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Sustainability, Innovation, and Competitive Advantage in Tourism: An Event Study of the Inflation Reduction Act

Abstract

This study analyzes the impact of policy-induced changes on the market valuation of tourism and hospitality firms, focusing on green innovation and competitive advantage. Using a sample of publicly listed tourism and hospitality firms in the United States, and drawing on an integrated theoretical framework, we examine how policy shifts reshape competitive dynamics. More precisely, this paper analyzes how legislative events related to the Inflation Reduction Act affected firms' market value fluctuations. The main results indicate that first-movers in green innovation initially benefited from policy uncertainty but faced competitive erosion once the approval of the new policy reduced entry barriers for competitors. These findings contribute to the strategic management and sustainability literature, highlighting the need for continuous innovation beyond regulatory incentives to sustain long-term differentiation.

Keywords: Sustainability-driven competitive advantage; Policy-induced market shifts; Inflation Reduction Act; Strategic ambidexterity; Event study methodology; Green innovation and investment.

1. Introduction

In recent years, sustainability and innovation have become key strategic priorities for firms across industries, particularly in tourism (Dogru et al., 2022; Jo & Shin, 2025; Pasquinelli & Trunfio, 2023; Wu, 2025). In this context, environmental concerns and changes in regulations have increasingly influenced business operations (Fu, 2025). The global push toward environmentally sustainable business models has led to the adoption of initiatives related to green technologies and sustainable practices in management (Hart, 1995; De Stefano et al., 2016); initiatives that bring about competitive advantages (Della Corte & Aria, 2016; Hussein et al., 2024).

The concept of competitive advantage has long been central to strategic management research. According to Porter (1980, 1985), firms achieve competitive advantage by either differentiating themselves within their industry or operating at a cost advantage. The resource-based view (Barney, 1991) refined this perspective by arguing that competitive advantage arises from valuable, rare, inimitable, and non-substitutable resources. This framework suggests that firms can sustain competitive advantage by leveraging unique capabilities that competitors cannot easily replicate.

Along these lines, the natural resource-based view (Hart, 1995) extends the resource-based view by integrating environmental sustainability into strategic decision-making. It argues that firms engaging in green innovation—such as eco-friendly product development, carbon reduction strategies, or sustainable business practices—can establish long-term competitive advantages by reducing costs, enhancing brand reputation, and responding proactively to regulatory pressures. Prior research suggests that firms investing in sustainability can gain first-mover advantages, benefiting from consumer preference for green products and proactive regulatory compliance,

which positions them ahead of competitors (De Stefano et al., 2016; Kuo et al., 2022; Aftab et al., 2023).

However, the ability to sustain this advantage is contingent on the persistence of entry barriers. If external conditions—such as government policies—reduce the cost of green innovation for competitors, the uniqueness of first movers' capabilities may erode. This raises the question: Does government intervention in green innovation disrupt competitive dynamics, favoring late adopters over first movers?

Moreover, while the traditional view of competitive advantage assumes that firms can establish long-term differentiation, there is literature that argues that advantages are increasingly transient (Dagnino et al., 2021; Forrest & Tallapally, 2024; Huang et al., 2015; D'Aveni, 1994; Wiggins & Ruefli, 2005). In fast-changing markets, firms must reinvent their competitive position constantly to remain relevant, because temporary advantages (rather than permanent ones) drive firm performance (Thomas & D'Aveni, 2009). This evolving view of competitive advantage—from one based on stable, inimitable resources to one determined by rapidly changing external conditions—suggests that resource-based view and natural resource-based view alone may be insufficient to explain how sustainability-driven advantages evolve in dynamic environments, and that complementary perspectives are needed to account for their potential erosion.

To address this gap, we integrate the temporary competitive advantage framework (D'Aveni et al., 2010), which argues that advantages are increasingly short-lived, especially in rapidly changing or policy-driven markets. In this view, green innovation may provide only temporary superiority, as external forces—such as regulatory incentives—accelerate diffusion and imitation.

In such environments, strategic ambidexterity (Tushman & O'Reilly, 1996; Raisch & Birkinshaw, 2008) becomes essential. Ambidextrous firms balance exploration (investing in

innovation and long-term growth opportunities) with exploitation (maximizing current capabilities for efficiency and profitability). Firms that over-rely on exploration (i.e., constant investment in innovation) may face profitability challenges, while those that focus only on exploitation risk losing competitiveness and struggling to adapt when industry conditions change. Strategic ambidexterity thus provides a dynamic capability through which firms can respond to the shifting balance between temporary and sustained advantages. This trade-off is particularly relevant for green tourism firms (Dias et al., 2024; Ferrer-Roca et al., 2022; Tajeddini et al., 2024; Vo Thanh et al., 2020), which must innovate regularly to maintain their differentiation—especially when external policies may reduce their initial competitive edge as they can change the cost structures associated with sustainable investments.

A key situation of how government intervention can modify the competitive landscape is the Inflation Reduction Act, signed into law in August 2022. The Inflation Reduction Act represents a significant policy intervention aimed at promoting clean energy investment, sustainability-driven innovation, and carbon reduction in the U.S. economy (Inflation Reduction Act, 2022). Among its many provisions, the Inflation Reduction Act provides substantial financial incentives for green initiatives, effectively reducing the cost of adopting eco-friendly business practices across industries, including tourism (Trujillo-Adriá et al., 2024; Xu et al., 2024).

While these incentives are expected to accelerate the adoption of sustainable business models, they also introduce a paradox: on the one hand, the Inflation Reduction Act lowers entry barriers, making it easier for more firms to implement green strategies; and on the other hand, it potentially diminishes the competitive advantage of first movers, who had previously differentiated themselves through sustainability-driven innovation.

Accordingly, the Inflation Reduction Act creates an environment where firms must reassess their competitive positioning dynamically. Green tourism firms that previously exploited their sustainability advantage may now need to reinvest in new innovations to maintain differentiation, as government incentives make it easier for competitors to catch up. At the same time, firms that were previously lagging in sustainability may find themselves better positioned to make the most of new incentives and reduce their competitive disadvantage. This scenario underscores the importance of not only understanding how sustainability-based advantages are built (via resource-based view and natural resource-based view), but also how they are eroded (through temporary advantage), and how firms can strategically respond (through ambidexterity).

By combining these perspectives, we propose an integrated theoretical framework that explains how policy-induced reductions in the cost of adopting sustainability practices disrupt competitive advantage, particularly in industries such as tourism where differentiation relies heavily on innovation. In doing so, we argue that resource-based view and natural resource-based view explain the origins of green competitive advantage, the theory of temporary competitive advantage explains its instability in the face of external change, and strategic ambidexterity provides a response mechanism through which firms can preserve—or re-establish—differentiation.

Beyond simply juxtaposing these perspectives, our theoretical contribution lies in showing that their integration generates explanatory power that none of them can achieve alone. The resource-based view and the natural resource-based view explain the origins of sustainability-based competitive advantages, but they are less suited to explaining how these advantages may erode when policy shifts alter industry cost structures. The theory of temporary competitive advantage fills this gap by explaining the mechanism of erosion in dynamic, policy-driven environments,

while the theory of strategic ambidexterity specifies the adaptive capability that firms can deploy to renew or preserve differentiation once barriers to entry fall. These perspectives form a process model that links emergence, erosion, and potential renewal of competitive advantage, thereby offering new theoretical insight into how government incentives may reshape competitive dynamics in sustainability-driven industries.

Building on this integrated framework, the objective of this article is to analyze how these policy-induced changes have an effect on competitive positioning in sustainability-driven tourism firms. Our primary focus is on measuring financial market reactions to policy-related events, as reflected in abnormal stock returns—the most immediate and forward-looking signal of how new policy information is incorporated into firm valuation—rather than on tracking post-event operational outcomes. Although our analysis measures cumulative abnormal returns over a short event window, these are forward-looking, market-based indicators of investor expectations regarding a firm's future cash flows. As such, cumulative abnormal returns capture how the market anticipates the long-term implications of policy changes at the time of the announcement, rather than documenting realized operational outcomes. Specifically, we investigate whether government incentives erode the competitive advantage of early adopters of green innovation by facilitating industry-wide adoption, thereby reducing differentiation. The empirical application of this study examines the impact of the Inflation Reduction Act on the market valuation of tourism firms by analyzing reactions in their market value to two critical events leading up to the passage of the legislation (Bauer et al., 2023): i) the brown event (July 14, 2022), when reports suggested that the Inflation Reduction Act would not pass, creating uncertainty about the continuation of these federal incentives (Cochrane & Friedman, 2022); and ii) the green event (July 27, 2022), when a legislative agreement was reached, signaling that the Inflation Reduction Act would be

enacted (Romm et al., 2022). By focusing on these events, we analyze how the market interpreted the changing competitive dynamics in the tourism sector, particularly for firms with strong sustainability-oriented innovation strategies.

From a managerial perspective, our findings offer valuable insights into how green innovative firms should navigate policy-induced shifts in competitive positioning, emphasizing the importance of strategic ambidexterity in maintaining long-term differentiation. From a theoretical viewpoint, this study advances the strategic management, financial economics, and sustainability literature by demonstrating how policy interventions affect competitive advantage and investor behavior. We contribute a synthesized framework that positions resource-based view and natural resource-based view as foundations of initial advantage, temporary advantage theory as the mechanism of erosion, and ambidexterity as the key adaptive strategy. Our findings challenge the resource-based view and natural resource-based view by showing that government incentives lower barriers to entry, eroding first-mover advantages in sustainability-driven industries. This extends the temporary competitive advantage framework, highlighting that sustainability-based differentiation may be inherently unstable in policy-driven markets. Additionally, we contribute to strategic ambidexterity theory by illustrating how green tourism firms must constantly balance exploration (green innovation) and exploitation (efficiency) to sustain differentiation when regulatory shifts change competitive dynamics.

2. Competitive advantage and strategic ambidexterity in green innovation

2.1. *The foundations of competitive advantage in green innovation*

The concept of competitive advantage has been a cornerstone of strategic management research. Porter (1980, 1985) introduced the notion of position-based competition, arguing that firms should focus on identifying industries with high potential and then establish a unique market

position within them to gain power. This perspective suggests that firms can sustain their advantage by differentiating themselves or, alternatively, achieving a cost advantage over competitors. Later, Barney (1991) refined this view through the resource-based view, which emphasizes firm-specific resources that are valuable, rare, inimitable, and non-substitutable as the foundation for sustaining a competitive advantage. According to this framework, firms that protect and develop unique resources—tangible such as technologies or intangible such as brand reputation—can maintain long-term differentiation and limit imitation (Teece et al., 1997). However, resource-based view assumes that these advantages can persist in relatively stable environments. In dynamic and policy-sensitive industries, this assumption may not hold.

Building on the resource-based view, Hart (1995) introduced the natural resource-based view, which extends strategic management theory by integrating environmental sustainability into competitive advantage formation. The natural resource-based view argues that firms investing in eco-friendly innovation—such as carbon reduction strategies, circular economy practices, or green technology adoption—can create both environmental and economic value, gaining an advantage over competitors. According to Begum et al. (2022), firms embracing sustainability-driven innovations benefit from reduced environmental impact, enhanced operational efficiency, and stronger market differentiation.

Moreover, empirical evidence indicates that firms proactively engaging in green innovation enjoy first-mover advantages, as they attract eco-conscious consumers and position themselves ahead of regulatory compliance requirements (De Stefano et al., 2016; Aftab et al., 2023; Lim et al., 2024; Su et al., 2024). However, the persistence of this advantage is contingent on external factors, particularly industry-wide adoption and policy shifts. For instance, if government policies lower the cost of green innovation for competitors, early adopters may lose their

differentiation, leading to a more level playing field. This situation raises the key question of whether government intervention in green innovation sustains or erodes first-mover competitive advantages.

Thus, while resource-based view and natural resource-based view explain how green innovation can initially generate competitive advantages, they do not fully account for how those advantages may erode when policy incentives accelerate market-wide adoption. This limitation calls for integrating a more dynamic perspective.

2.2. *Sustainable vs. temporary competitive advantage in green innovation*

Historically, sustainable competitive advantage was understood as a long-term, defensible market position, largely determined by inimitable firm-specific assets (Barney, 1991; Porter, 1985). However, recent research highlights that competitive advantages are increasingly transient (Dagnino et al., 2021; Forrest & Tallapally, 2024; Huang et al., 2015; Jørgensen, 2024), particularly in industries characterized by technological advancement and regulatory change.

The theory of temporary competitive advantage provides a useful lens for understanding this shift. D'Aveni (1994) introduced the concept of hypercompetition, arguing that industries are increasingly characterized by quick shifts in market leadership, where competitive advantages are frequently disrupted by innovation, technological change, and regulatory forces. In fact, Suarez and Lanzolla (2005) emphasized that a firm's ability to sustain competitive advantage over time depends on two key factors: the speed with which technology evolves and the potential expansion of the product market. A durable first-mover advantage is guaranteed in the presence of a strong technological edge, scarcity of assets left to competitors, and the existence of a strong base for consumers.

In environments characterized by fast developing technology and fast expanding consumer base, it is more challenging for firms to cling to their competitive advantage—especially when external shocks like regulatory incentives make those advantages easier to imitate. According to Thomas and D'Aveni (2009), the increasing volatility in financial returns supports the idea that the transitory component of competitive advantage is increasing over time, at the expense of its more permanent component.

In such dynamic environments, firms must constantly adapt and innovate to maintain differentiation, as temporary advantages are constantly replaced by new innovations. This reality is especially salient in policy-sensitive sectors such as tourism, where firms that once led in sustainability may find their advantage diluted when subsidies lower the costs of green innovation for all.

This change is particularly relevant for tourism firms engaged in sustainability-driven innovation (Kuo et al., 2022). While initial investments in green business models provide an advantage, these benefits may diminish over time as industry adoption increases. Furthermore, the cost of maintaining differentiation rises, as firms must reinvest in new sustainability initiatives to stay ahead of competitors (Martín-Rios & Ciobanu, 2019).

As such, temporary competitive advantage complements the resource-based view and natural resource-based view by explaining not only how competitive advantage is created—but how it is threatened when external forces (such as policies) shift the basis of competition.

2.3. *Strategic ambidexterity: balancing green innovation and market adaptation*

In this fast-evolving landscape, strategic ambidexterity serves as a response mechanism to the instability of green competitive advantages, and helps firms navigate the balance between

innovation and competitive positioning (Tushman & O'Reilly, 1996; Raisch & Birkinshaw, 2008). Ambidextrous green tourism firms should balance: i) exploration by investing in new sustainability innovations, such as energy management systems or regenerative tourism models; and ii) exploitation by maximizing returns from existing sustainable initiatives, ensuring efficiency and profitability.

In this context, tourism firms investing in green innovation face a strategic trade-off (Dias et al., 2024; Ferrer-Roca et al., 2022; Tajeddini et al., 2024; Vo Thanh et al., 2020): while over-reliance on exploration (continuous investment in new sustainability technologies) may lead to high costs and reduced profitability, focusing only on exploitation (maximizing current sustainability efforts) may result in loss of differentiation and vulnerability to competitors' innovations.

Importantly, policy interventions such as the Inflation Reduction Act add a layer of urgency to this trade-off. As incentives expand green adoption, early adopters must decide whether to double down on innovation or consolidate past investments.

Accordingly, strategic ambidexterity suggests that green tourism firms must actively reassess their competitive positioning in response to market changes and policy interventions. Rather than rely only on first-mover advantages, firms must continuously reconfigure their resource base—balancing efficiency and innovation—to sustain differentiation in a shifting regulatory landscape.

2.4. *Policy-Induced Disruption: The Impact of the Inflation Reduction Act*

Government policies play a crucial role in forming business environments, influencing industry dynamics, competitive landscapes, and consequently, affecting firm strategies. Policy interventions—such as regulatory changes, subsidies, tax incentives, or environmental mandates—can stimulate growth in certain sectors while simultaneously disrupting others. A

revealing example of how government policy can disrupt competitive advantage is the Inflation Reduction Act, signed into law in August 2022. This legislation aims to accelerate clean energy investment, promote green innovation, and reduce carbon emissions across multiple industries, including tourism (Inflation Reduction Act, 2022). Along these lines, the Inflation Reduction Act introduces financial incentives—such as tax credits, subsidies, and grants—that significantly lower the cost of sustainability-driven investments. While this encourages broader industry adoption of green initiatives, it also reduces the differentiation of firms that had previously built a competitive edge through sustainability innovation.

This situation introduces two strategic challenges for green tourism firms. First, there is an increased competition from late adopters. Notice that firms that invested previously in sustainability had a cost advantage over competitors who hesitated to make similar investments. However, by reducing the costs and risks of green adoption, the Inflation Reduction Act erodes the entry barriers that once protected early adopters' market positions—a dynamic that aligns with the theory of temporary competitive advantage; and second, there is pressure to reinvest in new differentiating strategies. To maintain a competitive edge, firms must now pivot toward newer, more advanced sustainability strategies beyond the scope of Inflation Reduction Act-supported initiatives.

This environment enhances the relevance of strategic ambidexterity (Dias et al., 2024; Ferrer-Roca et al., 2022; Tajeddini et al., 2024; Vo Thanh et al., 2020), as firms must simultaneously *exploit* prior sustainability investments while *exploring* new innovations to sustain differentiation. Firms that rely only on past green investments may find their advantage diluted, while those that reconfigure their innovation efforts may re-establish a temporary edge.

To empirically assess the market response to the Inflation Reduction Act, we analyze changes in the market value of tourism firms in reaction to two key events that shaped expectations regarding the policy's enactment (Bauer et al., 2023): i) the brown event (July 14, 2022) where news reports suggested that the Inflation Reduction Act might not pass, introducing uncertainty about the continuation of federal incentives for sustainability investments (Cochrane & Friedman, 2022); and ii) the green event (July 27, 2022) where a legislative agreement was reached, signaling that the Inflation Reduction Act would indeed be enacted, confirming that government support for green innovation would soon be available to all firms (Romm et al., 2022).

These two events offer a natural setting[1] to analyze how market participants adjusted their expectations regarding the competitive advantage of green tourism firms in response to policy uncertainty and eventual confirmation.

The brown event, occurring on July 14, 2022, was marked by media coverage suggesting that the Inflation Reduction Act might not be approved (Cochrane & Friedman, 2022). This development must have introduced uncertainty about the future of government-backed incentives for green investments, implying that firms would continue to bear the full costs of sustainability initiatives without external financial support. From a strategic management perspective, this event has direct implications for competitive advantage. On the one hand, the resource-based view (Barney, 1991) and the natural resource-based view (Hart, 1995) suggest that firms investing in

[1] The Inflation Reduction Act represents a particularly interesting case for study because it emerged from the alluded two extreme events that caused expectations to change in diametrically opposite directions. On July 14, news reports revealed that Senator Joe Manchin of West Virginia withdrew his support for new environmental spending, a crucial vote needed to pass legislation in the face of Republican opposition. This event, dubbed the "brown event," served as a market signal indicating that the environmental policy package would not be implemented. In contrast, on July 27, Senator Manchin reached an agreement with the Democratic Party, allowing the environmental policy to pass through the Senate. This second event, which referred to as the "green event," completely reversed market expectations, signaling that the environmental spending package was becoming a reality.

green innovation gain a differentiation advantage due to valuable, rare, inimitable, and non-substitutable resources; and on the other hand, firms that had already made significant investments in green innovation must have established entry barriers, making it difficult for competitors to replicate their sustainability efforts without incurring high costs, in line with Porter and Van der Linde (1995) and Teece et al. (1997). If the Inflation Reduction Act were not enacted, these barriers would remain intact, preserving the differentiation and competitive edge of early adopters of sustainability-driven innovation. From an investor viewpoint, the brown event signaled that the status quo would continue, meaning that green firms that had already positioned themselves as sustainability leaders would retain their relative advantage over competitors who had not yet transitioned to green practices (Bansal & Clelland, 2004; Schrettle et al., 2014). Since government incentives would not reduce the cost of green investments for competitors, first movers would be less likely to experience new competitive pressures from firms that had previously lagged in sustainability. Investors would likely view this as favorable to early green innovators, expecting their market advantage to persist longer in the absence of government-driven diffusion.

H1. *Green innovative tourism companies will experience more positive abnormal returns in response to the brown event than their non-green counterparts, as investors anticipate a continued advantage under sustained entry barriers.*

The green event, which occurred on July 27, 2022, confirmed that the Inflation Reduction Act would be enacted (Romm et al., 2022). This legislative decision meant that financial incentives for sustainability-driven investments would become available to all firms, significantly reducing the costs of adopting green innovations. In this case, from a competitive advantage standpoint, this policy shift represented a potential disruption to the market positioning of green firms. Firms

that had previously differentiated themselves through sustainability-driven innovation had done so at a higher cost, securing first-mover advantages by making early investments in eco-friendly technologies, sustainable operations, or carbon reduction strategies, among others. These firms benefited from consumer preference for green products and reputational advantages (Amatulli et al., 2021), positioning them as leaders in sustainability.

However, government-backed incentives now allowed late adopters to implement similar initiatives at a lower cost, thereby reducing the distinctiveness of early movers' efforts. This erosion of differentiation aligns with the logic of temporary advantage theory, where external forces can rapidly dismantle formerly secure positions. It also reflects the challenge of ambidexterity: firms must not only have innovated early, but also adapt and re-innovate in response to shifting policy dynamics (Tushman & O'Reilly, 1996).

From an investor perspective, the green event likely signaled increased competitive parity and reinvestment risk for early movers, who would need to adopt new innovations to regain lost differentiation. This reduced perceived value could trigger a negative stock market response.

H2. *Green innovative tourism companies will experience lower abnormal returns in response to the green event than their non-green counterparts, as investors anticipate increased competition and erosion of early-mover advantages under the new policy framework.*

3. Data and Methodology

To analyze how policy-induced changes affect the market valuation of tourism firms, we employ an event study methodology (Poretti & Heo, 2022). Event studies are widely used in financial economics (MacKinlay, 1997; McWilliams & Siegel, 1997; El Ghoul et al., 2023), as well as in hospitality and tourism research (Nicolau & Sharma, 2022), to assess stock market reactions to

new information, allowing us to measure abnormal returns associated with relevant events. In the following subsections, we outline the sample selection, the key event dates, and the models used for estimating abnormal returns and conducting the subsequent explanatory analysis.

3.1.Sample

We construct our sample by first retrieving all publicly listed "Travel & Leisure" companies in the United States from the LSEG Datastream database that were active as of fiscal year 2022 (N = 332). Next, we collected environmental, social, and governance (ESG) data on Refinitiv Eikon, and removed firms with missing accounting and market (i.e., stock prices) data. The final sample comprises 143 different firms. The distribution of sampled firms across sub-industries is the following: Restaurants & Bars (38%), Casinos & Gambling (17%), Recreational Services (15%), Hotels & Motels (10%), Airlines (10%), and Travel & Tourism (9%). This diverse representation allows for a comprehensive analysis of tourism-related firms and their market response to policy shifts.

3.2.Key events

Our analysis focuses on the two key dates related to the Inflation Reduction Act described in section 2.4 (Cochrane & Friedman, 2022; Romm et al., 2022): both events are directly tied to the legislative process of the Inflation Reduction Act and reflect shifts in expectations about its passage and the resulting incentives for green innovation. The first event is the "brown event" on July 14, 2022, corresponding to the disclosure of news indicating that support for the new legislation was faltering—this situation suggested a high likelihood that the act would not be passed, along with policies supporting green and sustainable innovation. The second event is the "green event" on July 27, 2022, occurring when news surfaced that a legislative agreement was

reached—this development signaled that the Inflation Reduction Act was close to being enacted, promising significant incentives for firms to invest in green and sustainable practices.

3.3. Model development

To measure the stock market reaction to the two events of interest, we used an event-study methodology, in line with previous studies. Firstly, we estimated the parameters from the market model using six months of daily returns prior to the event date.

$$R_{it} = \propto_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

Then, we calculated the abnormal returns (*AR*) by subtracting from actual daily returns the expected returns using the market model parameters and the actual market index return.

$$AR_{it} = \widehat{\varepsilon_i} = R_{it} - \left(\widehat{\propto_i} + \widehat{\beta_i} R_{mt}\right) \quad (2)$$

where R_{it} is the actual return of company *i* on day *t*, R_{mt} is the actual market index return on day *t*, and $\widehat{\propto_i}$ and $\widehat{\beta_i}$ are the market model parameters derived from equation (1). We estimated the parameters using daily returns over a one-year period ending two days before the first event date. Given the proximity of the two events, we used the same parameters for both events, which enabled us to avoid using parameters for the second event estimated over a period overlapping the first event. We used the FTSE USA Travel & Leisure Index as the market index.

Next, to obtain the cumulative abnormal returns (*CAR*), we summed abnormal returns over a 3-day period, i.e. (-1,+1).

$$CAR_{it} = \sum_{t=-1}^{T} AR_{it} \quad (3)$$

The rationale for using this three-day window (-1,+1) is threefold. First, financial markets react quickly to new information, but some price adjustments may begin before the official event due

to information leaks, speculation, or early media coverage (Fama, 1970). By including one day before the event, we capture any anticipatory market behavior that may have been driven by pre-event speculation. Second, while efficient market hypothesis suggests that stock prices should adjust immediately to new public information, trading frictions or investor interpretation delays can cause partial adjustments that extend beyond the event day (McWilliams & Siegel, 1997). Including one day after the event accounts for such delayed market responses, ensuring that our CAR estimates capture the full price adjustment process. And third, a three-day window balances comprehensiveness and precision. According to McWilliams and Siegel (1997), a shorter window (e.g., event day only) risks missing early reactions and post-event corrections, while a longer window is unwarranted in this case, as the events were clearly defined, sudden, and unanticipated, making it unlikely that relevant price movements would extend over multiple days. Additionally, longer windows increase the risk of capturing unrelated market developments, introducing noise into the analysis (Brown & Warner, 1985).

Innovativeness. The typology proposed by Miles and Snow (1978) categorizes business strategies into four distinct groups: defenders, analyzers, reactors and prospectors. Prospectors are the most innovative companies as they adapt to new contexts rapidly and have a propensity to be creative and innovative. Conversely, defenders tend to preserve the status quo, prioritizing efficiency over innovation.

Our proxy for innovation follows Bentley-Goode et al. (2019) as it is a function of six ratios capturing the four dimensions underlying the classification developed by Miles and Snow (1978): 1) the Research & Development-to-sales ratio; 2) the SG&A-to-sales ratio (SG&A stands for selling, general and administrative expenses); 3) the year-on-year sales variation as a

percentage; 4) the employees-to-sales ratio; 5) the property, plant, and equipment-to-assets ratio; and 6) the standard deviation of the total number of employees. The formula reads as follows:

$$\textit{Innovation Score} = \textit{R\&D-to-Sales ratio} + \textit{SG\&A-to-Sales ratio} + \textit{Sales Growth} + \textit{Employees-to-Sales ratio} - \textit{PP\&E-to-Assets ratio} + \textit{Standard deviation of total number of employees}$$

The rationale behind these ratios is that firms with greater R&D spendings are more likely to innovate, while firms with higher SG&A-to-sales ratio are those that explore new market opportunities and invest more in marketing expenses. Furthermore, more innovative firms (i.e., prospectors) "tend to exhibit quicker and more volatile growth as new product-markets materialize" (Poretti et al., 2024, p.6). We thus expect a higher revenue growth for prospectors. Next, the employees-to-sales ratio proxies for the firm's efficiency in producing and distributing its goods and services, and this ratio should be higher for more innovative firms. The property, plant, and equipment-to-assets ratio sheds light on the company's "capital and technological perspective" and is anticipated to be reduced for prospectors (Bentley-Goode et al., 2019). Finally, when a company's headcount fluctuates significantly it is a sign that the firm is less stable, which is often the case with innovative and growing businesses.

Following the literature (Avci et al., 2011; Bentley et al., 2013; Köseoglu et al., 2013; Poretti et al., 2024), our proxy for innovation is a score calculated as the 5-year rolling average of a combination of the six ratios (i.e., the score in 2022 is the average of the score over the past five years). Based on the score distribution, firms in the first (i.e., lowest) quartile are defenders, while firms in the fourth quartile are prospectors.

Sustainability. We classify firms based on their inclination toward sustainable practices. To do so, we use an ESG rating retrieved from Refinitiv Eikon. Refinitiv evaluates ESG performance by analyzing 630 company-level metrics, selecting 186 of the most relevant per industry for

assessment. These metrics, categorized into 10 groups, contribute to the overall ESG score, reflecting a company's commitment and effectiveness in sustainability, based on publicly available data. The scores are further categorized into environmental, social, and governance pillars. These scores are normalized to percentages, facilitating comparison across industries (Refinitiv, 2022). The average (median) ESG scores for sampled firms is 41.9 (42.0), with a minimum score of 11.1 and a maximum score of 86.9.

We explained the cumulative abnormal returns calculated with equation (3) using the following ordinary least squares model:

$$CAR_i = \partial_0 + \partial_1 PROSPECTOR\_GREEN_i + \partial_2 PROSPECTOR\_BROWN_i + \partial_3 BROWN\_EVENT_i + \partial_4 PROSPECTOR\_GREEN_i * BROWN\_EVENT_i + \partial_5 PROSPECTOR\_BROWN_i * BROWN\_EVENT_i + \partial_j \sum_{j=6}^{K} CONTROLS + \varepsilon_i, \quad (4)$$

where $PROSPECTOR\_GREEN_i$ is a binary variable that takes the value of 1 for innovative and sustainable firms and $PROSPECTOR\_BROWN_i$ is a binary variable that takes the value of 1 for innovative and non-sustainable firms. The baseline category is formed by non-innovative firms, i.e. non-prospectors. We define "green prospectors" as prospector firms with an ESG score above the sample median.

Accordingly, using innovativeness and sustainability, we define the variables as indicated previously: $PROSPECTOR\_GREEN_i$, as a prospector firm that has an ESG score higher than the sample median, is measured through a dummy variable that takes the value of 1 for innovative and sustainable firms; and $PROSPECTOR\_BROWN_i$ as a prospector firm that has an ESG score smaller or equal to the sample median, is measured by another dummy variable that takes the value of 1 for innovative and non-sustainable firms.

$BROWN\_EVENT_i$ is a binary variable that is equal to 1 when cumulative abnormal returns relate to July 14, and 0 if they relate to July 27. This variable allows us to explicitly differentiate between the two key events and analyze whether firms reacted differently to the uncertainty of the Inflation Reduction Act not passing (brown event) versus its confirmed enactment (green event).

CONTROLS is a vector of control variables that includes:

i) *SIZE*, measured by the natural logarithm of total assets, may be a determinant of financial performance and market expectations because larger firms typically have greater financial stability, diversified revenue streams, and stronger investor confidence (Orfila-Sintes & Mattsson, 2009), which may influence their stock price sensitivity to policy changes.

ii) *LEVERAGE*, measured as the debt-to-assets ratio, is introduced because firms with higher leverage are generally more financially constrained, making them more sensitive to economic shocks, in general, and regulatory changes, in particular. For this specific case, given that the Inflation Reduction Act introduces tax incentives and subsidies, it may affect highly leveraged firms differently.

iii) *RETURN ON ASSETS,* calculated as net income divided by total assets. Since more profitable firms may be better positioned to invest in green innovation and capitalize on sustainability incentives introduced by the Inflation Reduction Act, controlling for return on assets ensures that differences in stock market reactions are not simply attributable to differences in financial performance (Chrysafis et al., 2024).

iv) *GROWTH*, obtained as the year-on-year percentage variation in revenue. Growth-oriented firms may be more responsive to policy changes that affect investment opportunities. Therefore,

by including revenue growth, we account for the fact that firms with different growth trajectories may react differently to the Inflation Reduction Act, particularly in relation to its incentives for sustainable investments (Gössling et al., 2024).

v) *EFFECTIVE TAX RATE*, calculated as income taxes divided by earnings before taxes. Recall that the Inflation Reduction Act introduces tax credits and incentives for sustainability investments, meaning that firms with higher effective tax rates may benefit more from these provisions (He et al., 2024). Consequently, controlling for the effective tax rate ensures that observed market reactions are not confounded by tax-related investor expectations. Industry fixed effects are not included since the sample is restricted to Travel & Leisure firms[2].

4. Results and discussion

4.1. Descriptive statistics

Table 1 provides descriptive statistics for the full sample, for prospectors and non-prospectors. Overall, 19.6% of sampled firms are prospectors, and 16.8% are green prospectors. 85.7% of prospectors are also green prospectors. Following the brown event, cumulative abnormal returns were equal to 2.9% on average for prospectors and 0.1% for non-prospectors. Surrounding the green event, cumulative abnormal returns were equal to -3.1% for prospectors, and -1.1% for non-prospectors. Furthermore, prospectors tend to be smaller (*SIZE*), with a higher degree of leverage (*LEVERAGE*), disclose a lower accounting performance (*RETURN ON ASSETS*), grow at a faster rate (*GROWTH*), and tend to have a lower effective tax rate. Appendix A provides a correlation matrix. We also ran a variance inflation factors (VIF) analysis, and the results indicate that factors range between 1.0 and 2.3, which is below the usually accepted

[2] In untabulated robustness tests, we replicated Table 3 using sub-industry fixed effects. The results remained consistent with our main findings. We thank the referee for suggesting these additional tests.

maximum threshold of 10 (Hair et al., 2010). Overall, multicollinearity does not seem to be an issue.

Insert Table 1 about here

Table 2 presents univariate analyses of cumulative abnormal returns surrounding the two key events. Focusing on July 14, the brown event, the results indicate that in general, stock markets reacted positively to the announcement with average cumulative abnormal returns of +0.5% for all firms. Interestingly, prospectors experienced more positive cumulative abnormal returns, reaching +2.9%. In contrast, cumulative abnormal returns for non-prospector firms were limited to +0.1%. Regarding the green event on July 27, the overall industry reacted negatively, with average cumulative abnormal returns of -1.4%. Furthermore, prospectors exhibited negative cumulative abnormal returns during the green event reaching -3.1%. All cumulative abnormal returns appear significantly lower for the green event than for the brown event.

Insert Table 2 about here

4.2.Main analyses

Table 3 presents the results of our main analyses related to the application of model (4). The findings indicate that, in general, brown prospector companies experienced greater abnormal returns than other firms around the two events, while green prospector companies experienced lower returns. This is evidenced by the positive (negative for green prospectors) and significant coefficients ($p < 0.05$ and $p < 0.01$) on both variables, *PROSPECTOR_GREEN* and *PROSPECTOR_BROWN*.

Comparing abnormal returns surrounding July 14 (brown event) and July 27 (green event), the positive and significant ($p < 0.01$) coefficient on *BROWN_EVENT* (columns (1) and (2)) shows

that, in general, abnormal returns were more positive (or less negative) around the brown event than around the green event. This is further confirmed by the negative and significant ($p < 0.01$) coefficient on *GREEN_EVENT* in columns (3) and (4), reinforcing the notion that firms reacted less favorably when the Inflation Reduction Act was confirmed.

This divergence likely reflects changing investor expectations about the stability of early-mover advantages. In line with the theory of temporary competitive advantage (D'Aveni et al., 2010), the green event reduced perceived barriers to green innovation by enabling broader industry adoption, which undermined the unique positioning of first movers.

To test Hypotheses 1 and 2, we included interaction terms (*PROSPECTOR_GREEN * BROWN_EVENT* and *PROSPECTOR_GREEN * GREEN_EVENT*) in columns (2) and (4). The results support both hypotheses. The coefficient on *PROSPECTOR_GREEN * BROWN_EVENT* is positive and significant, indicating that investors reacted more favorably to green prospectors when the Inflation Reduction Act appeared unlikely to pass. This finding supports Hypothesis 1 and suggests that investors expected early green innovators to retain their competitive edge under the status quo, consistent with resource-based view and natural resource-based view assumptions about valuable and difficult-to-imitate sustainability resources (Barney, 1991; Hart, 1995).

However, the coefficient on *PROSPECTOR_GREEN * GREEN_EVENT* is negative and significant, indicating that the policy confirmation led investors to reassess the future competitive position of green prospectors. This erosion of advantage supports Hypothesis 2 and is in line with the idea that sustainability-based differentiation is inherently unstable in policy-driven markets (D'Aveni, 1994; Thomas & D'Aveni, 2009).

These findings underscore the strategic ambidexterity challenge faced by green tourism firms. In the face of policy shifts that commoditize green practices, firms must reinvest in new innovations

to regain differentiation, balancing exploration (new investments) with exploitation (leveraging existing green capabilities).

Further supporting this interpretation, we find that *RETURN ON ASSETS* is positively associated with cumulative abnormal returns, which suggests that more profitable firms were rewarded by investors, likely due to their greater capacity to reinvest in future innovation and absorb regulatory changes (Chrysafis et al., 2024). By contrast, *SIZE*, *LEVERAGE*, *GROWTH* and *EFFECTIVE TAX* do not exhibit significant effects, which implies that investor attention was more focused on firms' innovation orientation than structural or financial characteristics.

Insert Table 3 about here

5. Conclusions

This study examines how policy-induced changes affect the market valuation of tourism firms, focusing on the Inflation Reduction Act and its implications for green innovation and competitive advantage. Using an event study methodology, we analyze stock market reactions to two key legislative events: the brown event (July 14, 2022), which signaled uncertainty about the act's passage, and the green event (July 27, 2022), which confirmed its enactment. The results provide strong empirical evidence supporting our hypotheses: green prospectors were rewarded during policy uncertainty (brown event), yet penalized following policy confirmation (green event). These findings underscore that while green innovation may offer early-mover advantages, such advantages are vulnerable to erosion when regulatory shifts reduce entry barriers. This highlights the paradox that sustainability-driven differentiation, often viewed as a source of durable advantage, can become fragile in policy-driven environments.

Regarding theoretical implications, the results of this study contribute to the strategic management, financial economics, and sustainability literature by providing empirical evidence on how policy interventions shape competitive advantage and investor behavior. Our findings extend several theoretical frameworks:

First, this study challenges traditional assumptions embedded in the resource-based view (Barney, 1991) and the natural resource-based view (Hart, 1995), which suggest that sustainability-oriented resources—such as green innovation and environmental branding—can offer long-term, inimitable differentiation. While these theories explain the origins of early-mover advantages, our findings show that such advantages can erode when government incentives reduce imitation costs and facilitate widespread adoption. The negative reaction to the green event indicates that investors anticipated a collapse of entry barriers, undermining the uniqueness of early adopters.

This insight advances the theory of temporary competitive advantage (D'Aveni, 1994; Wiggins & Ruefli, 2005), showing that regulatory interventions—rather than competitive imitation alone—can accelerate the transience of firm advantages. It adds nuance to sustainability strategy by revealing that policy, while fostering green adoption, can simultaneously redistribute competitive positions.

Second, we extend the concept of strategic ambidexterity (Tushman & O'Reilly, 1996; Raisch & Birkinshaw, 2008) into the domain of sustainability policy. Ambidexterity typically refers to firms balancing exploration (innovation) with exploitation (efficiency). Our results show that green prospectors—who had explored early—were rewarded under uncertainty but penalized when policy shifted the landscape. This suggests that sustainability-oriented firms must engage in ongoing reconfiguration of their strategies—adapting to regulatory shifts while

seeking new areas of differentiation beyond compliance. Without this adaptive response, early investments risk obsolescence as sustainability becomes commoditized.

Third, we contribute to the literature on policy-driven investor behavior, showing that green policies do not universally boost firm valuation. While prior research emphasized the positive financial signaling of sustainability incentives (Wang & Chen, 2017; Çimen, 2019), our findings indicate a more complex dynamic: when policies eliminate differentiation, they may depress value for early movers. Investors responded not to the policy per se, but to its implications for industry-wide imitation, revealing a critical trade-off between promoting sustainability and preserving strategic uniqueness.

This study provides valuable practical implications for tourism and hospitality decision-makers, policymakers, and investors. Specifically, our findings highlight key strategic considerations for firms navigating policy-induced changes in competitive advantage, as well as implications for investment strategies in response to green policy interventions.

We put forth three sets of practical implications. The first set revolves around strategic considerations for tourism and hospitality firms beyond regulatory compliance. The results demonstrate that tourism and hospitality firms that had already invested heavily in sustainability, i.e., green prospectors, experienced negative stock market reactions following the confirmation of the Inflation Reduction Act. This result suggests that relying only on early green investments as a differentiator is not a sustainable strategy in the long run, as government incentives can reduce entry barriers and enable late adopters to catch up at a lower cost. Rather than treating environmental investments as “static differentiators”, hotel chains, airlines, resorts, and travel service providers should develop “dynamic capabilities” that allow them to maintain a strategic edge in changing regulatory environments. The implication is that tourism and hospitality firms

need to continuously innovate beyond regulatory compliance rather than treat sustainability as a static competitive advantage. As a consequence, these firms need to adjust their exploration-exploitation balance accordingly. Firms that fail to adapt may find their competitive advantages short-lived, particularly in industries where government incentives may create new market "equalization effects." For example, tourism and hospitality firms could develop innovative eco-friendly experiences beyond government-mandated green initiatives (e.g., for hotels, carbon-neutral lodging; for restaurants, zero-waste dining options; or for tour operators, sustainable tourism packages), and invest in next-generation sustainability infrastructure. Additionally, given that tourism and hospitality industries are highly exposed to both regulatory and environmental shifts, companies must actively participate in sustainability policymaking by engaging with industry associations and tourism regulatory bodies to define—or refine—policies that support long-term green innovation. This way, they can better anticipate how future policies might affect their business models and stay ahead of emerging potential trends in eco-tourism and hospitality sustainability standards.

The second set of practical implications are for tourism policymakers so that they can balance industry-wide sustainability and competitive fairness. While the Inflation Reduction Act aimed to accelerate green investment, its passage led to negative stock market reactions for early-adopter hospitality firms, suggesting that wide-ranging incentives can disrupt existing competitive dynamics and penalize first movers. To ensure that sustainability policies encourage innovation rather than simply "leveling" the playing field, policymakers could consider tiering sustainability incentives by offering different levels of benefits to firms based on their historical commitment to sustainability. For instance, early adopters of sustainability initiatives could receive higher financial incentives, extended tax credits, or additional grants to continue pushing

the boundaries of green innovation, while new adopters could receive baseline support to facilitate their transition toward environmentally responsible practices. Additionally, policymakers could implement performance-based incentives that reward firms based on tangible sustainability achievements, such as verified carbon footprint reductions or energy efficiency improvements. This approach would ensure that policy-driven sustainability efforts do not erode competitive differentiation for first movers while still fostering broader industry-wide adoption of green practices.

The third set of practical implications aims at investors in tourism and hospitality firms. For investors focused on the tourism and hospitality sector, our results suggest that not all sustainability-related policies translate into immediate shareholder value creation. While government incentives for green investments are generally viewed as positive, their impact on individual firms depends on pre-existing competitive positioning. Specifically, our findings indicate that: i) early-adopter tourism and hospitality firms may face stock price declines when sustainability incentives become widely accessible, eroding first-mover differentiation; and ii) late-adopting firms may present investment opportunities, as they can take advantage of sustainability incentives at a lower cost. According to these two points, investors in tourism and hospitality firms should consider adjusting their sustainability investment strategies by, first, identifying firms that integrate sustainability as part of their core strategy rather than those merely responding to policy shifts, and second, by diversifying sustainability investments across both first movers and later adopters, recognizing that policy-induced market shifts can redistribute competitive advantages in the sector.

Regarding future research lines, this study opens several avenues for future research at the intersection of sustainability strategy, policy-induced market shifts, and investor behavior in the

tourism and hospitality industry. Our findings highlight key areas where additional investigation could offer theoretical insights and provide more practical guidance for firms and policymakers:

First, future research could examine the long-term competitive consequences of policy-driven sustainability transitions. A key question in this regard is whether first-mover sustainability firms eventually regain their competitive edge over time or, conversely, whether government incentives permanently level the playing field, reducing the differentiation advantage of early adopters. Accordingly, longitudinal studies could track how early adopters adjust their sustainability strategies over multiple years and whether they develop new forms of differentiation beyond government-mandated sustainability initiatives. In fact, connected to this idea, it would be relevant to explore how firms effectively balance exploration (innovation) and exploitation (efficiency) when faced with regulatory shifts. Second, this study focuses on the Inflation Reduction Act in the United States, but sustainability policies may vary significantly across countries and regions. Accordingly, future research could analyze whether firms in regions with stronger green incentives (e.g., the European Union) experience similar competitive dynamics as those in the United States, and how multinational hospitality firms adjust their sustainability strategies across different regulatory environments. Moreover, cross-country comparative studies could reveal best practices in policy design and help identify which regulatory structures most effectively promote both sustainability and market competition.

Third, while we focus on the tourism and hospitality industry as a whole, this sector encompasses various sub-industries with distinct business models, operational challenges, and investor sensitivities to policy changes. Future research could adopt a more granular approach by examining the differential impacts of environmental policy announcements on specific sub-industries such as restaurants, hotels, airlines, recreational services, travel agencies, or casinos.

By conducting a more segmented analysis, researchers could gain a deeper understanding of how environment-related financial risks and opportunities manifest across different business models within the broader hospitality and tourism sector. Fourth, our study exclusively examines publicly traded firms, as the availability of stock market data allows for the application of the event study methodology to measure abnormal returns. However, many firms operating in the tourism and hospitality industry—especially small and mid-sized businesses—are privately owned. Future research could extend this analysis by exploring how the Inflation Reduction Act influenced strategic reactions and operational adjustments among private firms. This analysis could involve qualitative interviews or survey-based approaches to understand how non-publicly listed companies perceived and responded to the policy, particularly in terms of sustainability investments and pricing strategies. Such insights could complement our stock market-based analysis and provide a more comprehensive picture of the act's impact on the industry as a whole.

Fifth, while our study focuses on firms based in the United States, the Inflation Reduction Act has broader international implications due to the interconnected nature of global markets. Many multinational corporations in tourism and hospitality have operations across multiple countries, and policy changes in the United States can create spillover effects on firms in major trade-partner nations. Future studies could examine how foreign tourism firms have been indirectly affected by the act, for example, through foreign direct investment or competitive dynamics.

An additional avenue for future research involves examining the dynamics of policy adoption followed by announcements of its rollback. For example, a newly elected administration with a different policy agenda—such as proposals to cut green-oriented policies—

could signal the repeal of Inflation Reduction Act provisions. Such a reversal would provide a natural experiment to test our integrated framework under inverted conditions. In this scenario, early adopters of green innovation could regain a strengthened competitive advantage, as the removal of incentives would raise, once again, entry barriers for sustainability investments, making imitation costlier for late adopters. Investor reactions might therefore mirror, in reverse, the pattern obtained in our study: positive abnormal returns for early movers and weaker or negative returns for late adopters. Beyond replicating our methodology with such rollback events, future research could assess whether competitive advantages eroded during incentive periods are fully recoverable after policy withdrawal, or whether the temporary parity created under broad incentives leaves lasting structural changes in the competitive landscape.

A promising avenue for future research is to incorporate leadership-level attributes—such as the education, gender, and political affiliation of a firm's CEO or owner—into analyses of policy-induced competitive dynamics. Linking such variables to market reactions around policy events such as the Inflation Reduction Act could help explain heterogeneity in strategic adaptation among firms with similar resource profiles. For instance, CEOs with advanced technical or environmental education may be more likely to take advantage of green incentives for innovation, while ideological preferences could influence whether a firm aggressively exploits or cautiously adopts such policies. Integrating these leadership-level controls into event study would provide a richer understanding of the behavioral determinants underlying competitive advantage in policy-sensitive markets.

Finally, future research could involve examining how domestic political contexts influence market reactions to federal sustainability policies such as the Inflation Reduction Act. For example, firms headquartered in states with differing political orientations (e.g., Republican-

leaning vs. Democratic-leaning) may face varying stakeholder pressures, consumer expectations, and reputational dynamics that influence how markets perceive their sustainability strategies.

References

Aftab, J., Abid, N., Cucari, N., Savastano, M., (2023) "Green human resource management and environmental performance: the role of green innovation and environmental strategy in a developing country," *Business Strategy and the Environment*, *32* (4), 1782–1798. DOI: 10.1002/bse.3219

Amatulli, C., De Angelis, M., & Stoppani, A. (2021). The appeal of sustainability in luxury hospitality: An investigation on the role of perceived integrity. *Tourism Management, 83*, 104228. DOI: 10.1016/j.tourman.2020.104228

Avci, U., Madanoglu, M., & Okumus, F. (2011). Strategic orientation and performance of tourism firms: Evidence from a developing country. *Tourism Management*, *32*(1), 147-157. DOI: 10.1016/j.tourman.2010.01.017

Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management Journal, 47*(1), 93-103. https://doi.org/10.2307/20159562

Barney, J.B. (1991). Firm resources and sustainable competitive advantage. *Journal of Management*, *17*, 99–120. DOI: 10.1177/014920639101700108

Bauer, M., Offner, E., & Rudebusch, G.D. (2023). The effect of US climate policy on financial markets: An event study of the Inflation Reduction Act, Hutchings Center Working Paper #89. DOI: 10.2139/ssrn.4626499

Begum, S., Ashfaq, M., Xia, E., Awan, U., (2022) "Does green transformational leadership lead to green innovation? The role of green thinking and creative process engagement," *Business Strategy and the Environment 31*(1), 580–597. DOI: 10.1002/bse.2911

Bentley, K.A., Omer, T.C., & Sharp, N.Y. (2013). Business strategy, financial reporting irregularities, and audit effort. *Contemporary accounting research*, *30*(2), 780-817. DOI: 10.1111/j.1911-3846.2012.01174.x

Bentley-Goode, K.A., Omer, T.C., & Twedt, B.J. (2019). Does business strategy impact a firm's information environment?. *Journal of Accounting, Auditing & Finance*, *34*(4), 563-587. DOI: 10.1177/0148558X17726893

Brown, S.J., & Warner, J.B. (1985). Using daily stock returns: The case of event studies. *Journal of Financial Economics, 14*(1), 3-31. DOI: 10.1016/0304-405X(85)90042-X

Chrysafis, K.A., Papadopoulou, G.C., & Theotokas, I.N. (2024). Measuring financial performance through operating business efficiency in the global cruise industry: A fuzzy benchmarking study on the "big three". *Tourism Management*, *100*, 104830. DOI: 10.1016/j.tourman.2023.104830

Çimen, A. (2019). The impact of sustainability index on firm performance: An event study. *International Journal of Contemporary Economics and Administrative Sciences*, *9*(1), 170-183. DOI: 10.5281/zenodo.3341732

Cochrane, E., & Friedman, L. (2022, July 14). Manchin pulls plug on climate and tax talks, shrinking domestic plan. *The New York Times.* https://www.nytimes.com/2022/07/14/us/politics/manchin-climate-taxes.html

D'Aveni, R.A. (1994) Hypercompetition: Managing the Dynamics of Strategic Maneuvering. Free Press, New York. https://doi.org/10.2307/258639

D'Aveni, R.A., Dagnino, G.B., & Smith, K.G. (2010). The age of temporary advantage. *Strategic Management Journal*, *31*(13), 1371-1385. . DOI: 10.1002/smj.897

Dagnino, G.B., Picone, P.M., & Ferrigno, G. (2021). Temporary competitive advantage: a state-of-the-art literature review and research directions. *International Journal of Management Reviews*, *23*(1), 85-115. DOI: 10.1111/ijmr.12242

De Stefano, M.C., Montes-Sancho, M.J., Busch, T., (2016) " A natural resource-based view of climate change: innovation challenges in the automobile industry," *Journal of Cleaner Production 139*, 1436–1448. https://doi.org/10.1016/j.jclepro.2016.08.023.

Della Corte, V., & Aria, M. (2016). Coopetition and sustainable competitive advantage. The case of tourist destinations. *Tourism Management*, *54*, 524-540. DOI: 10.1016/j.tourman.2015.12.009

Dias, Á., Camal, C., Sousa, B., & Pereira, L. (2024). Ambidexterity among start-ups in the tourism and hospitality industry. *Tourism and Hospitality Management*, *30*(4), 569-579. doi.org/10.20867/thm.30.4.10

Dogru, T., Akyildirim, E., Cepni, O., Ozdemir, O., Sharma, A., & Yilmaz, M.H. (2022). The effect of environmental, social and governance risks. *Annals of Tourism Research*, *95*, 103432. DOI: 10.1016/j.annals.2022.103432

El Ghoul, S., Guedhami, O., Mansi, S.A., & Sy, O. (2023). Event studies in international finance research. *Journal of International Business Studies, 54*, 344–364. doi: 10.1057/s41267-022-00534-6

Ferrer-Roca, N., Guia, J., & Blasco, D. (2022). Partnerships and the SDGs in a cross-border destination: The case of the Cerdanya Valley. *Journal of Sustainable Tourism*, *30*(10), 2410-2427. doi.org/10.1080/09669582.2020.1847126

Forrest, J.Y.L., & Tallapally, P. (2024). Sustainable and Transient Competitive Advantages. In *Systemic Principles of Applied Economic Philosophies II: Value, Decision, and Large-*

Scale Business Forces (pp. 211-235). Singapore: Springer Nature Singapore. https://link.springer.com/book/10.1007/978-981-99-7939-4

Fu, J. (2025). Environmental regulation, air pollution and household well-being: evidence from China's key region policy. *Applied Economics*, 1-19. DOI: 10.1080/00036846.2024.2449205

Gössling, S., Humpe, A., & Sun, Y.Y. (2024). On track to net-zero? Large tourism enterprises and climate change. *Tourism Management*, *100*, 104842. 10.1016/j.tourman.2023.104842

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010) *Multivariate Data Analysis. Boston*. Cengage. https://www.drnishikantjha.com/papersCollection/Multivariate%20Data%20Analysis.pdf

Hart, S.L. (1995) "A natural-resource-based view of the firm," *Academy of Management Review*, *20*(4), 986-1014. 10.5465/amr.1995.9512280033

He, L.Y., Li, H., Chen, X.Z., & Yu, L. (2024). Can tax incentives foresee the restructuring performance of tourism firms?-An event-driven forecasting study. *Tourism Management*, *102*, 104882. 10.1016/j.tourman.2024.104882

Huang, K.F., Dyerson, R., Wu, L.Y., & Harindranath, G. (2015). From temporary competitive advantage to sustainable competitive advantage. *British Journal of Management*, *26*(4), 617-636. 10.1111/1467-8551.12104

Hussein, H., Albadry, O.M., Mathew, V., Al-Romeedy, B.S., Alsetoohy, O., Abou Kamar, M., & Khairy, H.A. (2024). Digital leadership and sustainable competitive advantage: Leveraging green absorptive capability and eco-innovation in tourism and hospitality businesses. *Sustainability*, *16*(13), 5371. DOI: 10.3390/su16135371

Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022). Retrieved from https://www.congress.gov/bill/117th-congress/house-bill/5376

Jo, Y., & Shin, H. (2025). Can Gamification and Augmented Reality (AR) Revitalize Declining Destinations? Investigating its Impact on Tourist Attitudes and Behavior. *Journal of Travel Research*, 00472875251332961. https://doi.org/10.1177/00472875251332

Jørgensen, M.T. (2024). The fallout of market-oriented sustainability measures: Tourism destination sustainability benchmarking and ranking. *Journal of Travel Research*, *63*(6), 1574-1580. 10.1177/00472875231204844

Köseoglu, M.A., Topaloglu, C., Parnell, J.A., & Lester, D.L. (2013). Linkages among business strategy, uncertainty and performance in the hospitality industry: Evidence from an emerging economy. *International Journal of Hospitality Management*, *34*, 81-91. https://doi.org/10.1016/j.ijhm.2013.03.001

Kuo, F.I., Fang, W.T., & LePage, B.A. (2022). Proactive environmental strategies in the hotel industry: Eco-innovation, green competitive advantage, and green core competence. *Journal of Sustainable Tourism*, *30*(6), 1240-1261. 0.1080/09669582.2021.1931254

Lim, S.E., Ok, C.M., & Yang, Y. (2024). A meta-analytic investigation of innovation predictors in tourism and hospitality organizations. *Tourism Management*, *105*, 104965. 10.1016/j.tourman.2024.104965

MacKinlay, A.C. (1997). Event studies in economics and finance. *Journal of Economic Literature, 35*(1), 13-39. https://www.jstor.org/stable/2729691

Martín-Rios, C., & Ciobanu, T. (2019). Hospitality innovation strategies: An analysis of success factors and challenges. *Tourism Management*, *70*, 218-229. https://doi.org/10.1016/j.tourman.2018.08.018

McWilliams, A., & Siegel, D. (1997). Event studies in management research: Theoretical and empirical issues. *Academy of Management Journal, 40*(3), 626-657. https://doi.org/10.2307/257056

Miles, R.E., Snow, C.C., Meyer, A.D., & Coleman Jr, H.J. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, *3*(3), 546-562. https://doi.org/10.5465/AMR.1978.4305755

Nicolau, J.L., & Sharma, A. (2022). A review of research into drivers of firm value through event studies in tourism and hospitality: Launching the Annals of Tourism Research curated collection on drivers of firm value through event studies in tourism and hospitality. *Annals of Tourism Research*, *95*, 103430. https://doi.org/10.1016/j.annals.2022.103430

Noh, Y. (2019). The effects of corporate green efforts for sustainability: An event study approach. *Sustainability*, *11*(15), 4073. https://doi.org/10.3390/su11154073

Orfila-Sintes, F., & Mattsson, J. (2009). Innovation behavior in the hotel industry. *Omega*, *37*(2), 380-394. https://doi.org/10.1016/j.omega.2007.04.002

Pasquinelli, C., & Trunfio, M. (2023). *Sustainability-oriented Innovation in Smart Tourism: Challenges and Pitfalls of Technology Deployment for Sustainable Destinations*. Springer Nature. https://doi.org/10.1007/978-3-031-33677-5

Poretti, C., & Heo, C.Y. (2022). COVID-19 and firm value drivers in the tourism industry. *Annals of Tourism Research*, *95*, 103433. https://doi.org/10.1016/j.annals.2022.103433

Poretti, C., Weisskopf, J.P., & de Régie, P.D.V. (2024). Innovative business strategies, corporate performance, and firm value in the travel and leisure industry. *International Journal of Hospitality Management*, *118*, 103683. https://doi.org/10.1016/j.ijhm.2023.103683

Porter, M.E. (1985). *The competitive advantage: Creating and sustaining superior performance*. Free Press. https://www.hbs.edu/faculty/Pages/item.aspx?num=193

Porter, M.E., (1980). Competitive Strategy: Techniques for Analyzing Industries and Competitors. Free Press, New York. https://www.hbs.edu/faculty/Pages/item.aspx?num=195

Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, *34*(3), 375-409. https://doi.org/10.1177/0149206308316058

Refinitiv (2022): Environmental, Social and Governance Scores from Refinitiv - May 2022. Refinitiv, an LSEG business. https://www.lseg.com/content/dam/data-analytics/en_us/documents/methodology/lseg-esg-scores-methodology.pdf

Romm, T., Stein, J. Roubein, R. and Joselow, M. (2022, July 27). Manchin says he has reached deal with Schumer on economy and climate bill. *The Washington Post.* https://www.washingtonpost.com/us-policy/2022/07/27/manchin-says-he-has-reached-deal-with-democrats-economy-climate-bill/

Schrettle, S., Hinz, A., Scherrer-Rathje, M., & Friedli, T. (2014). Turning sustainability into action: Explaining firms' sustainability efforts and their impact on firm performance. *International Journal of Production Economics, 147*, 73-84. https://doi.org/10.1016/j.ijpe.2013.02.030

Srinivasan, S., & Hanssens, D. M. (2009). Marketing and firm value: Metrics, methods, findings, and future directions. *Journal of Marketing Research*, *46*(3), 293-312. https://doi.org/10.1509/jmkr.46.3.293

Su, H.C., Fu, W., & Linderman, K. (2024). When does it pay to be green? The strategic benefits of adoption speed. *Journal of Operations Management*, *70*(7), 1155-1177. https://doi.org/10.1002/joom.1337

Suarez, F., & Lanzolla, G. (2005). The half-truth of first-mover advantage. *Harvard Business Review*. https://hbr.org/2005/04/the-half-truth-of-first-mover-advantage

Tajeddini, K., Gamage, T.C., Tajdini, J., Hameed, W.U., & Tajeddini, O. (2024). Exploring the effects of service innovation ambidexterity on service design in the tourism and hospitality industry. *International Journal of Hospitality Management*, *119*, 103730. https://doi.org/10.1016/j.ijhm.2024.103730

Teece, D., Pisano, G., Shuen, A., 1997. Dynamic capabilities and strategic management. *Strategic Management Journal 18*(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z

Thomas, L.G. and D'Aveni, R.A. (2009). The changing nature of competition in the U.S. manufacturing sector, 1950 to 2002. *Strategic Organization, 7*, pp. 387–431.

Trujillo-Adriá, Y., Silva-Cárdenas, M.B., Segarra-Oña, M., & Peiró-Signes, Á. (2024). Sustainable Tourism: Toward a Circular Economy with Transportation as a Key Factor. In *The Strategic Paradigm of CSR and Sustainability: A Public-Private Approach* (pp. 127-146). Cham: Springer Nature Switzerland. DOI: 10.1007/978-3-031-58889-1_6

Tushman, M.L., & O'Reilly III, C.A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, *38*(4), 8-29. **DOI:** 10.2307/41165852

Vo Thanh, T., Seraphin, H., Okumus, F., & Koseoglu, M.A. (2020). Organizational ambidexterity in tourism research: A systematic review. *Tourism Analysis*, *25*(1), 137-152. DOI: 10.3727/108354220X15758301241701

Wang, Y.S., & Chen, Y.J. (2017). Corporate social responsibility and financial performance: Event study cases. *Journal of Economic Interaction and Coordination*, *12*, 193-219. https://doi.org/10.1007/s11403-015-0161-9

Wiggins, R.R., & Ruefli, T.W. (2005). Schumpeter's Ghost: Is Hypercompetition Making the Best of Times Shorter? *Strategic Management Journal*, *26*(10), 887–911. https://doi.org/10.1002/smj.492

Wu, D., & Li, H. (2025). Information Asymmetry in Tourism Market: The Bilateral Effects of ESG Practices on Firm Profitability. *Journal of Travel Research*, 00472875251332950. https://doi-org.ezproxy.lib.vt.edu/10.1177/004728752513329

Xu, A., Jin, L., & Yang, J. (2024). Balancing tourism growth, Fintech, natural resources, and environmental sustainability: Findings from top tourist destinations using MMQR approach. *Resources Policy*, *89*, 104670. https://doi.org/10.1016/j.resourpol.2024.104670

Table 1. Descriptive statistics

Full sample (N = 143)	Mean / Percentage	St. dev.	p25	p50	p75
Cumulative abnormal returns brown event	0.005	0.052	-0.014	0.001	0.019
Cumulative abnormal returns green event	-0.014	0.073	-0.048	-0.010	0.016
PROSPECTOR	19.6%	-	-	-	-
PROSPECTOR_GREEN	16.8%	-	-	-	-
PROSPECTOR_BROWN	2.8%	-	-	-	-
SIZE	13.392	2.917	11.967	14.078	15.464
LEVERAGE	0.737	2.387	0.138	0.360	0.611
RETURN ON ASSETS	-0.911	5.369	-0.054	0.017	0.074
GROWTH	0.958	2.252	0.167	0.450	0.778
EFFECTIVE TAX RATE	0.099	0.793	0.000	0.107	0.236
Prospectors (N =28)					
Cumulative abnormal returns brown event	0.029	0.080	-0.020	0.000	0.060
Cumulative abnormal returns green event	-0.031	0.136	-0.048	-0.003	0.018
PROSPECTOR_GREEN	85.7%	-	-	-	-
PROSPECTOR_BROWN	14.3%	-	-	-	-
SIZE	11.471	3.294	8.436	12.008	13.868
LEVERAGE	1.365	4.359	0.036	0.254	0.513
RETURN ON ASSETS	-1.841	6.727	-0.552	-0.025	0.041
GROWTH	2.507	4.345	0.155	0.621	2.181
EFFECTIVE TAX RATE	0.048	0.264	-0.001	0.000	0.172
Non-prospectors (N = 115)					
Cumulative abnormal returns brown event	0.001	0.044	-0.013	0.001	0.017
Cumulative abnormal returns green event	-0.011	0.055	-0.047	-0.013	0.016
SIZE	13.860	2.628	12.729	14.346	15.640
LEVERAGE	0.584	1.574	0.173	0.378	0.613
RETURN ON ASSETS	-0.684	4.993	-0.032	0.026	0.075
GROWTH	0.581	1.055	0.167	0.415	0.721
EFFECTIVE TAX RATE	0.111	0.875	0.004	0.119	0.248

Table 2. Univariate analyses

	Average cumulative abnormal returns [-1;+1]		
Event	All firms	Prospectors	Non-prospectors
Jul-14 (brown event)	0.50%	2.90%	0.10%
Jul-27 (green event)	-1.40%	-3.10%	-1.10%
t-test of difference in means	**	*	*

*** p<0.01, ** p<0.05, * p<0.1

Table 3. Regression Results for Abnormal Returns Around the Brown and Green Events

	Dep. var.: Cumulative abnormal returns [-1;+1] (Brown and Green events)			
	(1)	(2)	(3)	(4)
PROSPECTOR_GREEN	-0.01***	-0.04***	-0.01***	0.02***
	(-7.48)	(-33.26)	(-7.48)	(4.65)
PROSPECTOR_BROWN	0.02**	0.02	0.02**	0.03***
	(2.04)	(0.73)	(2.04)	(12.19)
BROWN_EVENT	0.02***	0.01***		
	(19.28)	(268.46)		
*PROSPECTOR_GREEN*BROWN_EVENT*		0.06***		
		(11.21)		
*PROSPECTOR_BROWN*BROWN_EVENT*		0.01		
		(0.35)		
GREEN_EVENT			-0.02***	-0.01***
			(-19.28)	(-268.46)
PROSPECTOR_GREEN GREEN_EVENT*				-0.06***
				(-11.21)
*PROSPECTOR_BROWN*GREEN_EVENT*				-0.01
				(-0.35)
SIZE	-0.00	-0.00	-0.00	-0.00
	(-1.10)	(-1.10)	(-1.10)	(-1.10)
LEVERAGE	-0.00	-0.00	-0.00	-0.00
	(-0.37)	(-0.37)	(-0.37)	(-0.37)
RETURN ON ASSETS	0.00***	0.00***	0.00***	0.00***
	(3.10)	(3.10)	(3.10)	(3.10)
GROWTH	0.00	0.00	0.00	0.00
	(0.53)	(0.53)	(0.53)	(0.53)
EFFECTIVE TAX RATE	-0.00	-0.00	-0.00	-0.00
	(-1.16)	(-1.16)	(-1.16)	(-1.16)
Constant	0.02	0.02	0.04	0.04
	(0.80)	(0.97)	(1.64)	(1.46)
Observations	286	286	286	286
R-squared	0.53	0.56	0.53	0.56

OLS estimations. Standard errors are clustered at the sub-industry level. z-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Appendix A. Correlation matrix

	1	2	3	4	5	6	7	8	9
1: *Cumulative abnormal returns*	1.000								
2: *PROSPECTOR*	0.0104	1.000							
3: *PROSPECTOR_GREEN*	0.0012	0.9071*	1.000						
4: *PROSPECTOR_BROWN*	0.0221	0.3381*	-0.089	1.000					
5: *SIZE*	0.3161*	-0.4786*	-0.5423*	0.072	1.000				
6: *LEVERAGE*	0.0068	0.196	0.2091*	-0.001	-0.2264*	1.000			
7: *RETURN ON ASSETS*	0.2186*	-0.208	-0.2346*	0.030	0.4835*	-0.3130*	1.000		
8: *GROWTH*	0.2162	0.166	0.191	-0.020	-0.136	0.190	-0.0585	1.000	
9: *EFFECTIVE TAX RATE*	-0.0042	0.025	0.020	0.016	0.019	-0.020	-0.0055	0.0143	1.000

* denotes significance at the 1% level.