Foundations and Fault Lines: A Theorization of Certification Emergence Patterns and the Latent Hazards Facing New Ventures

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Abstract

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Certifications are powerful institutional mechanisms that shape markets and guide firm behavior. However, we know little about their emergence patterns or whether they truly benefit the firms that adopt them. In this dissertation, I theorize how market ambiguity and stakeholder pressure set the stage for institutional agents to create certifications. This combination influences whether emergence occurs and the design of the measurement scheme. I then examine the counterperformative potential of certification through an embedded case study of certifications in the cosmetic industry. I use qualitative data to trace how certifications cascade through value chains, embedding heuristics and processes that can later backfire. I contribute to certification research by theorizing patterns of emergence and how certifications embed and activate latent hazards. In doing so, I illuminate the institutional work of agents and the tensions entrepreneurs face between securing legitimacy and maintaining flexibility.

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ACKNOWLEDGEMENTS

I am grateful for the struggle. Although I have overcome many things before beginning the PhD program, this has been the most difficult yet rewarding professional engagement so far. Difficult is not bad, it is just difficult. Although the program was challenging, life circumstances seemed to compound this difficulty. I would not have been able to progress in the program were it not for forgiving, patient, and kind professors, students, friends, and family who were so helpful through all my struggles. It truly took a community to get me to where I am today, and I owe them everything.

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STATEMENTS

Conflict of Interest Statement

I have received research funding from the Kauffman Foundation and Bertrauche Transportation. Neither of which has a financial interest in the outcomes of the research. I also do not have a financial interest in the research outcomes and attest to no conflicts of interest in this dissertation.

LLM Statement

I acknowledge that the use of Large Language Models (Grammarly, ChatGPT-4) in this dissertation is within the guidelines of the University of Washington's *Effective and Responsible Use of AI in Research* article, which was originally written by Georgia Tech and modified for graduate students at the University of Washington.[1] According to the article, the appropriate use includes summarizing information, organizing findings, checking important facts, brainstorming ideas, exploring alternative explanations, improving readability, outlining main ideas, proofreading, and editing author-generated text.

The original ideas from the dissertation are my own. Since LLMs were used to improve readability and suggest alternate wording of my original writing, I ensured the suggested edits were not pulled from other materials that would require attribution. The text has been submitted to Grammarly, SimCheck, and Originality.ai for plagiarism checks, and all show no evidence of plagiarism.

[1] The article can be found here: https://grad.uw.edu/advice/effective-and-responsible-use-of-ai-in-research/; retrieved on July 26, 2025.

INTRODUCTION

The rise of third-party certifications has captured the attention of scholars spanning the fields of agriculture (Hatanaka, Bain, & Busch, 2005), political science (Cashore, Auld, & Newsom, 2004), sociology (Bartley, 2007), marketing (Atkinson & Rosenthal, 2014), and management (Lee, Hiatt, & Lounsbury, 2017). Certifications or the "process in which a central institutional actor with authority or status formally acknowledges that a venture meets a particular standard" have proliferated throughout most industries and the world (Sine, David, & Mitsuhashi, 2007: 578). This proliferation has caused firms and regulators alike to expend effort attempting to understand the role of this influential institutional phenomenon. Indeed, over the past 30 years, certifications have redesigned how consumers and businesses communicate unobservable product attributes to consumers, governments, and other firms alike. Certifications have carved out entirely new markets such as "fair trade coffee," "green buildings," or "cruelty-free cosmetics." Each of these and many certifications like them have reconfigured consumer expectations, industry standards, intra-organizational processes, innovation processes, market categories, industry boundaries, and overall organizational behavior (King, Lenox, & Terlaak, 2005; Lee et al., 2017; Navis & Glynn, 2010; Sauder & Espeland, 2009).

Governments (Energy Star), private firms (Sephora Clean), enthusiastic entrepreneurs (B Lab), NGOs (Leaping Bunny), and combinations of each (Roundtable on Sustainable Palm Oil) have all joined the fray to launch certification schemes that have fundamentally reshaped institutions all over the world. For instance, the organic certification program began in the United States in 1990 and has expanded to 75 countries (Willer, Trávníček, Meier, & Schlatter, 2021). Similarly, Fair Trade, Forest Stewardship Council, and Rainforest Alliance transcend regulatory and geographic boundaries to essentially institutionalize ways of doing business for firms

worldwide. The Body Shop, Whole Foods, Trader Joe's, Beautycounter, and Stony Brook Farms have all built their offerings almost exclusively on certified products. Indeed, certifications are "one of the most innovative institutional designs of the past 50 years" (Cashore et al., 2004: 3).

With their many benefits, certifications seem to warrant their institutional power; however, many fundamental questions have received little scholarly attention. How do certifications emerge in the first place? Why do we see governments launch certifications in the energy and food sectors (Energy Star, USDA Organic), but not engage in the cosmetic or textile industries? Why do private certifications emerge and proliferate in the coffee sector, while comparable sectors such as beer remain largely devoid of certifications? Why do some certification bodies build measurement schemes emphasizing narrow, easily quantifiable metrics while others emphasize broad, difficult-to-measure standards? And, what effects do certifications have on firms that choose to leverage certifications? My dissertation explores the certification phenomenon and provides theory and empirical support in answering these questions.

The chapter *Patterns of Certification Emergence: Where, When, and What Certification Emerge* develops a theoretical model of certification emergence. It addresses how stakeholder pressure, market ambiguity, and institutional agents shape not only whether certifications emerge but also the design of the measurement scheme. The chapter *Latent Hazards: Counterperformative Effects of Certification in New Ventures* utilizes a qualitative case study on certifications within the cosmetics industry to examine how certifications can sometimes constrain the very firms they are designed to help.

According to current certification literature, certification emergence patterns should follow high-authority central institutional actors attempting to address market ambiguities the uncertainties that market participants face when engaging with firms (Sharkey, Kovács, & Hsu,

2023; Sine et al., 2007). However, observed emergence patterns do not consistently follow this pattern (Bartley, 2007; King et al., 2005; Lee et al., 2017; Sharkey et al., 2023; Sine et al., 2007). Indeed, over the past twenty years, the world of certifications has evolved away from centralized high authority actors and embraced various forms of private third-party evaluation to address market ambiguities (Sharkey et al., 2023). For instance, coffee, tea, wine, beer, and soda product markets share similar supply chains and production methods that create comparable market ambiguities. Although the coffee, tea, wine, beer, and soda markets include high-authority central actors, the certification emergence patterns in these markets differ drastically. Whereas the coffee, tea, and wine markets have seen substantial proliferation of certification emergence from fringe actors (e.g., Fair Trade, Rainforest Alliance, Demeter Biodynamic, Non-GMO, Sustainability in Practice, etc.) and wide variation in those certifications' measurement schemes, the beer and soda markets have experienced virtually zero certification emergence. Current theory does not address why certification emergence varies between similar product-markets nor why measurement schemes vary within product-markets despite calls to do so (Garud, Jain, & Kumaraswamy, 2002; Rindova, Martins, Srinivas, & Chandler, 2018; Sharkey et al., 2023).

In *Patterns of Certification Emergence*, I use institutional work as a theoretical foundation to highlight the role of dynamic agents and assert that changes in institutions result from agents' efforts to establish, sustain, alter, or challenge institutional arrangements (Lawrence & Suddaby, 2006; Zietsma & Lawrence, 2010; Zietsma & McKnight, 2009). More specifically, I focus on *fringe agents* who do not possess formal authority but are highly attuned to marketplace signals. This focus helps shed light on how these agents marshal certification emergence. In doing so, I provide a theoretical model addressing how the context and agent attributes lead to variation in certification emergence patterns between product-markets, plus

variation in measurement schemes of emerging certifications within the same product-markets, a "sorely needed" perspective in the literature (Rindova et al., 2018:2195).

The model illustrates two pathways for certification emergence: one led by high-authority central institutional agents and the other led by agents with low authority but access to different information and skillsets that enable them to act. Both paths are viable; however, the fringe, low-authority route represents many certifications in the marketplace. For example, certifications that are now significant institutional forces, such as Organic, Fair Trade, and Non-GMO Project, did not come from central actors, but from fringe actors: either those acting on behalf of peripheral stakeholders, what I call "affiliated agents," or those championing fringe ideologies without direct ties to stakeholders or "unaffiliated agents" (Lee et al., 2017; Kim & Schifeling, 2022).

Fringe agents notice and respond to market information flows differently from central authorities. Fringe actors leverage technical or narrative means to launch certifications based on the match between market information and their ability to provide a solution. Agents with different technical and narrative powers may interpret signals differently in the same market; here, multiple certifications will emerge. The solution that emerges will differ based on the nature of the ambiguity (concrete/abstract) and stakeholder pressure (convergent/divergent). This framework matches more appropriately the patterns we see in the market.

Young firms, in particular, are inclined to use these certifications to communicate information that would otherwise be unobservable. Certifications serve as an "ideal information intermediary" by acting as information clearinghouses that enable young organizations to gain support from society (Sharkey et al., 2023:5; Sine et al., 2007). Or, in other words, certifications grant organizations legitimacy, thus winning a consensus that the firm's activities are appropriate

to interested stakeholders (Suchman, 1995). Both theory and empirical evidence show that certifications are a mechanism by which young firms signal their legitimacy (Armanios, Eesley, Li, & Eisenhardt, 2017; Eberhart & Armanios, 2021; Graffin & Ward, 2010; King et al., 2005; Sine et al., 2007; Terlaak, 2007; Tolbert, David, & Sine, 2011; York & Lenox, 2014).

Young firms can expect a host of benefits through certification. They can navigate around their liability of newness (Stinchcombe, 1965) enhance their reputation (Ruef & Scott, 1998), differentiate their offerings (Reinecke, Manning, & von Hagen, 2012), charge higher prices (Delmas & Grant, 2014); improve quality assessments (Armanios et al., 2017), reduce stakeholder sanctions (Barnett & King, 2008), all of which can increase performance (Lanahan & Armanios, 2018; Lanahan, Armanios, & Joshi, 2021). These empirical insights concerning the benefits of certification are encompassed in the statement that "certification from authorized actors [is] always beneficial" (Sine et al., 2007: 582).

However, evidence from the market and recent scholarship suggests that this view may be incomplete. Certifications, by nature, impose standards on young firms, which are already resource strapped. Their need for legitimacy and the potential resources may cause them to put too much confidence in certifications. Recent studies have begun to discuss the potential for certification to have negative consequences but stop short of explaining how this happens (Carlos & Lewis, 2018; Lanahan & Armanios, 2018). In my second study, I explore the potential for certifications to backfire on young firms. In essence, how do certifications become counterproductive or undermine the very resources certifications were meant to establish?

I use a qualitative inductive case study of ethical certifications in the cosmetics industry to investigate this phenomenon. I identify latent hazards or hazards that are embedded in certifications but are activated only through specific shifts in the external environment or

incompatibilities with the firm's processes or ambitions. In many cases, latent hazards may never be activated, and activation is hard to pinpoint temporally. Therefore, the literature has focused on certifications' ability to enhance and establish resources for young firms. These important dynamics suggest that while certification may initially offer young firms a straightforward path to legitimacy, it may later foreclose growth opportunities (Adner & Levinthal, 2004).

I suggest a process model that illustrates how certifications that may initially align with firm processes and external market norms can, at any time, become misaligned. When this misalignment occurs, latent hazards inherent in the certification structure are activated. These latent hazards can be classified into three overarching types: internal friction, operational strain, or strategic rigidity. These hazards cause the firm to drift into counterperformative outcomes. The superpower of young firms is their ability to adapt and innovate, yet certifications can strip young firms of this ability.

In my dissertation, I make three key theoretical contributions. First, I develop a novel framework for determining when, where, and what certifications will emerge. I highlight fringe agents as the drivers of certification emergence and the context as the measurement determinant. I contribute to both certification and institutional work literatures by explaining the conditions under which certifications emerge, addressing the function of fringe agents as the creators of certification schemes. Second, I theorize why these schemes differ in what they measure. I introduce the heterogenous nature of market ambiguity and stakeholder pressure as the main drivers of measurement schemes. Their joint effect determines whether certifications employ narrow, objective technical or broad, subjective measurement schemes. Lastly, I contribute to the certification, legitimacy, and new venture literatures, showing how certifications initially adopted to enhance legitimacy have latent hazards. I identify how these hazards are activated and

initiate counterperformative outcomes for young firms. This contributes to the certification and legitimacy literature by questioning the assumption that legitimacy is an asset with little to no downside. In sum, I broaden our understanding of the rise of certification and the associated risks.

FUTURE RESEARCH AGENDA

To further develop the findings of this study, empirical tests are a logical next step that can build on the theoretical frameworks from both the theoretical and empirical chapters. Specifically, future work can start to answer questions concerning certification emergence and deployment in varying contexts.

Empirical Validation of the 2x2 Model. First, the most natural outgrowth of this dissertation would be an empirical test of the 2x2 model of certification emergence introduced in Chapter 2. This framework predicts that certification measurement schemes will vary based on the nature of the ambiguity (concrete/abstract) and the stakeholder pressure (convergent/divergent). For example, certifications like Non-GMO and Cage Free would fit in the "Exact" quadrant, where concrete ambiguity and convergent stakeholder pressure predict objective, narrow schemes with binary criteria. In contrast, certifications like B Corp and Cradle to Cradle emerge in the context of abstract ambiguity and divergent stakeholder pressure, requiring broad, complex, and principle-based measurement schemes. This quantitative assessment of the fit between the quadrant and the certification measurement scheme could be tested through the data gathered in Chapter 3. In addition to the 107 cataloged cosmetic certification schemes, an additional 350 certifications from other industries are also available. These data concerning the design, and revenue data from Pro Publica (for all 501c3s), to see whether performance is based on the fit predicted by the theory. This data has active and inactive

certifications and would be a great avenue to answer questions concerning fit and performance predictions.

Heterogeneous Certification Work. Second, a study concerning who builds the different measurement schemes can also be pursued with this data. Based on the archival data and 457 certification schemes, the type of certification scheme institutional agents aim to build is likely moderated by their affiliation. From the literature, central actors trend towards "Exact" measurement schemes since the reputational risk of doing so is low. This would be a direct result of stakeholder pressure on ambiguity, but central actors would likely not launch certification schemes without the backing of powerful stakeholders. On the other hand, unaffiliated fringe agents would likely gravitate toward measurement schemes based on abstract market ambiguity and divergent stakeholder demands. The agents here are hoping to reshape legitimacy in the market. This study would add to certification work by shedding light on agent motivations and the design logic that shapes institutions.

Technology as a Substitute or Complement to Certification. Third, certifications are designed to mitigate information asymmetry through disclosures of compliance. In the case of the ethical certifications, the measurement schemes are commensurations or socially negotiated measurements designed to make the incomparable comparable (Espeland & Stevens, 1998). However, innovative technologies promise more transparency through a different type of intermediation. Today, technologies like blockchain promise traceability, authenticity, and compliance through real-time, tamper-proof data. For example, GPS tracking and timestamped events can verify origin, transport, and production location without relying on a third-party certification agency.

Walmart, for example, already uses this technology, whereas Burt's Bees relies on certification. Blockchain technologies promise immutable tracking of supply chains, reducing ambiguity and enabling deeper insights into traceability. Current theory provides little guidance concerning the substitutive and complementary dynamics between existing certifications and potential substitutive technology, such as blockchain. Blockchain could be a competitive substitute or validating technology for existing certifiers; however, we currently do not have theory or empirical evidence to predict the technology's effect on certification. When paired with IoT (Internet of Things) sensors, blockchain technology enables real-time mapping and tracking of entire supply chains. Thus, blockchain reduces information asymmetry concerning "organic" or "grass-fed" since GPS trackers ensure livestock originates from approved farms, transporters, and packing plants. Carbon emissions of travel distances can be compared between products, enabling investments in specific regions without relying on certifications. Thus, objective technology is now the intermediary for traceability data, threatening the raison d'être of certification.

This study could also leverage the certification database from the qualitative case study and a dataset of firms employing blockchain technologies in the food and cosmetics sectors. Data such as blockchain adoption, deployment details, technologies used, costs, supply chain stages covered, and the interplay with existing certifications are all available. This data could track firms' adoption of blockchain and certifications over time, enabling empirical analysis of patterns and outcomes associated with these strategies. This would fill a gap in our current understanding of blockchain in building theory concerning institutional implications of blockchain as a market governance mechanism. The study could begin to answer questions such

as when is blockchain a substitute for or a complement to existing certifications? Under what conditions would certifications emerge even when blockchain is available?

Counterperformativity in Identity-Based Certifications. Finally, to unpack the potential counterperformativity of certifications, identity-based claims are a logical next step for the generalizability of the findings. In the interview data, multiple CEOs mentioned minority certifications as detrimental to their businesses, explaining that these certifications initially seemed helpful. However, other firms that are certified as woman-, black-, or veteran-owned seem to think these certifications perpetuate prevalent stigmas such as "small" or "incapable. Here, public identity-based certification data is available, and website data can be matched, showing whether the firms claim their certification and which industries are more or less prone to claim certification. Then, testing around the stigmatizing potential of certifications, initially meant to help marginalized groups, could be observed. The literature on the unintended consequences of certification is underdeveloped. This study could further develop findings in studies like Lee, Hiatt, and Lounsbury's (2017) findings of the double-edged nature of legitimacy and answer the call from Eberhart and Armanios (2021) to research the deleterious effects of certifications.

When Does Certification Help? Lastly, as an extension to the themes developed in this dissertation, I constructed a dataset built during the development of the theoretical and empirical chapters, comprising over 8,000 unique firms across 93 countries and all major industries. This dataset tracks B Corp applications and approvals. This study examines the conditions under which certifications benefit, have no effect, or have an adverse effect on firm performance. Various studies have looked on their positive performance outcomes (e.g. Lanahan & Armanios, 2018), when firms strategically choose not to disclose them (Carlos & Lewis, 2018), and when

more certification is not always better (Lanahan, Armanios, & Joshi, 2021), but we still know little concerning the potential negative effects of firm-level ethical certifications. I use a time-series cross-sectional (TSCS) matching technique (Imai, Kim, & Wang, 2023) to create matches based on an identical history of treatment and web crawls as a proxy for performance. Additional self-reported company size, initial founding date, and company descriptions were gathered from LinkedIn. This entails information on the firm's age when it was first certified, the current size of the firm (2024), and the claimed certification status in the description of the firm. I hypothesize that certification is marginally beneficial only within the first two years of the firm, and then the effect is negligible. Indeed, some firms in stigmatized industries such as energy or chemicals may not benefit from certification because it is seen as a form of greenwashing. This would add a much-needed perspective on certifications' benefits and when they can backfire.

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CHAPTER 2 (FOUNDATION):

PATTERNS IN CERTIFICATION EMERGENCE: WHEN, WHERE, AND WHAT CERTIFICATIONS EMERGE

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ABSTRACT

The literature suggests that certification emergence follows central institutional agents' work to rectify market ambiguity. However, observed patterns in the emergence of certification differ substantially from this claim. Not only are efforts at certification often directed by fringe agents, but emerging certifications also differ substantially in the way in which they address market ambiguity. In this paper, we therefore develop a theoretical framework for explaining when, where, and what certification measurement schemes emerge in various markets. In addition to examining market ambiguity, we also consider two previously unspecified factors in certification emergence: stakeholder pressure and agent affiliation. We argue that market ambiguity and stakeholder pressure each lie on a spectrum, and their joint influence determines what the appropriate measurement scheme is for a given market. Next, we theorize that the stakeholder affiliation of the agent leading emergence influences when and where emergence occurs. In sum, our theory extends the research on certification by describing the contextual factors and institutional agents that shape these powerful institutional mechanisms.

INTRODUCTION

Certification, defined as "a process in which a central institutional actor with authority or status formally acknowledges that a venture meets a particular standard" (Sine, David, & Mitsuhashi, 2007: 578), is an institutional mechanism for remedying market ambiguity. As an institutional mechanism, certifications are compelling; they make obscure information transparent (King, Lenox, & Terlaak, 2005) and provide comparable metrics that stakeholders can analyze (Espeland & Stevens, 1998). Indeed, research shows that by reducing ambiguity and providing clear metrics, certifications heighten credibility and legitimacy (Darnall, Ji, & Vázquez-Brust, 2018), improve quality assessment (Armanios, Eesley, Li, & Eisenhardt, 2017), enhance firm performance (Lanahan & Armanios, 2018; Lanahan, Armanios, & Joshi, 2021), protect against stakeholder sanctions (Barnett & King, 2008), and serve as an "ideal information intermediary" (Sharkey, Kovács, & Hsu, 2023:5). Thus, it is not surprising to see the emergence and proliferation of certifications around the world. Organic certification programs, which began in the US, for instance, have now emerged in 75 countries, allowing retail chains to thrive by selling only certified organic products (Willer, Trávníček, Meier, & Schlatter, 2021).

However, current theoretical predictions of when and where certifications emerge diverge from observed patterns (Bartley, 2007; Lee, 2009). Indeed, Sharkey and colleagues note that basic questions about certifications, such as "when and where are they likely to appear…?" remain unanswered and require further inquiry (2023: 25). Whereas current theory suggests that patterns in certification emergence follow the efforts of central institutional agents, such as industry associations or government agencies that hope to remedy relevant market ambiguity (Santos & Eisenhardt, 2009), historical reviews of actual emergence patterns indicate that fringe agents also lead such efforts, often against the interests of established incumbents, (Auld, 2014;

Fligstein & McAdam, 2012; Leblebici, Salancik, Copay, & King, 1991; Memmi, 1965; Shils, 1975). Organic certification in the US, for example, came into existence as fringe agents affiliated with self-described "hippy farmers" worked on substantiating differences in the production practices of various producers—especially those deviating from the norms of large industrial-agricultural producers (Lee, Hiatt, & Lounsbury, 2017). The emergence of certifications by the B Corp, Fairtrade, Rainforest Alliance, Forest Stewardship Council, and the Non-GMO Project followed a similar pattern in that they emerged from the work of fringe agents who addressed market ambiguities salient to the stakeholders with whom they were affiliated (Kim & Schifeling, 2022).

Furthermore, current theory is silent on what measurement schemes are appropriate to particular contexts or why measurement schemes vary among emerging certifications within the same product market. Though the coffee market, for instance, has numerous certifications that vary substantially in terms of their measurement schemes, theory has not addressed why this variation exists. In sum, key theoretical questions concerning the patterns in certification emergence remain largely unanswered.

We seek to address theory's limitations by delving into patterns in certification emergence, by which we mean when and where certifications emerge, and what measurement schemes are deployed therein. To understand certification emergence patterns, we must first acknowledge the complexity of market ambiguity. Market ambiguity is not simply a uniform high/low as often presented, but instead, manifests differently across various aspects of a market. Consider the industrial chemical industry, where ambiguity arises from distinct concerns such as product safety, ingredient origin, and environmental impact. Although all of these aspects are significant, each of them has unique characteristics that vary in nature and in relevance to market

participants. Indeed, different facets of ambiguity within a single-product market space can be salient to various stakeholder groups (Mitchell, Agle, & Wood, 1997). For instance, one stakeholder group may be idiosyncratically vexed by a particular manifestation of market ambiguity in the supply chain; another stakeholder may be unbothered by that same manifestation. Moreover, to some degree, ambiguity is present in all markets but remains irrelevant unless galvanized by stakeholder pressure. Therefore, to gain a comprehensive understanding of market ambiguity, we must also address stakeholder pressure, which refers to deliberate stakeholder-driven initiatives aimed at influencing market participant behavior (Henriques & Sadorsky, 1999; Kassinis & Vafeas, 2006).Both factors, market ambiguity and stakeholder pressure, help explain patterns in certification emergence. We propose that market ambiguity and stakeholder pressure each lie on a spectrum. Market ambiguity varies from concrete, requiring objective measurement, to abstract, requiring nuanced judgment, while stakeholder pressure ranges from convergent, which reflects narrowly defined interests, to divergent, which encompasses broad, diverse interests. Joint consideration of both factors not only informs the need for certification emergence, but also what measurement scheme is most suitable for the context.

Next, because institutional agents carry out the actual work required for certification emergence, we draw on the institutional work literature to theorize how the affiliation of the agent's stakeholder affects when and where certifications emerge (Lawrence & Suddaby, 2006; Zietsma & Lawrence, 2010; Zietsma & McKnight, 2009). Importantly, we argue that agents' access to information flow depends on their stakeholder affiliations. Following the current literature, we argue that central agents—those affiliated with prominent stakeholders—actively work towards establishing certifications at the market's core in response to the ambiguity that prominent stakeholders hold salient. However, our theory reveals two additional pathways along

which certifications emerge in accordance with the efforts of fringe agents. One pathway involves fringe agents who are affiliated with peripheral stakeholders and who initiate the development of certification outside the market's core that align with the market ambiguities salient to those stakeholders. The other pathway involves unaffiliated fringe agents who develop certifications in line with an ideology and then search for sympathetic stakeholders to enroll thereby producing an unsystematic pattern in certification emergence. These two additional pathways better reflect historically observed patterns in certification emergence.

In making two theoretical contributions regarding certification emergence, our theory enables a better understanding of historical patterns in certification emergence including why certifications vary across markets as well as why they proliferate in some markets and not others. First, our examination of market ambiguity highlights the need to incorporate stakeholder pressure into theories of certification emergence. Consideration of the joint effects of market ambiguity and stakeholder pressure enables the theoretical identification of what measurement scheme characteristics are appropriate to a given context. Second, our model sheds light on the previously underappreciated role of fringe agents in the emergence of certification. While the role of central agents has been discussed (King et al., 2005; Sine et al., 2007), our theory reveals two additional pathways for emergence led by fringe agents. We conclude that identifying an agent's stakeholder affiliation is critical to determining when and where certifications will emerge. In sum, by clarifying the when, where, and what regarding patterns in certification emergence, our work informs fundamental, unanswered questions in the certification literature and offers guidance to firms and certifiers as they navigate these key institutional mechanisms.

LITERATURE REVIEW

Certification

While scholars have applied the label of certification to various phenomena including government grants (Lanahan et al., 2021), venture capital affiliations (Stuart, Hoang, & Hybels, 1999), government sanctions (Sine et al., 2007), contests (Rao, 1994), and ratings (Benjamin & Podolny, 1999), we concentrate here on its most prevalent conceptualization: evaluations against established standards (Delmas & Grant, 2014; King et al., 2005; Lee et al., 2017; Terlaak, 2007). This conceptualization involves three key participants: the certifier (who assesses against the standard), the focal applicant (the product, service, or firm), and the observers invested in the outcome of the evaluation.[2] Our theorization thus excludes conceptualizations of certification that are similar to standards, but are nonetheless different, such as preference-based rankings, contests, or endorsements.

Certifications offer clear signals of a firm's adherence to a defined standard, thereby mitigating information disparities (Eberhart & Armanios, 2021; Megginson & Weiss, 1991; Stuart et al., 1999). These signals are crucial in scenarios where observers struggle to evaluate relevant attributes consistently (Ellsberg, 1961). Certifications are viewed as highly efficient mechanisms for assessing quality, safety, or ethical standards (Armanios et al., 2017). For example, Whole Foods relies on certifications such as USDA organic to ensure supplier compliance with standards, while Home Depot, attempting to safeguard vulnerable forests, refuses to purchase wood not approved by sustainability certifiers such as the Forest Stewardship Council.

[2] The certifier assesses the applicant against the standard. The applicant provides information to the certifier. Observers use certification identifiers, often symbols, to assess the product, service, or firm

Ample evidence underscores the premise that well-established certifications wield significant institutional influence and bolster firm performance (Armanios et al., 2017; Bartley, 2007; Lanahan & Armanios, 2018; Lanahan et al., 2021). By serving as an information intermediary among market participants, certifications "reduce information asymmetries either by making private information public or by making public information more accessible and comprehensible to stakeholders" (Rindova, Martins, Srinivas, & Chandler, 2018: 2176). With enhanced information from the certification, stakeholders are more willing to provide firms access to resources (Carlos & Lewis, 2018; Graffin & Ward, 2010; Grimes, Gehman, & Cao, 2018; Lewis & Carlos, 2023). Compared to other information intermediaries, certifications are more transparent as their evaluation criteria are usually known and publicized (Sharkey et al., 2023). For example, USDA Organic, Animal Welfare Certified, and LEED publish standards that firms must meet to be certified.

While most research on certification has addressed effects, only a limited amount has addressed emergence. The literature on the subject argues that emergence is led by a central agent endowed with authority and status and whose focus falls on alleviating market ambiguity (Sine et al., 2007). Market ambiguity is most consistently defined as the uncertainties and complexities that market participants face when interacting within a market (Busenitz & Barney, 1997; Santos & Eisenhardt, 2009). Market ambiguity is thus multifaceted, arising from various sources including things such as quality, behaviors, unobservable firm activities, product categorization, and other information asymmetries that may surface as markets evolve (Rindova et al. 2018).

Despite its complexity, market ambiguity is often simplified in certification research. Recognizing that market ambiguity has multiple facets, we propose a more nuanced approach.

Such a perspective acknowledges that all stakeholders experience and respond to ambiguity in unique ways. While one may be deeply concerned about a specific ambiguity, another may remain indifferent to it. To understand certification emergence, we must consider the diverse pressures of stakeholders, which focus on the ambiguities related to their values, interests, or goals (Eesley & Lenox, 2006; Hiatt & Carlos, 2019). Such stakeholder pressures prompt changes aiming to resolve the ambiguities blocking resource allocation (Mitchell et al., 1997).

Despite the valuable insights gained from taking market ambiguity and stakeholder pressure into consideration, the current approach to certification has a significant limitation: it focuses primarily on central institutional agents. However, case histories and early work on the locus of institutional influence reveal that other, non-central agents also play a crucial role in driving institutional change (Memmi, 1965; Shils, 1975). Thus, consideration of a broader range of agents leading certification emergence is useful. For this, we turn to institutional work, a sub-literature of institutional theory, to elucidate the role of the different agents involved in certification emergence.

Institutional arrangements, of which certifications are a part, originate with the intentional actions of agents whose aim it is to create, modify, maintain, or disrupt institutions (Lawrence, Suddaby, & Leca, 2009; Rojas, 2010; Zietsma & Lawrence, 2010). Yet, as mentioned above, the current literature on certification regards central institutional agents—established, authoritative entities that hold a dominant position in the market and are widely recognized for its ability to create, endorse, or enforce formal standards—as the sole champions who initiate certification. This does not fully align with the historical accounts of the emergence of certification, which indicate instead that agents other than central agents often lead the

process. That is, fringe agents, defined as institutional agents not affiliated with prominent stakeholders, play a role in certification emergence (Lawrence & Suddaby, 2006).

The affiliation of institutional agents significantly influences their direction and focus. Their actions are typically directed towards the areas that they prioritize (Ocasio, 1997). More specifically, institutional agents assess and respond to the environmental context of the stakeholders with whom they are affiliated (Granovetter, 1985). Alternatively, if an agent is not affiliated with any stakeholders, they can engage in institutional work that aligns with their own personal ideologies (Lawrence, Suddaby, & Leca, 2009). Affiliation with different stakeholder groups sensitizes agents to specific market ambiguities, even within the same market.

We classify institutional agents within the same market into three types: 1) central agents, who are affiliated with that market's prominent stakeholders, 2) affiliate fringe agents, who are connected to peripheral stakeholders in that market, and 3) unaffiliated fringe agents, who follow their own ideologies and have no connection to any particular stakeholder group in that market. Each of these affiliations can be observed in the patterns in certification emergence. For example, Energy Star originated with central agents, specifically the US government, in response to stakeholder pressure to clarify energy efficiency standards. By contrast, certifications such as Green-e and Certified Naturally Grown (CNG) emerged from affiliated fringe agents. Green-e reduces the ambiguity around carbon offsets by verifying and labeling renewable energy sources. Notably, it was established in 1997 by experts affiliated with the producers of renewable power in the energy industry to verify and label renewable energy sources, and thus to reduce ambiguity in carbon offsetting. Certified Naturally Grown (CNG) offers a transparent certification framework designed specifically for smaller, local farms and was launched by advocates affiliated with the small-scale agricultural community. By contrast, the Cradle to Cradle (C2C)

certification grew out of an initiative led by unaffiliated agents, specifically a chemist and an architect—neither connected to any stakeholder—who shared a vision for sustainable design. Their interdisciplinary backgrounds for environmental and social responsibility influenced the development of the C2C framework.

With the literature pointing us towards our key constructs, we next turn to theorizing how market ambiguities, stakeholder pressures, and agent affiliation determine patterns in the certification emergence, namely, the when, where, and what in certification emergence.

THEORETICAL MODEL

To extend our theoretical knowledge about patterns in certification emergence, we must begin with context. More specifically, we must begin with the interaction between market ambiguity and the stakeholder to create a context amenable to a specific measurement scheme. Table 1 offers a summary description of the interactions between market ambiguity and stakeholder pressure as well as the measurement scheme appropriate to them. As shown here, we conceptualize the various market ambiguities in a market as ranging between concrete and abstract. Similarly, we view stakeholder pressure existing in a market ranging from convergent to divergent. What is important to remember is that the market ambiguity in any given market can be multifaceted. Thus, multiple stakeholder pressures can co-exist since stakeholders will respond to various market ambiguities differently. For this reason, it is possible for multiple certifications to emerge in the same market, each with potentially qualitatively different measurement schemes.

Insert Table 1 about here

Market Ambiguity

Market ambiguities reflect "a lack of institutionalized patterns of relations and actions" that make it difficult for consumers to interpret and understand product value and quality (Santos & Eisenhardt, 2009: 644; Rindova et al., 2018). Such ambiguities can arise for numerous reasons, including social and geopolitical issues, such as a firm's labor practices or its sourcing of raw materials. In the literature on certification, however, ambiguities most often ensue from a lack of information on such pertinent issues. For instance, market ambiguities with a high chance of prompting calls for certification are related to organizations' vague or misleading descriptions of products and product safety, to the failure of other mechanisms (e.g., regulation) to ensure necessary information disclosures, or else to instances in which goods cross regulatory regimes (Bartley, 2007; Epstein & Schneider, 2008; Yang, Su, & Fam, 2012). In the US, for instance, cosmetic companies are not obligated to disclose whether their products are tested on animals, while in Europe, cosmetics cannot be sold if they or any of their ingredients have been tested on animals. Consequently, for stakeholders concerned with animal testing, the cosmetic industry does not face market ambiguity in Europe but does in the US.

Nature of Market Ambiguity. Market ambiguity is a multifaceted concept. However, we argue that the concept is even richer and that the qualitative nature of each facet of uncertainty or complexity should be understood along a spectrum ranging from concrete to abstract (see Table 1). Concrete ambiguities arise when complexities stem from easily definable and observable gaps in information, as in the case of animal testing in the production of cosmetics. This ambiguity can be resolved by devising empirical verification and standardized measures that can be objectively applied. Following the cosmetics' example further, consumers' growing unease about animal testing in the cosmetics industry along with impending bans on such practices in

global markets has introduced ambiguity to companies and consumers transacting with US cosmetic companies. This ambiguity has revolved around a straightforward yet important question: do companies or their suppliers test their products on animals? Careful scrutiny of documentation, protocols, safety data sheets, testing documents, and sourcing practices has led to clear and objective assessments of whether firms have engaged in such testing. Similar unease about gluten in the food industry, specifically regarding gluten-related health concerns such as celiac disease and gluten intolerance, introduced ambiguity into the food sector. Certification arising from concrete ambiguities can be developed with objective criteria based on precise, quantifiable measures.

Unlike concrete ambiguities, which can be assessed with precise, measurable criteria, abstract ambiguities pose a distinct challenge to assessment as they are more aligned with complexities that are not easily definable and are often associated with normative issues that involve difficult-to-quantify beliefs or principles. In this space, measurements are often commensurations, which refers to the social process that transforms different qualities, characteristics, or values into a metric (Espeland & Stevens, 1998). Such an approach hopes to enable organizations to evaluate firm activities through the use of metrics, which, though comparable, are less precise because they involve the assessor's judgment. Concepts like sustainability, humane animal treatment, or ethical labor practices pose challenges to definition and measurement due to the diverse interpretations to which each of these principles and their intangible natures give rise. Indeed, the ambiguity concerning humane treatment of animals, ethical business practices, and sustainability can all be argued to be abstract. Likewise, the Roundtable on Sustainable Palm Oil (RSPO) certification emerged in the early 2000s in response

to stakeholder pressures to address the abstract environmental and social ambiguities regarding palm oil. The standards and metrics used are complex and evolving, and measure concepts like "fair labor," "socially responsible," and "enhance ecosystems" (RSPO, 2024), all of which are not easy to quantify and demand the discretion of the assessor.

As such, certifications addressing abstract market ambiguities often rely on subjective measurement schemes based on complicated or undisclosed algorithms. Here compliance relies on assessor discretion, assessor expertise, and agreement among stakeholders that the assessment and measurements are valid. . . For example, B Corp certification assigns a score for social and environmental performance using "key impact areas" that are defined and weighted by B Lab, with scoring tailored to each organization that undergoes assessment (B Lab Global, 2022). Its standards, which are continually evolving, are designed by a "Standards Advisory Council" (ibid). Concepts such as social fairness (measured by Cradle to Cradle), animal comfort (measured by Certified Humane), and fair wages (measured by Fair Trade) are certifications that use subjective measures to reify abstract concepts. By establishing a common, albeit subjective metric, measurement schemes that address abstract ambiguities make the incommensurable commensurable (Espeland & Stevens, 1998).

An understanding of the nature of market ambiguity makes it easier to note the difference in an emerging certification's measurement scheme. However, various stakeholders may have different perceptions of the nature and extent of each ambiguity.

Stakeholder Pressure

Stakeholder pressure refers to the capacity of stakeholders to influence the behavior of market participants (Henriques & Sadorsky, 1999; Kassinis & Vafeas, 2006). In effect, stakeholder pressure acts as an indicator of the salience of various market ambiguities and is a

crucial factor in determining not only if a certification will emerge, but also, and even more importantly, what measurement scheme will be appropriate for it. For example, stakeholder pressures in the coffee market are clearly different from those in the beer market. While many certifications—e.g., Fair Trade, USDA Organic, Rainforest Alliance, and UTZ—can regularly be found in the coffee aisle of grocery stores, nearly zero certifications exist in the beer market. Stakeholders seem to apply substantial pressure on one market, but not the other. A notable opinion in the newspaper *FoodPrint* titled "Why Don't More Brewers Make Organic Beer—and Will That Change?*"* notes that stakeholders have not exerted enough pressure on this industry:

> "We felt like maybe this is the time that the consumer might start to care about organic beer a little bit more. It certainly felt aligned with who we are, said Jason Perkins, brewmaster since 1999. But there hasn't been a big call for it (Held, 2020)."

Nature of Stakeholder Pressure. Like market ambiguity, the nature of stakeholder pressure can be understood existing along a spectrum - in this case from convergent to divergent. Convergent pressure occurs when stakeholders advocate for the resolution of similar issues. When stakeholders exert convergent pressure, indicating a shared concern, certification measurement schemes will tend to be more focused and specific. For instance, when concerns rose around the use of genetically modified ingredients (GMOs) in food products, stakeholders required clear indicators of whether GMOs were present. Responding to this, certifications needed a reliable method for determining the binary presence or absence of genetic material. In cases of convergent stakeholder pressure, certifications focus on a narrow range of concern, such as product attributes (GMO-free, grass-fed, gluten-free), or single-product categories (eggs, wool, palm, or salmon).

By contrast, divergent pressure occurs in cases where stakeholders make broader demands, and their needs and expectations vary significantly. When stakeholder pressures

diverge, the solutions required are typically more complex. Divergent pressures arise when a single solution does not adequately address the various uncertainties in the market, or when stakeholders have different interpretations of, place varying levels of importance on, or take different approaches to these uncertainties. This occurs when stakeholders not only present multifaceted requests to reduce ambiguity but also disagree among themselves on how to define both the ambiguity and the requisite measurement scheme. For example, the International Organization for Standardization (ISO) offers a broad measurement scheme that addresses a range of standards and compliance levels needed to meet the demands of various stakeholders. Standards for smaller companies in the chemical industry differ from those in larger companies in the food industry. Each standard is adaptable, customizable, and multifaceted so as to accommodate a variety of needs. Certifications that aim to resolve divergent stakeholder pressures tend to have broader measurement schemes.

What Measurement Scheme Will Emerge?

We argue that the nature of stakeholder pressure intersects with the nature of market ambiguity to help determine what certification measurement scheme will emerge in a market. We illustrate this interaction in Table 1. In Quadrant A, which we term "Exact," and in which convergent stakeholder pressures and concrete market ambiguities intersect, we see the emergence of measurement schemes with precise measures and clear standards. Such metrics are best at effectively satisfying market demand. There are many examples of straightforward and precise measurement schemes. For instance, The Non-GMO Project certifies products that are free of genetically modified ingredients. DNA testing methods like polymerase chain reaction (PCR) can be used to identify GMOs (Genetically Modified Organisms), while manufacturing processes can be implemented to prevent material contamination by GMOs.

GF (Certified Gluten-Free) certification is another certification that relies on simple, precise measurements. It addresses a clear quality ambiguity for food products: gluten content. Since gluten labeling requirements vary from country to country and the requisite labeling thresholds for gluten content may be insufficient for people with severe sensitivity to gluten, GF certification serves as a reliable indicator of gluten content (GFCO, 2024). It responds to convergent stakeholder pressure regarding concrete ambiguities: both consumers and producers seek specific information about the product. In this context, a highly precise measurement scheme based on an enzyme-linked immunosorbent assay (ELISA) determines the gluten level in a product. In such a situation, the assessor functions more as an observer than as an arbiter. They publish the findings rather than exercise discretion on whether a firm, product, or service achieves certification. The output is the certification itself. Building on our examples above, a company can neither conduct animal testing and be certified as "cruelty-free," nor sell products that contain GMOs or gluten and receive certification based on an assessor's judgment.

Proposition 1: Convergent stakeholder pressure on concrete market ambiguity leads to narrow, simple measurement schemes with limited objective measures and the lowest level of assessor discretion.

At the other end of the range, Quadrant D, termed “Imaginative,” refers to a measurement scheme in which divergent stakeholder pressures for abstract market ambiguity intersect. Since the market ambiguity is abstract and reflected in concepts such as stakeholder-centric capitalism or social responsibility, it calls for subjective measures. Furthermore, divergent stakeholder pressure requires broad, multifaceted assessment so that it can address a variety of stakeholder demands pertaining to different interpretations or approaches to measuring and defining the

ambiguity in question. We thus expect that the most complex and subjective measurement schemes will require the greatest level of discretion from the assessor.

These measurement schemes are distinguishable by the use of subjective evaluative metrics that quantify complex qualitative attributes (Espeland & Stevens, 1998). This process, called commensuration, translates qualitative aspects (e.g., environmental performance or employee treatment), into numerical scores, enabling a common measurement for comparison of firm or product attributes (ibid). These evaluations metrics rely heavily on the subjective assessments of the evaluator. For example, B Lab assessors certify companies they judge to meet subjective standards of "social and environmental performance, accountability, and transparency" (B Lab Global, 2022) by addressing government-, environment-, and shareholder-related issues, among others. Their subjective assessment is based on an evaluation of over 200 "complex and customized" measures (ibid.) across six impact categories that it uses to determine an overall score of a firm's environmental and social performance. And the various assessors may assign different scores for the same firm. Cradle to Cradle (C2C), Fair Trade, and Demeter Biodynamic, similarly address divergent stakeholders and abstract ambiguities.

Proposition 2: Divergent stakeholder pressure on abstract market ambiguity leads to broad, complex measurement schemes with many subjective measures and the highest level of assessor discretion.

Quadrants B, termed "Expansive," and C, termed "Interpretive," refer to the off-diagonal interactions of stakeholder pressure and market ambiguity. As such, they reflect alternative combinations of the characteristics discussed in quadrants A ("Exact") and D ("Imaginative"). Quadrant B-Expansive reflects the context in which diverse stakeholder pressures and concrete market ambiguity interface. This should lead to measurement schemes based on broad

assessments that can satisfy the variety of stakeholder requirements, but that due to ambiguity's concrete nature, would have to be based primarily on objective criteria. The standards used in certifications like ISO and LEED cater to a range of stakeholder interests, offering specific guidelines and measurable compliance objectives at various levels. Such guidelines and measures are applicable to diverse groups with potentially different objectives. Measurement schemes in this category often require multiple levels and inclusion criteria to accommodate various stakeholder interests. Yet, because these measurements are more precise and quantifiable, the certifications that use them remain for the most part objective. Thus, while concrete ambiguities lead to more precise measurements and straightforward standards akin to those of quadrant A-Exact, they may entail different standards and rankings based on the divergent pressures of stakeholders. Consequently, certification measurement schemes in this quadrant encompass a broad range of primarily objective and simple measures.

Proposition 3: Divergent stakeholder pressure on concrete market ambiguity leads to broad, simple measurement schemes with many objective measures and moderate-to-low assessor discretion.

Quadrant C-Interpretive represents the interface between convergent stakeholder pressures and abstract market ambiguities. Thus, like quadrant A-Exact, its measurement schemes involve a narrow scope of measurement. However, due to the abstract nature of the ambiguity, quantification becomes a challenge. Thus, though narrow in scope, they call for subjective judgment. Narrow yet subjective measurement schemes can be observed in certifications such as Certified Humane, Responsibly Sourced Palm Oil (RSPO), and Responsible Wool Standard (RWS). Each of these possesses measurement schemes tailored to assess principle-based ambiguities. These types of certifications employ terms that entail

subjective metrics, like "responsible" and "humane." In such cases, assessment requires interpretation, relies on expert advice, or is negotiated with and collaboratively developed with stakeholders. In this space, measurement schemes are narrowly scoped. And while assessors possess discretion over final judgment, they do not possess it to the same degree as do those in quadrant D-Imaginative.

Proposition 4: Convergent stakeholder pressure on abstract market ambiguity leads to narrow, complex measurement schemes with limited subjective measures and moderate to high assessor discretion.

In summary, as shown in Table 1, the choice of measurement scheme for a specific market is determined by the nature of both stakeholder pressure (convergent vs. divergent) and market ambiguity (concrete vs. abstract). Turning our attention from what certification measurement scheme emerges, we next theoretically address the sufficient conditions (e.g., when and where) for emergence.

When and Where Do Certifications Emerge?

For certification to emerge, three essential conditions must be simultaneously present: market ambiguity, stakeholder pressure, and an institutional agent. While market ambiguity and stakeholder pressure are necessary components, they, in themselves, are insufficient to initiate certification emergence. Most markets experience ambiguity and face pressure from stakeholders to resolve specific issues, such as the environmental impact of cryptocurrency mining. Despite calls for clarity from governments, environmentalists, and consumers, the ambiguity surrounding cryptocurrency emissions and energy use persists. We thus argue that a sufficient condition is reached once an institutional agent enters a context in which market ambiguity and stakeholder pressure already exist.

Certification emergence requires an agent that can recognize market ambiguity and stakeholder pressure, develop a measurement scheme to address the ambiguity, and build support for certification emergence. The literature on institutional work highlights the crucial role of institutional agents in initiating efforts to create, maintain, or shape institutions, an endeavor that calls for significant resources and stakeholder support. The institutional agent plays a pivotal role in mobilizing stakeholder support by highlighting their measurement scheme's capacity to address the specific market ambiguity(ies) that stakeholder pressure indicates is problematic. In short, the convergence of these three conditions enables certifications to emerge.

The relationship of these conditions is interdependent rather than sequential. Market ambiguity and stakeholder pressure create demand for certifications, but institutional agents must sense and act on this demand. Conversely, the efforts of an institutional agent too can raise awareness of ambiguity and mobilize stakeholder pressure. We thus theorize that conditions for certification emergence require the presence of an institutional agent in a context where discernable market ambiguity and stakeholder pressures exist. Furthermore, certifications will continue to emerge as long as these three conditions are present. Conversely, they will cease to emerge once one of the three conditions is absent.

Proposition 5a: The presence of an institutional agent in a context with discernable market ambiguity and stakeholder pressures jointly form the necessary and sufficient conditions for certification emergence.

Next, we discuss how the affiliation of the institutional agent adds precision to our understanding of where and when certifications emerge. While institutional agents in the presence of market ambiguity and stakeholder pressure are necessary and sufficient for certification emergence, not all agents are aware of the same market ambiguity(ies) nor are

subject to the same stakeholder pressure(s). Critical here is the agent's stakeholder affiliation. Central institutional agents, who are affiliated with prominent stakeholders, play a role in certification, but they are not the only agents in the market. Indeed, agents who are not affiliated with prominent stakeholders can likewise drive certification emergence. Fringe agents, who are either affiliated with a peripheral stakeholder group or initially unaffiliated with any group, also play a meaningful role in certification emergence. Each agent, based on their affiliations, responds to distinct combinations of market ambiguity and stakeholder pressure which shape how they perceive opportunities for certification emergence (Weimer & Vining, 1999).

Insert Figure 1 about here

Figure 1 illustrates our framework for understanding the impact of institutional agents' stakeholder affiliation on patterns in certification emergence. This market, like most, is affected by market ambiguity, which, in turn, affects stakeholders in different ways and leads to diverse stakeholder pressures. The gradient blue hues in Figure 1 represent this variation. Figure 1 also marks out four institutional agents and four stakeholder groups. The central agent is affiliated with the prominent stakeholder group. Fringe agent A is affiliated with peripheral stakeholder group A, while fringe agent B is affiliated with peripheral stakeholder group B. Fringe agent C is unaffiliated with any stakeholder group even though additional peripheral stakeholder groups are present—as shown in peripheral stakeholder group 3. Our theory addresses how the institutional agent's affiliation affects when and where certifications emerge within the same market.

Central Agent-led Certification. Central and fringe agents rely on different information flows (Reagans & McEvily, 2003; Uzzi, 1997). The certification path led by the central agent is well documented in the literature; in this case, authorities such as governmental and international

agencies dictate certification based on market ambiguity salient to prominent stakeholders (Mitchell et al., 1997; Sine et al., 2007). For example, the European Commission (EC) launched EU Ecolabel to address ambiguity concerning the environmental impact of products and provide a key differentiator to stakeholders. However, the central agents within a market are neither plentiful nor ubiquitous. The existence of diverse pressures and ambiguities in the market creates an opportunity for various certification solutions. This variation is crucial and noteworthy as it encourages tailored approaches that address various stakeholders' needs. If a singular central agent was solely responsible for developing certification schemes, the resulting measurement system within the market would likely be uniform. However, the presence of fringe agents in addition to central agents introduces alternative means for certification to emerge.

Proposition 5b: Central agents drive emergence at the core of the market in response to the ambiguities salient to prominent stakeholders.

Fringe Agent-led Certification. Although central agents have access to broad market signals (Cowan & Jonard, 2004), central agents are tied to prominent stakeholders and act on information filtered through these stakeholders (Reagans & McEvily, 2003; Uzzi, 1997). Unlike central agents, fringe agents can be numerous within a market. Fringe agents' varied affiliation with any number of peripheral stakeholder groups or their lack of affiliation expose them to a wide range of information and stakeholder pressures (Granovetter, 1985). For instance, fringe agents affiliated with peripheral stakeholders are deeply attuned to the problems and pressures faced by these more marginalized groups (Zietsma & McKnight, 2009) and prioritize the unique concerns of these stakeholders. By contrast, unaffiliated fringe agents identify market ambiguities and try to highlight them to mobilize stakeholder pressure, thereby potentially creating demand for certifications.

Therefore, when a central agent is absent or fails to consider the needs of all stakeholders beyond the most prominent ones, an opportunity is created for fringe agents to work on behalf of other stakeholders. Because fringe agents recognize the market's heterogeneous pressures and ambiguities, they develop customized certifications to address them. By acknowledging and responding to diverse stakeholder concerns, fringe agents create certifications that might otherwise be overlooked by central agents. In essence, variation in market pressures and ambiguities combined with the involvement of fringe agents foster a diverse certification landscape. Such diversity enables various stakeholders to find certification solutions that better align with their specific needs in addressing market ambiguities. Put differently, fringe agents are better able to address the niche concerns of less salient, peripheral stakeholders.

Affiliated Fringe Agents. Affiliated fringe agents are tightly intertwined with peripheral stakeholders and thus have access to fine-grained information flows. Consider California Certified Organic Farmers (CCOF): this certification was created by affiliated institutional agents in response to the needs of a peripheral stakeholder group of farmers who sought a way of differentiating products made according to organic standards from those produced conventionally. Their desire for a clear distinction between organic and non-organic products led to the establishment of CCOF certification (Lee et al., 2017). Thus, certifications developed by affiliated agents are tightly coupled with the solutions stakeholders wish to access.

Affiliated fringe agents are aware of demands for certification and initiate the development of ones capable of satisfying stakeholders' interests (Espeland & Stevens, 1998). This involves gathering and disseminating information on potential solutions to market ambiguities and assessing how stakeholders will respond to the standard proposed. By establishing boundaries and metrics that both address stakeholders' concerns and are appropriate

to the type of ambiguity in question, agents address the concerns of market participants and enable the market to function effectively. Thus, for example, Certified Natural Grown (CNG) is a peer-reviewed certification developed by a collective of small farmers. In this case, the certification that emerged matched the ambiguities that these small farmers wished to remedy. The institutional agents affiliated with the farming community championed the certification that resonated with the peripheral (as opposed to the mainstream) stakeholders' cause.

The deep connections between affiliated fringe agents and peripheral stakeholders have a significant impact on the solutions they develop. Affiliated fringe agents, much like central agents, actively solicit or react to stakeholder feedback and design certifications that directly address stakeholder concerns. This type of collaborative approach is evident in cases where certification standards have been jointly developed by initiators and the stakeholder communities they serve. The close relationship between fringe agents and stakeholders ensures that stakeholder input has a direct influence on the emerging certifications.

Compared to central agents, affiliated fringe agents attending to the concerns of peripheral stakeholders can generate a greater variety and quantity of measurement schemes. This is particularly significant at medium to low levels of stakeholder pressure and ambiguity, in cases where fringe agents drive certification emergence whereas central agents likely would not. In most markets, fringe agents and peripheral stakeholders outnumber central agents and prominent stakeholders. The diversity among fringe agents enables them to cater to the specific needs of small-scale farms, environmental NGOs, hydroponic startups, specialty food producers, and other niche players. Each such group has distinct concerns, and fringe agents can be affiliated with any of them, engaging at varying levels of pressure and responding to distinct types of ambiguity. The flexibility of fringe agents allows them to operate effectively in this

complex arena. By leveraging their unique affiliations, they can address the specific challenges and opportunities facing peripheral stakeholders. This, in turn, enables the emergence of certifications that may not have been possible through the efforts of central agents alone.

Proposition 5c: Affiliated fringe agents drive emergence outside the core of the market in response to the ambiguities salient to peripheral stakeholders.

Unaffiliated Fringe Agents. Unaffiliated agents also identify opportunities to address market ambiguities. Yet, since they are independent of any particular stakeholder group, their solutions prioritize and reflect their idiosyncratic or even ideological views of market ambiguity. That is, rather than being driven primarily by stakeholder pressures like affiliated central and fringe agents, unaffiliated agents are more sensitive to ambiguity. They proactively promote their own solutions and explore the market with the goal of enrolling stakeholders that are aligned with and see value in supporting an unaffiliated agent's measurement scheme. A notable example is Cradle to Cradle (C2C), which was developed by two individuals with no strong ties to stakeholders or direct involvement with their intended beneficiaries. Instead, they tried to persuade stakeholders to adopt their solution and thus resolve the ambiguity regarding product sustainability.

Unaffiliated fringe agents focus on market ambiguities that rouse their passion and try to amplify stakeholder pressure on that ambiguity. The unaffiliated agents are ambivalent as to which stakeholders, prominent or peripheral, create sufficient pressure for emergence. Unlike affiliated agents, they do not need to co-design certifications with the needs of specific stakeholder groups in mind. Instead, they bind their solutions to the ambiguity they aim to reduce and highlight the one that best aligns with their ideologic perspectives. For instance, the Environmental Working Group (EWG) certification in the cosmetic industry was created with

the purpose of identifying products without specific chemicals. Notably, EWG's founders were not from the cosmetics industry, but instead were environmental lobbyists in agriculture who recognized the ambiguities in cosmetics. Certifications from unaffiliated agents, such as EWG, highlight ambiguities to generate market differentiation and may have less connection to the stakeholders listed in Table 1.

Proposition 5d: Unaffiliated fringe agents drive emergence in an unsystematic pattern as they search for and enroll sympathetic stakeholders.

DISCUSSION

Certifications are powerful institutional mechanisms that shape markets (Lanahan & Armanios, 2018; Lee, 2009), regulate industries (Cashore, Auld, & Newsom, 2004; Bartley, 2007), institutionalize certain practices over others (Fuerst & McAllister, 2011), direct the attention of managers and consumers (Golan, Kuchler, Mitchell, Greene, & Jessup, 2001; Ocasio, 1997), and establish evaluative metrics that help stakeholders make decisions on resource allocation (Armanios et al., 2017). All the same, scholars lament that fundamental questions regarding the emergence, measurement, and proliferation of certification remain unanswered. For instance, we do not know under what conditions (when and where) certifications emerge nor in what context a given measurement scheme is appropriate. Plainly put, the received knowledge on certification emergence stops at the role played by central institutional agents and existence of market ambiguity (Armanios et al., 2017; Eberhart & Armanios, 2021; Sharkey et al., 2023). But this narrow focus does not align with observed historical patterns in certification emergence.

Our theory addresses the when, where, and what in certification emergence patterns. In doing so, we shed light on related but more nuanced questions, such as: Why do certifications

emerge in some markets, but not in others with similar characteristics? Why do some markets see a proliferation of certifications, while others are satisfied with only one? We structure our discussion around how our theory answers fundamental outstanding questions.

What Measurement Scheme Will Emerge?

We begin with the question of the appropriateness of a measurement scheme for a particular context. We integrate a richer conceptualization of market ambiguity with stakeholder pressure. Here different stakeholders respond idiosyncratically to the different facets of market ambiguity. Our theoretically derived framework thus focuses on the joint effects of market ambiguity and stakeholder pressure. Specifically, we introduce a 2x2 matrix illustrating that different certification measurement schemes are appropriate for different combinations of market ambiguity (concrete vs abstract) and stakeholder pressures (convergent vs divergent).

Our theory suggests that contexts in which concrete ambiguity is combined with convergent pressure, require a narrow, simple measurement scheme (Quadrant A – Exact), while ones in which abstract ambiguity is combined with divergent pressure require broad, complex measurement schemes (Quadrant D – Imaginative). The off-diagonal contexts (Quadrant B – Expansive and Quadrant C – Interpretative) in the 2x2 matrix are best served by broad and simple, or narrow and complex measurement schemes, respectively. Thus, by addressing the joint effect of market ambiguity and stakeholder pressure, our theory determines *what* measurement scheme is appropriate in each context.

When and Where Do Certifications Emerge?

Market ambiguity and stakeholder pressure set the stage for institutional agents to understand when and where certifications should emerge (Lawrence & Suddaby, 2006). We therefore theorize that all three factors—market ambiguity, stakeholder pressure, and an

institutional agent—are necessary to and sufficient for determining when and where certifications will emerge. If one of these conditions is missing, certification emergence will not occur. However, like ambiguity and stakeholder pressure, agents are not all the same.

Our theory differentiates three types of institutional agents according to their stakeholder affiliations. Central agents are affiliated with prominent stakeholders, while fringe agents are either 1) affiliated with peripheral stakeholder groups, or 2) unaffiliated and searching for sympathetic stakeholders. This implies that multiple certifications may emerge within a single market. Basically, as long as these three necessary and sufficient conditions are met, certification emergence will continue until one condition ceases. Markets may have multiple fringe agents responding to affiliated stakeholders and/or unaffiliated fringe agents attempting to enroll sympathetic stakeholders. This dynamic explains why certifications proliferate in some markets but not in others. Markets with diverse stakeholders and both affiliated and unaffiliated fringe agents see the emergence of multiple certifications, each representing a unique combination of market ambiguity and stakeholder pressure. Conversely, markets in which both market ambiguity and stakeholder pressure exist will not witness the emergence of certification if they lack willing agents. The affiliations of agents determine when and where certifications emerge.

This paper addresses certification's complex, context-dependent emergence patterns. By doing so, we provide practitioners and scholars with a framework to better understand certification dynamics. By incorporating agent affiliation, greater appreciation for the complexity of market ambiguity, and introducing stakeholder pressures, we move beyond a view that is limited to central institutional agents and a simpler view of market ambiguity. Our theory propels the literature on certification forward by accounting for multiple emergence patterns.

Future Research

Our theoretical framework offers many opportunities for delving into the role of agents in institutional processes and studying the diverse impacts of certifications on markets and firms as well as for assessing measurement schemes and firm enrollment, agent type and firm enrollment, certification success, and effect of certification on firm legitimacy and performance.

The risk of measurement schemes for enrolling firms. The devised metrics of certifications are the basis on which firms vying for certification organize firm processes (Espeland & Sauder, 2007; Muller, 2018). In concrete and convergent instances of Quadrant A – Exact, "Managing to the metric" may pose little risk for the firm as the metric is easily comprehensible to both the stakeholders and the firm. A measurement scheme beyond Quadrant A – Exact may increase the risk of those enrolled in certification. Broader, complex, and more subjective measurement schemes can quickly change and are difficult both to understand and comply with. If the firm incurs explicit costs to comply with these types of measurement schemes (along with the opportunity costs), their variability may have consequences, especially on young, resource-constrained firms (Boeker, 1989; Senyard, Baker, Steffens, & Davidsson, 2014). This concern is most evident in ideological certifications, which, despite an initial alignment with firm values, may eventually prove mismatched with market sensibilities.

Agent-type certification risk. How does a firm's risk in certification enrollment change if that certification is led by a fringe as opposed to a central agent? Moreover, does enrollment in a certification led by an unaffiliated fringe agent differ in this respect from enrollment led by the other two types of agents? Alternatively, do fringe agents revise their approaches to remain competitive, potentially introducing new certifications or expanding existing ones to differentiate themselves from other agents (Giorgi & Weber, 2015)? How do such changes affect the risk of

enrolled firms? Answering these questions is crucial to our understanding of the strategic implications of certification choices.

Certification success. In our theorizing of emergence, we do not address which emerging certification will succeed. We are nevertheless curious whether and under what conditions fringe-led certifications are more successful than those initiated by central institutional agents. We intuit that central agents are expected to manage more concrete ambiguities for convergent pressures. Their reputation is unlikely to suffer if they endorse obvious market problems (Hsu, 2004). Central agents, however, may face challenges when launching ideology-driven certifications since these may seem like self-serving attempts to reshape institutions in their favor. Understanding the nature of both market ambiguity and stakeholder pressures is crucial for predicting initial enrollment as well as long-term certification viability.

Empirical assessment. Finally, we recommend an empirical examination of our 2x2 matrix to address questions such as: "Which certifications are more successful in building legitimacy for nascent firms?" or "Which ones pose greater risks?" Certifications are used primarily by young firms seeking legitimacy (Armanios et al., 2017; Fisher, Kotha, & Lahiri, 2016). Nonetheless, it remains unclear which certifications provide access to strategic resources. Some—especially if led by fringe agents—may be more prone to failure. Premature certification initiatives can harm young firms that align with them, particularly if overly sensitive agents misjudge market demand or mobilize the wrong stakeholders. Further research is needed to disentangle the effects of various certifications across a firm's trajectory. Such studies could uncover underexplored potential advantages or, more intriguingly, the unforeseen negative effects of certification (Eberhart & Armanios, 2021).

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Table 1: The Interactive Effects of the Qualitative Nature of Market Ambiguity and Stakeholder Pressures on Emerging Certifications' Measurement Schemes

		Market Ambiguity	
		Concrete	**Abstract**
Stakeholder Pressure	**Convergent**	<u>Exact</u> • Objective measures • Few criteria • Lowest assessor discretion ***Narrow, Simple Measurement Scheme***	<u>Interpretive</u> • Subjective measures • Few criteria • Moderate assessor discretion ***Narrow, Complex Measurement Scheme***
	Divergent	<u>Expansive</u> • Objective measures • Many criteria • Moderate-low assessor discretion ***Broad, Simple Measurement Scheme***	<u>Imaginative</u> • Subjective measures • Many criteria • Highest assessor discretion ***Broad, Complex Measurement Scheme***

Figure 1: The Influence of Agent Affiliation on Certification Emergence Patterns

CHAPTER 3: FAULT LINES
LATENT HAZARDS: COUNTERPERFORMATIVE EFFECTS OF CERTIFICATION IN NEW VENTURES

ABSTRACT

New firms make considerable efforts to obtain legitimacy in order to mobilize stakeholder resources. In line with institutional theory, certification has been argued and empirically shown to be an effective mechanism for bestowing legitimacy and unlocking stakeholder resources. However, we know little about their potential to backfire, especially for young firms. I investigate how certifications can constrain the very resources they were meant to enhance, a process I call certification counterperformativity. Specifically, I use a qualitative embedded case study of ethical certifications in the cosmetics industry to illustrate how certifications can embed latent hazards that can later constrain firms hoping to innovate, expand, or meet market demands. Through a thematic analysis of interviews, fieldwork, archival documents, and public statements of informants positioned along the product value chain, I build a process model of how these latent hazards (internal friction, operational strain, and strategic rigidity) are activated, leading to counterperformativity. In doing so, I contribute to certification literature in detailing how the very mechanism meant to unlock resources can also introduce significant constraints.

INTRODUCTION

> "The Leaping Bunny Program ... regrets to inform compassionate consumers who look for the Leaping Bunny Logo that Urban Decay is no longer certified as cruelty-free.... The company has notified us that they have elected to sell their products in China, which ... will cause them to violate our [standards]" (LeapingBunny.org, 2012, June 6).

Research regarding certification nearly unanimously highlights its broad range of benefits (Lanahan & Armanios, 2018). For instance, certifications enable new firms to signal quality, establish legitimacy, and obtain resources (Eberhart & Armanios, 2021; Hsu, 2007; Sine, David, & Mitsuhashi, 2007). Indeed, the literature on certifications indicates that the benefits of certification are many and multifaceted (Armanios, Eesley, Li, & Eisenhardt, 2017; Graffin & Ward, 2010; King et al., 2005; Sine et al., 2007; Terlaak, 2007). These diverse benefits lead authors like Sine et al. (2007: 582) and other authors to claim, "certification from authorized actors to *always* be beneficial" (Armanios et al., 2017; Sharkey, Kovács, & Hsu, 2023). However, that was not the experience of Urban Decay, a young cosmetics startup.

As a company that campaigned against animal testing, Urban Decay naturally sought the strict "no animal testing" Leaping Bunny certification to differentiate itself as a "cruelty-free cosmetics" company. After years of growth and success, Urban Decay planned to expand into additional geographic markets, including China. It knew that Chinese authorities reserved the right to test on animals if necessary to remedy safety concerns. Leaping Bunny, however, chose to interpret the mere potential for the Chinese government to conduct animal test as a violation of certification standards. So, despite Urban Decay's protest that "our brand does not test on animals" (Cordelia, 2012, June 6), and that it has no control over what governments choose to do with its products. Less than a month after Urban Decay announced their expansion initiative, Leaping Bunny publicly revoked Urban Decay's cruelty-free certification. With no foresight of

this predicament, Urban Decay abandoned their Chinese expansion plans to be reinstated by Leaping Bunny (Hills, 2012, July 31; Yeomans, 2012, July 9). Indeed, Leaping Bunny's unexpected interpretation of what constitutes animal testing took Urban Decay by surprise and unexpectedly became problematic for Urban Decay, in effect, holding Urban Decay hostage.

And a certification turning from a benefit to a hazard is not unique to Urban Decay. Indeed, other examples indicate that the hazards take several forms. Beyond being held hostage, firms experience increased compliance costs, supply chain bottlenecks, and market backlash. For instance, Honey Pot touted its certified organic and "clean" cosmetic ingredients. However, because of firm growth, some certified clean, organic formulations were no longer viable with larger batch sizes and longer lead times. Honey Pot realized this and substituted some of the previously certified clean, organic ingredients with more robust preservatives to meet the operational realities of growth. However, after formulating out some of the certified ingredients, Honey Pot became the focus of a social media firestorm of false claims of selling out and a proposed class action lawsuit concerning the ingredient changes (McCormack, 2022, May 17). Similarly, ATHR Beauty, a certified cruelty-free, vegan, Fair Trade, B Corp, used "only certified fair-trade ingredients" (ATHR, 2019, September 30). However, when the business failed, the founder lamented that instead of concentrating on the sustainability certification standards, she wished she had instead focused on product efficacy and winning funding to survive (Brown, 2023, May 18).

These examples indicate the certification story is more complicated than current discussed. Certification holds the potential to burden the firm. That is, they possess what I term latent hazards, which are hazards that can be difficult to foresee and manifest only upon specific future pathways. For instance, whereas a certification's upfront costs, such as audits, application

fees, and renewals, are expected and not difficult to calculate, we know little about their nonfiduciary, downstream consequences that may emerge when changes in the firm or its environment occur. Therefore, in this paper, I consider: *When and how do certifications become counterperformative?* In other words, when does certification, which is described as nearly always beneficial, become negative for the firm? Since the literature has "uniformly highlighted the positive consequences" (Überbacher, 2014:685), this study builds theory around cases like Urban Decay, Honey Pot, ATHR, and others, where the latent hazards of certification manifest.

Hints of certification's downside are found in the literature. Wijen (2014:315) theorized that when broad policies are paired with practices, policies may "smother innovative practices by adopters." Carlos and Lewis (2018) argue that some firms avoid displaying certifications as a hypocrisy avoidance technique. Lanahan and Armanios (2018) speak to the diminishing returns of multiple certifications. Indeed, calls are rising for research concerning accompanying theory concerning the possible "deleterious effects" of certifications and their effects on new firm performance at later stages (e.g., Eberhart & Armanios, 2021:17; Moroz, Branzei, Parker & Gamble, 2018; Sharkey et al., 2023). However, few have examined how certification becomes counterperformative, especially for young firms where flexibility among growth initiatives is highly valued. Because foreclosing options, especially with little information about the future states, can derail survival chances (Adner & Levinthal, 2004). Indeed, as Eberhart and Armanios state "[C]ertification is a strategic choice with both benefits and costs, rather than just a benefit with little downside as the prior institutional literature tends to presume" (2021:15). As such, the main aim of this research is not to demonstrate that certifications can become latent hazards, but instead the aim is to investigate how and when counterperformative effects from the latent hazards may arise.

Through a qualitative, inductive study of ethical certifications in the cosmetics industry, I theorize a process model that illuminates the process that leads to the counterperformative effects of certification. Ethical certifications are usually third-party-led certifications with moral or ethical principles. Indeed, ethical certifications in the cosmetics industry provide an ideal context to study certification dynamics. Many startups use these certifications to differentiate themselves and gain trust with customers demanding ethical standards and transparency of complex and globally dispersed supply chains. These certifications are widely available and are essential in bringing hidden but important attributes to light (King et al., 2005). Thus, the complexity of these activities, the geographically distributed relationships, and the ability to engage stakeholders through certification labeling provide an ideal setting to observe the multifaceted effects of certification.

The evidence from the study points to latent hazards triggered by shifts in the external environment or firm activities leading to counterperformative effects. The first, illustrated in the Urban Decay example, manifests based on circumstances outside the firm's control. Here, certification is in sync with firm activities until a future state when external changes in the certification, market, or customer occur. The second trigger manifests itself primarily through internal changes. As the firm scales or tries to retrofit to certification standards, assets, activities, expertise, or partnerships may no longer be well aligned with certification standards. However, many firms seeking certification may not ever trigger latent hazards. These unfold depending on activities firms can control, such as strategic initiatives and resource utilization, but also situations they cannot, such as market trajectories, technological advances, shifting stakeholder preferences, or diminishing certification legitimacy.

Evidence uncovered in this research suggests that certifications come with latent hazards endemic to their design. Thus, counterperformative certification captures how these hazards, once triggered, can undermine the outcomes they are meant to promote. Although these hazards are built into the certification, the negative consequences are only realized through specific future firm actions or environmental conditions. Because these hazards are contingent or deferred, most new ventures are likely not to even consider certifications as self-imposed, "artificial constraints" embedded with hazards, but as legitimacy levers that help win resources and stakeholder support, as previous studies indicate.

However, these constraints are salient for young firms because their success can depend on resource conservation and flexibility to determine the best path forward (Baker & Nelson, 2005; Murray & Tripsas, 2004; Rindova & Kotha, 2001; Zuzul & Tripsas, 2020:2). As such, this study provides a process model for how certifications, though often beneficial in early-stage growth, can evolve into sources of constraint.

THEORETICAL BACKGROUND

New ventures like Honey Pot and ATHR commonly seek certifications or "acknowledgements from central institutional actors that a firm meets a particular standard" to authenticate their actions as legitimate, that is, "desirable, proper, or appropriate within some socially constructed system" (Suchman, 1995: 574). Legitimacy helps new ventures overcome the liability of newness (Stinchcombe, 1965), signal quality (King, Lenox, & Terlaak, 2005; Terlaak & King, 2006), and win resources from skeptical audiences (Armanios et al., 2017). Indeed, prior research has emphasized that certification, which is often communicated publicly via a badge or stamp, is viewed favorably by stakeholders (Sine et al., 2007: 578).

New firms seek to secure resources from wary audiences. They struggle to convince audiences of their viability without proven track records or signals of staying power (Stinchcombe, 1965; Zimmerman & Zeitz, 2002). Institutional theorists argue that legitimacy—a perception of appropriateness or conformity to social norms—is essential for firms to access resources and survive (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Suchman, 1995). Population ecologists link legitimacy to survival (Dobrev & Gotsopoulos, 2010), and economists link compliance signals to standards as a proxy for quality (Dranove & Jin, 2010). Thus, the literature overwhelmingly highlights the benefits of legitimacy and its resource-enhancing ability (Überbacher, 2014). New ventures, in particular, lack legitimacy and are unlikely to attract resources without it (Fisher, Kotha, & Lahiri, 2016; Überbacher, 2014; Zimmerman & Zeitz, 2002). Therefore, firms that become legitimate in the eyes of their stakeholders can more easily accumulate survival-enhancing resources.

Scholars have identified several ways of obtaining legitimacy. Some firms signal through conformance to norms (DiMaggio & Powell, 1983; Karlsson & Honig, 2009; Meyer & Rowan, 1977; Scott, 1995; Sine et al., 2007; Suchman, 1995; Zimmerman & Zeitz, 2002), locating in appropriate geographies (Carroll & Hannan, 2004), telling resonant stories (Lounsbury & Glynn, 2001), or performing symbolic actions like emphasizing the founders' education (Zott & Huy, 2007). These efforts are geared towards using proxies for performance to obtain legitimacy.

New ventures often adopt signals such as certifications as a substitute for performance to bridge the legitimacy gap. Certifications have existed since the late 1800s but became widespread in the early 1980s and 90s. As supply chains began to be geographically dispersed and cross multiple regulatory regimes, companies struggled to signal and ensure quality and compliance. Companies sought to mitigate ambiguities that accompanied the supply-chain

fragmentation, yet consumers and other stakeholders demanded transparency (Bartley, 2011); thus, supply-chain ambiguity became a problem. Stakeholders were pressing for increased information and quality guarantees, yet firms were initially unable to provide accurate information. Certifications emerged as a response to the market ambiguity accompanying global supply chains and stakeholder pressure concerning quality, sustainability, and ethics (Bartley, 2007a, 2007b, 2011; Taylor, Sirmon, & Hiatt, 2025). Governments were presented with a complex regulatory solution as the products traversed multiple nations, so private market-based solutions led by institutional agents—NGOs, trade groups, and firms—stepped in to provide solutions (Bartley, 2007a, 2007b; Lawrence & Suddaby, 2006; Taylor et al., 2025). The rise of audit culture, availability of access to products and purchasing through the internet, and the resulting supply chain complexity resulted in field-level transformation that supercharged certification emergence and diffusion (Auld, 2014; Hoffman, 1999). This diffusion and rapid uptake of certification led Cashore, Auld, and Newsom (2004: 4) to describe certification systems as "one of the most innovative and startling institutional designs of the past 50 years."

Through certification, firms had a tool for information intermediation, or the ability to translate their internal attributes or practices into standardized metrics that stakeholders could now evaluate (Espeland & Stevens, 1998; Sharkey et al., 2023). This intermediation through certification is uniquely valuable to new firms. Certifications entail aspects of institutional, cultural, and ecological theories concerning legitimacy attainment. Certifications can reaffirm a location or structure (AOC), quality (TÜV), tell a compelling narrative (Fair Trade), or be a

stamp of approval of institutional conformity (USDA Organic).[3] For example, Vintner's Daughter—a boutique cosmetics firm—holds certifications ranging from ecological (California Green Business) to institutional (Leaping Bunny) to identity-based (Women-Owned), each contributing to its perceived legitimacy (Lee, 2009; Sine et al., 2007). These benefits and multifaceted means to legitimacy lead authors like Sharkey et al. (2023:5) to describe certifications as "the ideal information intermediary."

This dynamic can be seen in the market with young firms like Vintner's Daughter. It cannot invite concerned stakeholders to audit its supply chain for each product. Since attributes important to the customer cannot be verified even after consumption, cosmetic products are "credence goods," and certifications are highly influential in these markets (Darby & Karni, 1973; McCluskey, 2000). As a result, firms in these markets choose a third-party certification to attest to unobservable but important firm activities such as humanistic standards. For example, Fair Trade audits a product's supply chain, then gives permission to add its stamp of approval on the labels, websites, and other company promotional materials. The applying firm is linked to the Fair-Trade website, lending legitimacy and attracting resources through this process (Darnall, Ji, & Vázquez-Brust, 2018). Thus, the prevailing view is that certification is essentially a net positive for young firms (Armanios et al., 2017; Graffin & Ward, 2010; King et al., 2005; Sine et al., 2007; Terlaak, 2007) even in cases where certifications are said to grant different levels of legitimacy (Bouvard & Levy, 2018; Jahn, Schramm, & Spiller, 2005).

[3] Appellation d'Origine Contrôlée (AOC) certifies that a product, usually wine, cheese, or other agricultural good, originates from a specific region in France. Fair Trade certifies that products meet social, environmental, and labor standards, especially in developing countries. TÜV Technischer Überwachungsverein) is a German-based certification body that verifies product safety, quality, and compliance with technical standards. USDA Organic certifies that agricultural products meet federally defined organic farming and processing standards.

Herein lies the puzzle: just as any voluntary signal of quality has benefits to stakeholders, the quality and conformity that certifications naturally come with costs, some of which are latent and only being realized if triggered (Gao, Gopal, & Agarwal, 2010; Spence, 1973). On the one hand, certification enables resource acquisition by complying with standards, thus signaling quality, and enhancing resource acquisition (Armanios et al., 2017; Doh, Howton, Howton, & Siegel, 2010; Hsu & Ziedonis, 2008, 2013). Resources may enable the firm to hire additional employees, build out facilities, and impress potential stakeholders. On the other hand, firms have limited attention and resources. In pursuing certification, they give up the flexibility to invest in building diverse knowledge and capabilities critical to a young firm's survival (Dobrev & Gotsopoulos, 2010; McDonald & Gao, 2019; Zuzul, 2019). Young firms are at a sensitive phase of their development. The early decisions they make can imprint or instill a "persistent and enduring effect" on the firm's dominant strategy and cause "inertial forces and path dependency" (Boeker, 1989; De Cuyper, Clarysse, & Phillips, 2020:1580; Gilbert, 2005; Snihur & Zott, 2020; Stinchcombe, 1965). Inertial forces and path dependency can work against a key advantage of young firms, their dexterity.

They can run lean, have pliable resources, and few entrenched beliefs (Kraatz & Zajac, 2001; Leonard-Barton, 1992; Levitt & March, 1988; McDonald & Gao, 2019; Ruef, 2006; Williamson, 1991). When new firms add additional standards, complexity, and resource requirements and are beholden to third parties' legitimacy, the implications of this choice at such a sensitive strategy-setting phase of the business are not well understood.

Indeed, certifications may appear like a panacea for legitimacy but can also be a potential source of constraint. When misaligned with either the market or the firm, certifications can become self-imposed constraints that arise not from regulatory, technical, or market realities,

but from voluntary legitimacy-seeking actions. Thus, a firm may trade its flexibility for certification-enabled legitimacy, but the downsides of this choice are not well understood.

Based on the inductive qualitative study of ethical certifications in the cosmetics industry, three specific types of latent hazards are identified through which potential counterperformative results can occur: internal friction, operational strain, and strategic rigidity. These mechanisms are latent and may be triggered in one of two ways: firm-induced actions, such as expansion or innovation, or market shifts, such as shifting standards, shifting demand, or legitimacy dilution. Based on these data, I developed a process model that details how these hazards are triggered and under what conditions certifications can become counterperformative. These benefits and multifaceted means to legitimacy lead authors like Sharkey et al. (2023) to describe certifications as an ideal information intermediary.

Firms like Vinter's Daughter, hoping to show compliance with specific social standards required for consumers to transact, cannot invite concerned stakeholders to audit the supply chain for each product; products that have unobservable attributes that are important to consumers are called “credence goods” (Darby & Karni, 1973). Qualifications are extremely influential since attributes cannot be verified (McCluskey, 2000). As a result, firms in these markets choose a third-party certification to attest to unobservable but significant firm activities such as humanistic standards. A certification like Fair Trade lends legitimacy by intermediating the information between stakeholders and the firm. The stamp of approval is then added to labels, websites, and other company promotional materials, and the firm is also linked to the Fair Trade website, lending legitimacy and attracting resources (Darnall et al., 2018; Sine et al., 2007).

The literature's current understanding is that certification is a net positive for young firms (Armanios et al., 2017; Graffin & Ward, 2010; King et al., 2005; Sine et al., 2007; Terlaak, 2007). This holds even though certifications are said to grant various levels of legitimacy (Bouvard & Levy, 2018; Jahn, Schramm, & Spiller, 2005). Recent work has begun to look at some potential risks associated with becoming certified. For example, Lanahan and Armanios (2018) indicate that a second certification can potentially lead to diminishing returns; however, they note that the first certification is positive. In their single-case study of the artisan chocolate industry, Woolley, Pozner, and DeSoucey (2022) highlight the moral tensions caused by certifications when founders' mission or priorities shift. Carlos and Lewis' (2018) cross-industry study of CSR certifications shows that some firms avoid displaying certifications as a hypocrisy-avoidance strategy. These studies highlight potential counterperformative effects that are not detailed but merely mentioned as potentially present.

METHODS

Background

Over the past thirty years, the cosmetic industry has seen a dramatic rise in third-party ethical certifications. While governments had introduced basic safety standards, such as the US Food and Drug Administration's 1938 Food, Drug, and Cosmetic Act and similar legislation worldwide, this was not enough for consumers and other stakeholders. Beginning in the 1970s, concerns about the treatment of animals[4], long-term health effects from chemicals[5], and a large-

[4] For example, the Draize Eye Irritancy Test, developed in 1944, applied chemicals to albino rabbits' eyes to document irritancy (Balls, Botham, Bruner, & Spielmann, 1995).

[5] Although this is multifaceted, instances like mascara causing serious eye injuries, safety concerns with mass-produced chemicals, and the publication of Rachel Carson's *Silent Spring* that shifted the dialogue from immediate harm to accumulated harm over time, contributed to stakeholder concerns.

scale advocacy movement for transparency began to incite stakeholders to push for change in the cosmetic industry. Brands like The Body Shop in the UK joined the movement and began touting "cruelty-free products," while Aveda highlighted "natural" formulas piggybacking on the burgeoning organic food movement. Although Europe proposed bans on animal testing and toxic substances, regulation was still fragmented and left space for certifications as a potential solution to address regulatory voids and stakeholder pressure (Taylor et al., 2025). The organic food movement began formal certification in the 1970s. In the 90s and 2000s, certifications like USDA Organic (US), ECOCERT (France), BDIH (Germany), Leaping Bunny (UK), Environmental Working Group (US), Fair Trade, and many others began to spread through the industry.

Today, the cosmetics industry has over one hundred certifications, most of which emerged in the last 30 years. Firms have certification options for everything from raw ingredient sourcing (Roundtable on Sustainable Palm Oil), absence of animal testing in finished products (Leaping Bunny), responsible forest harvesting for packaging (Forest Stewardship Council), and sustainability practices concerning the firm itself (B Corp). A sample of certifications in the industry is provided in Appendix A. These are widely seen as mechanisms to signal legitimacy by assuring consumers, retailers, and investors that a firm meets social and environmental standards.

Context Selection

The cosmetics industry is a particularly revelatory context for examining the counterperformative effects of ethical certifications. First, cosmetics are a credence good, meaning customers cannot independently verify specific attributes about a product, such as "reef safe," "cruelty free," or "naturally derived," even after consumption, thus making certifications

extremely influential (Darby & Karni, 1973; McCluskey, 2000). They are widely used throughout the industry, particularly by young firms as a springboard to legitimacy. For example, many labels prominently display certification logos at initial launch (see Appendix B).

Second, the industry has a constant influx of new ventures, and often these ventures differentiate themselves through value-based claims verified by certifications. Startups and boutique firms make up 81% of the market share in fragrance, 71% in skin care, and 79% of personal care (Jeong, 2023, November). Its low capital costs and ease of startup bring in a wide range of entrepreneurs. For example, Blanka is a Canadian startup that helps potential entrepreneurs "launch a private level makeup brand in minutes … just add your logo, Blanka handles the rest" (Blanka Beauty, n.d.). The industry has made it possible for ideas to become a reality by providing start-to-finish solutions for potential entrepreneurs.

Third, young firms are rarely vertically integrated and often have little control over their supply chains or partners. In addition, the industry is surprisingly complex, not only because of the dependence of many entrepreneurs on multiple inputs from different geographies, but also because of the scientific prowess required to understand the chemistry and toxicology behind the products. Thus, resulting supply chains are doubly complex, being both scientifically demanding and geographically dispersed. This dependence on external resources, combined with the ability to highlight firms that use certifications as the logo is visible on the packaging, makes identifying firms that use certifications and personnel aware of their effects straightforward. The complexity of these activities, the nature of sourcing relationships, and the ability to affect the customer through labeling and the widespread use of certifications to attest to appropriate activities enable the observation and evaluation of the phenomenon of interest. These features create an appropriate context where counterperformativity can be observed.

Methodology

I used a single-case, embedded design (Yin, 2018) to investigate the effects of ethical certifications within the cosmetics industry. During pilot interviews, informants were asked open-ended questions concerning their experience with certifications, why they chose to pursue certification, and their experience with certification in current and past companies. I observed a recurring pattern that contrasted with the literature's dominant portrayal of certifications as uniformly beneficial. In interviews and articles, certifications seemed to introduce constraints. To explore these effects, I adopted a value-chain[6] sampling strategy (Langley & Ravasi, 2019), sampling additional informants across young firms, contract manufacturers, ingredient suppliers, retailers, consultants, and certification bodies operating in North American and European cosmetics markets. This approach enabled me to map counterperformative effects across product ideation, development, compliance, marketing, and scaling. I prioritized obtaining firsthand accounts of key informants with broad and specific domain knowledge to provide unique insight into the underexplored phenomenon (Kumar, Stern, & Anderson, 1993; Maguire, Hardy, & Lawrence, 2004; Miles & Huberman, 1994). Access to experts in each of these phases requires advanced knowledge of the industry and exclusive access to experts throughout the industry and at each phase.

Because process-based theorizing requires key informants with deep contextual knowledge and triangulation of multiple sources to avoid bias, I also drew on public interviews from podcasts and trade events, media sources, and archival documents from sampled informants (Raffaelli, 2019; Yin, 2009). This design builds on prior studies that theorize institutional

[6] I use the term value chain (Porter, 1985) to describe the activities involved in product ideation, launch, and distribution, and post-launch maintenance.

processes through embedded perspectives in bounded field contexts (Maguire et al., 2004; Tracey & Phillips, 2016; Weber, Heinze, & DeSoucey, 2008; Zuzul & Edmondson, 2017) and is similar to other phenomenon-based certification studies on forestry (Zietsma & Lawrence, 2010), organic certification (Lee, Hiatt, & Lounsbury, 2017), grass-fed beef (Weber et al., 2008), and AASCB (Durand & McGuire, 2005).

Data

The core of the data is a collection of 56 first-person interviews conducted and transcribed between 2020 and 2024. The average interview lasted 57 minutes, with some lasting over 120 minutes. Informants included founders, R&D personnel, certification-body executives, ingredient suppliers, contract manufacturers, operations, and industry consultants (see Table 2) with a mean cosmetic industry tenure of 22 years. Some interviewees served in multiple roles such as operations, R&D, and executive management. The initial set of pilot interviews was a convenience sample of four founders of young cosmetic firms. I interviewed their founders through introductions from executives of two trade associations and connections from past professional engagements.

Insert Table 2 about here

Purposive and snowball sampling were then used to obtain informants from each step in the cosmetics industry's supply chain sectors, including product ideation, formulation, regulatory compliance, manufacturing, sales, and management. This diverse sample ensured representation across firm divisions and product lifecycles (Morse, 2015). I capture the perspectives from firm founding, certification use, product development, firm expansion, and customer feedback, thus

reaching out to the edges of the phenomenon by incorporating multiple perspectives usually overlooked by other studies (Ibid).

To triangulate findings and as a guide to understanding certifications, I gathered 40 articles from the top trade publications, transcribed 45 podcast episodes, and recorded trade events from industry experts, seven of whom I also interviewed, and reviewed industry-specific materials such as books and past industry events. These materials highlighted field-level discourse concerning certifications and guided my interview questions and site visit. I also reviewed over a decade of company documents, including emails, standard operating procedures (SOPs), marketing briefs, and sales sheets (see Appendix C). I attended eight certification-focused panel sessions at the University of Washington featuring entrepreneurs and experts invited to discuss third-party certifications. I then went back to the original pilot interviewees to ask for further clarification on certifications and interviewed six of the key informants again at each phase of the certification to see whether I had captured their experiences accurately.

Lastly, I gathered information concerning 107 cosmetic certifications. This information includes a list of cosmetic certifications and the associated requirements. The details include a description of requirements, type of standard (pass/fail, grading system), level of analysis (ingredient, packaging, manufacturing, etc.), audit frequency, audit type (third-party, company itself), duration of certification, along with various demographics. This list helped provide context concerning what is required to certify and the possible additional activities the business must undertake to become certified. For example, EWG certification has documentation requirements over and above legal requirements and bans ingredients otherwise allowed by Health Canada and the US Food and Drug Administration (FDA). Other standards dictate specific ingredient restrictions, require exclusive supplier credentials, or require frequent audits.

Data Analysis

After gathering these standards for context, I used thematic process analysis to uncover patterns and mechanisms of the process by which certifications become counterperformative (Braun & Clarke, 2006; Miles, Huberman, & Saldaña, 2014). I engaged in open coding (Saldaña, 2016) to assign descriptive labels to incidents, practices, and narratives related to certification from the initial articles and interviews. I used NVivo and Atlas.ti qualitative analysis software to manage and organize the transcripts. Second, I conducted pattern coding, grouping general first-order codes into thematic clusters (see Table 3). I then re-coded the pilot interviews and concentrated on the emerging counterperformative effects of certifications identified using pattern coding. Third, I used thematic analysis to organize these clusters into overarching patterns and relationships across the dataset, specifically across interviews, news articles, podcasts, and trade publications (Braun & Clarke, 2006; Miles et al., 2014). This pattern matching helped with refining codes and defining constructs.

Insert Table 3 about here

Interviews and articles were continually added until no additional information surfaced (Glaser & Strauss, 1967). After all data were gathered, two colleagues revisited themes to determine whether coding had been appropriately applied (Campbell, Quincy, Osserman, & Pedersen, 2013). After the codebook became more comprehensive, covering both the business phases (startup, expansion, retraction), production phases (ideation, research and development, sourcing and preparation, production and packaging, order and fulfillment), product launch, and additional strategizing, and post-market surveillance, the rest of the data was then coded over a year. The codebook was revisited four times throughout the project to ensure accuracy and

updated as new information became available or previous codes no longer reflected the themes that emerged from the data.

Lastly, after all data was coded, tables were created with exemplary quotes based on the theme from the sample to compare patterns one more time across interviews, articles, podcasts, and field observation. Similar patterns were then grouped accordingly (give an example). Lastly, experts were consulted to evaluate the themes that emerged from the data to ensure accurate application of the codes (See Table 4).

Insert Table 4 about here

FINDINGS

Certifications require aligning operations, messaging, and internal decisions with externally imposed standards. Initially, this confers legitimacy and provides resources, but what participants described was another hidden process by which certifications, once adopted for legitimacy, can change into a constraint. Certifications come with latent hazards or risks embedded within strategic paths that only become problematic under specific circumstances (Sydow, Schreyögg, & Koch, 2009). These hazards remain dormant until the external environment or the internal dynamics trigger a misalignment between firm operations and certification requirements. Then, the once beneficial certification becomes a constraint mechanism (MacKenzie, 2006; MacKenzie & Bamford, 2018). Our first-hand interviews, field observations, articles, and public interviews reveal this process and indicate that these hazards are latent in that they do not manifest immediately or, in many cases, ever thereby only "actively undermin[ing]" certain new ventures (MacKenzie & Bamford, 2018: 99). But even worse, both

the form of the hazard as well as the triggers for their manifestations are difficult to detect as their source is embedded in the demands of the certification itself.

Based on the data analysis, Figure 1 captures how the latent hazards of certifications are activated, eventually leading to counterperformative outcomes. The analysis suggests the latent hazards take three specific forms: internal friction, such as conflict with internal expertise or ethical tension; operational strain, such as increased time to market or overly complicated system inputs; and strategic rigidity, where certifications lock firms into paths that foreclose instead of enable future strategic flexibility (Adner & Levinthal, 2004; Trigeorgis & Reuer, 2017). These latent hazards, when activated, lead the firm to counterperformative outcomes. The figure indicates that these activations are time agnostic and may manifest latent hazards at any time.

Insert Figure 2 about here

Certification as an Institutional Anchor

As expected, informants highlighted the multifaceted benefits of the resources won through the legitimacy certifications provided (Sine et al., 2007; Suchman, 1995). Consistent with previous literature, participants described enhanced legitimacy but also, over time, moved from the periphery of a firm's practices to their core. It became a driver of organizational processes, sensemaking, value propositions, and narratives concerning identity directed at stakeholders. As Beekeeper's Naturals founder, Carly Stein explained in a public interview: "At every level of production, our company was essentially built to support that mission. So, as we were going through things [for certification] … [it] was really built into our entire supply chain and the ethos and structure of the company" (McCormack, 2020, January 17).

Similarly, Jana Blankenship of Captain Blankenship described B Corp certification as a guiding force: “For me personally, B Corp was always my North Star for Captain Blankenship… a way to make sure that as we scale, we continue to make people and planet top of every decision we make” (Ibid). Thus, certifications became deeply ingrained sensemaking mechanisms (Weick, 1995), providing heuristics that influenced both present decisions and future strategic trajectories (Boeker, 1989; Marquis & Tilcsik, 2013; Moroz et al., 2018). Many of the archival sources echoed this pattern. For these founders, certification unlocked access to capital and supply relationships and satisfied the demands of stakeholders but required commitment and alignment. However, this very alignment carried hidden risks. Alignment hard-coded assumptions about sourcing, formulation, marketing, and compliance that reflected certification logic rather than the firm's evolving needs. These early decisions won legitimacy but tied firms to compliance commitments that, when misaligned, could become burdensome.

Certification as a Latent Hazard

Certification compliance signaled quality and aligned with stakeholder values, but this compliance also became deeply embedded in many aspects of the business. Founding documents and production checklists from our data show product development checklists and internal communications referencing certifications as guiding principles for formulation and standard operating procedures. "Is it on the certification list?" one project manager asked in an internal email discussing some confusion as to how to formulate a new product. These hazards are baked into the structure of the certification. Certifications codify general standards across firms and industries, but that codification, while necessary for comparability and enforcement, is poorly suited for dynamic firm contexts and individual firm adaptation. Latent hazards do not emerge

from misapplication, but from structural tension between a certification's external authority and a firm's internal flexibility.

In the interviews above, founders indicated “current states of the world,” certifications requiring “significant time and resources,” certifications being built into their “entire supply chain," and being beholden to external governing bodies. These dependencies continue to enhance legitimacy so long as market conditions and certification requirements remain stable and aligned with firm needs. These latent hazards are dangerous because they are invisible until triggered—the current state reinforces this arrangement, and their effects are not always immediate but cumulative. The informants described the slowly mounting frictions, such as launch delays, staff debates, escalating costs, or curbed expansion, that only became apparent when the external environment changed, or internal dynamics evolved.

Latent Hazard Activation

Latent hazards require activation. In our data, informants described two such events: external shifts or shifts outside the firm's control, such as regulation, technology, or stakeholder sentiment, and internal evolution, such as expansion, retraction, resources, or strategic reorientation. Rachel Budde, the founder of a boutique skin care company, Fat and the Moon, illustrates one such event in her Instagram Post: “About halfway through the process, we made the decision not to become B Corp certified. We made this call as more multinational corporations and companies like Nespresso have joined the ranks of B Corp... We’ve started to deeply question the necessity of certifications for us to communicate our commitment to our values” (Budde, 2024, April 26).

For Budde, the entry of Nespresso, a firm with a questionable environmental record, into the B Corp ecosystem diluted the signal's legitimacy. The certification no longer differentiated

her mission-driven brand; it put her in the same camp with practices she opposed. Another participant highlighted an unexpected shift: "We're working so hard to achieve a really clean product, and because it has this specific oil, then the [certification] would change their perspective on an ingredient… So, it could be perfectly fine and check out in 2016, but in 2020, new information informs their decision making, and then [certification body] would just change the standards" (ID17).

Another mentioned that certification seemed to "move the goalposts… and suddenly, without doing anything, you're at a competitive disadvantage" (ID03). And another informant added, "So you've limited your path, and that path is designed by someone who has no interest in your company whatsoever… no interest in how your products work or the science of your products" (ID25). Many of the participants in the study discussed how this path was not predictable or easy to understand. "New information informs their decision making, and then they would just change it. There's no process to inform you" (ID17).

Since these processes were heuristics for the firm and deeply embedded from the beginning, activating these latent hazards through environmental shifts became particularly problematic. "And so, brands that built their whole story around, we have this certification, which could become obsolete. And then what do they have left to stand on? Because sometimes their sacrifice was real product efficacy, to get that certification. And if that certification comes out of vogue, they're just kind of left with a mediocre product that they pay too much for" (ID20).

As the next section will indicate, external shifts are not the only path to latent hazard activation. Internal activities (e.g., shifts in strategy, scale, or organizational structure) can also cause activation of latent hazards.

Not only does the external environment evolve, but natural firm growth or shifts in strategy are part of firm maturation. These internal evolutions or firm-driven alterations in strategy, structure, or scale also activated the latent hazards. These internal changes require flexibility, consistent with real-options logic, prescribing incremental, low-commitment paths that allow firms to experiment and reverse course when needed (Adner & Levinthal, 2004). However, certification standards often impose rigid parameters that restrict the firm's ability to pursue these adaptive pathways.

Interviewees described this scenario, specifically, when firms began expanding, and certification-backed processes became problematic. "A lot more variables come into play when you scale it up because you'll start to see things that you never saw at a smaller scale. You wouldn't even see it in a five-kilogram batch. You weren't seeing problems until you're making hundreds of kilos" (ID19). Activating latent hazards can cause misalignments between certification standards and the complex environment that new firms are navigating. These scenarios can activate certification counterperformativity.

Latent Hazards: Internal Friction, Operational Strain, Strategic Rigidity

The data highlight how the external environment or internal dynamics can activate one or more latent hazards. Across the data, three distinct but interrelated hazards emerged: internal friction, operational strain, and strategic rigidity. Together, they drive the process of certification counterperformativity.

Internal Friction. The first latent hazard, internal friction, was activated as discord arose among personnel when a certification conflicted with their lived experience, expertise, or beliefs. These frictions often emerged from tensions between the functional roles of different departments (such as marketing and research and development). As firms complied with

certification standards, informants experienced frustration, moral conflict, or diminished agency in their roles. Both employees and entrepreneurs lamented the toll that certifications took on the inner workings of their companies. "Marketing is excited about a certification," said a former R&D executive turned CEO. "And they're like, okay, we're getting certified through [redacted certification]. Then we in R&D say that's going to be complicated. Marketing says, well, I don't really care…. It causes discord, and marketing's costs also increase. So, you have the latent cost of likely not enough certifiers to assess your products, annual audits, etc.; it's just a mess...." (ID34). Scientists resented being asked to comply with standards they saw as unscientific or arbitrary. For example, R&D is trying to meet the demands of marketing but is frustrated that marketing does not understand that the certification standards may stand in contrast to what is scientifically possible, or how the scientists would otherwise approach the problem. And, as one participant put it, certification is "signing up teams for a burden they didn't sign up for!" (ID03). Scientists resented being asked to comply with these "arbitrary standards." "Oh, man, we get so mad whenever we get a restriction where we know that it's not true," said a frustrated formulation chemist. "You're gonna make us do something because of somebody else's opinion? That drives us nuts. It's probably just the characteristics of a scientist, but we don't like to just accept and move on" (ID07).

He further described one of the problems of these artificial restrictions when they "hit the bench," as he called it, or when the restrictions were pushed onto new products. "We don't mind a challenge; we love it! He, however, goes on to say, "But I mean, we're getting failure after failure... we're on prototype number 110. So, if you have 110 failures, gosh, that's so demeaning. And so, we're getting really frustrated. And that willingness to be innovative is starting to kind of

get carved out." A few participants noted that products no longer met their intended function and certifications causing formulation "impossibilities."

Not only were tensions present between staff because of artificial restrictions and clashes of expertise but also concerning ethical issues staff were having with complying with certifications. "I've had to do things that I know aren't necessarily what I believe is the best or the right way," said the founder of a small cosmetic company who understands where R&D is coming from. "But I'm not going to be able to change that, you know, not when you have all these brands and multinationals that are [redacted certification] certified. And, as a small brand, you know, you really want to have that trust." But, speaking of other brands that were certified safe, "Would I use this product on my baby? (shaking her head no)" (ID31). Another formulator described her turmoil, "I had to, just say, I've tried to educate [the founder] but ultimately, I'm not here to like fight and cause discord. And, I don't have a big enough voice. So, I had to put my head on my pillow at night and say, 'Did I do everything that I could that was in my power?' And that's how you sleep at night, I guess" (ID19). This theme was frequently echoed by other informants with phrases like "they don't care," "they do not understand, or do not want to understand," calling the implementation and maintenance of certification "a real challenge."

Another formulation chemist termed certifications "artificial restrictions" because of the voluntary restrictions firms put on themselves when they choose to certify. "They're somewhat artificial, right? You don't have to have these restrictions to go to market"(ID33). She gives an example that you can comply with the standards, but "so often they're not really based on anything but ridiculousness. They'll malign a type of ingredient, but they don't have the logic to malign another type of ingredient that has a similar chemistry." Another formulation chemist turned ingredient sales representative echoed this sentiment but does not lay the blame on

marketing and notes that customers are "afraid of science" and "they think, everything should be edible, even if you don't want to eat it, it should be safe enough to eat…. So, it's just misinformation" (ID01). These "artificial restrictions" and general contempt from the scientists lead to frustration, discord, and infighting among those tasked with implementing the standards.

Operational Strain. In addition to internal friction, informants described a second latent hazard: operational strain. Certifications required additional resources for the same output. Firms diverted limited attention and resources away from core functions to ongoing certification maintenance (Ocasio, 1997). One informant illustrated this strain: "I was VP of product, and I'm not working on product. I'm calling a bunch of suppliers, to try to get them to give me information that they probably don't actually have anyway" (ID03). Certifications impose constraints (ingredient restrictions, supplier documentation, approved chemicals, etc.) that may necessitate new processes (testing, reformulation, batching, validating, audits) that would not be required otherwise. Indeed, Martincic (1997:4) noted that certifications could "compound the already burdensome task" of operational documentation and reduce profit margins through additional personnel and expertise requirements. "Typically, if we get into [certified] material that's nonstandard… we will actually take that material to the lab and make a small batch to make sure what effect that's going to have on the final formulation. That all costs work. So, you think that these certifications would raise the standards of efficacy and raise them, you know, but I can tell you… they're a train wreck" (ID34).

Another operations professional talked about the difference between the complexity of the production process after becoming certified. "[Certifications] processes can be very disruptive on the manufacturing floor… If I have to shut down production, do a special off-cycle clean, because we're running organic, that hits my margins intensely. That wastes our time and

then makes the product more expensive" (ID24). These additional steps increased burdens on already-strained small firms and contributed to a loss in productivity.

The added administrative complexity trickled down to overall slowdowns in productivity. Rerouted sourcing lanes, requests for documentation, and waiting for certification audits became strains on production timelines. One operations expert said, “I have lost so many hours of my life just boiling over full tanks as a rabbi stands there and watches for six hours while we clean and sanitize a piece of equipment… it takes so much time away from actually producing a high-quality product.” (ID24). Production was even halted as firms awaited the results of certification audits. "We had to submit everything to [certification body]. Then you had to kiss their ass and pay a lot of money. And then they would sit on the ingredient review because they were so busy. We couldn't put the [redacted certification] in a formula that we gave to them six months prior because we had launch" (ID27). Another spoke of being "pushed into another season… and now it doesn't now make sense to launch a sunscreen in November" (ID20). Delayed launches, added documentation requirements, and waiting on the audit outcomes were all triggered by certifications.

One participant gave a holistic perspective of how these problems hit the production floor and touched every aspect of the business. "It [certification] slowed everything down. It wasn't just like a siloed conversation about product packaging lead times. It was affecting all pieces of the business because we chose a lane. We chose a lane to be [certified]… and that was a detriment to any decision that we would be making going forward" (ID17). In her case, she was aware of the hidden cascading effects that certifications can have on productivity, not only on the production floor but throughout the business operations. But these costs can be challenging to quantify because the implementation burden does not fall on finance or marketing.

“Marketing and sales can be pushing for this, because that's, again, consumer visible, but the compliance is falling on another group," said one of the VPs of product. "And then finance is often in the dark and has no idea. There's maybe a yearly certification fee. Oh, that's it, but it's like, no, no, there's all this other stuff" (ID03). This "other stuff" or was best described by another informant. “Determining costs was a little bit challenging. Because you'd have to go out and try to source a different raw material. So, the cost wasn't necessarily a direct cost; there wasn't necessarily an immediate correlation. But, for the business, in general, if we have to go source a brand-new raw material, engage with a new supplier, then we have to purchase at another MOQ (minimum order quantity) of something when we could have just used something else that we know is safe and effective” (ID20). These hidden costs were difficult to determine, not because they were not salient, but because they would show up later in various parts of the business, further underscoring the nature of these latent hazards. “If you're just looking at the raw material cost for cost, it wasn't necessarily that something else was going to be way more expensive on a per kilo basis. But it was all of the additional resources that go into sourcing another raw material and then storing it and shipping it and all of those things.” (ID20).

Strategic Rigidity. Firms also encountered hidden opportunity costs as personnel were diverted from core activities. The hidden costs were both an inaccurate fiscal expense and an opportunity cost to other salient business activities. "Okay, I have an average of one and a half days for certification that I will be audited. I lose one and a half days multiplied by three people multiplied by X number of certifications. And so that alone could be tens of thousands of dollars, then I have opportunity costs that come from taking those people outside of what's really happening on the production floor." (ID24). Another informant illustrated the actual strategic tradeoffs: "Any additional layer of regulatory compliance or value add certification... waiting for

my supply chain, to go get some training and then input all this data, then double check it and validate it... instead of purchasing and, you know, strategically thinking or getting down to the tactical procurement" (ID14). Not only did he mention taking the person away from regular duties but being able to strategically think and "strategically building relationships because they have a 16-page, 200-question validating survey that's going to take two hours a day." These hidden costs often remained obscured during initial certification decisions but accumulated slowly over time, leading not only to operational strains but strategic rigidity or the inability to pursue or consider alternate strategic paths due to prior commitments.

Strategic rigidity manifests when early choices that helped the venture gain legitimacy foreclose future strategies and cause path dependence. This foreclosure illustrates how legitimacy triggers this last latent hazard (Tracey, Dalpiaz, & Phillips, 2018). "We chose a lane, and everything was thereafter affected by this choice" (ID17), as the informant described earlier. This quote captures the core dynamic: founders may think that certifications are, as one founder put it, just another "unique selling proposition" (Mroczkowski, 2020). However, as data suggests, certifiers prescribe inputs for supplier rosters and even narrative claims. Each incremental compliance step entrenches the firm further in certification-backed opportunities, precisely the opposite of providing the flexibility young firms may require (Adner & Levinthal, 2004).

In addition, certification bodies themselves warned against becoming too reliant on their expertise because, as one of the lead scientists at a certification body said, “We are not vested in the safety of your specific products… [Certifications] don't have R&D staff in house that can say, ‘Well, this mixture makes sense for these types of products that are safe, but not in our mixture.’ Or ‘our supplier’s carryover additives are actually higher, so we need to have a higher

preservative rate,' or whatever it is, right? There's none of those conversations here… We are vested in being a tool, not a replacement for actual expertise" (ID12). However, many young firms may not fully recognize these risks at the outset. As one founder explained in the *Beauty Independent* article *Are Certifications Worthwhile?* "We are not chemists or dermatologists nor are we researchers who know the latest in ingredient safety science. We look to EWG [certification] and their team of scientists and toxicologists." (Brown, R., 2024, May 13).

"I could spend the rest of the call talking about this," said an informant who sees the inner workings of the operations of many small cosmetic companies. "[Firms] lean on certifications to represent themselves as high quality or whatever" (ID24). This can be problematic for young firms if they outsource core activities like safety, innovation, regulatory guidance, and legitimacy to third parties not vested in the firm's success. "Really, the team could spend the time doing their research, rather than relying on these certifying bodies," said the VP of a large formulation house as she reflected on her time with a smaller firm. "We could take the time to understand who the expert in this is, and getting information from them, and more of a consultancy basis, rather than, like, a seal of approval basis." (ID20). Instead of developing dynamic capabilities and bolstering core competencies, firms became less able to adapt (Helfat & Peteraf, 2003; Teece, Pisano, & Shuen, 1997). Thus, participants indicated these paths leading to entrenchments of learning and operational capabilities built within the silos of certification standards (Levitt & March, 1988).

These certification silos redirected scarce attention and resources away from core, growth-oriented activities toward compliance-related tasks (Ocasio, 1997). Informants described time and resource tradeoffs they had to make and how their priorities were sometimes hijacked by certification-backed activities. "It just ends up being this tradeoff between my money and

effort. Do I put my time and resources over here, which is really what I need to grow my business, or here to maintain compliance with a [certification]" (ID03). She went further to say "it's so important, who I pick as my next headcount, is it going to be the R&D guy? Is it going to be a scale-up engineer? Or is it this document jockey who we need just to comply with this certification?"

Participants echoed the cost of scarce time and attention resources in some frustrated statements from one founder of a manufacturing firm: "And I think we could have been much more more hyper focused on what's adding value to our day to day business and your overarching strategy of the organization… and become very proficient in doing strategy at a high level…. But then it's a sheet, I got to fill out once a quarter or once a year. I gotta go refresh myself for two hours or three hours, and then try to remember where I put the files and then reinsert the data. So these [certifications] pull away from some of the opportunities that you have to be more proficient in your areas of expertise" (ID14). A former executive also talked about this dilemma: "You're already trying to do sales, you're doing sales, being back office, you're doing accounting, you're doing accounts payable, accounts receivable, you're doing all these things. But wait a minute, I now have to submit a product dossier that is one hundred pages long" (ID10). A formulator captured this misallocation of resources: "Well, if we weren't focusing on certifications, we could probably focus on actually formulating better products!" (ID20).

These shifts or "attentional constraints" (Zuzul & Edmondson, 2017) occured when firms focused on the certification efforts at the expense of more strategic activities. In the *Beauty Independet* article*, Beauty Brands Spill the Beans on The B Corp Certification Process,* the founder of Alima Pure, a small cosmetic brand, talked about the commitment and resources to certify. “It takes you away from your core business for a while. It does. You have to make the

commitment to say, 'I'm going to spend all these hours over all these weeks to put this documentation together and set goals for the future, and have the back and forth with their team'" (McCormack, 2020, January 17). Thus, resource allocations to certification became hardened resources in equipment, personnel, or heuristics designed and developed based on certification compliance.

"We create an ecosystem," said the lead scientist of a large certification body. "We are creating a marketplace where we are talking to consumers, to retailers, manufacturers, and suppliers all at the same time" (ID12). Certifications, although framed as optional and strategic, contradict the principles of real options theory (Adner & Levinthal, 2004). Real options logic holds that under uncertainty, firms should make incremental investments that preserve flexibility, options that are easy to abandon if necessary. However, certification curates investments based on compliance logics, specific system-approved inputs, supplier relationships, and narrative reinforcement. These become sticky to the firm and their audience (Moroz et al., 2018). “So they're pushing you down a path, and you're dependent on their inputs, that that was really like you're saying, you know, like blinders, like, you can't use anything outside of their criteria” (ID03).

"We are redesigning processes…and verifying those processes," said the head of a large certification agency. She went on to say it's not just the firm, it's a multistakeholder approach with "an accountability mechanism" (ID32). "They want you to build certified 'safe' products," said one entrepreneur, "but in doing so they are restricting how you build the product, who you can use, who your suppliers are… and these dictate the type of customer you're going after" (ID33). As one of our formulation consultant informants warned, "I always try to make my clients aware of certification problems… you don't want to be the brand that has to publish a

national recall. That can tank your whole brand" (ID21). These accumulating tradeoffs often left founders questioning the long-term value of certification entirely. As one consultant described it: "I think they're focused on these short-term gains, but I think it's really gonna screw them over in the long run." (Novakovich, 2024, April, 1). Moreover, as many participants said, these structures did not match firm trajectories when firms began to scale or expand into different markets.

When firms began moving on from a garage-based venture to hiring, scaling, and increasing their reach, they experienced additional certification problems. One ingredient manufacturer spoke of his client's problem moving his product beyond the US consumer base. Like Urban Decay, many startups that had made no-animal testing certification a part of their story ran into problems when expanding to China. He went further to say, "In the US, you want to put all this certification stuff all over your package so that you don't do animal testing. And so, you put that through your whole supply chain, your whole product development process. And then you want to expand into a huge market like China, now you're gonna have to do this testing. So, now you're locked out of this huge expansion market" (ID03).

Certifications, in some cases, did not translate well into foreign markets or even outside certain stakeholder groups. "There are these weird commercial implications also with some of these certifications that don't cross like global markets" (ID03). Simple things like "gluten free" or formulating a product to be certified "Sephora Clean" came with huge ramifications. One of the founder informants tried moving her teen-focused brand into Europe and was advised about all she needed to do for the gluten-free label. "If I had known, I never would've gone to Europe in the first place" (ID84). Another ingredient sales representative talked about firms adhering to the "clean" certification: "Is it consumer demand for transparency? Maybe to a certain degree, it

is also misinformation and fear, especially in Western cosmetics, it's definitely not the case in Asian cosmetics, for like a word like nano is a positive and in Western it's a fear. Oh, nano blustering is gonna kill me. In Asia, they're like, oh, nanotechnology. That's great!" (ID01). In addition, the certified ingredients “just didn’t work as well” (ID25), as one participant mentioned. "And those larger amounts may have to sit longer than they did before. Because they're shipping into China, or they're shipping it to wherever, right? And so that's where it would exacerbate quality problems, of shelf life, or even, you know, colors change over time a little bit, and those types of things" (ID21).

Counterperformative Outcomes

The three hazards, once activated, did not remain isolated. Internal friction led to less innovative products, which led to problems on the production floor, and founders being constrained in their strategy moving forward. What began as localized problems led to growing constraints as certifications embedded themselves into multiple aspects of the venture. Importantly, these hazards not only diminished the value of the certification but also reversed its intended function. Internal friction degrades coordination and decision quality; operational strain demands additional resources and delays actions; strategic rigidity forecloses future paths. Thus, the badge meant to secure legitimacy is a latent hazard that, once triggered, can undermine the resources it was meant to enhance. These outcomes were not necessarily caused by poor management. They emerged when shifts caused misalignments between the certification body as an uninvested external arbiter of important core internal firm processes and decisions. As the article from *The Conversation* illustrates in its description of the downfall of The Body Shop: “While the brand initially served as a catalyst for change to industry and consumption standards, cruelty-free products eventually became expected of all companies in the saturated beauty

market. As a commercial business, The Body Shop became estranged from its original customer base and failed to meaningfully engage with a younger demographic. It missed the mark on evidence-based skincare products, which rely on scientific research and formulations—another major trend. Consumers have also traded down to cheaper options, amidst a cost-of-living crisis, as they must prioritize price over ethical claims made by brands like The Body Shop" (Lee, Spry, & Vredenburg, 2024).

As shown, certifications do not belie their original purpose through any single event. Instead, counterperformativity arises as a recursive system of reinforcing constraints and reverses the function certification was meant to serve.

DISCUSSION

This study aims to answer the question of how certifications come to undermine the very resources they were meant to promote. To do so, this study utilizes an in-depth study of ethical certifications within the cosmetic industry. The literature has largely neglected studies concerning the "deleterious effects" of certifications and calls for studies in this space (e.g., Eberhart & Armanios, 2021: 17; Sharkey et al., 2023). Prior research highlights the many benefits, and a few limited studies highlighted possible adverse effects of certification, but confined these mostly to outcomes and not processes, or did not describe how certifications can become counterperformative (e.g., Carlos & Lewis, 2018; Lanahan & Armanios, 2018; Lanahan, Armanios, & Joshi, 2021). This study has three main contributions.

Certification: Legitimacy Lever and Latent Hazard

First, certifications help firms gain legitimacy, reduce uncertainty, and unlock resources (Armanios et al., 2017; Sine et al., 2007). This literature attests to these benefits specifically in the context of young firms; however, certifications also embed latent hazards. The legitimacy

benefits can be immediate, but the hazards remain latent and manifest later, if ever. These risks are inherent in signaling the desired outcome to stakeholders for resource acquisition (Spence, 1973; Suchman, 1995) since stakeholder salience and stakeholder approval can vary over time (Fisher et al., 2016; Mitchell, Agle, & Wood, 1997). Thus, this study extends work on certification in that certification is not a static asset (Armanios et al., 2017; Sine et al., 2007), or even a tradeoff between borrowed and grassroots legitimacy (Lanahan & Armanios, 2018), but a complex legitimating mechanism that has easy-to-determine benefits yet difficult-to-identify hazards. Thus, this study posits that certifications are context-specific legitimation mechanisms instead of unconditional assets.

The legitimacy received through certification is embedded with latent hazards; hazards that are activated under specific external and internal conditions. In this sample, the data indicated that firms rarely treat certification as a potential liability but often as a necessity for the firms to grow, enter new markets, or be innovative. However, each of these activities is acutely impacted by certifications.

When these activities are implemented, the latent hazards may have already begun to pave the path to counterperformativity. This study posits that these "artificial restrictions" come with latent hazards that are not necessarily activated by ignorance or poor implementation but are ever present and become more likely to manifest as firms grow, innovate, or experience change within or outside the firm's control. This insight reframes certifications as a beneficial, but often complicated, gambit for legitimacy.

Certifications as a False Option

The second contribution to the certification literature involves viewing certifications through real options theory. First, as stated earlier, certifications are conditional resources rather

than stable assets. One key insight from the data is that founders seem to treat certifications as a real option or a low-cost resource-enhancing investment that still preserves firm flexibility, minimizes downsides, and defers commitments (Adner & Levinthal, 2004). Founders and marketers in the data indicated that instead of investigating the implications of certifications, certifications were an easy option that enabled resource accumulation.

However, this study suggests that certifications do not necessarily function this way and instead violate the core assumptions of the real-options logic. Instead of providing flexibility, they, by design, impose rigid structures. They open new paths such as retailer relationships, but at the same time, they foreclose options like grassroots growth, supply chain dexterity, organizational learning, and set stakeholder expectations that are costly if not impossible for young firms to abandon. These constraints undermine the option's value or a firm's ability to be flexible in choosing future strategic paths.

Instead of being a strategic move to gain legitimacy and preserve flexibility, certifications act more like an entrenchment rather than a reversible option. In other words, certifications may seem like the resources obtained through certification will provide future possibilities of growth and the ability to pursue alternate paths, but they may instead foreclose future paths. This finding emphasizes that new ventures are acutely affected by their optimistic view of certifications.

Certification Effect on New Ventures

Lastly, this study contributes to the new venture legitimation strategy literature. Young firms primarily adopt certifications to legitimize their ventures (Fisher et al., 2016; Zimmerman & Zeitz, 2002). Certifications have an outsized impact on young firms in that they are at a legitimacy deficit, and certifications can fill this void. Importantly, a firm just beginning to build out their resources are at a sensitive phase of their development, and the early decisions they

make can imprint or instill a "persistent and enduring effect" on the firm's dominant strategy and cause "inertial forces and path dependency" (Boeker, 1989; De Cuyper, Clarysse, & Phillips, 2020:1580; Gilbert, 2005; Snihur & Zott, 2020). One of the strategic advantages of young firms when competing with established firms is their ability to be flexible and avoid the bloat of bureaucracy, rigid resources, and entrenched beliefs (Kraatz & Zajac, 2001; Leonard-Barton, 1992; McDonald & Gao, 2019).

We lack clarity on the implications of implementing "artificial" compliance requirements and inviting outside entities to determine standard operating procedures at such a sensitive strategy-setting phase of the business. The literature has mentioned the potential for certification to go awry but has not yet identified how this happens, nor which firms are most likely to experience the negative effects. When implemented, they can undermine the very resources they were meant to obtain.

Practical Implications

Certifications are now a crucial part of markets all over the world. Yet, entrepreneurs are ill-equipped to understand the ramifications of obtaining a certification. They are not an isolated asset that affects the marketing department, but they have far-reaching consequences for all aspects of the business. Certifications can embed routines, logic, relationships, and heuristics that can alter how firms navigate markets.

Certifications are not a quick stop for legitimacy, nor are they superficial means to signal conformity, but are commitments to ways of doing business. They can be difficult to abandon and can, in certain circumstances, be more hurtful than helpful. And, most importantly, certifications are not a substitute for strategy, learning, or developing core-competency-

enhancing expertise. They are designed to show compliance, not substitute for core firm functions, as was strongly echoed by all certification executives who were interviewed.

Future Research Implications

This study opens up various avenues for future work in certification, strategy, and the flexibility versus conformity debate for new ventures. First, this study generalizes certifications as homogeneous when, in reality, certifications are diverse and have different effects on different firms. For example, Leaping Bunny has a higher threshold for compliance than Beauty without Bunnies. But both certifications attest to compliance with cruelty-free standards. Although they both highlight the same attribute, firms not testing on animals, the difference in their commitments will likely play a role in the counterperformative potential of the certification. Likely, the Leaping Bunny with its higher standards would be more restrictive and have a higher propensity for counterperformativity; however, Beauty Without Bunnies may endear firms with a more passionate audience that will punish firms that choose to forgo the standard in the future. We are not well-informed concerning how these heterogenous certifications will affect the outcomes of certified firms.

Second, the certification bodies themselves are faced with building standards to attest to specific attributes. How are these standards built? Why do some certifications, rather than others, choose to build schemes that are all encompassing, like B Corp, while others single out a specific product attribute, like the presence of GMOs? Both of these certifications will likely have different impacts on the firms that choose to certify. We are neither well equipped to understand why agents build standards differently nor the legitimate outcomes of some certifications versus others.

Third, certifications are backed by all organization types, such as government-owned, not-for-profit, for-profit, and hybrid. Which ones would be more prone to counterperformative outcomes than others? One would think that those that are built by for-profit firms would likely be more subject to market-based pressures and likely shift their standards more. Or those run by large NGOs may likely partner with large firms and thus be detrimental to young firms in that they are unable to meet the high bar and resource requirements of these certifications.

Fourth, future research might extend this work to the comparing of other information intermediaries to ethical certifications. Which legitimating mechanism in which scenario would be ideal for a young firm? How do managers approach these intermediaries strategically? What happens when managers claim the same level of compliance without getting the certification? We are not well informed about these questions.

Fourth, food and cosmetic industries have recently received an uptick in regulations that increasingly require traceability in supply chains. Certifications have been traditionally used to lend legitimacy and traceability in this sector. However, blockchain technology provides a potential substitute for certifications. Blockchain technology services promise "immutable tracking" of supply chains, reducing ambiguity and enabling deeper insights into traceability. Current theory provides little guidance concerning the substitutive and complementary dynamics between existing certifications and blockchain technology. What is the value of blockchain versus certification? When would firms choose certifications, blockchain, or both? What are the effects on certifiers, and what affects their adoption of blockchain?

Lastly, markets that were traditionally served through private regulatory mechanisms like certifications are now increasingly being shut down by governments for greenwashing or consumer confusion problems. Which certifications are more prone to being deemed as

greenwashing, contributing to consumer confusion, or lending credibility to misinformation? How are entrepreneurs able to select among certifications that align with their strategy and do not heighten the risk of legitimacy worsening instead of legitimacy? These are fruitful paths for future research that can shed light on the internal and external dynamics of these increasingly prevalent and powerful institutional forces.

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Table 2: Qualitative Data Overview

Data Sources	No.	Role in Analysis
Semi-structured interviews (56 interviews*; between 30-120 minutes long; Zoom/phone/face to face)		
R&D	*16*	The primary source to understand the effects of certifications on firms. Key informants provided detailed accounts of how certifications became counterperformative.
Operations	*10*	
Founders	*13*	
Trade/Certification	*6*	
Regulatory	*6*	
Executives	*16***	
Marketing	*5***	
Archival Data (about 1100 pages from transcribed interviews, articles, and books)		
Podcast interviews	45	Triangulate facts about founder experiences, certification's role in company operations, and prevalence of certification use.
Trade and Media Articles (GCI, Beauty Matter, Beauty Independent, New Yorker, etc.)	40	
Books (*Branded: How the Certification Revolution is Taking Over the World by Michael Conroy; Better Business: How the B Corp Movement is Remaking Capitalism by Chris Marquis*)	2	
Field Notes		
Industry events and site visits	4	Triangulate facts about current use of certification, effects on R&D personnel, and product ideation. Understand founder and employee communication dynamics to mitigate recall bias.
Company documents (emails, R&D sheets, marketing briefs, etc.)	10 years	
Certification invited speakers	8	
Certification Database		
Cosmetic certification requirements	107	Understand the requirements of certifications, audit frequency, and governance mechanisms.

**Six interviewees were interviewed multiple times, seven were also on the podcast*

***Interviewees in this category are also represented in the founder, R&D, and Operations categories*

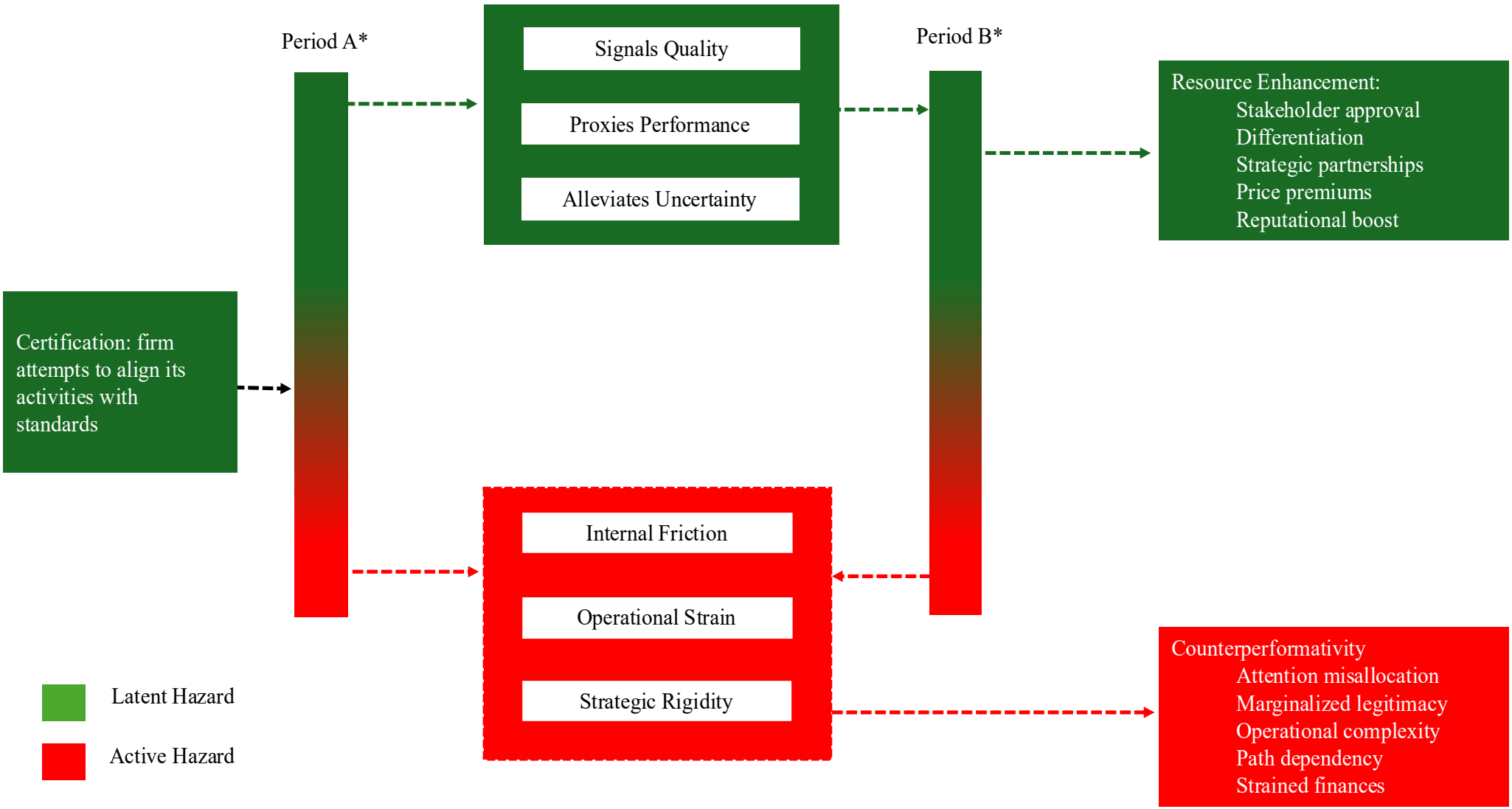
Table 3: Coding Process

Coding Stage	Purpose	Analysis	Example Output
Open Coding	Generate initial descriptive codes tied to the informants' language.	Line-by-line coding of transcripts, documents, fieldnotes, and archival data using NVivo and Atlas.ti	"Alignment," "Flexible," "Compliance," Credibility"
Pattern Coding	Cluster similar codes into broader conceptual categories to capture underlying mechanisms.	Grouped first-order descriptive codes into second-order categories; used memos and comparison across data	"Internal Shift," "Operational Strain"
Thematic Analysis	Identify overarching themes and relationships across code clusters to inform theoretical development.	Developed visual model and quote tables.	Theme: Certifications can backfire when firms grow or change.

Table 4: Coding Structure

First-Order Code	Second-Order Concept	Example
Creativity/Innovation	Internal Friction	"Certifications can be extremely limiting on innovation, because [redacted certification], specifically, their hazard or their high ratings are all based on available information… But if it's a new innovation, they may not have any information on it. And so, they'll rate ingredients as dangerous just because they don't have information."
Staff Disagreement	Internal Friction	"I'm not here to fight and cause discord in the company."
Internal Capabilities	Internal Friction	“I don’t really think any of these certifications are worth it. Why don’t we come up with our own standard and just be really transparent about that and communicate what that standard is and how we built it?”
Complexity	Operational Strain	"Companies that have sought ISO 9000 certification have complained that the extensive documentation introduces more bureaucracy into a company. Some say that ISO 14000 will build on top of ISO 9000 registration, but others point out that the ISO 14000 documentation requirements will only compound the already burdensome task and that the extra administrative costs will reduce profit margin."
Fiduciary Costs	Operational Strain	"You could be spending $50,000 a year on these certifications, if you have multiple. If I have a certification, I may have a customer that requires I have [redacted certification], or some other crazy certification, plus organic, kosher, halal, Leaping Bunny, and all of these other things."
Productivity	Operational Strain	“It was just so much time. It took away from other things we could’ve been doing like finalizing formulations. It slowed down everything going on the packaging, because if we weren’t going to get the certification, I couldn’t put the mark on the packaging.”
Expansion	Strategic Rigidity	"If I would've known that this was going to be such a problem in Europe, I would've never done it."
Bad Standards	Strategic Rigidity	"You're obviously using a marketing tactic to create trust, but then you distrust because then you're not actually using true principles."
Flexibility	Strategic Rigidity	“There can be just this unintended standardization of like innovation in a way that comes when you when you maybe sort of adopt those things”
Resource Allocation	Strategic Rigidity	“You’re an entrepreneur you're already trying to do sales, you're doing sales, being back office, accounting, you're doing accounts payable, accounts receivable, you're doing all these things. And now all of a sudden, I have to submit a product dossier that is 100 pages long, right?

Figure 2: Theorized Model for Certification Counterperformativity



*Hazards can shift from latent to active at any time during a firm's journey; thus there are infinite periods where the latent hazard can be activated .

Appendix A: Sample List of Ethical Certifications in the Cosmetic Industry

Certification	Year est.	Scope of Certification	Country of Origin	Founder(s)
Certified Vegan	1990	Certifies products free from animal ingredients and not tested on animals.	UK	Vegan Awareness Foundation
Leaping Bunny	1996	No animal testing at any stage of product development.	UK	Coalition of eight national animal protection groups (e.g., American Anti-Vivisection Society)
BDIH (BDIH-Siegel für kontrollierte Naturkosmetik)	1996	Certifies natural cosmetics based on strict criteria for ingredient sourcing, processing, and labeling.	Germany	Association of German Industries and Trading Firms (~400 members in health products)
USDA Organic (NOP)	2000	Certifies cosmetic products made with 100% organic agricultural ingredients and without synthetic additives.	USA	United States Food and Drug Administration
RSPO (Roundtable on Sustainable Palm Oil)	2004	Certifies sustainable palm oil production that complies with environmental, social, and economic sustainability standards.	Switzerland	World Wildlife Fund, Unilever, Migros, MPOA, Aarhus United, Karlshamns, The Body Shop, Loders Croklaan, Golden Hope, Pacific Rim Palm Oil
B Corp	2006	Certifies entire companies (not individual products) based on their social, environmental, and governance performance.	USA	Jay Coen Gilbert, Bart Houlahan, Andrew Kassoy
Non-GMO Project	2007	Covers ingredients, supply chain, and testing to verify the absence of ingredients from genetically modified organisms.	USA	The Natural Grocery Company, The Big Carrot Natural Food Market
Made Safe	2014	Certifies that products are made without ingredients known or suspected to harm human health, animals, or ecosystems.	USA	Amy Ziff
EWG Verified	2015	Certifies personal care and household products as free from chemicals of concern.	USA	Ken Cook, Richard Wiles
CosmEthically Produced	2018	Certifies ethically sourced cosmetics.	Slovenia	Society for Cosmetics and Detergents of Slovenia
NaTrue	2007	Certifies natural and organic cosmetic products	Belgium	Weleda, Wala, Laverana, PRIMAVERA, LOGOCOS, CEP

Appendix B**:** Cosmetic Label Draft Before Product Launch Displaying the USDA Organic logo and Making the Non-GMO claim.

Appendix C: Sales Sheets from an Ingredient Manufacturer (yellow boxes are redacted information).

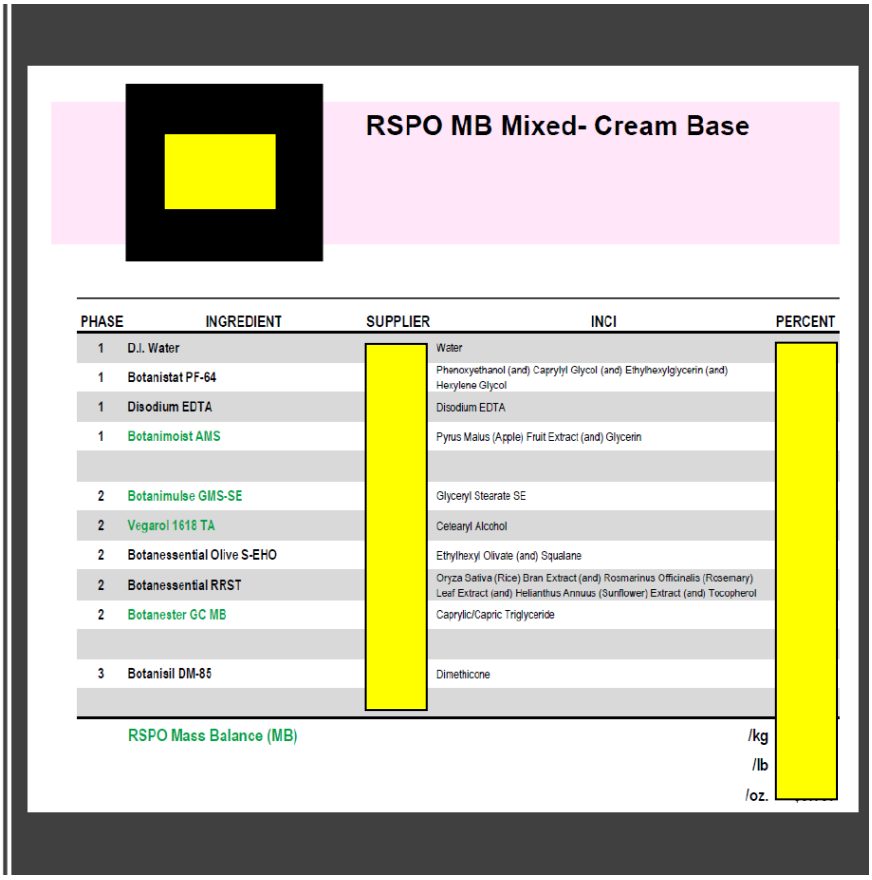
Mass Balanced (MB)
95%

CERTIFIED SUSTAINABLE PALM OIL ™
RSPO
MIXED

MASS BALANCE "Mixed" SPECIFIC RULES

Additional Claims

- ✓ Paraben Free
- ✓ 88% increase in hydration in just 30 minutes
- ✓ Anti-oxidant protection
- ✓ Olive derived squalane (sustainably sourced) for skin moisture



RSPO MB Mixed- Cream Base

PHASE	INGREDIENT	SUPPLIER	INCI	PERCENT
1	D.I. Water	[redacted]	Water	[redacted]
1	Botanistat PF-64		Phenoxyethanol (and) Caprylyl Glycol (and) Ethylhexylglycerin (and) Hexylene Glycol	
1	Disodium EDTA		Disodium EDTA	
1	Botanimoist AMS		Pyrus Malus (Apple) Fruit Extract (and) Glycerin	
2	Botanimulse GMS-SE		Glyceryl Stearate SE	
2	Vegarol 1618 TA		Cetearyl Alcohol	
2	Botanessential Olive S-EHO		Ethylhexyl Olivate (and) Squalane	
2	Botanessential RRST		Oryza Sativa (Rice) Bran Extract (and) Rosmarinus Officinalis (Rosemary) Leaf Extract (and) Helianthus Annuus (Sunflower) Extract (and) Tocopherol	
2	Botanester GC MB		Caprylic/Capric Triglyceride	
3	Botanisil DM-85		Dimethicone	

RSPO Mass Balance (MB)

/kg
/lb
/oz.

Appendix C: Sales Sheet Referencing Certifications

CULTI-BIOTA

IMPACT ON MICROBIOTA PRINT

Thirty volunteers, aged 20-44 years old, participated in an in vivo study for one week. The volunteers were identified to have a stressful lifestyle using the Perceived Stress Scale. The facial skin was washed regularly for 48 hours, without applying additional product. Once skin was calibrated, twice daily application of a gel containing 1.00% Culti-Biota was applied on one cheek and a placebo gel on the other cheek. The skin's microflora on the cheeks were sampled before and after 1 week of treatment. The analysis of the microbiota print can be found below which indicates the number of bacteria per genus by color. Culti-Biota restores the balance of microflora lost by stress in as short as one week as can be seen below.

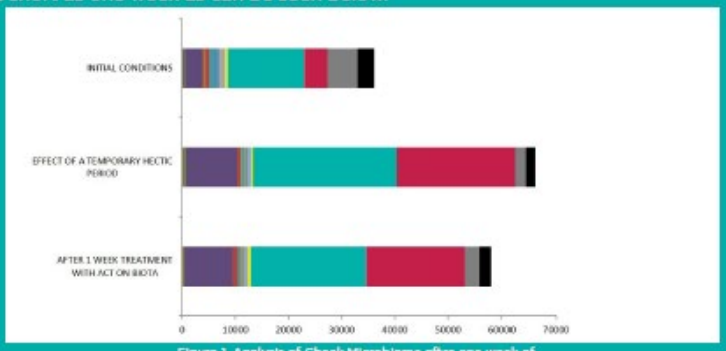


Figure 1. Analysis of Cheek Microbiome after one week of treatment with 1.00% Culti-Biota

RESTORES SKIN IMPERFECTIONS

As part of the above study, additional test results were obtained utilizing a specialized clinician with a scale of 1-100. As a result of the rebalanced microbiota, skin imperfections and skin redness caused by the imbalance of the microbiome were restored and rebalanced within one week.

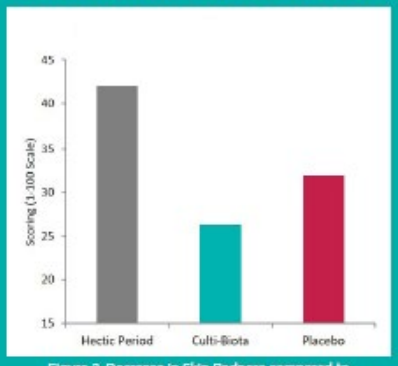


Figure 2. Decrease in Skin Redness compared to the Placebo and Untreated

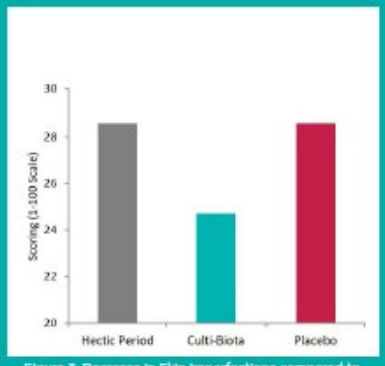


Figure 3. Decrease in Skin Imperfections compared to the Placebo and Untreated

GLOBAL COMPLIANCE AND PRODUCT FEATURES

For additional information please contact technical@barnetproducts.com. * An alternate version, Culti-Biota GPA, preserved with Phenethyl Alcohol and a use level of 2.00% is available upon special request.

COUNTRY	COMPLIANCE
AUSTRALIA	Listed AICIS
CANADA	Listed DSL, rICL
CHINA	Listed IECIC
EU	<1 MT Exempt

05.22

Appendix C: Continued: First-Time Launch Email – Request for Certification Support

From: [Redacted]
To: [Redacted]
Date: 3/22/2022 4:10:52 PM
Subject: [Redacted] Product Regulations
Hi [Redacted],
I hope you are doing well. I am working on a new baby-line extension under [redacted] that will hopefully launch in Q4 of this year.
We are sourcing the product directly from [redacted supplier]. All ingredient sourcing, manufacturing, and labeling will happen in [redacted country]
and then be shipped to the US ready for sale.
I am working on our development plan and timelines for these products. We have testing information from our [redacted country] team, but
I'm sure we will need some US validation. ***We are hoping to get USDA Organic certification, Leaping Bunny***, and a hypoallergenic statement.
Do you have a list of regulatory services you offer with pricing? If it's easier to discuss over the phone, I'm happy to schedule a call.
Thanks so much,
[Redacted]
Research and Development Director
[Redacted]

Appendix C: Continued: Certification Problem Email Two Months After Requesting Services

Subject: [Redacted]
To: [Redacted]
From: [Redacted]
Date: Tue May 10 2022 10:39:13 GMT-0700 (Pacific Daylight Time)
Dear [Redacted]
Hi [Redacted],
I've been encountering ongoing obstacles with my [redacted product name] label and was directed to seek your expertise.
I would like to find out if it can be a problem to use the word [redacted claim] on the front of the jar as shown in the attached label. I'm praying it's okay because I am using [redacted ingredients].
As a side note, ***I've failed earning the organic certification label.*** I'm told one reason is due to using certified vegan [redacted] in lieu of [redacted]. ***I'm running out of time and my livelihood depends on this.*** The photoshoot has already been done which is my fault because I am pressed on moving forward and just hoped for the best.
I appreciate your time and look forward to receiving some great news, especially after this half-year journey.

Thank you,
[Redacted]