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Determinants and benefits of over-certification: A signaling theory perspective

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Abstract

Different types of organizations use certifications to reduce information asymmetry in an extensive range of business activities. In some cases, the widespread use of certifications can lead to multiple competing and overlapping standards. Some organizations also obtain similar certifications in a process defined as over-certification, which is understudied in the literature. The primary objective of this study is to identify the determinants of the over-certification process, specifically regarding the influence of stakeholders that motivate organizations to engage in over-certification. Grounded in both signaling and stakeholder theories, this study confirms the isomorphic effect of stakeholders' pressures that creates different motivations for using different (but similar) certifications. An empirical analysis of a sample of 418 European organizations highlights that the decoupling in the interest in certifications is the main antecedent of over-certification in relation to corporate social responsibility-related certifications. Our results also show that the occurrence of over-certification in organizations is mainly due to its ability to impact corporate reputation, confirming the signaling value of different (but similar) certifications.

KEYWORDS
CSR management-related certifications, decoupling, over-certification, signaling theory, stakeholders, symbolism

1 | INTRODUCTION

Certifications are widely used to reduce information asymmetry when certain organizational behaviors are hidden or challenging to supervise (King et al., 2005) or by sellers when asymmetry affects the quality of their products and services (Huh et al., 2023). The development of management standards for administrative processes that cover an extensive range of business activities is considered especially important for organizations (Brunsson & Jacobsson, 2010; Heras-Saizarbitoria & Boiral, 2013). In the last few decades, the widespread diffusion of some of these early certifications, such as ISO 9001 (first edition in 1987) and ISO 14001 (1995), has resulted in multiple competing and overlapping standards that address the same issue (Christmann & Taylor, 2006; Montiel et al., 2019; Singh, 2024).

The literature on certification practices has assumed that multiple certifications that serve the same market compete with each other (e.g., Fischer & Lyon, 2014; Heyes & Martin, 2017; Li & Simcoe, 2021). Despite the competing nature of these standards, organizations tend to obtain different related certifications, which leads to over-certification (Huh et al., 2023; Marinovic et al., 2018). In this study, we refer to over-certification as deliberately obtaining various related and overlapping certifications to reinforce signals to

stakeholders of hidden organizational practices without actually being interested in internalizing certification practices. In particular, we analyze this phenomenon in the specific case of corporate social responsibility (CSR) management-related certifications, which has received limited attention in the literature.

Thus, it is common for organizations to certify their environmental/quality management systems (EMS/QMS) with various related certifications (Darnall et al., 2023; Hernandez-Vivanco et al., 2019; Wiengarten et al., 2017), such as ISO 14001 and the Eco-Management and Audit Scheme (EMAS) or ISO 9001 and the European Foundation for Quality Management (EFQM). Multiple certifications of occupational safety and health standards have also been recently analyzed (Singh, 2024). Recent studies such as Marrucci et al. (2022) and Daddi et al. (2022) found that more than 80% of the EMAS-certified organizations included in their research sample additionally certify their EMS with ISO 14001, even though EMAS certification complies with ISO 14001 standard specifications. In contrast, some organizations obtain certifications without publicizing their signaling value (Heras-Saizarbitoria et al., 2020).

Although the different terms can overlap, we opted for the term over-certification in this study. We started from the initial consideration that, a priori, over-certification may be much more related to the symbolic (versus substantive) use of certifications. Over-certification entails overlapping very similar standards and can be repetitive in terms of their certification process. As this topic is still the subject of ongoing debate among scholars and organizations take different positions on over-certification processes (Lanahan et al., 2022; Li & Simcoe, 2021), further research is needed.

Since the seminal study of Taylor (1958), certifications have been used to provide more efficient information. Therefore, the signaling value of certifications is related to their potential to reduce information asymmetry (Montiel et al., 2012; Ullah, 2020). However, a priori, if the reputation of the certifications is reduced due to their symbolic use, they could lost their signaling value in the future. Understanding how diverse stakeholders' pressures impact the different motivations for using certifications helps stakeholders put additional pressure on organizations, favoring the real internalization of certifications and preventing symbolic over-certification.

Analyzing the different motivations for certification could also help explain the use of over-certification in organizations. This study thus aims to enhance the knowledge regarding corporate interest in over-certification and investigate what lies behind it, particularly by exploring how over-certification impacts corporate reputation, which is likely the main reason for its symbolic use. In other words, we enhance the current debate on the determinants of over-certification and explore whether reputation contingencies favor its positive influence.

In summary, the main contribution of this paper is the identification of the motivations behind organizational over-certification and how stakeholders' pressures could influence this process. We also contribute to a better understanding of these practices and their current effect on corporate reputation. Finally, we examine the relevant implications for policymakers and standard-setting organizations (SSOs) aimed at preventing the symbolic use of certifications.

The rest of the article is organized as follows. First, we present our theoretical background, review the literature, and develop our hypotheses. Next, we describe our method applied to 418 European organizations. Finally, after presenting the main results, we include a brief discussion of these results and summarize the study's main conclusions.

2 | THEORETICAL BACKGROUND

Since the 1990s, organizations have been using third-party certifications (from now on, certifications). These certifications cover a wide range of business activities and tend to use similar methodologies for their structure, creation, implementation, and monitoring. In fact, by 2022, the International Standardization Organization (ISO),[1] the primary SSO in the world, had issued (and maintained activities) over 2.4 M of certificates at more than 3.4 M sites and in more than 190 countries around the world (ISO, 2023). The literature has focused on studying the drivers of managerial certifications, such as QMS and EMS. These motivations are classified as internal or external under institutional and resource-based view (RBV) approaches (see, e.g., Heras-Saizarbitoria et al., 2011; Mas-Machuca & Marimon, 2019; Prajogo, 2011; Todaro et al., 2020 for a literature review).

From an internal point of view, organizations decide to incorporate certifications based on their specific internal resources and motivations (Morrow & Rondinelli, 2002; Todaro et al., 2020; Tuczek et al., 2018). From an external perspective, institutional theory suggests that organizations introduce certifications due to external pressures (Daddi et al., 2016). In addition, stakeholders use certifications, which are a form of guarantee from third parties, to obtain specific signals of the trustworthiness of organizational practices (Conte et al., 2022; Crane, 2020). The new institutionalism complements this view, with the understanding that organizations tend to foster standardization within their operations, such as by promoting certifications (Heras-Saizarbitoria et al., 2010).

Some authors argue that certifications provide a way to alleviate these pressures through signals in an imperfect market that suffers from information asymmetry (Brach et al., 2018; Desai, 2018). Thus, Signaling theory is fundamentally concerned with reducing information asymmetry between two parties (Spence, 2002). Spence (1973) pioneered the application of signaling theory to labor market operations, illustrating how high-quality prospective employees distinguish themselves from low-quality employees via higher education. He observed that in some markets, certain participants do not know certain things that others in the market may wish to communicate (Spence, 2002). In the management literature, since Ross's (1977) study of managerial incentives until the examination of glass cliffs for female executives (Reinwald et al., 2023), scholars have applied signaling theory to help explain the influence of information asymmetry in

[1]See https://www.iso.org/standards.html for more information.

various research contexts. In all of these contexts, signals act as mechanisms that help organizations show compliance with facts that are difficult to observe and validate without any in-depth insider knowledge of a particular organization (Connelly et al., 2011).

Drawing on signaling theory, certifications can reduce information asymmetries and transactional costs (King et al., 2005; Montiel et al., 2012). According to this theoretical framework, in markets characterized by information asymmetry, certifications operate as a signal of directly unobservable facts (Delmas & Montiel, 2009; Kirmani & Rao, 2000). Signals are used to overcome problems associated with adverse selection (Holmstrom, 1979), wherein organizations' internal capabilities or product characteristics are not directly observable (Gao et al., 2010). For instance, a typical signal analyzed in this sense are product and management-related certifications. Although both certifications are grounded in different praxes, the market usually does not pay attention to these differences, confounding management-related certifications as signals of superior product attributes (Bapnaa, 2019; Martínez Caro & Martínez García, 2009; Terlaak & King, 2006).

Our research focuses on CSR management-related certifications as signals of different internal practices that are difficult to manage externally. Thus, certifications could tend to represent the views of potentially objective external parties rather than the organization's members (Podolny, 1994; Polidoro, 2013; Rao, 1994). They are generally based on external audits by third parties, guaranteeing that a business conforms to certain standards or follows specific practices or guidelines (Barnett & King, 2008; Graffin & Ward, 2010; Harbaugh et al., 2011; King et al., 2005). Certifications have also been analyzed from the perspective of cartels and clubs proposed by Potoski and Prakash (2005). According to the latter authors, certifications differentiate certified organizations from noncertified ones and thus provide a credible signal to stakeholders. With limited exceptions, most academic research on the role of certifications in strategic management, organization theory, or other related fields suggests that accreditation tends to benefit receiving organizations and economies (Daddi et al., 2015; Polidoro, 2013; Rao, 1994; Sine et al., 2007). In general, third-party accreditation provides an organization with legitimacy, highlighting the organization's values, which may be desirable for external stakeholders (Dowling & Pfeffer, 1975; Meyer & Rowan, 1977; Richards et al., 2017). Thus, organizations could use this legitimacy by manipulating symbols or conformity to particular frames in situations of information asymmetry to obtain societal support (Djupdal & Westhead, 2015; Pacheco et al., 2010).

For instance, EMS certification according to ISO 14001 or the EMAS signals to external stakeholders that organizations aim to improve their environmental performance (Delmas, 2000; Delmas & Montes-Sancho, 2011; Luffarelli & Awaysheh, 2018). Other certifications, such as those related to QMS certification according to ISO 9001 or the EFQM, help organizations gain legitimacy by signaling their unobservable quality management (Terlaak & King, 2006). Nevertheless, certification of these standards does not always result in improved environmental performance or better-quality products (Christmann & Taylor, 2006; King et al., 2005; Nawrocka & Parker, 2008) because organizations often implement standards in a symbolic way that is decoupled from business practices (Aravind & Christmann, 2011; Iatridis & Kesidou, 2018; Marrucci et al., 2021). Consequently, organizations, in turn, may use these certifications to signal virtuous behaviors to stakeholders in response to their pressures (Delmas & Toffel, 2004; Terlaak, 2007; Testa, Boiral, & Iraldo, 2018). Often, the signal entails changes to company operations that are real and concrete (substantive) (Ashforth & Gibbs, 1990). In contrast, an organization may not wish to make these changes and may, therefore, engage in symbolic actions that appear to conform to stakeholders' wishes but do not actually result in effective organizational changes (Rodrigue et al., 2013). These symbolic actions are decoupled from actual practices but provide a legitimizing explanation and a false signal of organizational actions (Meyer & Rowan, 1977). Hence, in situations of asymmetric information, symbolic actions can help organizations signal compliance with stakeholder demands at a reasonable cost (Hahn et al., 2021; Truong et al., 2021).

The role of certifications as signals that reduce information asymmetry is not necessarily continuous because they relate to a particular moment in time (Davila et al., 2003). Because of the dynamic characteristics of the competitive business environment, signaling should be repeated to continue reducing information asymmetry and remaining differentiated (Connelly et al., 2011). Recertification is thus used by organizations to maintain the signaling effects of certifications (Farris & Pohlen, 2004; Moroz & Gamble, 2021; Rybski et al., 2017). In addition, an increase in the number of signals can also boost the effectiveness of the certification (Janney & Folta, 2003). Repetitive signaling can be very effective, especially if organizations use different signals to communicate the same message (Balboa & Martí, 2007). Signaling theory thus helps us to understand over-certification as reinforcing the impact of a signal through the decision to certify different (but similar) certifications. However, organizations can suffer from "an (over) certification trap in which the benefits of reputation are dissipated by excessive certification" (Marinovic et al., 2018). In line with this and also drawing on signaling theory, Darnall et al. (2023) and Drover et al. (2017) categorize multiple (but similar) signals around a single issue as a signal incongruence with potential adverse effects for organizations.

Based on the above arguments, in this study, Stakeholder theory is considered essential for understanding why the pressures predicted by (neo)institutional theories can be extended to a significant number of stakeholder groups, a priori, without any direct interest or control over firms' activities (Clarkson, 1995; Freeman, 1984; Parmar et al., 2010). For instance, certifications can replace other substantive actions and effectively signal the degree to which the company meets stakeholders' interests in response to economic, social, and environmental pressures. Based on this theory and the ones analyzed in this section, the interest of organizations using over-certification for the ornamental part of certifications to manage their relationships with the different stakeholders affecting business activities is irrefutable. Organizations use certifications to signal a commitment to stakeholder requests, consequently improving their relationships with these stakeholders (López-Navarro et al., 2015). For instance, the most frequent certification benefit is, by far, its impact on the organization's

image, stakeholder relationships, and reputational benefits (Boiral et al., 2018; Sartor et al., 2016; Sfreddo et al., 2021), whereas stakeholders' pressures and corporate reputation improvement (REP) expectations are the most common factors among the drivers (Castka & Prajogo, 2013; Heras-Saizarbitoria et al., 2010; Sartor et al., 2019; Testa, Boiral, & Iraldo, 2018).

3 | HYPOTHESIS DEVELOPMENT

3.1 | Stakeholders' pressures and motivations for obtaining a certification

The literature exploring certifications has achieved a broad consensus regarding organizations' symbolic/substantive motivations (SYM/SUB) and has focused mainly on specific QMS and EMS certifications. In the environmental literature, symbolic and substantive actions generally differ in terms of the degree of implementation and goal alignment (Berrone et al., 2017; Ferrón-Vílchez et al., 2021; Iatridis & Kesidou, 2018; Marquis et al., 2016). In turn, some authors exploring QMS certifications, such as ISO 9001, affirm that the design of the certification, the goal of the audits, the system implementation, and the documentation requested favor that the objective of organizations may be more symbolic than substantive (Boiral, 2003; Heras-Saizarbitoria & Boiral, 2015). As a result, in clear symbolically motivated cases, organizational actors have never believed in the real value of the certification (Kostova & Roth, 2002; MacLean & Behnam, 2010; Walgenbach, 2001). In other words, organizations may only be loosely committed to the daily activities and behavior suggested by the certification and be ready only for audits. Although the previous literature is much more interested in the symbolic/substantive implementation/use of certifications, how this emerges inside organizations and is shaped by other factors remains largely unexplored (Heras-Saizarbitoria & Boiral, 2015). Nevertheless, the presented arguments highlight that the process of certification depends on the main motivations of organizations. The pressures may thus determine, ex ante, the motivations for the certificate, which decide first how the certification will be used/implemented.

As previously mentioned, this study is grounded secondarily in the theoretical perspectives of Stakeholder theory because pressure from stakeholders is a key factor in the motivations of organizations to obtain a certification. Scholars have pointed out that organizations do not respond equally to all stakeholders' pressures (Crane, 2020), and they tend to prioritize stakeholders and evaluate demands' legitimacy, urgency, and power (Mitchell et al., 1997). In practice, this pressure can lead organizations to take specific actions (e.g., obtaining a certification) to alleviate stakeholders' pressures while minimally altering their strategies and competitive ends. From this perspective, the symbolic versus substantial implementation of certifications could be two different responses to different stakeholders' pressures with diverse expectations and institutional logics (Testa, Boiral, & Iraldo, 2018). In fact, different stakeholders generate different interests in certifications (Boiral et al., 2017; Delmas & Toffel, 2004, 2008; Testa, Boiral, & Iraldo, 2018).

Buysse and Verbeke (2003) analyzed how different stakeholders have different impacts on organizational practices. Primary stakeholders have formal relationships with the organization and have the greatest impact on its competitiveness and strategy. For instance, suppliers can push other supply chain members to comply with certification and to gain competitive advantages (Battaglia et al., 2010; Testa et al., 2012). Regarding employees, pressure from internal primary stakeholders tends to lead to the internalization of better certifications (Boiral et al., 2017; Lannelongue & González-Benito, 2012). On the other hand, secondary stakeholders interact much less with organizations and are much more sensitive to the general reputational image of organizations without paying attention to day-to-day actions and practices. For instance, regarding the internalization of EMS certifications, (Testa, Boiral, & Iraldo, 2018) show how secondary stakeholders such as industry associations and community groups promote symbolic interest in certifications and that primary stakeholders such as suppliers, banks and shareholders promote substantive interest in certifications. Similarly, (Castka & Prajogo, 2013) empirically show how pressure from secondary stakeholders does not contribute to the internalization of ISO 14001.

Based on these arguments, we expect that primary stakeholders, who are closer to the real practices of organizations, can influence the internal motivations of the organization in the substantive use of certifications. Thus, we hypothesize the following:

> **H1.** Primary stakeholders' pressures generate substantive organizational motivations to obtain a certification/s.

However, secondary stakeholders have more difficulties auditing the organization's internal actions, as they are more exposed to the symbolic use of certifications as a signaling mechanism to superficially satisfy their demands. This argument gives rise to the following hypothesis:

> **H2.** Secondary stakeholders' pressures generate symbolic organizational motivations to obtain a certification/s.

Certifications have been historically viewed as an instrument for voluntary self-regulation in the case of those related to management practices (Christmann & Taylor, 2006; Heras-Saizarbitoria et al., 2011; King & Lenox, 2000). The relationship between regulatory pressures and the decision to internalize certifications has thus received some attention from management authors (Boiral et al., 2017; Demirel et al., 2018; Testa, Boiral, & Iraldo, 2018). In contrast, some arguments in the CSR management-related certifiable standards literature favor symbolic versus substantive certification (Boiral et al., 2017). From the beginning, regulation compliance, and EMS certification have been seen as practices related to reactive strategies that are a long way from advanced proactive positions (Aragon-Correa, 1998;

Garcés-Ayerbe et al., 2016). However, recent research has shown that regulatory stakeholders' pressures can foster symbolic and hinder SUBs to obtain a certification.

On the one hand, organizations affected by CSR regulatory pressures might consider the internalization of a standardized management system as a contrasting solution to regulation compliance, thereby maximizing their competitive options. However, Demirel et al. (2018) show how environmental regulation promotes EMS adoption aimed at improving environmental performance while preventing the external certification of this EMS. This suggests that organizations interested in using the managerial mechanisms of EMS for regulation compliance may not be interested in the signaling value of certifications.

On the other hand, Johnstone and Labonne (2009) find strong evidence that certification acts as a signal to regulatory authorities, leading to a reduction in regulatory scrutiny. Thus, regulatory stakeholders have designed specific effective incentives such as grants and tax reductions for certified organizations (Heras-Saizarbitoria et al., 2016; Testa et al., 2016). This type of incentive might tempt organizations to symbolically adopt certifications, avoiding internalization costs, and internal changes while appearing to respond to government pressures (Boiral et al., 2017; Heras-Saizarbitoria et al., 2016; Testa, Boiral, & Iraldo, 2018). Regulatory pressures might thus encourage organizations to adopt certifications but may not be sufficient to make organizations implement them in a substantive way (Lannelongue et al., 2014). This is probably because an organization can obtain legitimacy by merely symbolically implementing certification (Boiral, 2007; Castka & Prajogo, 2013), minimizing the costs of complying with prevailing regulations but taking advantage of regulatory benefits (Iatridis & Kesidou, 2018). This argument thus led to the following hypotheses:

H3. Regulatory stakeholders' pressures generate symbolic organizational motivations to obtain a certification/s.

H4. Regulatory stakeholders' pressures prevent the appearance of substantive organizational motivations to obtain a certification/s.

3.2 | Motivations for certification and over-certification

Drawing on signaling theory, over-certification could be understood as a strategic decision related to stakeholder relationship management. This practice seeks to increase the effectiveness of the certification signaling process, using different related signals to communicate the same message (Balboa & Martí, 2007; Janney & Folta, 2003). It is thus crucial to consider the predominant intention of organizations in obtaining certifications. In this sense, certifications may be adopted predominantly for signaling purposes when organizations seek to exploit their symbolic value by sending a compliance message to stakeholders or by substantially focusing on obtaining the organizational benefits associated with applying standards (Iatridis et al., 2016; Terlaak, 2007). This duality in certification intentions has its theoretical roots in two competing scenarios (Heras-Saizarbitoria et al., 2011; Iatridis et al., 2016). On the one hand, the RBV explains how certification internalization can improve organizational performance through new internal capabilities. On the other hand, signaling and institutional theory explain how organizations can use certifications as an answer to stakeholders' pressures by obtaining benefits from certifications as a way of alleviating these pressures and improving stakeholder relationships. For instance, in terms of QMS certification, internal motivations have been presented as a reinforcement of the relationship between certification and operational performance (Llopis & José Tarí, 2003; Prajogo, 2011). In contrast, external motivations weaken this relationship since they distract organizations from organizational benefits, focusing instead on the ornamental value of certifications (Boiral, 2003; Prajogo, 2011).

This evidence supports the idea that organizations' intentions to obtain benefits from certifications clearly lead to over-certifications. In other words, organizations investing a significant amount of resources in obtaining multiple related certifications (Boiral, 2007) are likely to be more interested in signaling value than in the new organizational capabilities of certifications. However, organizations that obtain certifications to potentially generate internal strategic resources should focus on a specific certification, avoiding the lack of resource efficiency and organizational tensions that could be created by over-certification (Benner & Tushman, 2002; Manders et al., 2016; Marinovic et al., 2018; Prester & Bozac, 2012). Based on the above arguments, we formulate the following hypotheses:

H5. Symbolic motivations to obtain a certification/s are positively related to over-certification.

H6. Substantive motivations to obtain a certification/s are negatively related to over-certification.

3.3 | Over-certification and corporate reputation

Although organizations extensively use over-certification, the lack of research makes it challenging to draw hypotheses on its impact on reputation. As previously mentioned, organizations may use over-certification to address pressure by highlighting extra compliance with stakeholder demands. We can support this suspicion through some CSR and quality management literature arguments.

Previous literature has extensively reported the relationships between CSR and quality management and corporate reputation (e.g., Pérez-Cornejo et al., 2023; Staw & Epstein, 2000; Surroca et al., 2010). Stakeholders interpret these actions as a signal of the degree to which the company will continue to meet its interests through its economic, social, and environmental actions (Barnett, 2007; Tang et al., 2015). Some studies therefore suggest that corporate environmentalism and quality management also tend to be opaque fields with extreme information asymmetry (Johnstone & Labonne, 2009;

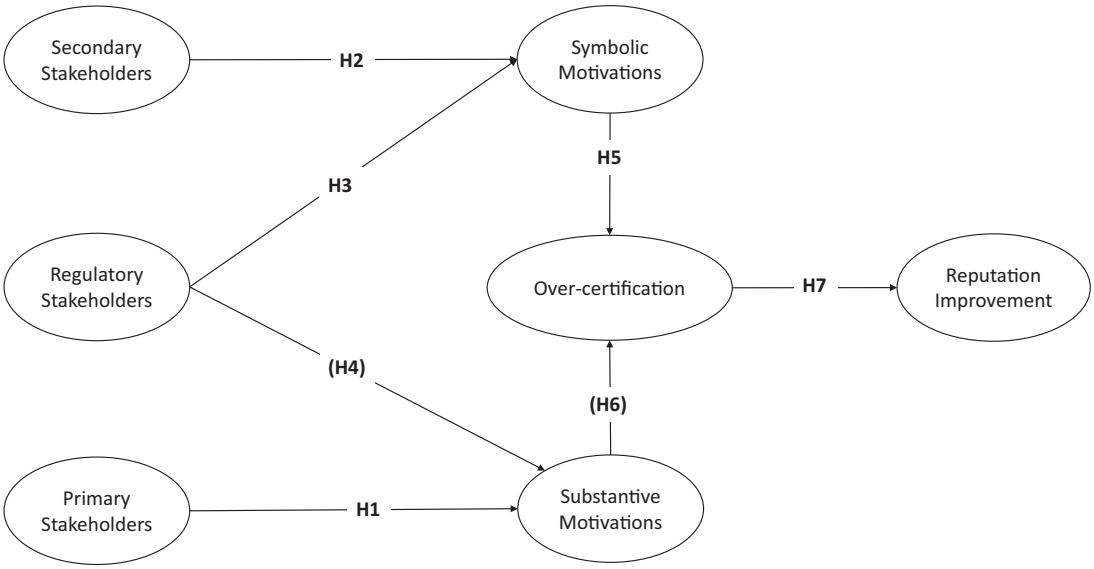

FIGURE 1 Conceptual model and hypotheses.

Terlaak & King, 2006; Wijen, 2014). Hence, Truong et al. (2021) propose that "symbolic actions are bound to create greater information asymmetry between management and external stakeholders because the cost of these actions is low, allowing a large number of companies to adopt symbolic actions in response to institutional pressures."

Organizations find in the described characteristics the perfect environment to alleviate stakeholders' pressures through over-certification. They use signals that suppose an increase in reputation in an imperfect market that suffers from information asymmetry (Brach et al., 2018; Desai, 2018; Graffin & Ward, 2010; Marinovic et al., 2018). Certifications can positively influence long-term corporate reputation thanks to their value as a signal for third parties (Graffin & Ward, 2010; Staw & Epstein, 2000). Although organizations may not completely internalize the spirit of certification (e.g., Aravind & Christmann, 2011; Testa, Boiral, & Iraldo, 2018; Todaro et al., 2019; Wijen, 2014), certified organizations can improve their reputation by improving their organizational legitimacy (Desai, 2018; Graffin & Ward, 2010; Polidoro, 2013) and reducing reputational risk (Iatridis & Kesidou, 2018; Su et al., 2016). Finally, it is worth highlighting again that an increase in the number and variety of signals used to communicate the same message can also boost the effectiveness of certification signaling (Balboa & Martí, 2007; Janney & Folta, 2003). There is thus a clear connection between over-certification and reputation based on certification as a signaling instrument. Highly reputable organizations thus tend to use more signals to maintain their reputation (Ortega Carrasco & Ferrón Vílchez, 2022). Based on all of these arguments, we hypothesize the following:

> **H7.** Over-certification is positively related to improving corporate reputation.

Figure 1 summarizes our conceptual model and its theoretical hypotheses.

4 | RESEARCH METHODOLOGY

4.1 | Sample

This research is based on a questionnaire sent to all European EMAS-certified organizations[2] in April 2020. EMAS certification is a public initiative from the European Commission that seeks to promote continuous improvements in the environmental performance of organizations by establishing and implementing environmental management systems that meet ISO 14001 requirements (European Commision, 2017). EMAS-certified organizations are a perfect population for studying over-certification. Although EMAS requirements are based on ISO 14001 and its base model is similar to that of other organization-related certifications, such as those focused on energy or social responsibility management, these organizations frequently try to obtain multiple related certifications (Daddi et al., 2022; Marrucci et al., 2022). To avoid including in our sample those organizations that over-certificate for other reasons, we studied organizations that have not internalized EMAS certification. After 2 months of data collection, our final sample consisted of 418 companies that fully completed the questionnaire and showed a low level (below the median) of internalization of the practices included in the EMAS certification, according to the scale developed by Todaro et al. (2019). The final response rate was 11.7% of companies initially contacted, similar to recent studies that surveyed organizations regarding CSR issues (e.g., Garcés-Ayerbe et al., 2016, 10.11%; Marín-Vinuesa et al., 2020, 8.8%; Pinzone et al., 2015, 13.64%). Table 1 reports demographic information about the 418 organizations. After carrying out a pretest, our final questionnaire included measuring instruments proposed in the literature.

[2]See for an updated list of these companies: https://webgate.ec.europa.eu/emas2/public/registration/list.

TABLE 1 Sample descriptive statistics.

	Frequency	Percent
Country		
Austria	15	4%
Belgium	14	3%
Germany	119	29%
Italy	156	37%
Poland	13	3%
Portugal	10	2%
Spain	71	17%
Other	20	5%
Industry		
C-Manufacturing	135	32%
D-Electricity, gas, steam, and air conditioning supply	37	9%
E-Water supply, waste management, and remediation activities	55	13%
F-Construction	9	2%
G-Wholesale and retail trade; repair of motor vehicles	5	1%
H-Transporting and storage	11	3%
I-Accommodation and food service activities	10	2%
M-Professional, scientific, and technical activities	19	5%
N-Administrative and support service activities	12	3%
O-Public administration and defense	42	10%
P-Education	9	2%
Q-Human health and social work activities	25	6%
R-Arts, entertainment, and recreation	5	1%
Other NACE codes (A, B, J, K, L, U, Q, S)	44	11%
Size: Number of employees		
Less than 10	26	6%
11–50	108	26%
51–250	121	29%
More than 250	163	39%
Total	418	100%

During the pretest, we modified the final version of the questionnaire to avoid item vagueness, complexity, ambiguity, and bias. We asked the selected participants to provide feedback about the suitability, understanding, and feasibility of the content and the timing of the questionnaire. In Annex S1, there is a copy of the final questionnaire used.

Although the use of a pretest and the focus on a nonsimple theoretical model (see Figure 1) help control common method bias (CMB) (Chang et al., 2010; Podsakoff et al., 2003), we also ran an additional test. We used Harman's single-factor test to estimate the extent of CMB, verifying whether a single factor explains most of the variance. All the observed variables were subjected to principal components analysis. The first un-rotated component explains less than 21% of the variance. Furthermore, we estimated a single-factor confirmatory model. This model did not have a good fit ($\chi^2[275] = 2126.36$, root mean square error of approximation [RMSEA] = 0.126, standardized root mean square residual [SRMR] = 0.118, and Comparative Fit Index [CFI] = 0.377). Consequently, no single factor explained the data structure.

4.2 | Measurement of variables

To measure our variables, we included items already used in the literature, with some adjustments based on the previous pretest. Table 2 lists all the items used in the survey and their descriptive statistics by variable construct. Stakeholders' pressures was measured using (Buysse & Verbeke, 2003) among pressures from primary (PSTK-3 items), secondary (SSTK-3 items), and regulatory (RSTK-3 items) stakeholders.

Because of the recent attention given to over-certification in the literature, no agreed method exists for measuring it. Consequently, we developed our measure of over-certification (OVER) following recent empirical efforts by Darnall et al. (2023) analyzing penalty zones when companies adopt multiple international sustainability standards. We used three dummies (1 = yes; 0 = no) to measure OVER through organizations obtaining additional certification/s for other related-management systems according to ISO 14001, ISO 50001, and SA 8000, in addition to EMAS certification. A total of 67.5% of companies in our sample obtained two-related certifications, 13.4% three, and 1.7% four. The remaining 17.5% just have an EMAS certification.

Substantive internalization and symbolic adoption of certifications have been extensively studied using different instruments (Castka & Prajogo, 2013; Christmann & Taylor, 2006; Todaro et al., 2019). Nevertheless, to our knowledge, previous research has not focused on measuring symbolic versus SUBs for using certifications. In this study, we measured organizations' internal motivations for obtaining CSR management-related certifications as an essential antecedent to over-certification. In order to construct new measures in this regard and avoid social desirability problems, we exploited the different expected uses of certifications as an indicator of the certification's internal motivations. Thus, we related improvements in environmental performance, quality, and employee involvement to SUBs, exactly as the EMAS is intended to follow (Testa, Iraldo, & Daddi, 2018). On the other hand, the satisfaction of a requirement from private or public organizations, access to a public procurement process, or mere imitation of competitors are generally perceived as symbolic intentions (Boiral et al., 2017; Christmann & Taylor, 2006; Iatridis & Kesidou, 2018; Testa et al., 2016). According to Table 2, we use three items to measure SYM and three other items for SUB to obtain a certification, respectively. Finally, corporate REP was measured with four items from Daddi et al. (2019).

TABLE 2 Variables reliability, validity, and descriptive statistics.

Code	Item	Loadings	AVE	CR	Mean	SD
Primary stakeholders–Importance in the influence of:			0.579	0.803		
PSTK1	Suppliers	0.841***			3.354	0.953
PSTK2	Clients	0.625***			4.112	0.858
PSTK3	Employees	0.800***			3.967	0.800
Regulatory stakeholders—Importance in the influence of:			0.750	0.900		
RSTK1	Environmental authorities	0.872***			4.232	0.771
RSTK2	European legislators	0.876***			3.926	0.900
RSTK3	National legislators	0.851***			4.005	0.886
Secondary stakeholders–Importance in the influence of:			0.657	0.852		
SSTK1	Local citizens or NGOs	0.847***			3.610	0.890
SSTK2	Mass Media	0.811**			3.428	0.969
SSTK3	Politicians	0.772**			3.376	0.938
Substantive motivations			0.631	0.837		
SUB1	To improve the environmental performance of my organization	0.760***			4.060	0.766
SUB2	To improve the quality of the products/services	0.827***			3.419	0.841
SUB3	To increase employee satisfaction	0.794***			3.165	0.885
Symbolic motivations			0.640	0.841		
SYM2	To satisfy a request from trade associations	0.712***			2.806	0.997
SYM3	To increase my organization's chances of accessing to or gaining a competitive advantage in public procurement procedures	0.819***			3.268	1.182
SYM4	To keep up with main competitors and/or other members of the trade associations to which my organization belongs	0.861***			3.124	1.100
Corporate reputation improvement			0.595	0.854		
REP1	Improved organization's reputation toward customers and/or suppliers	0.795***			3.648	0.785
REP2	Improved organization's reputation toward government authorities	0.782***			3.833	0.807
REP3	Improved organization's reputation compared to the reputation of non-EMAS competitors	0.833***			3.469	0.813
REP4	Improved in relations with local communities and reduction of conflicts	0.663***			3.330	0.795

Abbreviations: AVE, average variance extracted; CR, composite reliability; PSTIK, primary stakeholders; REP, corporate reputation improvement; RSTK, regulatory stakeholders; SD, standard deviation; SSTK, secondary stakeholders; SUB, substantive motivations; SYM, Symbolic motivations.
***$p < 0.00$.
**$p < 0.01$.

4.3 | Statistical analysis

To test our hypotheses and consider the structure of our data, we used structural equation modeling (SEM) based on the partial least squares (PLS) approach. This methodology allowed us to simultaneously run a combination of confirmatory factor analyses to build the latent variables (measurement model) and multiple regression analysis (structural model). We opted for PLS due to the assumption of nonmultivariate normality (Kolmogorov–Smirnov and Shapiro–Wilk tests for univariate normality with $p < 0.00$ for all items). PLS is also less restrictive regarding sample size (Davcik, 2014; Fornell & Bookstein, 1982) and can predict key novel target constructs (Hair et al., 2011; Richter et al., 2016), taking into account both the direct and indirect effects and analyzing the mediating models in terms of causal inference. During the measurement model estimation, we used a PLS algorithm with 300 iterations. The structural model was assessed using bootstrapping with 10,000 subsamples.

All the items used in the measurement model were treated as reflective, except those related to over-certification. The latter were included in the structural model as formative indicators because of their sourcing characteristics, as suggested by the low-Pearson correlations between dummies (below 0.16 in all cases). There were no problems in terms of reliability using factor loading (λ) and composite reliability (CR) indicators, nor were there problems with the convergent validity of our variables using the average variance extracted (AVE; Nunnally, 1978). We assessed discriminant validity by applying the (Fornell & Larcker, 1981) approach. Additionally, we calculated the Heterotrait–Monotrait ratio of the correlations, which is more sensitive to a lack of discriminant validity than other criteria (Henseler et al., 2015). We used variance inflation factors (VIFs) to check that there were no potential multicollinearity problems (Hair et al., 2011). Finally, to test the predictive relevance of our structural model and evaluate the model's fitness, we analyzed cross-validated redundancy using the Q^2 indicator (Geisser, 1974; Stone, 1974).

TABLE 3 Discriminant validity assessment.

	REP	PSTK	RSTK	SSTK	SUB	SYM
Fornell–Larcker criterion						
REP	*0.773*					
PSTK	0.292	*0.761*				
RSTK	0.225	0.395	*0.867*			
SSTK	0.150	0.405	0.468	*0.812*		
SUB	0.341	0.350	0.040	0.176	*0.794*	
SYM	0.373	0.229	0.147	0.072	0.324	*0.799*
Heterotrait–Monotrait ratio criterion						
REP						
PSTK	0.409					
RSTK	0.274	0.539				
SSTK	0.195	0.551	0.599			
SUB	0.461	0.509	0.080	0.234		
SYM	0.499	0.336	0.172	0.130	0.463	

Note: Correlations/HTMT are below the diagonal, and the square root of the AVE is in italics on the first diagonal.

5 | MAIN RESULTS

As a first step in the analysis of the results, we assessed the robustness of our measurement model. Table 2 includes all the reliability and convergent validity indicators for the variables used in the model. All of these indicators indicate good internal consistency (CR >0.8 and λ >0.62) and adequate convergent validity (AVE >0.57). Additionally, values below 3.3 in the VIF of the outer model for the formative indicators and the inner model for the reflective indicators guarantee that multicollinearity is not an issue (Diamantopoulos & Siguaw, 2006; Kock & Lynn, 2012). Finally, the results presented in Table 3 highlight that our measurement model meets the discriminant validity criteria because the square root of the AVE of each construct is greater than its correlation with other constructs, and in any case, the HTMT values are less than 0.6.

After validating the final measures, we developed a structural equation model to test for cause-and-effect relationships between stakeholders' pressures, motivation to obtain certifications, over-certifications, and corporate reputation. Regarding our main structural model, Figure 2 shows the model path coefficients and p values to validate our hypotheses. As expected, different stakeholders' pressures drive different motivations (symbolic vs. substantive) for certification practices. Thus, the estimated coefficient of the effect of PSTK on SUB is positive and significant ($\beta = 0.396$, 97.5% CI [0.287, 0.508]; $p = 0.00$), confirming H1. Nevertheless, the coefficient estimating the effects of SSTK on SYM is also positive but not significant ($\beta = 0.004$, 97.5% CI [−0.156, 0.167]; $p = 0.96$), forcing us to reject H2. In terms of regulatory stakeholders, the estimated coefficients measuring the positive impact of RSTK on SYM ($\beta = 0.146$, 97.5% CI [−0.001, 0.259]; $p = 0.03$) and the negative impact on SUB ($\beta = -0.116$, 97.5% CI [−0.233, 0.002]; $p = 0.05$) confirm our theoretical expectations for H3 and H4, respectively.

In terms of over-certification antecedents, our results confirm that different motivations for obtaining a certification can facilitate or hinder this organizational practice. On the one hand, the coefficient estimating the effect of SYM on OVER is positive and significant ($\beta = 0.089$, 97.5% CI [0.036, 0.128]; $p = 0.00$). On the other hand, the coefficient is negative and significant ($\beta = -0.069$, 97.5% CI [−0.112, −0.009]; $p = 0.00$) in the case of the measured effect of SUB on OVER. These results confirm both H5 and H6, respectively.

Following the analysis of the consequences of over-certification, our estimations also confirm that over-certification generates improvements in corporate reputation. Consequently, the estimated coefficients measuring the direct effect of OVER on REP ($\beta = 0.411$, 97.5% CI [0.159, 0.798]; $p = 0.02$) are positive and significant, thus providing empirical evidence to confirm H7.

Finally, in terms of model fitness, our model shows positive Q^2 values for all the dependent variables, suggesting that the model has predictive validity and that it respects the overall model fit criteria (Chin, 1998).

6 | DISCUSSION AND CONCLUSIONS

We investigated over-certification as a recent organizational phenomenon. Grounded in signaling theory, our results show how organizations often introduce over-certification regarding CSR management-related certification practices as a result of pressure from their stakeholders. Regulatory pressure from stakeholders was found to favor SYMs for certifications while it prevents SUBs occurrence. Nevertheless, primary stakeholders focus more on daily practices, thereby generating SUBs for certifications. The internal interest for certification are an essential part of our model. On the one hand, the results show how SYMs underlies over-certification. On the other hand, organizations with SUBs avoid over-certification because they tend to focus more on the internal benefits of certification rather than on its signaling value.

From an operative point of view, organizations use over-certification as an ornamental instrument. Our results show thus, how over-certification improves corporate reputation by signaling the value that organizations reach with their use, just as companies with SYMs in certification expect. In contrast, organizations interested in the organizational and operative benefits of certifications focus on internalizing one certification instead of scattering their efforts into over-certification.

6.1 | Academic implications and over-certification

This paper's results are directly or indirectly linked with different exciting bodies of management literature, such as impression management (Bolino et al., 2008), organizational facades (Cho et al., 2015), symbolic behaviors (Christmann & Taylor, 2006), or organizational myths (Boiral, 2007). Studies grounded in signaling theory have argued that similar certifications compete with each other

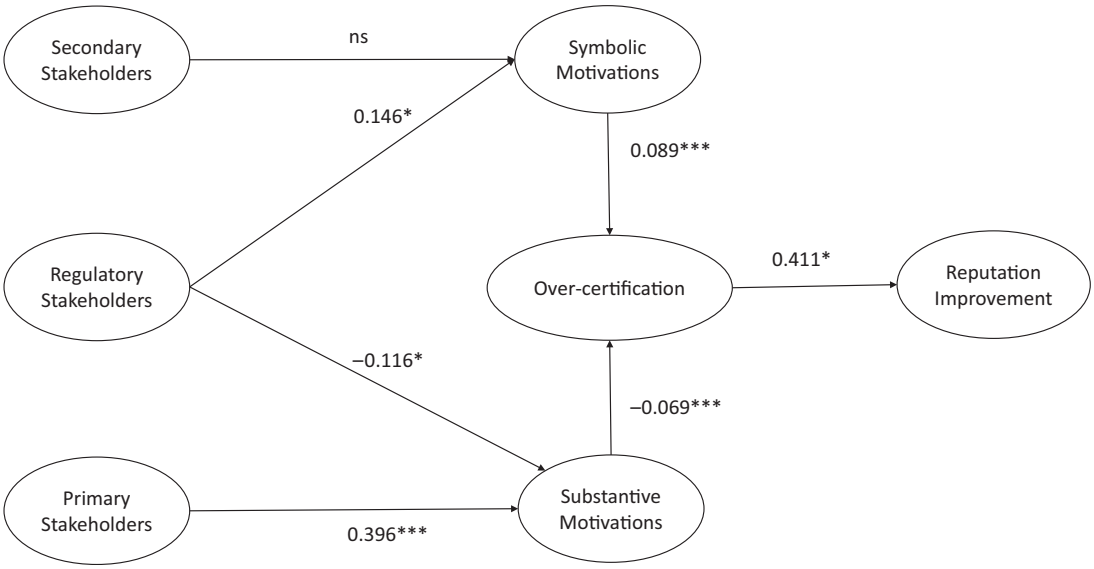

FIGURE 2 Estimation results of the structural model. *** $p < 0.00$; * $p < = 0.05$; ns, no significant estimated coefficient.

(e.g., Heyes & Martin, 2017; Li & Simcoe, 2021; Montiel et al., 2019). Our results extend this view, confirming that different related certifications can act as complementary signals that reinforce the response to some types of stakeholders' pressures.

Our results agree with previous studies suggesting that stakeholders' pressures are isomorphic, generating different interests in certifications (e.g., Castka & Prajogo, 2013; Iatridis & Kesidou, 2018; Testa, Boiral, & Iraldo, 2018). Our results confirm that regulatory stakeholders are more vulnerable to symbolic practices. The information asymmetry problem, which partially supports the use of certifications, makes it challenging to monitor the real internalization of certifications (Johnstone & Labonne, 2009; Terlaak & King, 2006; Wijen, 2014), resulting in an ideal environment for over-certification. Nevertheless, primary stakeholders who are more interested in the organization's daily operations can exert real control over the organization's compliance, generating SUBs to obtain a certification.

Our results are also in line with studies on internal versus external motivations and how these affect the benefits of certification. The literature on certification interests and motivations has generally been grounded in the RBV and institutional theories (Heras-Saizarbitoria et al., 2011; Mas-Machuca & Marimon, 2019; Prajogo, 2011; Todaro et al., 2020). Our results confirm that RBV operationalizes the SUBs for certification, avoiding over-certification and focusing on their internalization to obtain their benefits. Additionally, signaling theory explains how organizations with SYMs for certifications use over-certification to respond to institutional pressures. Thus, our research highlights how different organizational interests in certifications favor the decoupling in their uses.

Finally, we found that over-certification could have similarities with the multiple certifications implementation process analyzed by other authors (Darnall et al., 2023; Hernandez-Vivanco et al., 2019; Wiengarten et al., 2017). However, our study provides a more explicit definition of over-certification with a particular emphasis on the symbolic intentionality of the process that leads to different overlapping certifications and, therefore, tends to certify very similar processes. Consequently, we cannot add evidence to competing arguments about the profitability of over-certification (Lanahan et al., 2022; Li & Simcoe, 2021; Marinovic et al., 2018), and/or multiple (but similar) certifications (Darnall et al., 2023; Hernandez-Vivanco et al., 2019; Wiengarten et al., 2017). However, we can highlight some common reflections about the process that leads to over-certification and confirm that companies are increasingly adopting multiple standards and managing complex certification processes, as highlighted by these authors.

A recent study by Huh et al. (2023), for instance, reported that inaccurate certifications may favor over-certification because inaccurate certifications can be more profitable due to lower certification costs. Although we do not focus on a specific analysis of the profitability of over-certification, we confirm how this symbolic practice could be profitable because it enhances corporate reputation. Therefore, over-certification legitimizes companies' principal activities thanks to the reinforced signaling value of multiple (but similar) certifications but incurring a lower cost than requested by substantive actions (Truong et al., 2021). Our results are also in line with the literature showing how CSR and quality management actions improve corporate reputation (e.g., Pérez-Cornejo et al., 2023; Staw & Epstein, 2000; Surroca et al., 2010).

6.2 | Implications for practitioners

The main implications for practitioners in this study are mainly related to SSOs, third-party auditors, policymakers, and stakeholders receiving certification signals. From an internal perspective, organizations could merely use certifications as a signal of compliance, thereby responding to stakeholders' pressures. Nevertheless, this signaling

value of certifications is based on the real internalization of the practices presented by certifications, which can combat information asymmetry. Based on this evidence, different stakeholders in the certification process should avoid opportunistic and risky signaling behaviors.

Considering the results of our study, third-party auditors should aim to become more effective in detecting symbolic uses of certifications and demanding their real internalization. It is important to note that auditors are central to generating signaling value for certifications as legitimizing instruments.

From another perspective, regulatory stakeholders should scrutinize the process of certifications, not simply accepting their presence as a signal of better compliance. Additionally, they can improve their pressure instruments demanding more sophisticated measures to complement the mere presence of certifications.

In addition, SSOs could exploit our results to improve certifications through the continuous updating process present in the majority of standards and certifications. They can improve their policy mechanisms by favoring more inspections of organizations, increasing points of control, and facilitating the work of auditors. These improvements are needed to guarantee the substantive use of certifications to reinforce their power as a signal. The signaling value of certifications could lose its power over time, causing serious problems for SSOs and organizations using it as an information asymmetry reduction tool whenever they cannot maintain their certifications' reputation.

The previous reflections lead us to consider that our findings could be applied by stakeholders targeted by the symbolic use of certifications to develop new instruments of pressure that are not affected by symbolic impression management. They would thus not accept this type of practice as a legitimizing instrument thanks to understanding the nonstrictly legitimate uses of certifications. Organizational over-certification should alert stakeholders to the symbolic misuse of certifications rather than the intended real internalization of the certifications.

6.3 | Limitations, future avenues, and final conclusions

To the best of our knowledge, our study is the first attempt to analyze in-depth organizational over-certification and its motivations. Thus, future research could improve the baseline established in this work.

First, although we take several precautions (e.g., the use of an anonymous process, an online platform, a pretest, indirect questions, a subjective measures such as certifications to construct our main variable of over-certification and a focus on companies with low rates of certification internalization) to avoid the extended limitations in the use of surveys, such as social desirability bias, additional methods should be used to confirm our results. Other studies using large secondary databases with innovative measures and qualitative methodologies based on in-depth analysis of case studies could reinforce our results.

Second, in this study, over-certification was considered a process, which implies some overlap in the practices or products covered by the related certifications. Consequently, we measured over-certification as the accumulation of different related CSR management-related certifications. Further studies could develop new instruments for more accurate measurements of over-certification. Focusing on standards or certifications related to other practices in organizations could help to generalize our results. In this sense, future research could analyze the effects of accumulating certifications that are not related to each other. Although this phenomenon would go beyond the current definition of over-certification it seems likely, based on our results, that it would not be motivated by symbolic intentions.

Third, some limitations could be related to the European scope of our analysis. These findings could be extended to other environments in future studies to determine whether our results could be replicated in other geographical areas where over-certification could be instrumentalized in different directions.

Finally, future research could also investigate the mechanisms that actually guarantee the real internalization of certifications and thus improve the development of certifications. In addition, future research could attempt to find further evidence that would encourage SSOs to fight against cases where over-certification is primarily a form of virtue signaling and instead promote policies that favor their intended use and highlight the possible internal benefits.

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