, M., Orzes, G., Touboullic, A., Culot, G., Nassimbeni, G., 2019. ISO 14001 standard: literature review and theory-based research agenda. *Qual. Manag. J.* 26 (1), 32–64.
- Statistisk sentralbyrå, 2021. Virksomheter. <https://www.ssb.no/virksomheter-foretak-og-regnskap/statistikker/bedrifter>.
- Steg, L., Vlek, C., 2009. Encouraging pro-environmental behaviour: an integrative review and research agenda. *J. Environ. Psychol.* 29 (3), 309–317. <https://doi.org/10.1080/10686967.2018.1542288>.
- Tahir, R., Athar, M.R., Afzal, A., Palazzo, M., 2020. The impact of greenwashing practices on green employee behaviour: mediating role of employee value orientation and green psychological climate. *Cogent Bus. Manag.* 7 (1) <https://doi.org/10.1080/23311975.2020.1781996>.
- Testa, F., Boiral, O., Iraldo, F., 2015. Internalization of environmental practices and institutional complexity: can stakeholders pressures encourage greenwashing? *J. Bus. Ethics* 147 (2), 287–307. <https://doi.org/10.1007/s10551-015-2960-2>.
- Testa, F., Iraldo, F., Daddi, T., 2018. The effectiveness of EMAS as a management tool: a key role for the internalization of environmental practices. *Organ. Environ.* 31 (1), 48–69. <https://doi.org/10.1177/1086026616687609>.
- Todaro, N.M., Daddi, T., Testa, F., Iraldo, F., 2019. Organization and management theories in environmental management systems research: a systematic literature review. *Bus. Strategy Dev.* 3 (1), 39–54. <https://doi.org/10.1002/bsd2.77>.
- Valenciano-Salazar, J.A., André, F.J., Martín-de Castro, G., 2021. Sustainability and firms' mission in a developing country: the case of voluntary certifications and programs in Costa Rica. *J. Environ. Plann. Manag.* 1–25 <https://doi.org/10.1080/09640568.2021.1950658>.
- VERBI Software, 2019. MAXQDA 2020 [computer Software].
- Vesely, S., Klöckner, C.A., 2020. Social desirability in environmental psychology research: three meta-analyses. *Front. Psychol.* 11, 1395. <https://www.frontiersin.org/article/10.3389/fpsyg.2020.01395>.
- Young, W., Davis, M., McNeill, I.M., Malhotra, B., Russell, S., Unsworth, K., Clegg, C.W., 2015. Changing behaviour: successful environmental programmes in the workplace. *Bus. Strat. Environ.* 24 (8), 689–703. <https://doi.org/10.1002/bse.1836>.