

The Impact of Destigmatization and Green Marketing on Firms' Dynamic Competitive Advantage: The Mediating Role of Green Corporate Social Responsibility and the Moderating Effect of Dynamic Absorptive Capacity

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Abstract. In today's competitive market, firms face pressure to maintain advantages while addressing social and environmental concerns. This study examines how destigmatization and green marketing influence dynamic competitive advantage, with green corporate social responsibility (CSR) as a mediator and dynamic absorptive capacity as a moderator. Data from 917 manufacturing enterprises in China were analyzed using structural equation modeling. Results show that destigmatization, green marketing, and green CSR positively impact dynamic competitive advantage, with green CSR mediating the effects of destigmatization and green marketing. Dynamic absorptive capacity strengthens these effects. The findings highlight the role of green CSR and absorptive capacity in leveraging green strategies for sustainable competitive advantage, offering practical guidance for managers.

Keywords: Destigmatization, Green Marketing, Green Corporate Social Responsibility, Dynamic Absorptive Capacity, Dynamic Competitive Advantage

1. Introduction

Under the driving forces of consumption upgrading, technological advancement, lower market entry barriers, and capital operations, firms must continuously enhance their dynamic competitive advantage (Eisenhardt & Martin, 2000; Haas, 2015; Wenzel et al., 2020; Bahmanova et al., 2024; Ghimire, 2024) in order to cope with ongoing changes, frequent market fluctuations, and rapidly shifting customer demands, thereby maintaining their market position over extended periods.

With the increasing severity of environmental issues and society's growing emphasis on green and sustainable development, destigmatization and green marketing have gradually become important strategies for firms to enhance their dynamic competitive advantage. The implementation of these strategies is not only significant for corporate development but also plays an irreplaceable role in global sustainability and social progress (Ottman, 2017; Bocken et al., 2019; Kassinis et al., 2022; Hasnawati, 2024; Zhan, 2025). With the implementation of destigmatization and green marketing strategies, firms experience improved corporate image, increased profits, and higher stakeholder recognition, which also positively promotes their green corporate social responsibility (Siltaoja et al., 2020; Zhang et al., 2023). Against the backdrop of destigmatization and green marketing strategies, firms that adopt new concepts and practices and make a series of strategic decisions can reduce pollution, protect the ecological environment, and efficiently utilize and allocate resources, thereby promoting green and sustainable development and achieving their green corporate social responsibility (CSR) goals (Sarfraz et al., 2023). Moreover, green CSR can help enhance corporate image, increase stakeholder recognition, and strengthen organizational cohesion, ensuring that these new concepts and strategies are effectively implemented to create sustained value and improve firms' dynamic competitive advantage (Ge Baoshan et al., 2016).

Although the body of literature on competitive advantage, corporate social responsibility (CSR), and dynamic capabilities is extensive, notable research gaps persist. First, prior studies have largely focused on static or sustainable competitive advantage, neglecting the dynamic processes through which firms create and sustain short-lived but renewable advantages. Second, research on destigmatization has primarily concentrated on individual or societal contexts, with limited exploration at the organizational level, particularly in relation to strategic outcomes. Third, although green marketing has been linked to consumer behavior and corporate performance, its role in shaping dynamic competitive advantage has been insufficiently addressed. Finally, the interplay of green CSR and dynamic absorptive capacity within these relationships remains an underexplored area.

This study sets out to: Examine the direct effects of destigmatization and green marketing on dynamic competitive advantage; Investigate the mediating role of green CSR in the relationships between destigmatization, green marketing, and dynamic competitive advantage; Explore the moderating role of dynamic absorptive capacity in shaping these relationships.

2. Literature Review and Hypotheses Development

2.1 Theoretical Foundations

2.1.1 Sustainable Development Perspective

The sustainable development perspective emphasizes that firms must not only pursue economic success but also assume social and environmental responsibilities. Brundtland (1987) sustainable development calls for meeting present needs without compromising future generations' ability to meet their own. Elkington (1997) triple bottom line framework further highlights the integration of economic, social, and environmental dimensions in corporate strategy. Within this framework, organizations are increasingly expected to adopt green practices, reduce ecological footprints, and communicate these commitments transparently to stakeholders.

Destigmatization and green marketing are both aligned with sustainable development objectives. Destigmatization helps firms rebuild legitimacy when criticized for environmental or social misconduct, while green marketing signals proactive commitment to sustainable practices. Together, they represent organizational strategies that integrate sustainability with competitiveness.

2.1.2 Dynamic Capabilities Theory

Dynamic capabilities theory, introduced by Teece, Pisano, and Shuen (1997), explains how firms sense opportunities, seize them, and reconfigure resources to adapt to rapidly changing environments. Unlike static resource-based views that emphasize unique but stable assets, dynamic capabilities highlight organizational processes that enable continuous renewal of advantages.

Dynamic absorptive capacity, as a higher-order capability, extends this view. It reflects the ability to acquire and exploit external knowledge for adaptation and innovation (Zahra & George, 2002). By enabling firms to internalize new ideas, technologies, and practices, absorptive capacity supports the creation of dynamic competitive advantage (Eisenhardt & Martin, 2000).

This study adopts the perspective of dynamic capabilities, emphasizing that when firms absorb environmental knowledge, they must integrate and transform this knowledge with internal resources to effectively respond to the challenges of rapid environmental change (Eisenhardt et al., 2010). By incorporating the notion of dynamic responsiveness into the absorptive capacity framework, the study highlights the enhancement of firms' dynamic absorptive capacity (Chen et al., 2020). Furthermore, timely sensing of environmental shifts and implementing strategic adjustments and innovative transformations enable firms to better navigate evolving market conditions and strengthen their dynamic competitive advantage. Accordingly, this research conceptualizes dynamic competitive advantage as the dependent variable, with dynamic absorptive capacity serving as the moderating variable.

2.1.3 Competitive Advantage Perspective

Traditional competitive advantage theories (Porter, 1980; Barney, 1991) emphasized cost leadership, differentiation, or unique resources. However, scholars such as McGrath (2013) argue that in fast-changing environments, sustainable competitive advantage is rare; instead, firms must pursue transient advantages through agility and innovation. This dynamic view highlights the need for firms to continuously create and abandon advantages in response to market turbulence.

Within this context, destigmatization and green marketing can be conceptualized as strategic levers for generating short-lived yet renewable competitive positions. Green CSR provides the institutional and operational backbone for sustaining these strategies, while dynamic absorptive capacity ensures that firms can update and recombine knowledge to stay ahead.

The theory of competitive advantage has evolved from static strategic choices to dynamic adaptive capabilities. In particular, the concept of dynamic competitive advantage emphasizes how firms achieve and sustain competitiveness in constantly changing markets through flexibility, rapid response, and continuous innovation. These theoretical developments provide a solid foundation for understanding how firms acquire, maintain, and enhance competitive advantage in complex competitive environments. Especially in rapidly changing markets, dynamic competitive advantage has become a critical determinant of firm success (Gupta et al., 2018; Kwon, 2020).

2.2 Destigmatization and Dynamic Competitive Advantage

Destigmatization involves organizational strategies that counteract negative stereotypes or societal disapproval (Hudson, 2008). Firms often face stigma due to industry-specific controversies (e.g., pollution, labor exploitation) or organizational misconduct. Left unaddressed, stigmatization undermines legitimacy, stakeholder trust, and competitiveness (Devers et al., 2009). Aranda et al. (2023) discussed how firms can reshape their identity to cope with stigmatization, noting that

de-stigmatization fosters strategic adaptability, helps identify whether existing advantages are at risk of erosion, and facilitates the capture of new market opportunities. Moreover, firms are encouraged to undertake proactive strategic transformations that build a positive social image and strengthen consumer trust and loyalty. When facing stigmatization risks, cultivating strong “moral reserves” can mitigate negative public perceptions and reactions, allowing firms to better focus on user experience, develop resilient customer networks, and ultimately reinforce dynamic competitive advantage (Salgado et al., 2022).

By engaging in destigmatization, firms can improve reputation, rebuild stakeholder relationships, and reduce institutional barriers. These outcomes enhance flexibility, legitimacy, and resilience—key foundations of dynamic competitive advantage. For example, a manufacturing firm stigmatized for environmental damage can restore legitimacy by transparently addressing criticisms, engaging communities, and signaling corrective actions.

H1: Destigmatization positively influences firms’ dynamic competitive advantage.

2.3 Green Marketing and Dynamic Competitive Advantage

Green marketing emphasizes environmentally friendly features of products and services, promoting them to consumers concerned with sustainability (Leonidou et al., 2013). In recent years, green marketing has become not only a promotional tool but also a strategic orientation influencing corporate innovation, operations, and stakeholder engagement. In fostering innovation and learning, green marketing encourages firms to continuously innovate and develop new environmentally friendly technologies and products to meet market and consumer demands. Peattie and Crane (2005) emphasize that by promoting learning and innovation, firms can better understand and address market needs while strengthening their green market positioning. This ongoing process of innovation and learning helps firms enhance their dynamic competitive advantage and maintain a leading position amid market changes and technological advancements.

In improving operational efficiency, green marketing also involves enhancing firms’ environmental performance in operations, such as reducing energy consumption, minimizing waste generation, and optimizing resource utilization, thereby guiding firms toward innovation and transformation (Szabo & Webster, 2021).

From a competitiveness perspective, green marketing strengthens customer loyalty, attracts environmentally conscious investors, and fosters efficiency in resource utilization. Furthermore, it helps firms differentiate themselves in crowded markets while aligning with regulatory and societal expectations. These factors contribute to firms’ ability to adapt to environmental pressures and sustain dynamic competitive advantages.

H2: Green marketing positively influences firms’ dynamic competitive advantage.

2.4 Destigmatization, Green Marketing, and Green CSR

Green corporate social responsibility (CSR) extends the CSR construct by explicitly focusing on ecological stewardship and environmental sustainability. Firms engaging in green CSR voluntarily integrate environmental concerns into their strategies, operations, and stakeholder relationships (Sharma et al., 2023).

2.4.1 Destigmatization and Green CSR

According to social identity theory, firms must establish strong identification with stakeholders in order to maintain competitiveness in the marketplace (Ashforth & Mael, 1989). De-stigmatization not only enhances a firm’s image in the eyes of consumers but also provides a solid social foundation for the implementation of its green CSR strategies. Through destigmatization, firms can improve their environmental practices, actively communicate green production and innovation initiatives, and

enhance their social identification among the public, thereby promoting the practice of green corporate social responsibility (Hampel & Tracey, 2017).

More specifically, de-stigmatization strengthens firms' social commitment to environmental protection, thereby driving tangible actions in green CSR. By engaging in de-stigmatization practices, firms reduce external skepticism regarding their environmental image and proactively embed ecological values into daily operations and strategic decision-making. Research shows that de-stigmatization effectively stimulates investment in environmental technologies, green products, and sustainable development strategies (Kim & Kim, 2023). Thus, de-stigmatization not only improves corporate image but also reinforces responsibility in environmental management and green development.

By implementing destigmatization strategies, firms often engage in CSR initiatives to demonstrate responsibility and counteract negative perceptions. For example, firms criticized for pollution may adopt green CSR initiatives—such as investing in renewable energy or sustainable supply chains—to signal reform. This process strengthens credibility and helps translate destigmatization into tangible competitive benefits.

H3: Destigmatization positively influences green CSR.

2.4.2 Green Marketing and Green CSR

Green marketing significantly enhances firms' relationships with stakeholders. Sen et al. (2006) found that consumers are willing to pay a premium for environmentally friendly products, and firms can strengthen their relationships with consumers through green marketing initiatives. Leonidou et al. (2011) further demonstrated that green marketing activities—through consumer education and communication—can reinforce consumer identification with firms' green CSR practices. Such identification not only increases consumer brand loyalty but also motivates firms to further invest in green corporate social responsibility. In addition, by promoting values of resource conservation and waste reduction, firms strategically integrate social responsibility actions with consumers, thereby fostering joint participation and fulfilling stakeholders' expectations for social responsibility (Rust et al., 2021).

Green marketing campaigns must be backed by substantive green CSR practices to avoid perceptions of “greenwashing.” When firms align marketing with authentic CSR initiatives, they gain credibility and stakeholder trust. Therefore, green CSR provides the structural foundation for green marketing to enhance competitive outcomes.

H4: Green marketing positively influences green CSR.

2.5 Green CSR and Dynamic Competitive Advantage

Green corporate social responsibility (CSR) enhances organizational flexibility and agility, enabling firms to rapidly adjust strategic directions and operational models. By clearly communicating CSR objectives and market positioning, green CSR helps different organizational levels better understand and implement strategic decisions (Taamneh et al., 2025). For example, Brammer and Pavelin (2006) found that firms engaging in green CSR significantly improved internal communication efficiency and execution capacity through stakeholder dialogue mechanisms and CSR reporting. Such alignment across organizational levels is a critical factor in ensuring rapid action and tangible results in the short term. Pelozo and Falkenberg (2009) further argued that green CSR activities strengthen collaboration with stakeholders and enhance internal management efficiency, thereby substantially improving organizational flexibility. Moreover, firms practicing green CSR, through transparent communication and social responsibility commitments, not only foster stronger employee identification with the organization but also promote cross-departmental collaboration, enabling rapid adaptation to external changes (Cornelissen, 2023).

Green CSR initiatives strengthen legitimacy, reduce regulatory risk, and enhance stakeholder relations. By embedding sustainability into organizational processes, green CSR helps firms adapt to shifting consumer preferences and environmental regulations. In doing so, it supports the continuous reconfiguration of resources and capabilities required for dynamic competitive advantage (Babiak & Trendafilova, 2011).

H5: Green CSR positively influences dynamic competitive advantage.

2.6 Mediating Role of Green CSR

Green corporate social responsibility (CSR), through sustained social responsibility practices, further consolidates the effects of de-stigmatization while strengthening firms' sense of social responsibility and public image (Carroll, 1991). Aguilera et al. (2007) found that green CSR enhances corporate reputation and broadens public recognition of firms' de-stigmatization efforts. Particularly in consumer markets, green CSR activities—such as community support or educational programs—enable firms to not only restore reputation but also foster greater public identification with the brand. Lins et al. (2017) demonstrated that green CSR initiatives not only rebuild public trust but also generate social capital, which provides critical support for firms in competitive environments. For instance, by issuing sustainability or CSR reports, firms can showcase their long-term commitments to stakeholders, thereby reinforcing their market position and competitiveness (Alam & Islam, 2021).

Green corporate social responsibility (CSR) enhances firms' sensitivity to market changes. The formation of dynamic competitive advantage requires firms to capture opportunities and respond effectively in rapidly changing markets, and green CSR significantly improves such sensitivity through stakeholder collaboration and environmental information-sharing mechanisms (Nahapiet & Ghoshal, 1998; Dangelico et al., 2022). According to Teece's (2007) dynamic capabilities theory, environmental sensitivity and adaptive capacity are core elements enabling firms to gain competitive advantage in uncertain market environments.

The literature suggests that green CSR is a key mechanism through which destigmatization and green marketing generate competitive outcomes. By institutionalizing sustainability practices, green CSR transforms reputational strategies (destigmatization) and promotional strategies (green marketing) into enduring organizational routines that underpin dynamic competitiveness.

H6: Green CSR mediates the relationship between destigmatization and dynamic competitive advantage.

H7: Green CSR mediates the relationship between green marketing and dynamic competitive advantage.

2.7 Moderating Role of Dynamic Absorptive Capacity

Fosfuri and Tribó (2008) suggest that a high level of dynamic absorptive capacity enhances firms' understanding and implementation of de-stigmatization strategies, thereby increasing their speed of market response following reputation recovery. However, if a firm's dynamic absorptive capacity is low, even successful implementation of de-stigmatization strategies may struggle to translate market feedback into tangible competitive advantage (Volberda et al., 2010). Lane et al. (2006) further support this view, arguing that insufficient dynamic absorptive capacity can lead to delayed responses to market changes, thereby weakening the effectiveness of de-stigmatization strategies. More recently, Zhao and Li (2024) emphasize the critical role of dynamic absorptive capacity in reputation recovery and market performance within rapidly evolving social media environments, highlighting its importance in modern competitive contexts.

Firms with high dynamic absorptive capacity can more effectively integrate external environmental knowledge and apply it to strategic adjustments and product innovations, enabling faster market responses (Todorova & Durisin, 2007). Cohen and Levinthal (1990) argue that dynamic

absorptive capacity allows firms to better learn from and assimilate external green technologies and market trends, thereby enhancing the effectiveness of their green marketing strategies. Conversely, firms lacking sufficient dynamic absorptive capacity may fail to timely adjust green products and services to meet rapidly changing market demands, weakening the impact of green marketing on dynamic competitive advantage (Zahra & George, 2002). Empirical evidence from Giudice and Peruta (2016) further demonstrates that dynamic absorptive capacity is a crucial factor for successfully implementing green innovation and achieving market competitive advantage.

Dynamic absorptive capacity amplifies the impact of green corporate social responsibility (CSR) on dynamic competitive advantage. By enhancing firms' sensing capabilities, flexibility, and market responsiveness, dynamic absorptive capacity significantly strengthens the effect of green CSR on dynamic competitive advantage (Li et al., 2021; Sætra & Mills, 2022). It enables firms to quickly learn from and adopt stakeholder feedback, translating it into innovative actions that enhance the competitive benefits of green CSR (Bocken et al., 2014). Siddiqui et al. (2024) further emphasize that dynamic absorptive capacity helps firms more effectively cope with complex policy and market pressures, ensuring that green CSR practices can promptly respond to changes in the external environment.

Dynamic absorptive capacity reflects a firm's ability to recognize, assimilate, and exploit external knowledge in rapidly changing environments (Flatten et al., 2011). Firms with higher absorptive capacity are more adept at integrating sustainability knowledge, regulatory insights, and stakeholder feedback into competitive strategies.

In this study's framework, absorptive capacity is expected to strengthen the effects of destigmatization, green marketing, and green CSR on dynamic competitive advantage. For instance, firms with high absorptive capacity can more effectively convert destigmatization efforts into innovation, align green marketing with technological advances, and translate green CSR into adaptive routines.

H8: Dynamic absorptive capacity positively moderates the relationship between destigmatization and dynamic competitive advantage.

H9: Dynamic absorptive capacity positively moderates the relationship between green marketing and dynamic competitive advantage.

H10: Dynamic absorptive capacity positively moderates the relationship between green CSR and dynamic competitive advantage.

3. Method

3.1 Research Design

This study adopts a quantitative research design to empirically test the hypothesized relationships among destigmatization, green marketing, green corporate social responsibility (CSR), dynamic absorptive capacity, and dynamic competitive advantage. A cross-sectional survey method was employed because it enables the collection of data from a large number of respondents within a relatively short period of time, and is particularly suitable for testing causal models using structural equation modeling (SEM).

To ensure robustness, several measures were taken in designing the study. First, validated scales from prior literature were adopted and adapted to the Chinese context through translation and back-translation procedures. Second, the survey was pretested with a small group of managers to assess clarity and relevance. Finally, statistical controls were included to minimize the risks of common method bias and multicollinearity.

3.2 Sampling and Data Collection

The sampling frame consisted of manufacturing enterprises located in Shandong Province and four first-tier cities in China: Beijing, Shanghai, Chongqing, and Shenzhen. These regions were selected due to their concentration of enterprises engaged in sustainability-oriented transformations and their exposure to both reputational and environmental pressures.

A purposive sampling approach was adopted, targeting middle- and senior-level managers who were assumed to have knowledge of organizational strategies, CSR initiatives, and market dynamics. Questionnaires were distributed both online and offline through professional networks, industry associations, and MBA/EMBA alumni channels.

A total of 1,200 questionnaires were distributed, and 917 valid responses were obtained, representing a response rate of 76.4%. The effective sample size exceeds the minimum requirement for SEM analysis (Hair et al., 2010) and enhances the generalizability of findings.

Sample characteristics: Firm size: 42% small and medium-sized enterprises (SMEs), 58% large enterprises. Industry sectors: electronics, machinery, chemicals, automotive, textiles, and others. Respondent roles: 35% senior managers, 41% middle managers, 24% functional managers. Average firm age: 16.7 years.

3.3 Measures

All constructs were measured using multi-item Likert-type scales (1 = strongly disagree, 7 = strongly agree). The measurement items were drawn from established studies and adapted to the context of this research.

Destigmatization was measured using a four-item scale adapted from Hudson (2008) and Devers et al. (2009). Items captured organizational efforts to counteract negative perceptions, rebuild legitimacy, and communicate positive change.

Green marketing was assessed using a five-item scale based on Leonidou et al. (2013). Items measured the extent to which firms promote environmentally friendly features in their products, services, and communication.

Green Corporate Social Responsibility (CSR) was measured with six items adapted from Sharma et al. (2023) and Babiak & Trendafilova (2011). Items assessed firms' voluntary initiatives aimed at environmental stewardship, such as energy conservation, emission reduction, and ecological protection.

Dynamic absorptive capacity was measured with eight items adapted from Zahra & George (2002) and Flatten et al. (2011). Items captured knowledge acquisition, assimilation, transformation, and exploitation capabilities.

Dynamic competitive advantage was assessed using a five-item scale developed based on McGrath (2013) and Eisenhardt & Martin (2000). Items measured firms' ability to adapt, reconfigure resources, and maintain competitiveness in dynamic environments.

4. Results

4.1 Reliability and Validity

Cronbach's α coefficients and composite reliability (CR) values were computed for each construct. As shown in Table 1, all values exceeded the recommended threshold of 0.70, indicating high internal consistency. Convergent validity was assessed through factor loadings, average variance extracted (AVE), and CR. All factor loadings were greater than 0.70, AVE values exceeded 0.50, and CR values were above 0.70, confirming convergent validity.

Table 1: Reliability Analysis

Variable	Dimension	Item	Mean if Deleted	Var if Deleted	Corr-Total	α if Deleted
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Destigmatization	QW1	44.868	98.724	0.797	0.943	0.949
	QW2	44.764	97.148	0.776	0.944	
	QW3	44.872	98.489	0.734	0.946	
	QW4	44.843	97.410	0.763	0.945	
	QW5	44.755	96.373	0.783	0.944	
	QW6	44.737	96.563	0.777	0.944	
	QW7	44.787	95.864	0.791	0.943	
	QW8	44.781	96.208	0.794	0.943	
	QW9	44.836	96.646	0.824	0.942	
	QW10	44.911	98.741	0.812	0.943	
Green Marketing	YX1	46.436	160.294	0.746	0.942	0.946
	YX2	46.444	158.310	0.780	0.941	
	YX3	46.434	160.191	0.735	0.942	
	YX4	46.444	161.018	0.738	0.942	
	YX5	46.433	158.848	0.767	0.941	
	YX6	46.421	160.866	0.722	0.942	
	YX7	46.429	159.712	0.740	0.942	
	YX8	46.444	159.518	0.745	0.942	
	YX9	46.485	159.516	0.744	0.942	
	YX10	46.413	161.144	0.755	0.941	
	YX11	46.411	160.751	0.730	0.942	
	YX12	46.451	159.278	0.778	0.941	
Dynamic Competitive Advantage	JZ1	63.820	255.019	0.747	0.954	0.956
	JZ2	63.791	251.773	0.753	0.953	
	JZ3	63.806	252.030	0.738	0.954	
	JZ4	63.797	251.105	0.755	0.953	
	JZ5	63.853	253.054	0.748	0.954	
	JZ6	63.833	251.502	0.741	0.954	
	JZ7	63.822	250.544	0.730	0.954	
	JZ8	63.864	250.764	0.733	0.954	
	JZ9	63.804	251.121	0.708	0.954	
	JZ10	63.795	249.615	0.736	0.954	
	JZ11	63.751	251.209	0.713	0.954	
	JZ12	63.807	251.490	0.749	0.953	
	JZ13	63.816	252.201	0.747	0.954	
	JZ14	63.761	251.499	0.784	0.953	
	JZ15	63.764	251.689	0.775	0.953	
	JZ16	63.767	255.675	0.754	0.954	
Green CSR	ZR1	39.016	104.328	0.813	0.954	0.958
	ZR2	39.007	101.869	0.789	0.955	
	ZR3	39.044	101.889	0.808	0.954	
	ZR4	39.056	100.981	0.817	0.954	
	ZR5	39.041	102.155	0.803	0.954	
	ZR6	39.040	100.434	0.818	0.954	
	ZR7	39.096	101.807	0.846	0.952	
	ZR8	39.024	103.307	0.842	0.953	
	ZR9	39.048	101.238	0.813	0.954	
	ZR10	39.053	104.278	0.815	0.954	
Dynamic	DT1	101.953	653.735	0.658	0.970	0.971

Absorptive Capacity	DT2	101.887	652.251	0.689	0.970
	DT3	101.906	646.406	0.767	0.970
	DT4	101.925	647.923	0.756	0.970
	DT5	101.877	646.691	0.761	0.970
	DT6	101.936	649.091	0.725	0.970
	DT7	101.945	648.176	0.757	0.970
	DT8	101.913	647.143	0.766	0.970
	DT9	101.903	646.476	0.767	0.970
	DT10	101.903	644.981	0.740	0.970
	DT11	101.870	646.624	0.752	0.970
	DT12	101.947	647.586	0.757	0.970
	DT13	101.908	649.468	0.722	0.970
	DT14	101.902	649.593	0.735	0.970
	DT15	101.883	647.642	0.758	0.970
	DT16	101.941	647.278	0.754	0.970
	DT17	101.883	647.597	0.742	0.970
	DT18	101.908	647.221	0.748	0.970

Discriminant validity was established using the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). As shown in Table 2, The square root of AVE for each construct was greater than its correlations with other constructs, and HTMT values were below 0.85, indicating sufficient discriminant validity.

Table 2: Validity Analysis

	Destigmatization	Green Marketing	Dynamic Competitive Advantage	Green CSR	Dynamic Absorptive Capacity
Destigmatization	0.809				
Green Marketing	.465**	0.769			
Dynamic Competitive Advantage	.434**	.420**	0.755		
Green CSR	.459**	.391**	.447**	0.836	
Dynamic Absorptive Capacity	-.381**	-.251**	.123**	-.174**	0.752
AVE	0.654	0.591	0.569	0.699	0.566
$1 * CR < 0.01$	0.950	0.941	0.936	0.959	0.935

4.2 Common Method Bias and Non-Response Bias

To ensure the validity of the study, potential common method bias (CMB) and non-response bias (NRB) were evaluated.

Common Method Bias. CMB may arise from using the same respondents, identical measurement contexts, or self-report questionnaire design (Podsakoff et al., 2003). Given that data were collected from a single survey, the potential for common method variance was assessed. Confirmatory factor analysis (CFA) conducted in Mplus 8.3 revealed poor fit for a single-factor model ($\chi^2/df = 13.508$, CFI = 0.364, TLI = 0.346, RMSEA = 0.117, SRMR = 0.203), while the proposed measurement model exhibited excellent fit ($\chi^2/df = 1.193$, CFI = 0.990, TLI = 0.990, RMSEA = 0.015, SRMR = 0.024). Consistently, Harman's single-factor test using exploratory factor analysis (EFA) in SPSS 26.0 showed that the first unrotated factor accounted for only 27.79% of total variance, below the 40% threshold (Wu, 2010). These results indicate that CMB is unlikely to significantly affect the study's findings.

Non-Response Bias. NRB was evaluated following Armstrong and Overton's (1977) approach, by dividing the sample into early and late respondents under the assumption that late respondents are more similar to non-respondents. Chi-square tests and independent-samples t-tests were conducted on region, industry type, registered capital, and employee count using SPSS 27.0. Chi-square values ranged from 0.317 to 7.106 (all $p > 0.05$), and all t-tests were non-significant ($p > 0.05$, confidence intervals included 0), suggesting no systematic differences between early and late respondents. Hence, NRB is not considered a serious concern in this study.

4.3 Hypothesis Testing

4.3.1 Direct Effects

The fit indices for both Model 1 and Model 2 indicate good model fit. For Model 1, $\chi^2/df = 1.350$, CFI = 0.993, TLI = 0.992, RMSEA = 0.020, and SRMR = 0.019; for Model 2, $\chi^2/df = 1.311$, CFI = 0.990, TLI = 0.990, RMSEA = 0.018, and SRMR = 0.023. All indices meet recommended thresholds, suggesting that the hypothesized models adequately fit the data.

Regarding the direct effects, in Model 1, de-stigmatization positively influences green corporate social responsibility (CSR) ($\beta = 0.366$, $p < 0.001$), and green marketing also positively affects green CSR ($\beta = 0.233$, $p < 0.001$), supporting the proposed hypotheses. In Model 2, de-stigmatization ($\beta = 0.197$, $p < 0.001$), green marketing ($\beta = 0.197$, $p = 0.019$), and green CSR ($\beta = 0.253$, $p < 0.001$) all have significant positive effects on dynamic competitive advantage, confirming the hypothesized relationships. Table 3 summarizes the direct effect paths for both models.

Table 3: Summary Table of Direct Effect Hypotheses and Path Results

Model	Hypothesized Path	β	SE	t	p	R^2
Model 1	Destigmatization \rightarrow Green CSR	0.366	0.033	11.022	0.000	0.272
	Green Marketing \rightarrow Green CSR	0.233	0.034	6.770	0.000	
	Destigmatization \rightarrow Dynamic Competitive Advantage	0.197	0.035	5.635	0.000	
Model 2	Green Marketing \rightarrow Dynamic Competitive Advantage	0.197	0.031	6.417	0.000	0.321
	Green CSR \rightarrow Dynamic Competitive Advantage	0.253	0.033	7.549	0.000	

4.3.2. Mediation Effect Testing

Based on the research framework illustrated in Fig 1, destigmatization and green marketing were treated as independent variables, green corporate social responsibility (CSR) as the mediating variable, and dynamic competitive advantage as the dependent variable. A mediation model was constructed to examine the indirect effects of de-stigmatization and green marketing on dynamic competitive advantage through green CSR. Following the recommendations of Pieters (2017) and Zhao et al. (2010), testing the mediation model involves first estimating the model to obtain the path coefficients, and then examining the mediation effects.

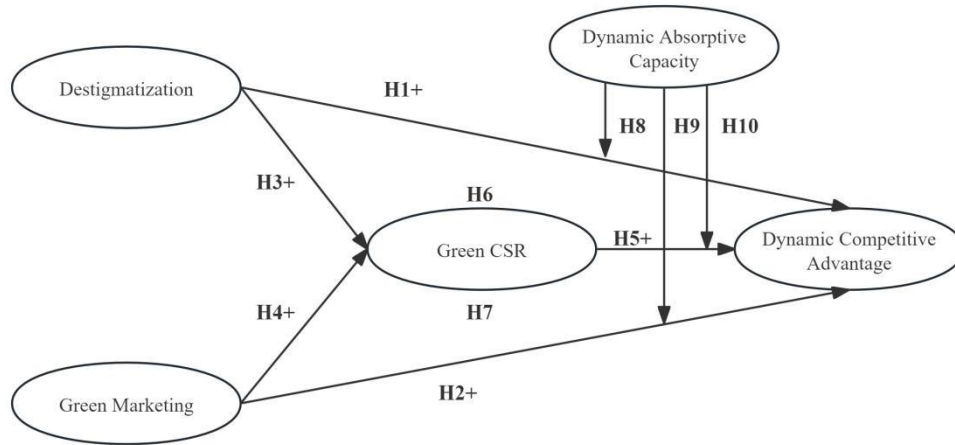


Fig 1: Theoretical Framework

The model fit indices indicate good fit: $\chi^2/df = 1.311$, below the threshold of 5, suggesting acceptable fit; CFI = 0.990 and TLI = 0.990, both above 0.90, indicating excellent fit; RMSEA = 0.018, below 0.08, and SRMR = 0.023, also below 0.08, both meeting recommended standards. Overall, these results suggest that the hypothesized mediation model fits the data well. The results of Table 4 indicate that green marketing and green CSR both play significant partial mediating roles—individually and sequentially—in the relationship between destigmatization and dynamic competitive advantage.

Table 4: Summary of Mediation Effect Analysis Results

Hypothesized Path	β	SE	t	p	LLCI	ULCL	R^2
Destigmatization → Green CSR	0.366	0.033	10.975	0.000	0.301	0.435	0.272
Green Marketing → Green CSR	0.233	0.035	6.720	0.000	0.164	0.301	
Destigmatization → Dynamic Competitive Advantage	0.209	0.035	5.894	0.000	0.140	0.279	0.321
Green Marketing → Dynamic Competitive Advantage	0.231	0.031	7.417	0.000	0.170	0.291	
Green CSR → Dynamic Competitive Advantage	0.268	0.032	8.327	0.000	0.204	0.329	
Total Effect	0.451	0.029	15.718	0.000	0.394	0.506	
Total Indirect Effect	0.242	0.026	9.347	0.000	0.195	0.297	
Destigmatization → Green CSR → Dynamic Competitive Advantage	0.098	0.015	6.477	0.000	0.072	0.131	
Green Marketing → Green CSR → Dynamic Competitive Advantage	0.031	0.006	5.248	0.000	0.021	0.044	
Direct Effect	0.209	0.035	5.894	0.000	0.140	0.279	

4.3.3 Moderation Effect Testing

Currently, the latent moderated structural equation approach can only be performed through specialized computation. Therefore, the moderation effect was tested using the Latent Moderated Structural (LMS) method in MPLUS 8.3. When the standardized coefficient of the selected interaction term is significant ($p < 0.05$), the moderation effect is considered statistically significant, indicating

that the hypothesized moderating effect is supported.

Table 5: Path Coefficients for the Moderation Effect Model

	β	SE	t	p
Destigmatization	0.431	0.038	11.285	0.000
Dynamic Absorptive Capacity	0.394	0.034	11.540	0.000
Destigmatization \times Dynamic Absorptive Capacity	0.314	0.038	8.160	0.000

As shown in Table 5, the interaction term between de-stigmatization and dynamic absorptive capacity has a standardized path coefficient of 0.314 on dynamic competitive advantage, with $t = 8.160$ and $p < 0.001$, indicating a significant interaction effect.

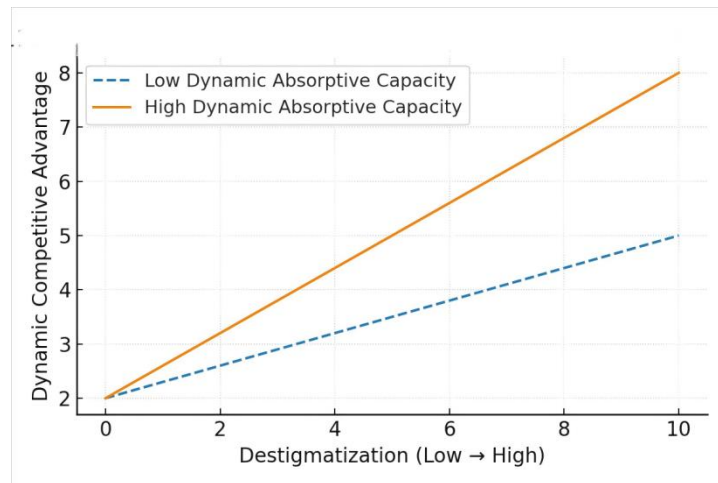


Fig. 2: Moderation Effect Plot

To further examine the moderating role of dynamic absorptive capacity in the relationship between de-stigmatization and dynamic competitive advantage, a moderation effect plot was generated based on the structural equation model path results. As illustrated in Fig 2, both high and low levels of dynamic absorptive capacity exhibit positive slopes, indicating that dynamic competitive advantage increases as de-stigmatization increases. Moreover, the slope for high dynamic absorptive capacity is steeper than that for low dynamic absorptive capacity, suggesting that the positive effect of de-stigmatization on dynamic competitive advantage is stronger when dynamic absorptive capacity is higher. These findings indicate that dynamic absorptive capacity positively moderates the relationship between de-stigmatization and dynamic competitive advantage, supporting the proposed hypothesis.

Table 6: Path Coefficients for the Moderation Effect Model

	β	SE	t	p
Green Marketing	0.445	0.032	13.990	0.000
Dynamic Absorptive Capacity	0.359	0.031	11.406	0.000
Green Marketing \times Dynamic Absorptive Capacity	0.260	0.036	7.290	0.000

According to Table 6, the standardized path coefficient of the interaction term between green marketing and dynamic absorptive capacity on dynamic competitive advantage is 0.260, with a t -value of 7.290 and $p = 0.000 < 0.05$. This indicates that the interaction between green marketing and dynamic absorptive capacity has a significant effect on dynamic competitive advantage.

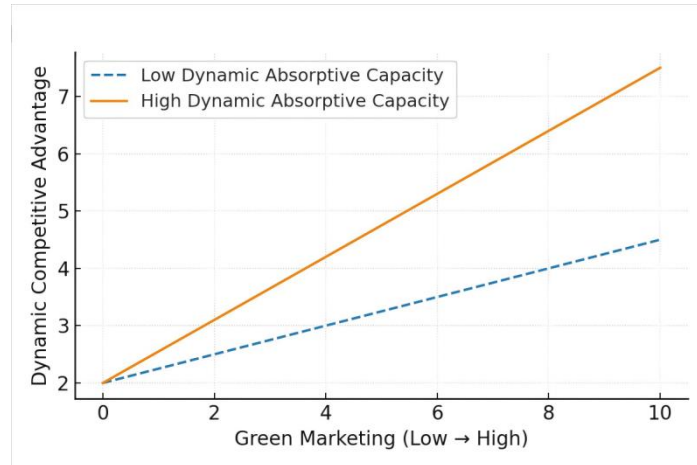


Fig.3: Moderation Effect Plot

To further examine the moderating effect of dynamic absorptive capacity on the relationship between green marketing and dynamic competitive advantage, this study plotted a moderation effect model based on the structural equation modeling path results. As shown in Fig 3, the results reveal that under both high and low levels of dynamic absorptive capacity, the regression lines present an upward trend, indicating that as green marketing increases, dynamic competitive advantage also improves. Furthermore, the slope of the line for high dynamic absorptive capacity is steeper than that for low dynamic absorptive capacity. This demonstrates that as absorptive capacity increases, the positive impact of green marketing on dynamic competitive advantage is strengthened. When dynamic absorptive capacity is at a higher level, green marketing exerts a greater influence on dynamic competitive advantage. Therefore, dynamic absorptive capacity plays a positive moderating role in the relationship between green marketing and dynamic competitive advantage, and the hypothesis is supported.

Table 7: Path Coefficients for the Moderation Effect Model

	β	SE	t	p
Green CSR	0.474	0.027	17.539	0.000
Dynamic Absorptive Capacity	0.371	0.029	12.845	0.000
Green CSR \times Dynamic Absorptive Capacity	0.382	0.028	13.827	0.000

According to Table 7, the standardized path coefficient of the interaction term between green corporate social responsibility (green CSR) and dynamic absorptive capacity on dynamic competitive advantage is 0.382, with a t-value of 13.827 and $p = 0.045 < 0.05$. This indicates that the interaction between green CSR and dynamic absorptive capacity has a significant effect on dynamic competitive advantage.

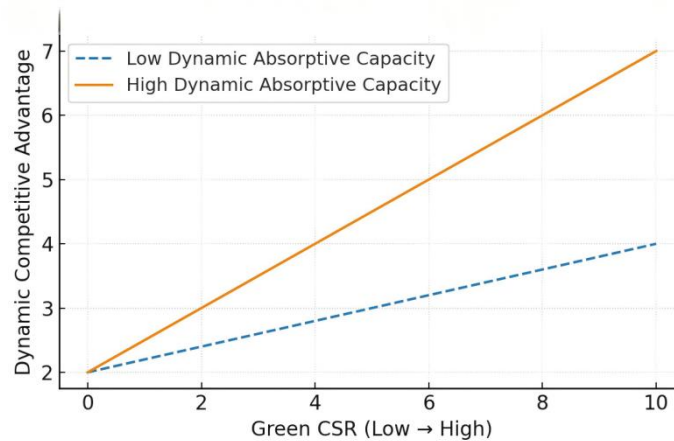


Fig.4: Moderation Effect Plot

To further examine the moderating role of dynamic absorptive capacity in the relationship between green CSR and dynamic competitive advantage, this study plotted a moderation effect model based on the structural equation modeling path results. As shown in Fig 4, the results reveal that under both high and low levels of dynamic absorptive capacity, the regression lines display an upward trend, indicating that as green CSR increases, dynamic competitive advantage also improves. Moreover, the slope of the line under high dynamic absorptive capacity is steeper than that under low dynamic absorptive capacity. This demonstrates that as dynamic absorptive capacity increases, the positive impact of green CSR on dynamic competitive advantage is strengthened. When dynamic absorptive capacity is at a higher level, green CSR exerts a greater influence on dynamic competitive advantage. Therefore, dynamic absorptive capacity plays a positive moderating role in the relationship between green CSR and dynamic competitive advantage, and the hypothesis is supported.

5. Discussion

5.1 Interpretation of Findings

This study set out to investigate how destigmatization and green marketing influence dynamic competitive advantage (DCA), with green corporate social responsibility (CSR) serving as a mediator and dynamic absorptive capacity acting as a moderator. The empirical findings provide robust support for the hypothesized model.

First, both destigmatization and green marketing were found to positively influence dynamic competitive advantage. This result underscores the strategic importance of reputation repair and sustainability-oriented marketing in enabling firms to adapt to turbulent environments. Destigmatization allows organizations to overcome legitimacy deficits, regain stakeholder trust, and position themselves as credible actors in the marketplace. Meanwhile, green marketing signals a firm's environmental commitment, differentiates products, and attracts sustainability-minded customers—all of which enhance adaptability and competitiveness.

Second, green CSR emerged as a critical mediating mechanism. Destigmatization and green marketing enhanced DCA not only directly but also indirectly through their influence on green CSR. This finding highlights the fact that reputational strategies and marketing efforts alone are insufficient unless institutionalized into organizational practices. Green CSR provides the structural backbone that transforms symbolic actions into substantive, long-term routines. In other words, while destigmatization and green marketing may initiate change, green CSR consolidates it, ensuring that competitive advantages are renewable rather than transient.

Third, dynamic absorptive capacity was confirmed as a positive moderator. Firms with stronger absorptive capacity derived greater benefits from destigmatization, green marketing, and green CSR in

enhancing DCA. This suggests that knowledge-related capabilities determine how effectively firms can translate sustainability strategies into competitive outcomes. High absorptive capacity enables organizations to integrate external knowledge, regulatory insights, and stakeholder feedback, thereby amplifying the advantages gained through green strategies.

Collectively, these findings indicate that dynamic competitive advantage is best achieved when firms simultaneously engage in reputational recovery (destigmatization), market signaling (green marketing), institutionalized sustainability (green CSR), and knowledge transformation (absorptive capacity).

5.2 Theoretical Contributions

Integrating Destigmatization into Strategic Management: While previous studies have examined stigma primarily from sociological or psychological perspectives, this study extends the concept to organizational strategy. By demonstrating that destigmatization enhances DCA, we provide evidence that stigma management is not merely a reputational necessity but also a strategic pathway to resilience and adaptability. This integration enriches both the stigma literature (Hudson, 2008; Devers et al., 2009) and dynamic capabilities theory.

Linking Green Marketing to Dynamic Competitive Advantage. Although green marketing has been widely studied in consumer behavior and sustainability contexts, its role in generating dynamic competitive advantage has been underexplored. Our findings show that green marketing, when combined with absorptive capacity, allows firms to continuously reposition themselves in changing markets, thus extending the scope of marketing strategy research into dynamic capabilities.

Highlighting the Mediating Role of Green CSR. By identifying green CSR as a mediator, this study demonstrates how symbolic strategies (destigmatization and marketing) are institutionalized into substantive practices that reinforce adaptability. This bridges CSR and dynamic capability literatures, showing that CSR initiatives are not peripheral but central mechanisms that sustain competitive advantages in volatile environments.

Establishing Absorptive Capacity as a Boundary Condition. While absorptive capacity has often been treated as an antecedent of firm innovation or performance, this study positions it as a boundary condition. We show that absorptive capacity strengthens the effectiveness of destigmatization, green marketing, and CSR in achieving DCA. This highlights its contingent role in shaping the outcomes of strategic initiatives, thereby enriching dynamic capabilities research.

5.3 Managerial Implications

Prioritize Reputation Recovery through Destigmatization. Firms facing reputational crises should not only engage in crisis communication but also adopt proactive destigmatization strategies. Transparent engagement with stakeholders, acknowledgment of past shortcomings, and visible corrective actions can restore legitimacy and strengthen long-term adaptability.

Leverage Green Marketing as a Differentiation Strategy. Managers should recognize that green marketing is not simply a promotional tool but a strategic approach to positioning the firm in sustainability-conscious markets. Authenticity is critical: marketing claims must be backed by substantive green CSR initiatives to avoid accusations of greenwashing.

Institutionalize Sustainability via Green CSR. Firms should embed environmental sustainability into their core operations rather than treating it as a peripheral activity. Green CSR initiatives—such as renewable energy adoption, eco-friendly supply chain practices, and environmental partnerships—create long-term resilience and reinforce dynamic capabilities.

Develop Dynamic Absorptive Capacity. Firms must invest in organizational learning mechanisms, employee training, and knowledge management systems to strengthen absorptive capacity. By doing so, they enhance their ability to transform external knowledge into innovative practices, thereby maximizing the benefits of destigmatization and green strategies.

Adopt an Integrated Strategy. The findings suggest that isolated efforts (e.g., marketing without CSR, or CSR without absorptive capacity) may yield limited results. Managers should adopt a holistic approach that simultaneously addresses reputation, market positioning, sustainability practices, and knowledge absorption.

5.4 Limitations and Future Research

Cross-sectional design. Data were collected at a single point in time, which limits the ability to infer causality. Future studies could employ longitudinal designs to examine how destigmatization, green marketing, and CSR evolve over time in influencing DCA.

Geographical scope. The study focused on firms in China. While this provides valuable insights into an emerging economy with unique institutional pressures, future research should examine cross-country comparisons to enhance generalizability.

Industry representation. Although multiple manufacturing sectors were included, service industries (e.g., hospitality, finance, education) were underrepresented. Future studies could test whether the relationships hold in service-intensive contexts where reputational concerns may be even more salient.

Single-source data. Despite procedural and statistical controls, the use of manager-reported data raises the risk of common method bias. Future research could triangulate data from multiple stakeholders (e.g., employees, customers, regulators) or incorporate objective performance metrics.

Additional mediators and moderators. While this study focused on green CSR as a mediator and absorptive capacity as a moderator, other mechanisms may be relevant. For example, organizational culture, leadership commitment, and digital transformation capabilities could further explain how sustainability strategies translate into DCA.

6. Conclusion

The purpose of this study was to explore how destigmatization and green marketing contribute to dynamic competitive advantage (DCA), while highlighting the mediating role of green corporate social responsibility (CSR) and the moderating role of dynamic absorptive capacity. Drawing upon the perspectives of sustainable development and dynamic capabilities theory, this research sought to provide both theoretical and practical insights into the mechanisms that enable firms to thrive in turbulent market environments.

6.1 Summary of Key Findings

The findings reveal several important insights. First, destigmatization and green marketing each exert significant positive effects on DCA. This result confirms that organizations can enhance adaptability and sustain competitive positions not only by recovering reputational legitimacy but also by proactively engaging in sustainability-oriented marketing strategies.

Second, green CSR was shown to mediate the effects of destigmatization and green marketing on DCA. This highlights the importance of institutionalizing sustainability initiatives within firms. Symbolic actions alone are insufficient; they must be reinforced by substantive CSR practices that demonstrate environmental accountability and embed sustainability into organizational routines.

Third, dynamic absorptive capacity positively moderated the relationships between destigmatization, green marketing, green CSR, and DCA. Firms with stronger absorptive capacity benefited more from sustainability strategies because they were able to integrate external knowledge, adapt to stakeholder demands, and reconfigure resources more effectively.

Together, these results suggest that DCA is best achieved when organizations adopt a holistic approach that combines reputational recovery, sustainability-oriented marketing, institutionalized CSR, and knowledge transformation capabilities.

6.2 Concluding Remarks

In conclusion, this study demonstrates that organizations can achieve dynamic competitive advantage by integrating destigmatization, green marketing, green CSR, and absorptive capacity. By addressing reputational deficits, signaling sustainability commitments, institutionalizing CSR practices, and developing strong knowledge transformation capabilities, firms can not only adapt to turbulent markets but also shape them. The findings underscore that dynamic competitiveness in the contemporary business landscape is not a product of isolated strategies, but of integrated efforts that align reputation, sustainability, and learning.

This research thus contributes to the theoretical development of dynamic capabilities and sustainability strategy while offering practical pathways for firms striving to achieve resilience and long-term success in increasingly uncertain environments.

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