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HEC MONTRÉAL
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Two essays on the effects of strategic branding using archival data

par
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Résumé

Cette thèse explore les effets du branding stratégique en utilisant des données d'archives longitudinales. Le premier article s'intitule "Les effets réciproques du bouche-à-oreille électronique (eWOM) des extensions de marque sur leurs marques parentes." Il s'appuie sur la théorie du réseau associatif (ANT) pour développer un cadre complet pour étudier les effets réciproques dynamiques liés au eWOM des marques expérientielles. Les résultats révèlent un effet de débordement de la valence du eWOM des extensions sur la valence du eWOM des marques parentes, un effet d'engouement du volume du eWOM des extensions sur le volume du eWOM des marques parentes, et un simple effet d'exposition du volume du eWOM des extensions sur la valence du eWOM des marques parentes. L'utilisation d'un jeu de données unique de 409 733 paires d'évaluations et de critiques de films au niveau individuel avec des dates de publication permet d'étudier les effets dynamiques couvrant la période pré- et post-lancement des extensions. Les résultats contribuent à la connaissance des effets réciproques. De plus, l'étude contribue à la compréhension de la dominante du volume du eWOM par rapport à sa valence en utilisant une nouvelle caractérisation des effets réciproques.

Le deuxième article intitulé "L'effet de la participation d'une entreprise à une campagne de boycott corporatif sur sa valeur marchande" examine un nouveau phénomène lié aux boycotts corporatifs. À l'été 2020, une campagne de boycott corporatif ciblant Facebook a été organisée par une coalition d'organisations de défense des droits civils et de groupes de plaidoyer. Plusieurs entreprises ont retiré leurs publicités de la plateforme de médias sociaux pendant un mois pour exprimer leur opposition à la réticence de Facebook à

censurer les discours haineux et à traiter la désinformation politique. Nous constatons un effet général positif de l'annonce du boycott sur les cours des actions des entreprises boycottées en utilisant des données longitudinales quotidiennes. De plus, les entreprises affiliées à la campagne organisée #StopHateForProfit ont bénéficié davantage de leur annonce de boycott, surtout dans des conditions de couverture médiatique élevée. Ces résultats fournissent des informations précieuses aux parties prenantes impliquées dans l'activisme des entreprises, telles que les entreprises envisageant de boycotter, les investisseurs et les organisations à but non lucratif.

Mots clés : extension de marque, effet réciproque, bouche-à-oreille électronique (eWOM), boycott corporatif, responsabilité sociale des entreprises, activisme de marque

Méthodes de recherche : Modélisation des séries chronologiques, étude d'événements

Abstract

This dissertation explores the effects of strategic branding using longitudinal archival data. The first essay entitled "The reciprocal effects of brand extensions' electronic Word-of-Mouth (eWOM) on parent brands eWOM" draws from the associative network theory (ANT) to develop a comprehensive framework for investigating the dynamic reciprocal effects of experiential brands' eWOM. Results reveal a spillover effect of extensions' eWOM valence on parent brands' eWOM valence, a bandwagon effect of extensions' eWOM volume on parent brands' eWOM volume, and a mere exposure effect of extensions' eWOM volume on parent brands' eWOM valence. Using a unique dataset of 409,733 individual-level movie rating-review pairs with posted dates enables the investigation of the dynamic effects of extensions covering the pre- to post-launch period. The findings add valuable knowledge to the reciprocal effect literature. Additionally, the study contributes to understanding the dominant importance of eWOM volume over valence using a novel characterization of reciprocal effects.

The second essay entitled "The effect on a firm's market value of participating in a corporate boycott campaign" investigates a new phenomenon related to corporate boycotts. In the summer of 2020, a corporate boycott campaign targeting Facebook was organized by a coalition of civil rights organizations and advocacy groups. Several firms withdrew their advertisement from the social media platform for one month to express their opposition to Facebook's reluctance to censor hateful speech and address political misinformation. The research finds a general positive effect of the boycott announcement on the boycotting firms' stock prices using daily longitudinal data. Moreover, the firms

affiliated to the organized #StopHateForProfit campaign benefited more from their boycott announcement, especially under high media coverage conditions. These findings provide valuable insights to stakeholders involved in corporate activism, such as potential boycotting firms, investors, and non-profit organizations.

Keywords : branding extension, reciprocal effect, electronic Word-of-Mouth (eWOM), corporate boycott, corporate social responsibility, brand activism

Research methods : Time-series modeling, event study

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List of abbreviations

ANT: Associative network theory

CSA: Corporate sociopolitical activism

CSR: Corporate social responsibility

EWOM: Electronic Word-of-Mouth

IMDb: Internet Movie Database

MTBR: Market-to-book ratio

ROA: Return on assets

WOM: Word-of-Mouth

To the curious mind that dares to dance on the precipice of the unknown

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Introductory Chapter

Examining the effects of strategic branding: A representative review of research in the marketing literature

Brands are considered strategic assets for companies and hold value for multiple stakeholders, including consumers, employees, partners, investors, government, and the general public (Kapferer, 2012). The brand name carries meaning and value, evokes trust, passion, and affection among stakeholders, and enables companies to command premium prices for their products or services. In today's highly competitive environments, a strong brand is crucial for companies to attain and maintain a competitive edge.

Branding encompasses all the actions, decisions, and guidelines that shape and add value to a brand. Its ultimate goal is to create a distinct brand identity and image that is difficult to imitate or replace (Rooney 1998; Urde, 1999). By doing so, branding differentiates the brand from its competitors, establishing competitive advantages in the market and contributing to the long-term success of the brand.

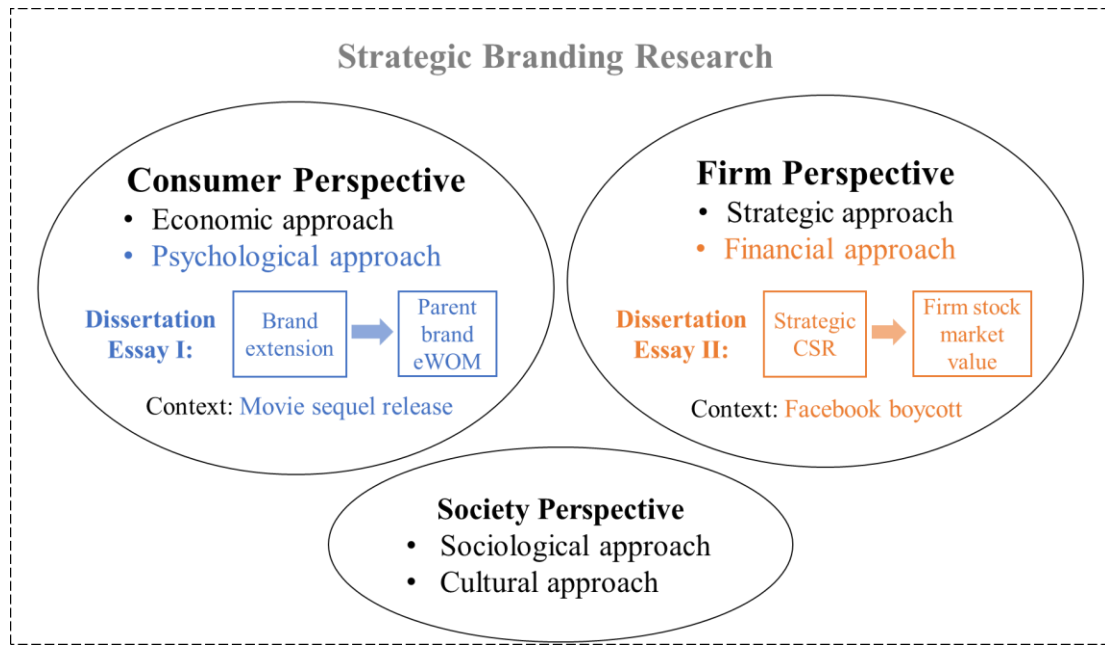
Branding has become an increasingly challenging task for companies. On the one hand, in this hyper-connected era, companies are losing control over brand evaluation as more individuals participate in the value co-creation or co-destruction of the brand (Swaminathan et al., 2020). Brand information is now accessible through multiple sources, and opinions from peers or opinion leaders obtain more trust than those from official channels. On the other hand, stakeholders have higher expectations for brands. They expect brands to achieve recognition and profitability, contribute to sustainable development, and make a meaningful impact on sociopolitical issues.

The strategic significance and complexity of branding necessitate a deeper understanding of its influence on brand and company performance and stakeholders. This understanding is valuable to both academia and managers. Research on branding has flourished for decades and remains a prominent field (Keller & Lehmann, 2006; Swaminathan et al., 2020). In the marketing literature, the term "strategic branding" and its interchangeable

counterpart, "branding strategy", are used in two distinct manners. In a narrow sense, they specifically pertain to brand architecture selection or brand portfolio design (Keller, 1999; Rao et al., 2004;). However, in a broader context, they encompass any branding decisions that hold strategic significance for the brand and the company (Milberg et al., 1997; Simmons, 2007). This dissertation adopts the broader definition. The strategic branding examined in the dissertation includes movie sequels as brand extensions in the first essay and the Facebook boycott as social responsibility engagement in the second essay. The two essays diversify by examining different branding forms and utilizing distinct measurements to assess the effects.

Strategic branding encompasses a range of forms, which include but are not limited to brand elements selection, brand portfolio and architecture decision, brand extension, co-branding, ingredient branding, brand alliance, rebranding, brand turnaround or rejuvenation, brand crisis discovery, brand expansion cross culture and geographic boundaries, branding related to social welfare such as strategic social responsibility and sociopolitical activism engagement. This chapter provides a representative literature review utilizing the theoretical perspectives and approaches outlined by Swaminathan et al. (2020). *Figure A* provides a framework illustrating the existing research on the effects of strategic branding. It also showcases the positioning of the two dissertation essays within the research landscape. The two essays are then introduced using the framework.

Figure A. Research framework and positioning of dissertation essays in strategic branding effect literature



Literature on the effects of strategic branding: multiple perspectives

Swaminathan et al. (2020) classify the extensive branding research into three perspectives: firm, consumer, and society. Each view comprises two approaches that measure the effects using various brand or company outcomes.

Consumer perspective. Consumer perspective includes both psychological and economic approaches. From a consumer psychological standpoint, a brand is perceived as a collection of associations within consumers' minds. Consumer-based brand equity, defined as the differential impact of brand knowledge on consumer response to branding (Keller, 1993), forms a fundamental concept in this approach. Its multiple dimensions include perception-level factors like brand awareness, brand image, and brand attitude, as well as behavior-level aspects like brand loyalty and purchase intention. Consumer researchers investigate how various strategic branding efforts influence consumer-based brand equity.

As an illustration, here are a few examples from the extensive research findings. Dahlén and Rosengren (2005) discover that consumers exhibit greater familiarity and hold more favorable attitudes toward slogans of strong brands than weak brands. In the context of brand extensions, parent brands experience increased brand awareness (Morrin, 1999),

and there is a bidirectional attitude spillover between parent brands and extensions (Pina et al., 2013; Swaminathan et al., 2001). When responding to product harm crises, consumers with stronger (weaker) expectations towards brands exhibit lesser (greater) declines in brand equity (Dawar & Pillutla, 2000). Brand co-creation has enhanced consumer empowerment and fostered a stronger sense of brand identification (Fuchs et al., 2010). However, in specific industries such as luxury products, co-creation does not positively impact brand attitudes or liking (Fuchs et al., 2013).

Another consumer-centric approach involves economic theory, which centers around consumer utility and supply-demand equilibrium. Wernerfelt (1988) presents a signaling model that illustrates how an umbrella branding strategy signals quality for newly introduced experiential products among consumers. Examining longitudinal data on advertising, pricing, and sales, Dubé et al. (2005) analyze the pulsing of brand advertising and identifies a threshold effect and carry-over effects from the demand side.

Firm perspective. The firm perspective encompasses the financial approach and strategic approaches. In the strategic approach, various measures of firm or brand performance are used to assess the effects of branding.

For instance, implementing a rebranding strategy leads to increased hotel occupancy rates and revenue. The brand identity component is crucial in driving most of this growth (Tsai et al., 2015). The advertising elasticity of brands has been found to vary over time, with durable goods exhibiting higher elasticity than nondurable goods. Additionally, products in the mature stage of their life cycle tend to have higher elasticity compared to those in the early stages (Sethuraman et al., 2011). Regarding brand alliances, firm profit only benefits when the products from both brands possess equal quality. Otherwise, firms with lower-quality brands tend to exploit the alliance (Yan & Cao, 2017). The global branding effect on firm market share is influenced by socioeconomic factors such as market experience, competitive challenges, and marketing mix issues (Roth, 1995).

The financial approach under the firm perspective refers to the effect measurements such as stock price, Tobin's q, idiosyncratic risk, and earnings volatility, to name a few (Mizik & Jacobson, 2009). Compared to the outcomes in the strategic approach based on

backward-looking performance, financial outcomes are forward-looking, reflecting the market's estimation of the firm's future cash flow (Simon & Sullivan, 1993). The financial approach is usually applied to listed firms that own well-known brands, with the financial data obtained from public financial reports. A representative method is the event study (Sorescu et al., 2017). During the period surrounding a branding announcement or implementation, any unusual fluctuations in a firm's financial outcomes that cannot be accounted for by market conditions, industry factors, the firm's capabilities, or momentum can be attributed to the branding efforts.

Much research focuses on this stream, investigating various strategic branding effects. Generally, investors react positively to strategic branding initiatives such as brand alliances (Das et al., 1998), co-branding (Cao & Sorescu, 2013), corporate brand name changes (Kalaighnam & Bahadir, 2013), CSR engagement (Arya & Zhang, 2009; Jones & Murrell, 2001), and celebrity endorsements (Jaikumar & Sahay, 2015). However, strategic branding can also elicit negative market responses, such as brand activism on controversial sociopolitical issues (Bhagwat et al., 2020).

Firm characteristics can act as moderators or boundary conditions. Morgan & Rego (2009) find a positive correlation between the size of a firm's brand portfolio and Tobin's q, along with a reduced cash flow variability. Hsu et al. (2016), in their examination of the financial implications of brand architecture, discover that the sub-branding architecture strategy generates the highest abnormal returns, although accompanied by the highest idiosyncratic risk among various brand architecture forms, including endorsed brand, house-of-brands, brand house, and the hybrid. Wiles et al. (2012) find that the abnormal stock returns of the acquirer (seller) to brand acquisition (disposal) announcements depend crucially on three complementary firm assets: marketing capabilities, channel relationships, and brand portfolios.

Society perspective. Both sociological and cultural approaches within the societal perspective primarily focus on brand conceptualization rather than the effects of branding. Brands are viewed as vessels containing socially constructed meanings or carriers of cultural symbols that go beyond their functional attributes. Within this perspective, the

study of branding effects is relatively underdeveloped. Descriptions of branding effects are often qualitative (Casaló et al., 2008) or rely on measurements derived from consumer or financial perspectives (Marzocchi & Bergami, 2013; Thompson & Sinha, 2008). However, this perspective has significant potential as growing attention is given to brands' social characteristics and values. Swaminathan et al. (2020) argue that brands can be seen as agents of social change. Their effects regarding social and cultural aspects can be measured at the meso or macro level. For instance, Algesheimer et al. (2005) provide a study that explores how identification with a brand community leads to increased community engagement and greater normative community pressure and reactance.

Dissertation essays within the research landscape

The two dissertation essays investigate the effects of strategic branding, focusing on different branding forms and the effects measured through different outcomes. The first essay examines the impact of brand extension, a planned and widely adopted strategy, on the parent brand, called the reciprocal effect. The results reveal that parent brands' electronic Word-of-Mouth (eWOM) is continuously and positively influenced by the extensions' eWOM from the pre- to post-extension launch period, and eWOM volume and valence play different roles. Specifically, a valence-on-valence spillover effect, a volume-on-volume bandwagon effect, and a volume-on-valence mere exposure effect can occur.

The first dissertation essay employs the eWOM of extensions as the predictor and that of parent brands as the measure for reciprocal effects. It considers eWOM a valuable source of insights for a brand's long-term growth due to its ability to reflect real-time consumer opinions, which accumulate over time in the market. Although not directly part of consumer-based brand equity, eWOM is frequently studied in branding research. The mainstream investigates the impact of eWOM on various aspects. For instance, the research explores its influence on sales (Babić Rosario et al., 2016), brand image and purchase intention (Torlak et al., 2014), customer value and loyalty (Gruen et al., 2006), as well as the moderators that affect its effectiveness (Zhang et al., 2021) or persuasiveness (Zhang et al., 2010). Additionally, eWOM is employed as a measure for the branding effect, similar to brand equity. Maxham III (2001) finds that implementing

moderate to high levels of service recovery efforts significantly increases consumers' intention to engage in positive WOM communication. Another study by Kong et al. (2021) reveals that brands' economic and social sustainability communication has a stronger impact on motivating eWOM for luxury brands than non-luxury brands.

A major advantage of using eWOM is its ability to capture multiple dimensions of brand equity. EWOM volume is the total amount of interpersonal discussion around a product, indicating brand awareness. On the other hand, valence represents the overall tone of the discussion, whether positive, negative, neutral, or mixed, reflecting brand attitude. Liu's seminal research (2006) argues that weekly movie box office performance is mainly explained by the volume of eWOM associated with the movies rather than its valence. The first essay capitalizes on this advantage by analyzing the effect of eWOM volume and valence of extensions on the eWOM volume and valence of parent brands, providing a comprehensive understanding. Notably, this essay is the first research to incorporate eWOM into studying reciprocal effects.

The second essay explores corporate boycotts of a firm facing scandal. The event the essay studies is the #StopHateForProfit Campaign organized against Facebook for its inaction towards hate speech in 2020. The essay contributes to the branding literature by studying this novel phenomenon and investigating how investors of brands' owning firms respond to boycott announcements. The effects are measured using empirical and dynamic stock price data. Model analyses based on an event study reveal that the Facebook boycott resulted in a rise in the market value of the boycotting firms. This positive effect should be attributed to investors recognizing the boycott as a strategic social responsibility effort by the firms, which effectively communicates brand and firm value and enhances the brand's and firm's image. Moreover, media exposure positively moderates the boycott effect, but only for the boycotters who are officially affiliated with a campaign organized by a third party (e.g., #StopHateForProfit Campaign).

Branding related to social welfare has become the bandwagon to meet stakeholders' expectations. These branding forms are considered strategic if firms consciously invest to please the stakeholders and strive for a mutually beneficial relationship between the firm

and society (Acquier et al., 2017). It is still under debate whether the Facebook boycott should be regarded as a social responsibility cause or sociopolitical activism (He et al., 2021; Villagra et al., 2021). The disagreement lies in the extent to which the public believes the cause should benefit society. Social responsibility causes, such as supporting education, reducing carbon footprint, and providing aid during natural disasters, are generally well-received. Conversely, sociopolitical activism causes often involve contentious topics like gun control, refugee acceptance, and LGBTQ rights. The second essay argues that the participating brands and firms benefit from strategically positioning the Facebook boycott as a social responsibility cause. This positioning highlights the opposition to Facebook's profit-making through deliberately neglecting hate speech on its platforms. The widespread recognition of this positioning stems from the general acknowledgment of the increasing detrimental impact of online hate speech.

Regarding methodology, the first essay utilizes time-series models with regression discontinuity, while the second essay utilizes a short-window event study. Both essays employ a quantitative modeling approach to examine dynamic effects using longitudinal archival data. Using such data in marketing research has grown with the increasing maturity of quantitative modeling techniques (Morgan et al., 2019). This approach helps investigate the evolving patterns of branding strategy effects that cannot be detected through cross-sectional analysis.

The two essays share similarities in methodology. The outcome variable involves the repeated measurement of each entity during each time unit. The modeling process involves selecting timespans for effects, identifying key time points, capturing the time-varying effects while controlling the time-invariant effects, and accounting for the naturally clustered residual. *Table A* provides an overview of the data and variables used in both essays.

Table A. Summary of data and variables

Dissertation Essay 1	Dissertation Essay 2
Samples	
52 parent movies having direct sequels	61 US-listed firms announcing boycotting Facebook
<hr/>	
Timespan	
361 days [-180, 180], sequel release date as T_0	41 trading days [-10, 30], boycott announcement date as T_0
<hr/>	
Time-varying variables	
<i>Dependent variable with repeated measures</i>	
Individual-level eWOM valence (N=409733)	Daily stock price (N=2440)
Daily aggregated eWOM volume (N=17177)	
<i>Independent variables</i>	
Sequel release (0/1)	Boycott announcement (0/1)
Daily aggregated sequel eWOM volume	Daily aggregated media coverage
Daily cumulative averaged sequel eWOM valence	
<hr/>	
Time-invariant variables	
Movie-specific fixed effect	Firm's revenue
	Firm's leverage
	Firm's return on assets (ROA)

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Chapter 1

The reciprocal effects of brand extensions' electronic Word-of-Mouth (eWOM) on parent brands' eWOM

Abstract

This research draws from the associative network theory (ANT) to develop a comprehensive framework for investigating the dynamic reciprocal effects of experiential brands' consumer electronic Word-of-Mouth (eWOM). Results reveal a spillover effect of extensions' eWOM valence on parent brands' eWOM valence, a bandwagon effect of extensions' eWOM volume on parent brands' eWOM volume, and a mere exposure effect of extensions' eWOM volume on parent brands' eWOM valence. Using a unique dataset of 409,733 individual-level movie rating-review pairs with posted dates enables the investigation of the dynamic effects of extensions covering the pre- to post-launch period. The findings add valuable knowledge to the reciprocal effect literature. Additionally, the study contributes to understanding the dominant importance of eWOM volume over valence using a novel characterization of reciprocal effects.

Keywords: reciprocal effect, brand extension, movie sequels, electronic Word-of-Mouth (eWOM), associative network theory (ANT)

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1.1 Introduction

The application of brand extension strategy has been observed across various product categories, ranging from the most commonplace fast-moving consumer goods (Völckner & Sattler, 2006) to arts experiences (d'Astous et al., 2007). This strategy involves companies utilizing established brand names to diversify their product lines or enter new product categories. Extensions benefit from their parents in improving brand image and garnering positive market response (Prosser & James, 2003; Sattler et al., 2010).

However, companies, particularly those that regard their parent brands as valuable assets, must remain vigilant of the reciprocal effect of extensions, which refers to the impact that extensions can have on the parent brands (Balachander & Ghose, 2003; Colucci et al., 2008; Martínez et al., 2009).

Marketing literature documents various reciprocal effects. Some research finds that the reciprocal effect obeys a general feedback rule: the more successful the extension is, the more benefits are reciprocated to the parents (Ahluwalia & Gürhan-Canli, 2000; Dwivedi et al., 2010; Luo et al., 2010). Some research argues that even a successful extension may tarnish the parent brand image if its perceived quality cannot match the parent's (Völckner et al., 2008) or if the perceived parent-extension fit is low (Salinas & Pérez, 2009; Thorbjørnsen, 2005). Other research contends that launching brand extensions can benefit parents' awareness and sales regardless of their success (Hennig-Thurau et al., 2009; Keller & Aaker, 1992).

Vital gaps remain despite the extant findings. Word-of-Month (WOM) has never been studied in reciprocal effect research. WOM is broadly defined as any interpersonal communication among consumers in an informal pattern (Anderson, 1998; Berger, 2014). Specifically, the easy and widespread access to online platforms has increased the significance of electronic Word-of-Mouth (eWOM) in consumer communication (Chevalier & Mayzlin, 2006; Dellarocas, 2003; Litvin et al., 2008). Consumers usually refer to eWOM as one of the most potent sources of their purchase decision-making (East et al., 2008). Therefore, it is crucial to monitor how parent brands' eWOM fare when it launches an extension and how it is dynamically affected by extensions. However, the reciprocal effect literature has yet to explore how parent brands' eWOM is affected, let alone the specific effects regarding multiple eWOM metrics. This research addresses this critical gap by investigating the reciprocal effects of the eWOM of extensions on the eWOM of parent brands covering a one-year timespan during extension launch. The context is the movie industry, where sequels are conceptualized as the extensions of the original movies' parent brands (Sood & Drèze, 2006). Movie sequels are considered complementary rather than substitute products to their parents (Liu, 2006). This implies

that sequels do not cannibalize the success of the parent movies and can play a reciprocal role.

Another critical gap exists in need for more research into the dynamic reciprocal effect before the extension launch. The marketing efforts in the pre-launch period create attention and discussion about the extensions, and the impact on their parents should also occur from the pre-launch period. However, the pre-launch reciprocal effect of an extension has been partly overlooked in prior research because eWOM was not the topic of interest. Furthermore, reciprocal effect studies typically employ experimental methods, resulting in a static phenomenon perspective. The emerging use of longitudinal reciprocal effect research utilizing secondary data has yet to incorporate the pre-extension launch period (Knapp et al., 2014). As far as the authors' knowledge goes, the work of Hennig-Thurau et al. (2009) is the only exception that includes the 12 weeks before the extension launch to calculate the parent movies' abnormal DVD sales attributed to the sequel launch. However, its approach employs cross-sectional models and fails to capture the dynamic effect. This research uses a unique dataset containing 409,733 individual-level movie rating-review pairs with posted dates. The disaggregated daily eWOM data for both parent brands and extensions allow for an investigation of the dynamic reciprocal effects from pre- to post-sequel release. *Table 1.1* summarizes the key empirical studies on reciprocal effect, highlighting how this research addresses the abovementioned gaps.

Table 1.1. Summary of key empirical studies on reciprocal effects

Research	Context	Reciprocal effect on	Methodology	Static/ dynamic effect	Timespan
Ahluwalia & Gürhan-Canli (2000)	Electronic products	Parent brand equity	Experiments	Static	Post-extension period
Balachander & Ghose (2003)	Yogurt and detergent	Parent brand equity	Longitudinal secondary data	Dynamic	Post-extension period

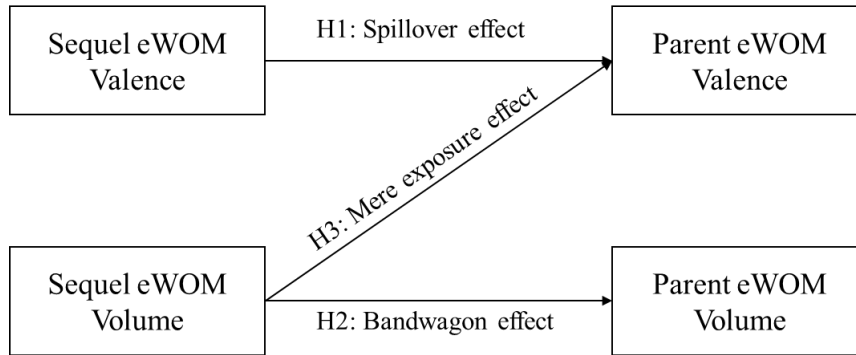
de Oliveira Santos & Giraldi (2017)	Tourism country and tourism destination	Parent brand equity	Experiments	Static	Post-extension period
Dwivedi et al. (2010)	Man fashion	Change of parent brand equity	Cross-sectional surveys	Static	Post-extension period
Hennig-Thurau et al. (2009)	Movie	Parent brand equity; Parent brand financial performance	Longitudinal secondary data	Static	Pre- to post-extension period
Luo et al. (2010)	Celebrity and movie	Parent brand equity	Longitudinal surveys	Dynamic	Post-extension period
Martínez et al. (2009)	Dairy products	Parent brand equity	Experiments	Static	Post-extension period
Morrin (1999)	Staple goods and computer	Parent brand equity	Experiments	Static	Post-extension period
Knapp et al. (2014)	Book and movie	Parent brand financial performance	Longitudinal secondary data	Static	Post-extension period
Phau et al. (2021)	Watches and kidswear	Parent brand personality	Experiments	Static	Post-extension period
Salinas & Pérez (2009)	Fast-moving consumer goods, durable goods and services	Parent brand equity	Cross-sectional surveys	Static	Post-extension period

Swaminathan & Reddy (2001)	Personal care and food	Parent brand choice	Cross-sectional panel data	Static	Post-extension period
Völckner et al. (2008)	Fast-moving consumer goods	Parent brand equity	Longitudinal field experiments	Static	Post-extension period
Yuan et al. (2016)	Higher education sector	Parent brand equity	Interviews	Static	Post-extension period
This research	Movie	Parent brand eWOM	Longitudinal secondary data	Dynamic	Pre- to post-extension period

This research examines the effects of both eWOM volume and valence. EWOM comprises multiple metrics, among which volume and valence have been the most extensively studied (Babić Rosario et al., 2016). Volume describes the total amount of interpersonal discussion around a product, indicating its awareness and popularity. Valence, on the other hand, is the overall tone (positive, negative, neutral, or mixed) of the discussion, which reflects consumer attitude towards a product or brand (Liu, 2006). Please note that as marketing and eWOM are both regarded as drivers of product awareness and adoption (Van den Bulte & Lilien, 2001), this study also models the longitudinal revival effects on parent brands' eWOM associated with sequels' marketing efforts. Thus, the isolated reciprocal effects of sequels' eWOM are substantial.

This research contributes to the literature by developing a comprehensive framework of reciprocal effects related to the eWOM of parent brands and extensions. The study finds a spillover effect of extensions' eWOM valence on parent brands' eWOM valence, a bandwagon effect of extensions' eWOM volume on parent brands' eWOM volume, and a mere exposure effect of extensions' eWOM volume on parent brands' eWOM valence. *Figure 1.1* summarizes the framework, and the authors provide the theoretical explanations of the three effects using associative network theory (ANT).

Figure 1.1. *Theoretical framework*



This research also contributes to the eWOM literature by providing empirical evidence of the dominant importance of eWOM volume over valence by characterizing them in the scenario of reciprocal effect. This study broadens the scope of examining the imbalanced importance of eWOM metrics beyond the previous focus on their impact on sales (Chintagunta et al., 2010; Duan et al., 2008; Liu, 2006; You et al., 2015). The results demonstrate that movie sequels' eWOM volume on the previous day positively impacts both parent movies' eWOM volume and valence on a subsequent day. In contrast, the positive effect of sequels' eWOM valence is only reflected in the eWOM valence of parent movies. This finding using a novel reciprocal effect characterization is consistent with the conclusion in the extant literature that eWOM volume dominates valence in affecting sales (Babić Rosario et al., 2016).

1.2 Conceptual background

Reciprocal effect and associative network theory

Associative Network Theory (ANT) (Anderson, 1983) is the most commonly used theoretical framework for understanding reciprocal effects. According to ANT, information about an object is organized and stored in the human brain as a network of interconnected nodes. The links that connect nodes vary in strength based on the associations between the nodes, with stronger links increasing the probability and effectiveness of one node activating another and altering the attributes of the nodes (Keller, 1987). In a branding context, ANT stipulates that brand knowledge is stored as a

network of nodes in a consumer's mind, and the interconnections allow for brand associations. Upon an extension launch by a parent brand, consumers create a new cognitive network that is also intricately interconnected with the parent brand's network. The reciprocal effect occurs when the parent brand's network is modified by the new associations provided by the brand extension, leading to a change in consumers' cognitive schema.

Spillover effect of sequels' eWOM valence on parent movies' eWOM valence

The spillover effect describes how evaluating one entity, whether an object or an individual, impacts the evaluation of another entity. This effect is characterized by transferring affect, attributes, or both from one associated entity to another (Raufeisen et al., 2019). The literature suggests that consumers' attitudes toward experiential extensions can impact their perception of parent brands. For instance, de Oliveira Santos & Giraldi (2017) reveal that a positive attitude toward a destination city can reciprocate to the country as a parent tourism brand. Similarly, Luo et al. (2010) find that celebrities' movie performance impact how favorably they are perceived in the long run.

This research applies the node attribute transfer in the ANT framework to explain the effect of sequels' eWOM valence on parent brands' eWOM valence. Consumers' attitudes towards the various aspects of an extension are stored as the nodes of the sequel's network. Their attributes can be transferred to the connected parent nodes, strengthening the memory in the same direction and attenuating the memory on the opposite side, then updating the attitude or evaluation towards the parent. For instance, the recently launched sequel *Avatar: The Way of Water*, has been mostly criticized for "visually stunning but very weak characters and story" (Sam56800, 2022, para. 1). These critiques of the sequel can activate the interconnected nodes of the parent movie, reinforcing the positive perception of the visual effects and the negative perception of the storytelling of the parent movie. The review of *Avatar*, the parent movie, has changed from "unbelievable, it's not just awesome graphics but an incredible and moving storyline!!" (Hannah, 2009, para. 1) to "visually stunning but lacks of solid storytelling" (Man From The Moon, 2022, para.

1). In general, parent movies' eWOM valence can increase (decrease) if the sequels' eWOM valence is more positive (negative).

This reciprocal spillover effect is expected to be ongoing and immediate. The eWOM activity commences during the pre-launch phase. Depending on the product's popularity and life cycle, it can last for varying durations, ranging from weeks to months or even years. EWOM is also generated and disseminated rapidly. Consumers can quickly locate online communities and exchange information regarding any product. For movies, popular movie review websites like Internet Movie Database (IMDb), Rotten Tomatoes, and Metacritic provide a platform for movie enthusiasts to share their opinions. Social media users can also use relevant tags to participate in discussions. Therefore, the reciprocal spillover effect is subject to continuous and rapid updates based on the latest eWOM valence of the sequel. This research proposes that the parent movies' eWOM valence is affected by sequels' cumulative rather than daily eWOM valence, as movie watchers typically do not rely solely on reviews from a single day but consider all available comments to obtain a comprehensive reference. The hypothesis is based on analyzing daily movie eWOM data from the pre- and post-sequel release periods.

H1: Sequels' cumulative eWOM valence positively affects parent brands' daily eWOM valence.

Bandwagon effect of sequels' eWOM volume on parent movies' eWOM volume

The bandwagon effect, rooted in the theory of informational cascades (Bikhchandani et al., 1998) and herding behavior (Banerjee, 1992), describes that individuals tend to make decisions based on the popularity of an idea rather than its actual merit or validity. This phenomenon is also observed in consumer behavior research, where consumers tend to follow other consumers' behaviors to feel effective, inclusive, or less uncertain (Babić Rosario et al., 2016; Huang & Chen, 2006; Van Herpen et al., 2009).

This research proposes a reciprocal bandwagon effect. When an extension becomes a popular topic of discussion, it serves as a constant reminder of the parent brands due to

their shared characteristics and functions. This, in turn, can motivate individuals to engage in discussions about the parent brands, which can increase parent brands' eWOM volume.

Node activation can explain this effect in the ANT framework. Nodes of extensions act as retrieval cues that activate the linked nodes in the parent brands' network. An increased number of active nodes, or higher levels of node activity, can lead to a greater probability of recognition and recall of the parent brands' network, resulting in heightened awareness of the parent brands (Hennig-Thurau et al., 2009; Morrin, 1999), which is usually accompanied by increased discussion. The success and effectiveness of activation can be aided by the increasing number of retrieval cues and the strengthening of the links (Lowry et al., 2008). The information is communicated more frequently when extensions have a larger eWOM volume. This adds to the number of useful retrieval cues in the extensions' networks and contributes to activating more nodes in parent brands' networks. The repetition of similar information further strengthens the links and accelerates activation. The awareness of the parent brand is then increased, and the volume of discussion rises accordingly.

Additionally, the familiarity between the parents and extensions should increase the effectiveness of the activation and facilitate the recall of parent brands (Morrin, 1999). In the case of movies where the parent and sequel share characters and related plotlines and maintain consistency in genre and audiovisual presentation, the probability of activation occurring is high. Therefore, a higher volume of sequel eWOM can lead to a higher volume of eWOM for parent movies. Recall that the reciprocal effects of eWOM are supposed to be ongoing and immediate. This research proposes that:

H2: Sequels' daily eWOM volume¹ positively affects parent movies' daily eWOM volume.

Mere exposure effect of sequels' eWOM volume on parent movies' eWOM valence

¹ In the dataset, a few popular movies gain a considerable number of ratings in a single day. For example, *The Dark Knight*, the sequel of *Batman Begins*, had 5436 reviews on July 18, 2008, while the average daily rating count for all sequels is 29.81. This research uses daily rather than cumulative eWOM volume to avoid the longitudinal effect being distorted by the extreme outliers.

According to the mere exposure effect, repeated exposure to information about an object can improve the efficiency of information processing and lead to a higher evaluation of the object (Janiszewski & Meyvis, 2001). In the consumer research literature, Fang et al. (2007) find that repeated exposure to banner advertisements enhances information processing fluency, helping create positive feelings in consumers' minds and leading them to favor the product. This positive impact of repetition has been extensively studied in advertising, and it increases attitudes toward the brand and the intention to purchase (Grimes & Kitchen, 2007).

It is also reasonable to assume a reciprocal mere exposure effect of extensions' eWOM volume on parent brands' eWOM valence, which is also theoretically supported by ANT. Repeated exposure to relevant information increases the number of nodes that can serve as retrieval cues in the network of parent brands and strengthens the links between them. This results in greater awareness and reduces perceived risk for consumers, ultimately leading to a more favorable response to the brand (Lowry et al., 2008). Moreover, parent brands that introduce extensions are typically successful and favored by consumers. It suggests that not only are the majority of nodes in consumers' memories related to the parent brands positive, but the links between these positive nodes are also stronger, considering the merits of brands are more communicated. When the extension information serves as a retrieval cue, it is more probable that a positive node in the parent brand's network is activated. It can happen regardless of whether the extension information is positive or negative.

Regarding movies, sequels typically embody and build upon the iconic elements established in parent brands (Gierl & Huettl, 2011). Communicating the positive aspects of a sequel brings to mind the positive association with the parent movie. An example would be a review of *The Dark Knight*, which stated, "It definitely lived up to the hype, and was even better than *Batman Begins*" (Sean, 2008, para. 1). Even if the sequel is not a success and generates negative associations, the linked nodes of the parent brand are likely to contain positive attributes. The positive impression of the parent movie remains intact. It may even be strengthened, as with the review of *Iron Man 2*, "another big problem I had though, was the lack of 'magic moments' and thrilling action, like in the

first flick" (EddyOne, 2010, para. 1). The literature supports the notion that although nodes may change their attributes due to external influences, brands that are more familiar and have more extensive associations are more resistant to external influences (Simonin & Ruth, 1998).

In general, the greater the discussion surrounding the sequels, the more probable it is for the positive and memorable aspects of the parent movies to be triggered, resulting in a more positive attitude and increased eWOM valence towards the parent movies. The research proposes:

H3: Sequels' daily eWOM volume positively affects parent movies' daily eWOM valence.

Controlling for the revival effects of sequels' marketing efforts

Marketing efforts introduce brand knowledge, generate consumer interest, and create positive images and buzz. Van den Bulte & Lilien (2001) argue its critical effect on a newly launched product's awareness and purchase intention. Marketing efforts of brand extensions can also contribute to reviving the eWOM volume and valence of parent brands. Such marketing activities inform consumers of the upcoming release of brand extensions and highlight the existence of parent brands. During the release of movie sequels, movie watchers can view the parent movies to understand the story and familiarize themselves with the characters. For those who have already watched the parent movies, sequels' marketing can facilitate the recall of the parent movies and stimulate discussions.

Extensions' marketing can also benefit parent brands' eWOM valence. The mechanism is the same as the mere exposure effect discussed before. Extensions' marketing usually leverages the classic elements created in parent brands. *The Imperial March* musical theme in *the Star Wars* franchise and the final visual shot of a Tyrannosaurus Rex roaring in *Jurassic Park* movies are examples that appear in the trailers of several sequels. Intense sequel marketing can lead to increased affective memory and a more positive attitude towards parent movies, resulting in higher eWOM valence of parent movies.

Both these reciprocal revival effects should exhibit a consistent dynamic pattern with the intensity of the sequels' marketing efforts. Experiential products such as movies have a one-shot consumption characteristic and a relatively short life cycle in theaters resulting in quick and intense marketing when sequels are released (Kim & Hanssens, 2017). The marketing peaks during the opening week and declines rapidly, as demonstrated by various advertising patterns analyzed by Arai et al. (2013) and Bruce et al. (2012). Therefore, the eWOM volume and valence of parent movies, influenced by sequels' marketing efforts, should also increase before the sequel release and decline after that. To isolate the reciprocal effect of sequels' eWOM from the marketing effort, this research control for these revival effects associated with marketing campaigns in the model by including a time parameter that is allowed to augment before the sequel release and then decrease after it.

1.3 Methodology

Data collection and variable operationalization

Our movie eWOM data comes from the movie review website Rotten Tomatoes. Rotten Tomatoes is one of the most referenced movie review websites, collecting ratings and reviews from movie audiences and professional critics. This data is the source of several studies on consumer eWOM (Holbrook & Addis, 2008; Kim et al., 2023; Pang et al., 2022), expert critics (Gemser et al., 2012; Moon et al., 2010; Peng et al., 2013) and sentiment analysis using machine learning approach (Quader et al., 2017; Soni & Yadav, 2022).

Rotten Tomatoes was selected as the data source for another critical reason: the platform contains pre-release eWOM in the form of pre-release ratings. Until 2019, anyone could rate and review a movie on the website without viewing it (Rotten Tomatoes, 2019). After May 2019, Rotten Tomatoes established processes to ensure that the reviewers had purchased tickets and watched the movie. This loose review policy tarnished the website's credibility but now contributes to the existence of eWOM covering the pre- to post-release period. EWOM does not have to be based on consumption; all product-related

communication counts. In this sense, the Rotten Tomatoes ratings and reviews provide the ideal data for this research.

The following criteria are used to identify the eligible parent movies in the sample:

- (i) The parent movie should have at least one direct sequel. A movie franchise can contain multiple movie series which share the same universe and have intersections on the characters and storylines. For example, the movie series featuring Ironman, Captain America, Black Widow, and Avengers all belong to the Marvel Cinematic Universe. The movie, *Avengers: Age of Ultron* is considered a direct sequel of *The Avengers*, but not of *Captain America: The First Avenger*. A direct sequel of the latter is *Captain America: The Winter Soldier*.
- (ii) The parent movies must have ratings and reviews before the date of the sequel launch. It allows us to observe a complete dynamic pattern of parent eWOM affected by the sequel from the pre- to post-release period.
- (iii) The US release date of sequels should be earlier than June 2019, when Rotten Tomatoes forbid pre-release reviews.

The final sample contains 52 parent movies released between 1995 and 2015, each with their first direct sequels released between 2004 and 2019. A summary of the information on the sample movies is presented in *Appendix 1.1*.

On Rotten Tomatoes, a movie watcher can rate a movie on a 0-5 scale with 0.5 as the minimum. If one gives a rating and a textual review of a movie, this rating-review pair will be publicly seen with its posted date. This rating-review pair allows exploring movie eWOM measured as scaled ratings or textual information. This research uses scaled ratings for the main results and sentiment analysis derived from textual information as a robustness check. The chronological nature of the reviews also makes it feasible to capture the dynamic patterns of parent movie eWOM around their sequel release.

Parent movies eWOM valence and volume as dependent variables. EWOM volume is operationalized as the daily counts of ratings, while the rating scores indicate how positive or negative the eWOM is (Chen et al., 2011; Liu, 2006).

Sequel eWOM valence. Duan et al. (2008) study the dynamic effects of eWOM volume and valence on box office using daily movie data and operationalize eWOM volume as the daily count of online movie ratings. Regarding eWOM valence, Duan et al. (2008) employ both cumulative average and average daily rating and find that the two terms' effects on the daily box office are consistent. The present research employs the cumulative average rating considering that potential movie watchers usually not only refer to the reviews on a single day but look through the existent reviews to get an overall idea. Besides, the overall rating score for each movie seen and referred to by all the movie watchers is, in essence, the cumulative average rating updated in real-time.

Sequel eWOM volume. This research follows Duan et al. (2008) and Xiong & Bharadwaj (2014) to operationalize sequel eWOM volume as the daily counts of sequel ratings. A concern for using daily rating counts rather than the cumulative sum of counts is that the volume of movie eWOM peaks in a few days. Using the cumulative sum risks distorting the actual effect after the peak.

Time. A time span of 361 days (180 days before the sequel release date to 180 days post) is set to detect the long-run effect centered on the sequel release date. If a parent movie does not have available reviews as early as 180 days before the sequel release, the date that its first rating-review pair appears is considered the starting point.

Sequel release. The release date of the sequel is the threshold for the binary variable created to observe if the parent eWOM differs after the sequel release.

The operationalization of variables is summarized in *Table 1.2*.

Table 1.2. Operationalization of variables

Variable	Operationalization
Model predicting parent movies' WOM volume	
<i>Dependent variable:</i>	
eWOM volume of parent movie (PrtVol _{it})	Metric. Rating counts of parent movie i on T _t
<i>Independent variables:</i>	
Cumulative eWOM valence of sequel (SqlValCum _{it})	Metric. Cumulative mean of rating scores of the sequel of parent movie i on T _{t-1} , mean-centered
eWOM volume of sequel (SqlVol _{it})	Metric. ln(Rating counts of the sequel of parent movie i on T _{t-1} +1)
<i>Control variables:</i>	
Time (T _t)	Metric. Timespan, in weeks, around the sequel release of parent movie i, the date of sequel release is set as 0
Sequel Release (R _{it})	Binary. 1 after the sequel release, else 0
Model predicting parent movies' WOM valence	
<i>Dependent variable:</i>	
eWOM valence of parent movie (PrtVal _{ijt})	Metric. Rating score of parent movie i from individual j on T _t
<i>Independent variables:</i>	
Cumulative eWOM valence of sequel (SqlValCum _{it})	Metric. Cumulative mean of rating scores of the sequel of parent movie i on T _{t-1} , mean-centered
eWOM volume of sequel (SqlVol _{it})	Metric. ln(Rating counts of the sequel of parent movie i on T _{t-1} +1)
<i>Control variables:</i>	
Time (T _t)	Metric. Timespan, in weeks, around the sequel release of parent movie i, the date of sequel release is set as 0
Sequel Release (R _{it})	Binary. 1 after the sequel release, else 0

Model specification

A linear ordinary least squares regression with clustered standard errors and movie-level fixed effects is applied to the model predicting parent movies' eWOM valence. The clustered standard errors are used to account for the within-cluster dependence of the observations due to repeated measures (Abadie et al., 2022). The movie-level fixed-effects are to capture the unobservable time-invariant characteristics of each movie (Brüderl & Ludwig, 2015; Pinheiro & Bates, 2000).

$$\begin{aligned} \text{PrtVal}_{ijt} = & \beta_0 + \beta_1 \text{SqlValCum}_{it-1} + \beta_2 \text{SqlVol}_{it-1} \\ & + \beta_3 T_t + \beta_4 R_{it} + \beta_5 T_t \times R_{it} + u_i + \varepsilon_{ijt} \end{aligned} \quad (1)$$

The coefficients β_1 and β_2 capture the dynamic effect of sequel eWOM valence and volume, respectively, and β_3 and β_4 for the effect of time, sequel release, respectively. The coefficient β_5 represents the interaction of Time and Release that estimates a turning trend of parent movies' eWOM at sequel release. The term u_i represents the movie-specific intercepts, and ε_{ijt} is the residual from each rating.

Regressions in the Poisson family are usually employed to model the count data because they account for the skewed nature of the distribution (Gardner et al., 1995; Hall, 2000). Standard Poisson regression holds the basic assumption that the variance of the outcome variable should be equal to its conditional mean. Longitudinal panel data featuring individual dependence violates this assumption and causes the issue of overdispersion (variable's variance larger than the conditional mean) (Coxe et al., 2009). This issue is confirmed for the dataset by running a standard Poisson model and seeing the value of residual deviance divided by degree of freedom (83544/10355) much greater than 1 (Hinde & Demétrio, 1998). Negative binomial regression in the Poisson family, which allows unequal variance and mean, is recommended in this situation (Cameron & Trivedi, 1990; Dhaoui & Webster, 2021; Wuyts et al., 2004). Therefore, this research applies negative binomial regression for the model predicting parent movies' eWOM volume. The specification is similar to the model predicting valence. The clustered standard errors and the movie-level fixed effects are also included.

$$\ln(\text{PrtVol}_{it}) = \beta_0 + \beta_1 \text{SqlValCum}_{it-1} + \beta_2 \text{SqlVol}_{it-1} + \beta_3 T_t + \beta_4 R_{it} + \beta_5 T_t \times R_{it} + u_i + \varepsilon_{it} \quad (2)$$

The coefficients β_1 to β_5 have the same meanings as those in Equation (1). Note that ε_{it} represents the error term of each movie at time t . For both models, the generalized variance inflation factors, all smaller than 5, indicate that multicollinearity is not an issue.

1.4 Results

The parent brands' eWOM valence dataset contains 409,733 individual ratings. The dataset predicting parent brands' eWOM volume contains 17,177 daily rating counts of parent movies. Due to the dynamic structures, the descriptive statistics of the daily eWOM volume and the cumulative eWOM valence of sequels in the two datasets differ. A descriptive summary is presented in *Table 1.3*. The correlation matrixes are shown in *Appendix 1.2*.

Table 1.3. Descriptive summary

	Model predicting parent movie eWOM valence			Model predicting parent movie eWOM volume		
	<i>PrtVal</i>	<i>SqlValCum</i>	<i>SqlVol</i>	<i>PrtVol</i>	<i>SqlValCum</i>	<i>SqlVol</i>
Mean	3.84	4.18	112.30	21.89	3.86	29.81
Std. Dev.	1.21	0.48	284.04	130.79	0.50	138.06
Min.	0.50	2.50	0.00	0.00	2.25	0.00
Max.	5.00	5.00	5436.00	2007.00	5.00	5436.00

Effects in the main models

Reciprocal effects. *Table 1.4.* summarizes the results in the main models. The spillover effect of sequels' eWOM valence on parent movies' eWOM valence is found in *Model 1*. The increase of the per rating score of sequels on the previous day contributes to an average increase of the parents' score of .238 (SE=.058, $p < .001$) on a subsequent day. H1 is supported.

The bandwagon effect of sequels' eWOM volume on parent movies' eWOM volume is shown in *Model 2*. The significant elasticity of sequels' eWOM volume ($\beta=.239$, $SE=.048$, $p<.001$) indicates a daily positive impact of sequels' eWOM volume on parent movies' eWOM volume. Specifically, for every one percent increase in sequels' eWOM volume on the previous day, there is an average increase of 0.239 percent in parent movies' eWOM volume the following day. H2 is supported.

The mere exposure effect of sequels' eWOM volume on parent movies' eWOM valence is also found in *Model 1*. Parent movies' eWOM valence increases by .025 ($SE=.003$, $p<.001$) on average when sequels' eWOM volume on the previous day increases by each percent. These results support H3.

Effects of control variables. The results firstly reveal a positive main effect of Sequel Release along with a negative interaction of Time and Sequel Release in *Model 1*, which can be considered the revival effect on parent movies' eWOM valence associated with sequels' dynamic marketing efforts. On one hand, parent movies' eWOM valence increases by .053 ($SE=.025$, $p<.05$) on average after the sequel release. On the other hand, the negative interaction of Time and Sequel Release ($\beta=-.009$, $SE=.003$, $p<.01$) indicates that parent movies' eWOM volume declines after the sequel release. However, this revival effect on parent movies' eWOM volume is not confirmed in *Model 2*. Neither Sequel Release ($\beta=.169$, $SE=.191$, n.s.) nor the interaction ($\beta=.012$, $SE=.017$, n.s.) is significant.

Table 1.4. Results for the main models

Variable	Predicting parent brand eWOM valence (N = 409,733)		Predicting parent brand eWOM volume (N = 17,177)	
	Model 1		Model 2	
	<i>Estimate</i>	<i>(SE)</i>	<i>Estimate</i>	<i>(SE)</i>
SqlValCum _{it-1}	0.238	(0.058)***	0.381	(0.507)
SqlVol _{it-1}	0.025	(0.003)***	0.239	(0.048)***
T _t	0.004	(0.002)*	-0.032	(0.008)***

R_{it}	0.053	(0.025)*	0.169	(0.191)
$T_t \times R_{it}$	-0.009	(0.003)**	0.012	(0.017)

Notes: . $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Robust standard errors clustered at the movie level.

Tests of robustness

To test the robustness of the findings, the research measures the valence of the textual reviews rather than the scaled ratings. A sentiment score is extracted from each textual review. The minimum value of -1 indicates extreme negativity in emotion, and the maximum value of 1 represents the highest degree of positivity. The vector-based algorithm efficiently captures the semantic meaning by factorizing each word with a k-dimension representation (Maas et al., 2011). A pre-trained dataset with labels using the movie reviews from IMDb ensures the relevance of the text meaning. The correlation between parent ratings and their sentiment scores is .57, and that between sequel ratings and sequel sentiment scores is .60.

The specifications for the alternate models are similar to those of the main models, except that instead of the eWOM valence for both the parent movies and sequels, the sentiment scores are utilized, represented as $PrtSent$ and $SqlSentCum$, respectively.

$$PrtSent_{ijt} = \beta_0 + \beta_1 SqlSentCum_{it-1} + \beta_2 SqlVol_{it-1} + \beta_3 T_t + \beta_4 R_{it} + \beta_5 T_t \times R_{it} + u_i + \varepsilon_{ijt} \quad (3)$$

$$\ln(PrtVol_{it}) = \beta_0 + \beta_1 SqlSentCum_{it-1} + \beta_2 SqlVol_{it-1} + \beta_3 T_t + \beta_4 R_{it} + \beta_5 T_t \times R_{it} + u_i + \varepsilon_{it} \quad (4)$$

The results of alternative models, summarized in *Table 1.5*, validate the findings from the main models. All the reciprocal effects gain solid support by the consistent results in alternative models as in the main models. The spillover effect is confirmed by the positive effect of sequels' eWOM sentiment on the parent movies' eWOM sentiment ($\beta = .173$, $SE = .026$, $p < .001$) in *Model 3*. The bandwagon effect is found in *Model 4*, which reveals the significant positive impact of sequels' eWOM volume on parent movies' eWOM volume ($\beta = .234$, $SE = .048$, $p < .001$). The positive impact of sequels' eWOM volume on

parent movies' eWOM sentiment, also shown in *Model 3* ($\beta=.011$, $SE=.004$, $p<.01$), further support the mere exposure effect.

As to the revival effects which are remained in the alternative models, the effect on parent movies' eWOM valence is only partially confirmed in *Model 3*, shown by a mixed pattern of a non-significant Sequel Release estimate ($\beta=-.014$, $SE=.018$, n.s.) and a significant negative interaction of Time and Sequel Release ($\beta=-.005$, $SE=.001$, $p<.001$). There is still no effect on parent movies' eWOM volume, as shown in *Model 4*, where neither the Sequel Release ($\beta=.147$, $SE=.184$, n.s.) nor the interaction ($\beta=.011$, $SE=.018$, n.s.) is significant.

Table 1.5. Results for the alternative models

Variable	Predicting parent brand eWOM valence (N = 409,733)		Predicting parent brand eWOM volume (N = 17,177)	
	Model 3		Model 4	
	<i>Estimate</i>	<i>(SE)</i>	<i>Estimate</i>	<i>(SE)</i>
SqlSentCum _{it-1}	0.173	(0.026)***	0.274	(0.417)
SqlVol _{it-1}	0.011	(0.004)**	0.234	(0.048)***
T _t	0.003	(0.001)*	-0.032	(0.008)***
R _{it}	-0.014	(0.018)	0.147	(0.18)
T _t × R _{it}	-0.005	(0.001)***	0.011	(0.018)

Notes: . $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$. Robust standard errors clustered at the movie level.

1.5 Discussion

This research investigates the reciprocal effects of extensions' eWOM on parent brands' eWOM, focusing on brands of experiential products. Specifically, there is a spillover effect of extensions' eWOM valence on parent brands' eWOM valence, a bandwagon effect of extensions' eWOM volume on parent brands' eWOM volume, and a mere exposure effect of extensions' eWOM volume on parent brands' eWOM valence. The

findings suggest that parent brands' eWOM is susceptible to the immediate impact of extensions' eWOM, and the dynamic effects build up from the pre-extension launch and continue through the pre- to post-launch period.

Previous research has utilized node attribute transfer within the ANT framework to explain how consumers' attitudes toward extensions can spill over to their attitudes toward parent brands (Czellar, 2003; Dwivedi & Merrilees, 2013). By incorporating dynamic eWOM, this study contributes to existing knowledge by identifying a valence-on-valence spillover effect and a volume-on-volume bandwagon effect. Furthermore, using multiple metrics of eWOM allows for an investigation of the effects across metrics, leading to the identification of a volume-on-valence mere exposure effect, which is also incorporated into the ANT framework. Integrating the three reciprocal effects contributes to a better understanding of reciprocal effects and further develops ANT.

This research also provides insights into the imbalanced importance of eWOM metrics. While most of the extant literature has focused on using a single method to characterize eWOM's role in predicting sales (Marchand et al., 2017), few studies have explored scenarios beyond sales, such as product return (Minnema et al., 2016). This research joins the debate by demonstrating the roles of eWOM volume and valence in a novel scenario: the reciprocal effect of brand extensions on parent brands. The findings provide additional evidence that eWOM volume outweighs valence.

These effects may persist or vary for products in other categories. Darby & Karni (1973) devise a framework to classify products into search, experiential, and credence. Liebermann & Flint-Goor (1996) expound on these categories, highlighting their differences in information intensity and product attributes. Search products, such as furniture and sporting equipment, are characterized by readily available objective information that facilitates pre-consumption evaluation. Experiential products, such as movies, wine, and hotels, are more challenging to assess before consumption but can be evaluated after the fact. Credence products are notoriously difficult to evaluate before and after consumption due to consumers' limited knowledge about the quality and

characteristics of the products they are considering (Dulleck & Kerschbamer, 2006). Examples of credence goods include medical treatment and legal services.

Previous studies have established that consumers' evaluation of experiential products significantly depends on eWOM (Lee & Shin, 2014). This research corroborates these findings and further demonstrates that the eWOM of extensions also impacts the eWOM of parent brands. Moreover, the results shed light on how the reciprocal effects might manifest for search and credence goods. It is important to note that the category describes the parent brand. For example, when Lego (a search product) launches the Lego movie series (experiential products) as extensions, the reciprocal effect is on Lego, a search product.

The bandwagon effect would also be observed for search and credence products, whereby relevant extension nodes act as retrieval cues to activate parent brand nodes, resulting in increased consumption and discussion of parent brands. Especially for credence products, which are difficult to evaluate and entail higher perceived risk, eWOM is a crucial source of information for consumers to make purchase decisions and facilitate evaluation. They are more likely to actively seek out and engage in eWOM to mitigate uncertainty and reduce risk (Lin & Lin, 2018). Therefore, extensions' eWOM volume may stimulate more extensive discussion of parent brands, and hence the bandwagon effect may be more pronounced for credence products than for search and experiential products.

The spillover effect is likely to occur for credence products due to consumers' inability to evaluate the parent brands before and after consumption. This uncertainty makes consumers more vulnerable to external cues, such as the valence of eWOM generated by extensions, increasing the likelihood of attitude transfer from the extensions to the parent brands. This effect would be more significant for parent brands of credence products than for experiential products. In contrast, search products provide easy access to objective information for quality assessment, enabling consumers to make independent judgments about product quality. Consequently, nodes containing evaluations of parent brands are more resistant to attribute transfer from extension nodes for search goods, resulting in a less significant or non-significant spillover effect.

The mere exposure effect is expected to be less significant for search and credence products but for different reasons. In the case of search products, the attitude towards the parent brands is formed independently and is less susceptible to external influence, as discussed in the previous paragraph. This proposition is consistent with previous research indicating that eWOM has a more significant effect on sales for experiential and credence products than search products (Park & Lee, 2009; Tsao & Hsieh, 2015). For credence products, consumers tend to be more skeptical and cautious when evaluating parent brands (Pan & Chiou, 2011). Negative attributes may be perceived as more reliable and diagnostic than positive ones. Therefore, the negative attributes carried by extension nodes are more likely to transfer to the nodes of parent brands. As a result, repeated exposure to extensions' eWOM may not necessarily lead to increased parent brands' eWOM valence for credence products.

In contrast to most existing research on reciprocal effects, which focuses on conditional effects, this study identifies general effects that apply regardless of conditions. These general effects are expected to reveal fundamental rules and pave the way for future research to investigate potential conditions that may influence the magnitude of the reciprocal effects related to eWOM. In addition to the product categories discussed above, other factors related to online platforms and users may also serve as potential moderators. Examples of these factors include the platform's reputation, the format of reviews adopted by the platform, users' expertise, the propensity to trust and perceived risk, and the parent-extension fit. Future research can investigate these conditions to understand better how the reciprocal effects on eWOM vary.

One of the limitations of this research is using a single movie industry as the context. Validating the findings would be meaningful through future research that explores other industries involving experiential brands and their extension. Moreover, the context can extend beyond brand extensions to include co-branding, brand alliance, ingredient branding, sponsorship, and celebrity endorsement, where the two experiential brands have a close association and can mutually affect each other's eWOM. The authors hope the future findings also validate the imbalanced importance of eWOM volume and valence.

Another limitation of this research is that it uses the interaction of time and launch as a proxy for longitudinal marketing efforts of extensions due to limited data availability. Future research would benefit from using real-world marketing expenses as a control to isolate reciprocal effects. Additionally, with the available data, future research can examine the revival effects of dynamic marketing expenses (measured by monetary unit) or marketing intensity (measured by marketing activities' frequency) on parent brands' eWOM. Last but not least, the research only employs the first direct movie sequel as an extension for simplicity and clarity. In practice, the situation could be more complicated, and the reciprocal effects of multiple or consequential extensions are worth further exploration.

Managerial implications

Our study's managerial implications are particularly relevant for brands with complementary extensions, like movie sequels, as opposed to substitute extensions. Considering companies typically try to avoid substitute extensions, which have the potential to cannibalize the market share of parent brands, the implications of the findings have a wide application across various industries.

The effective management of extensions' eWOM is crucial for the eWOM of their parent brands, especially for successful parent brands with multiple extensions entering diverse industries. Proper management of the volume and valence of extensions' eWOM can positively impact the parent brands' eWOM, contributing to long-term parent brand equity and success. The findings demonstrate that the reciprocal effects are immediate and continuous, indicating the need for constant supervision of the extensions' eWOM and prompt handling of sudden adverse events. Moreover, the reciprocal effects begin during the pre-extension launch period and last through the post-launch phase. Therefore, it is essential to start the supervision and management of extensions' eWOM early on, throughout the entire lifecycle of the extensions.

The dominant importance of eWOM volume over valence in the reciprocal effects on eWOM also provides valuable managerial insights. In some cases, the two eWOM metrics can be trade-offs. For instance, accurate targeting of consumers leads to higher

satisfaction and positive reviews but limits the scale of eWOM. Conversely, widespread eWOM indicates that consumers outside the target segment are attracted, who may follow the fad to purchase but end up feeling unsatisfied and subsequently voice their complaints. In such cases, managers may have difficulty maintaining both metrics at the ideal level. Which metric should be the priority? The findings suggest that expanding extensions' eWOM volume should be the preferred strategy for experiential products to maximize the reciprocal effects on their valuable parent brands because it can affect both their eWOM volume and valence.

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Chapter 2

The effect on a firm's market value of participating in a corporate boycott campaign

Abstract

In the summer of 2020, a corporate boycott campaign targeting Facebook was organized by a coalition of civil rights organizations and advocacy groups. Several firms withdrew their advertisement from the social media platform for one month to express their opposition to Facebook's reluctance to censor hateful speech and address political misinformation. This research finds a general positive effect of the boycott announcement on the boycotting firms' stock prices using daily longitudinal data. Moreover, the firms affiliated to the organized #StopHateForProfit campaign benefited more from their boycott announcement, especially under high media coverage conditions. These findings provide valuable insights to stakeholders involved in corporate activism, such as potential boycotting firms, investors, and non-profit organizations.

Keywords: corporate boycott, #StopHateforProfit, corporate socio-political activism, corporate social responsibility, image spillover, media coverage

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2.1 Introduction

In June 2020, Facebook refused to take any action about then-President Donald Trump's "when the looting starts, the shooting starts" declaration on Instagram. It ignited public criticism of Facebook's inaction on the spread of misinformation and hate speech. Civil rights organizations and advocacy groups, including the Anti-Defamation League, the NAACP, Sleeping Giants, Color of Change, Free Press, and Common Sense Media, started "Stop Hate for Profit", an advertising boycott campaign targeting Facebook and its Instagram subsidiary. The coalition called for companies to pause ads on Facebook in

July, aiming to push Facebook to censor hateful speech and address political misinformation (Stop Hate For Profit 2020).

The campaign started on June 17th, 2020. The hashtag #stophateforprofit was created on Twitter and soon received responses from more than 1,000 companies (Hsu & Friedman, 2020). The North Face, REI, Upwork, and Patagonia became the earliest participants. Some of Facebook's largest advertisers, including BestBuy, PepsiCo, CVS, and Honda, followed suit. Big names such as Coca-Cola, Starbucks, HP, and Disney also paused their Ads on Facebook but did not formally announce that they joined the movement.

The campaign made an impact. Facebook promised to remove groups and pages discussing hate and violence more efficiently after a sharp price drop of 8% (Fung, 2020). By the end of July, most participants had resumed their Facebook advertising, while a few continued the boycott.

The corporate Facebook boycott brought to light a novel phenomenon. The current literature examines companies targeted by boycotts because of improper business practices, declarations on partisan sociopolitical events, or irresponsibility on societal or environmental issues (Klein et al., 2004). In those studies, community leaders or third-party activist groups organize consumers who play the role of boycotters. By contrast, with the Facebook boycott, firms, rather than end consumers boycotted another firm. Furthermore, the Facebook case offers the opportunity to investigate whether the organization of the boycotting entities into a coordinated group impacts the boycott's effect. This is possible because while some firms joined the #StopHateForProfit campaign, other firms decided to announce their boycott independently of this third-party entity. Empirical literature has only studied cases where a group organizes boycotting consumers. Finally, boycott research has so far been concerned with the impact on the boycotted firms rather than on the boycotters. Hence, the perspective taken in this study is new by investigating whether boycotting firms may benefit from their actions.

Recent research has started the discussion around this corporate boycott case. Villagra et al. (2021) consider the Facebook boycott as corporate sociopolitical activism (CSA), arguing that corporate boycott harmed the target firm but failed to exert an effect on

boycotting firms. He et al. (2021) propose that the corporate Facebook boycott is a corporate social responsibility (CSR) behavior that is less divisive than CSA. While the authors do not present empirical results, they predict that boycotting firms should reap benefits from this CSR stance. The current research joins this academic discussion by answering the following research questions: how were boycotting firms affected by their boycott decision? Is it worthwhile for a firm to associate itself with an organized corporate boycott campaign, or should it act independently?

The results show a general positive effect of the boycott announcement on firms' daily abnormal returns, supporting the idea that investors interpreted the Facebook boycott as a CSR initiative, which is positively received by investors (Arya & Zhang, 2009). This research also draws from image spillover effects in umbrella branding and sponsorship research to propose that firms affiliating to the organized campaign benefit more from their boycott announcement, especially under high media coverage conditions. Consistent with this prediction, there is an amplification effect of the firms' media coverage on the boycott effect only when the firms officially joined the #StopHateForProfit campaign.

2.2 Conceptual background

Corporate sociopolitical activism versus Corporate social responsibility

One perspective is to view the corporate Facebook boycott as corporate sociopolitical activism (CSA), where a firm publicly takes a stance on a sociopolitical issue. Nowadays, corporations are pressured by stakeholders to make substantive efforts on CSA. Despite CSA's momentum in recent years (Vredenburg et al., 2020), investors seem to react unfavorably to it. Research suggests that CSA engagement leads to a fall in company stock price, especially when investors interpret the CSA engagement as deviating from stakeholder value or brand image, absorbing resources, or representing CEO's preferences that are not relevant to business interests (Bhagwat et al., 2020). The main reason is that CSA involves controversial issues such as gun control, refugee acceptance, and LGBTQ rights. The partisan nature of these sociopolitical issues can only appeal to a portion of stakeholders at the cost of offending the other parties involved. Mukherjee & Althuizen

(2020) find that when a firm positions itself on a sociopolitical issue, the adverse reactions from consumers who disagree outweigh the gains from consumers agreeing with it.

Another perspective is to conceptualize the corporate Facebook boycott as corporate social responsibility: "a commitment to improve community well-being through discretionary business practices and contributions of corporate resources" (Kotler & Lee 2008, pp 3). This commitment goes beyond the requirements of the law and encompasses causes such as support for education, the reduction of carbon footprint, and natural disaster relief. As Bhagwat et al. (2020) explain, CSR and CSA lie on a continuum of sociopolitical issue engagement and differ in the level of consensus on the good they pursue. Unlike the ambiguous impact on firms associated with CSA's divisive positions (Nalick et al., 2016), CSR positively affects firm value (Malik, 2015).

The reward of the financial market to CSR can be explained by investors interpreting CSR as a strategic investment (Pava & Krausz, 1996). Although investors perceive CSR engagement as costly and a deviation from the firm's focus, it pleases other critical stakeholders (Mishra & Modi, 2016). CSR leads to more positive consumer attitudes, higher purchase intentions, and higher post-purchase satisfaction (Tian et al., 2011). CSR also improves employee-company identification, strengthening employees' commitment to the firm (Kim et al., 2010). It also helps employee recruitment, retention, motivation, engagement (Rupp et al., 2018), job satisfaction (Valentine & Fleischman, 2008), and job performance (Korschun et al., 2014). Suppliers also prefer to give more trade credit to firms with better social responsibility performance (Zhang et al., 2014).

Corporate Facebook boycott as corporate social responsibility

Several characteristics of the corporate Facebook boycott favor viewing it as corporate social responsibility. First, when launching the Facebook boycott, its organizers attributed the hate speech to Facebook's inaction or intentional negligence, therefore blaming Facebook for making a profit while harming others. The boycott's organizers highlighted the harm wrought by online hate speech in general very broadly, framing the issue as a widespread cause of concern that is highly prevalent and threatens all spheres of society. Evidence strongly suggests that the pervasiveness of online hate speech has been an

intensifying social problem. Surveys show that 39% of global internet users have experienced cybercrimes in 2022 (Petrosyan, 2023). In the United States, 64% of teenagers have encountered racist, sexist, anti-religion, or homophobic hate speech on social media in 2018 (Petrosyan, 2022). Moreover, cyber violence extends to the real world. Research has found a positive association between the prevalence of hate speech on social media and increased physical-world crimes against minorities (Williams et al., 2020).

Second, the withdrawal of advertisements, an integral part of the boycott, is a strong signal to stakeholders. Pausing ads collectively was likely to be impactful given Facebook's financial dependence on advertisements. In 2021, Facebook's 115 billion US dollars in advertisement revenue represented 98.6% of the firm's total revenue (Dixon, 2023). During the boycott, Facebook lost more than 7 billion dollars in revenue due to more than 1000 firms pausing their advertisements.

Finally, for the boycotting firms, withdrawing Facebook ads showed their determination to oppose Facebook's perceived misdeeds and affirm their values. By hitting the pause button, boycotting firms risked decreased sales due to missing advertising exposure. Such a costly decision provided a credible signal to stakeholders (Connelly et al., 2011). However, the one-month duration of the boycott indicated to investors that the risk of loss was temporary and controllable. The firms only distanced themselves from Facebook for a limited time rather than severing their relationship for good.

In sum, the CSR value and outcome of the boycott sent a signal that could lead to a positive evaluation from investors, while the privation from advertising benefits was only temporary. Thus, the research proposes that:

H1: The stock price returns of boycotting firms increase after their boycott announcement of Facebook.

Campaign affiliation of corporate boycott

The magnitude of the effect for boycotting firms could vary as a function of whether they joined the #StopHateForProfit campaign or not. By officially being affiliated to an

organized campaign, firms could gain from an image spillover effect, appearing more credible in affirming their values, and by decreasing investors' uncertainty.

Image spillover is well-documented in areas such as brand alliance, celebrity endorsement, and sponsorships. As strongly linked brands, the image of celebrities and of their endorsed brands influence each other reciprocally (Miller & Allen, 2012). In sponsorship research, image transfer is found between events and sponsor firms (Prendergast et al., 2016), as well as among concurrent sponsor brands, or brands that sponsor the same event simultaneously (Carrillat et al., 2015). A similar spillover effect occurs in the brand extension context. Well-known brands transfer their high-quality image to new products bearing their names (Völckner & Sattler, 2006).

The associative network memory model (Anderson, 1983) is the theoretical mechanism that explains the image spillover effect. The human brain stores information pieces in nodes connected via links. When a given node is activated (e.g., the brand node, upon exposure to the brand name), so are their strongly linked nodes (e.g., the feature of a product bearing the brand name, a brand personality trait, other brand names). Distinct nodes, such as those representing two different brand names, can become linked if consumers are exposed to both brands simultaneously. Image spillover occurs as the beliefs and attitudes nodes linked to a given brand node connect with another brand node in memory (Raufeisen et al., 2019). Because of such a spillover effect, brands that joined the #StopHateForProfit campaign reinforced each other's associations related to social values and the rejection of hate speech.

Brands that boycotted Facebook outside the collective campaign effort could not benefit from the same spillover effect. In the Facebook boycott case, boycotting brands affiliated with the #StopHateForProfit campaign had many opportunities to be activated together, unlike the individual boycotting firms, facilitating spillover. The vigorous promotion of the campaign catalyzed information dissemination and installed the collective visibility of the participating brands. The campaign was initiated with a full-page advertisement in the Los Angeles Times, calling for attention and support. Furthermore, a campaign website and official Twitter account were developed, official statements were

communicated, reports about the campaign process were released, and the list of brands that joined was regularly updated.

Brands affiliated with the campaign leveraged the campaign branding in their communications and included the viral hashtag #StopHateForProfit in their official statements. Therefore, affiliated firms were more closely associated with the values articulated by the campaign and other brands. In one month, the campaign obtained an estimated 10 billion media impressions worldwide (Shorty Awards, 2021). Brands that acted individually also made public statements through official websites, social media, spokespersons, or press releases. Still, the media attention was independent of the other brands, precluding any magnifying effect from spillover.

The campaign has also helped the affiliated firms in terms of credibility. Stakeholders are skeptical of the motives of firms' cause-related efforts for chasing business interests rather than intrinsic goodwill (Forehand & Grier, 2003). They negatively react when perceiving firms' CSR practices as manipulative or deceptive. Investors perceive external communication channels as less controlled, filtered, or manipulated (Gruber et al., 2017). Therefore, investors are likely to consider campaign-affiliated firms' boycotts more transparent and credible than firms reporting the sanctions themselves.

Finally, affiliation to the campaign may also have reduced uncertainty. According to agency theory, investors worry that firm managers who are active in sociopolitical issues may utilize firm resources to manifest their personal preferences and build their social image rather than focus on profit (Barnea & Rubin, 2010). They also doubt managers' competence in organizing social causes since they are business professionals rather than social activism experts. Affiliation to the campaign demonstrated that the boycott was not purely a matter of personal interest for managers, as the decision from a collective of brands to follow the same path could be seen as validation by investors. In addition, the synergies in terms of visibility and organization afforded by the affiliation to the campaign allowed affiliated firms to save energy and resources, mitigating investors' concerns.

H2: The stock price returns of campaign-affiliated firms announcing a boycott is higher than independent ones.

Firm activation by media coverage

A firm's media coverage is vital in disseminating information, improving awareness, and attracting investor attention (Carroll & McCombs, 2003). Investors' increased firm knowledge reduces investment costs (Nguyen, 2015) and positively affects investors' purchase intention (Barber & Odean, 2008). According to the associative network memory model, a firm's media exposure functions as an activation source. The more frequent the firm's media exposure, the more salient its node becomes in memory. Salient nodes are more likely to be stored in long-term memory and are processed faster and with greater priority than other nodes.

Importantly, salient nodes are also more likely to activate the nodes they are linked to through the phenomenon of spreading activation (Anderson, 1983). Research shows that sponsorship is an exemplar of activation. Spending money on obtaining event sponsorship rights is insufficient to reap returns on investment. Sponsor firms must promote awareness and strengthen associations with the events through various marketing communications strategies known as activation (Carrillat et al., 2015). The Facebook boycott was not commercially oriented. Thus, marketing communications to address boycott actions may be considered overexploiting the cause, making stakeholders doubt firms' altruism (Carrillat & d'Astous, 2012). Nevertheless, the media coverage, or the number of news articles mentioning the boycotting firms, could activate the association between the firm and the cause, just like activation strengthens the event to sponsor link, without the doubts sown by a firm-initiated communication activation.

The research proposes that the media exposure of boycotting firms magnifies the greater stock value benefits reaped by those affiliated with the #StopHateForProfit compared to those not. A given level of media coverage is more likely to activate the links between boycotting firms and reinforce their value perceptions via spillover for firms affiliated with the campaign than if they act independently.

H3: The daily media coverage of boycotting firms exerts a more positive moderation effect on the stock price returns of campaign-affiliated firms than of independent firms.

2.3 Methodology

Sample and data collection

The boycotting firms are identified in two ways. First, the authors traced publicly-traded firms or brands with publicly-traded parents on the website of the #StopHateForProfit campaign (Stop Hate For Profit, 2020). Second, the authors added to the sample companies that did not publicly join the campaign but announced a Facebook advertisement pause. Firms announced their boycott through three channels: statements on official websites or social media (Twitter, Instagram, or LinkedIn) and news reports. The final sample consists of 61 US firms reacting to the Facebook boycott event. The list of sample firms can be found in Appendix 2.1.

The dataset originates from multiple sources. Firms' daily stock prices originate from Yahoo Finance. If the firm has both common and preferred stocks, the prices of its common stock are used (Kothari & Warner, 2007). News articles come from Factiva.

Event study with market model parameterization

This research applies a short-term event study with a market model parametrization. This simple methodology has been found to be “both well-specified and relatively powerful under a wide variety of conditions” (Brown & Warner, 1985). The firm abnormal return (AR) is calculated as the difference between the actual return and the expected normal return using the following regression:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i \times R_{mt}) + \varepsilon_{it} \quad (1)$$

Where AR_{it} is the abnormal return of firm i on day t , R_{it} is the actual return of firm i on day t , α_i and β_i are the parameter estimates of the market model, R_{mt} is the market index to estimate the parameter, and ε_{it} represents the error term.

The boycott campaign started on June 17th, and firms in the sample announced their participation from June 19th to July 18th. As Hock & Raithel (2020), ten business days were added after the last announcement date to observe how the effects unfold over time.

The final event window was set from June 18th to July 31st, covering 31 trading days. The estimation period to infer the expected normal returns is from May 31st, 2019, to May 31st, 2020, covering 252 trading days.

Variable operationalization

Daily abnormal returns as the dependent variable. Daily abnormal returns are used to avoid temporal aggregation bias arising from covariates not aggregated to the same temporal unit. A potential major confounding factor is the daily media exposure in the event window. This effect is dynamic and would be subject to an aggregation bias in traditional methods using cumulative abnormal returns. For ease of interpretation, all the daily abnormal returns in the model have been multiplied by 100.

Independent or campaign-affiliated announcement. The authors conducted an exhaustive search on Factiva, the firm's official websites, and social media accounts to confirm the earliest announcement of a firm's boycott of Facebook. The average reacting time is 8.59 days. The most premature announcement came up 2 days after the campaign's launch, and the latest announcement 21 days later. Among the 61 sample firms, 33 firms affiliated to the #StopHateForProfit campaign while 28 firms boycotted independently. Separate variables with dummy reflect the two types of announcements. In the models, the reference category is the period when the boycott (either affiliated or independent) is still unannounced.

Media Coverage. The "Company" function in Factiva helped to obtain the daily count of news articles mentioning the firm within the event window. The average count is 12.68, with a minimum of 0 and a maximum of 329.

Model specification

Following Hock & Raithel (2020), a linear ordinary least squares regression model with robust standard errors is used to account for the clustered nature of the longitudinal data (Raithel et al., 2016). The main effects of firm's independent announcement and campaign-affiliated announcement are captured respectively by β_1 and β_2 , while the main

effect of media coverage is captured by β_3 . The term ε_{it} is the residual from each abnormal return.

$$\begin{aligned} \mathbf{AR}_{it} = & \beta_0 + \beta_1 \cdot \text{Independent Announcement}_{it} \\ & + \beta_2 \cdot \text{Campaign Affiliated Announcement}_{it} \\ & + \beta_3 \cdot \text{Media Coverage}_{it} \\ & + \varepsilon_{it} \end{aligned} \tag{2}$$

Furthermore, to measure if media coverage moderates either type of announcement effect, the interaction terms of Independent Announcement with Media Coverage and Campaign Affiliated Announcement with Media Coverage are added. The coefficients in Equation (3) have the same meaning as those in Equation (2). In addition, β_4 and β_5 measure the moderating effects, respectively.

$$\begin{aligned} \mathbf{AR}_{it} = & \beta_0 + \beta_1 \cdot \text{Independent Announcement}_{it} \\ & + \beta_2 \cdot \text{Campaign Affiliated Announcement}_{it} \\ & + \beta_3 \cdot \text{Media Coverage}_{it} \\ & + \beta_4 \cdot \text{Independent Announcement}_{it} \times \text{Media Coverage}_{it} \\ & + \beta_5 \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Media Coverage}_{it} \\ & + \varepsilon_{it} \end{aligned} \tag{3}$$

2.4 Results

The results, summarized in *Table 2.1*, suggest that a boycott announcement positively influences abnormal returns, regardless of whether the firms are joining the campaign or not. Daily abnormal returns are .22% higher after the announcement for the firms announcing boycott independently (SE=.10, $p < .05$), and are .37% higher for the firms affiliated to the #StopHateForProfit campaign (SE=.12, $p < .01$). H1 is supported. A Wald-type test of difference reveals that these two announcements do not yield statistically different results; $t(1890) = .96$, $p > .10$. H2 is not supported. Meanwhile, Media Coverage does not affect the daily abnormal returns ($p > .10$).

As shown in *Model 2*, the effects of the two announcements remain analogous when considering the two-way interactions of Media Coverage with the two types of announcements ($\beta_{\text{Independent Announcement}} = .22$, SE=.09, $p\text{-value} < .05$; $\beta_{\text{Campaign Affiliated}}$

Announcement=.38, SE=.12, p-value<.01). The extent of media exposure positively moderates the effect of Campaign Affiliated Announcement. More extensive daily media coverage for the firm participating to the campaign is related to higher abnormal return rates after the announcement ($\beta=.31$, SE=.11, $p<.05$). For the independent boycotting firms, the media coverage does not have a significant moderating impact on firm value (p value>.10).

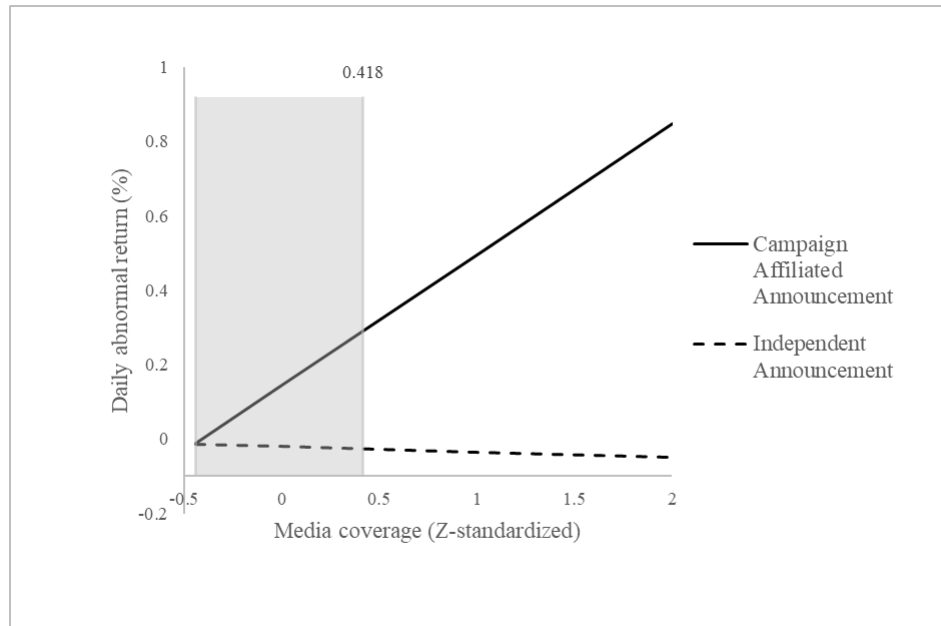
Table 2.1. Results for the main models

	Model 1		Model 2	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Independent Announcement	0.22	(0.10)**	0.22	(0.09)**
Campaign Affiliated Announcement	0.37	(0.12)***	0.38	(0.12)***
Media Coverage	0.10	(0.07)	0.04	(0.05)
Independent Announcement \times Media Coverage			-0.06	(0.11)
Campaign Affiliated Announcement \times Media Coverage			0.31	(0.11)**

Note: . $p<.20$. * $p<.10$. ** $p < .05$. *** $p < .01$.

As shown in *Figure 2.1*, firm daily media exposure enhances the positive effect of the announcement of affiliation with the campaign ($\beta=.32$, SE=.11, $p< .05$) but not of an independent boycotting (p value>.10). A floodlight analysis reveals that the difference between the two types of announcements becomes significant when media coverage is .418 standard deviation above the mean. Thus, results support H1 and H3 but not H2.

Figure 2.1. Interaction of media coverage and announcement type



Note. The shadow area is the interval where the difference between the two types of announcements is non-significant.

Robustness check

In the alternative models, potential confounding effects at the firm level are controlled to assess the robustness of the detected effects. Equation (4) introduces firm-level characteristics, including Revenue, market-to-book ratio (MTBR), Leverage, and return on assets (ROA), into the model (Cordeiro & Tewari, 2015). These time-invariant variables are annual and pertain to the previous year of the boycott event. All the financial data utilized to compute these four indexes, such as assets, liabilities, long-term debt, market value, revenue, and net income, are sourced from Compustat. Equation (5) extends the model by incorporating two-way interactions between each firm-level variable and two announcement types, as well as media coverage. Additionally, the alternative models include firm-level fixed-effects to account for unobservable firm characteristics. As illustrated in Equation (6), each firm is assigned its specific intercept estimate, represented by the term u_i , rendering the main effects of firm-level variables no longer applicable. Interaction terms are also examined in the fixed-effects model, as displayed in Equation (7).

$$\begin{aligned}
\mathbf{AR}_{it} = & \beta_0 + \beta_1 \cdot \text{Independent Announcement}_{it} \\
& + \beta_2 \cdot \text{Campaign Affiliated Announcement}_{it} \\
& + \beta_3 \cdot \text{Media Coverage}_{it} \\
& + \beta_4 \cdot \text{Revenue}_i + \beta_5 \cdot \text{MTBR}_i + \beta_6 \cdot \text{ROA}_i + \beta_7 \cdot \text{Leverage}_i \\
& + \beta_8 \cdot \text{Independent Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \beta_9 \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \varepsilon_{it}
\end{aligned} \tag{4}$$

$$\begin{aligned}
\mathbf{AR}_{it} = & \beta_0 + \beta_1 \cdot \text{Independent Announcement}_{it} \\
& + \beta_2 \cdot \text{Campaign Affiliated Announcement}_{it} \\
& + \beta_3 \cdot \text{Media Coverage}_{it} \\
& + \beta_4 \cdot \text{Revenue}_i + \beta_5 \cdot \text{MTBR}_i + \beta_6 \cdot \text{ROA}_i + \beta_7 \cdot \text{Leverage}_i \\
& + \beta_8 \cdot \text{Independent Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \beta_9 \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \beta_{10} \cdot \text{Independent Announcement}_{it} \times \text{Revenue}_i \\
& + \beta_{11} \cdot \text{Independent Announcement}_{it} \times \text{MTBR}_i \\
& + \beta_{12} \cdot \text{Independent Announcement}_{it} \times \text{Leverage}_i \\
& + \beta_{13} \cdot \text{Independent Announcement}_{it} \times \text{ROA}_i \\
& + \beta_{14} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Revenue}_i \\
& + \beta_{15} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{MTBR}_i \\
& + \beta_{16} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Leverage}_i \\
& + \beta_{17} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{ROA}_i \\
& + \varepsilon_{it}
\end{aligned} \tag{5}$$

$$\begin{aligned}
\mathbf{AR}_{it} = & \beta_0 + \beta_1 \cdot \text{Independent Announcement}_{it} \\
& + \beta_2 \cdot \text{Campaign Affiliated Announcement}_{it} \\
& + \beta_3 \cdot \text{Media Coverage}_{it} \\
& + \beta_4 \cdot \text{Independent Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \beta_5 \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + u_i + \varepsilon_{it}
\end{aligned} \tag{6}$$

$$\begin{aligned}
AR_{it} = & \beta_0 + \beta_1 \cdot \text{Independent Announcement}_{it} \\
& + \beta_2 \cdot \text{Campaign Affiliated Announcement}_{it} \\
& + \beta_3 \cdot \text{Media Coverage}_{it} \\
& + \beta_4 \cdot \text{Independent Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \beta_5 \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Media Coverage}_{it} \\
& + \beta_6 \cdot \text{Independent Announcement}_{it} \times \text{Revenue}_i \\
& + \beta_7 \cdot \text{Independent Announcement}_{it} \times \text{MTBR}_i \\
& + \beta_8 \cdot \text{Independent Announcement}_{it} \times \text{Leverage}_i \\
& + \beta_9 \cdot \text{Independent Announcement}_{it} \times \text{ROA}_i \\
& + \beta_{10} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Revenue}_i \\
& + \beta_{11} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{MTBR}_i \\
& + \beta_{12} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{Leverage}_i \\
& + \beta_{13} \cdot \text{Campaign Affiliated Announcement}_{it} \times \text{ROA}_i \\
& + u_i + \varepsilon_{it}
\end{aligned} \tag{7}$$

The results of the alternative models are summarized in Table 2.2, showing the sustained robustness of the results. The basic pattern of results remains in *Model 3* with the integration of firm-level variables. None of the firm-level variables significantly affect the abnormal returns (all p values > .10). The effects of the two types of boycott announcements remain robust ($\beta_{\text{Independent Announcement}} = .23$, $SE = .09$, p value < .05; $\beta_{\text{Campaign Affiliated Announcement}} = .37$, $SE = .12$, p value < .01, respectively). The alternative models show the same moderating pattern as in *Model 2*.

Model 4 tests the two-way interactions of firm-level characteristics with the announcement types. As in previous analyses, the effects of the two types of announcements remain positive and significant ($\beta_{\text{Independent Announcement}} = .27$, $SE = .09$, p value < .01; $\beta_{\text{Campaign Affiliated Announcement}} = .35$, $SE = .12$, p value < .01 respectively), as well as the moderation effect of Media Coverage on Campaign Affiliated Announcement ($\beta = .45$, $SE = .10$, p < .01). As to the firm-level variables, again, MTBR, Leverage, and ROA fail to affect the abnormal returns (all p values > .10). However, Revenue negatively moderates

both types of announcement effects ($\beta_{\text{Revenue with Independent Announcement}}=-.29$, $SE=.11$, $p\text{-value}<.05$; $\beta_{\text{Revenue with Campaign Affiliated Announcement}}=-0.36$, $SE=.14$, $p\text{ value}<.05$, respectively).

Table 2.2. Results for the models with firm-level covariates

	Model 3		Model 4	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Reaction level variables				
Independent Announcement	0.23	(0.09)**	0.27	(0.09)***
Campaign Affiliated Announcement	0.37	(0.12)***	0.35	(0.12)***
Media Coverage	0.06	(0.05)	0.01	(0.05)
Independent Announcement \times Media Coverage	-0.06	(0.11)	0.02	(0.12)
Campaign Affiliated Announcement \times Media Coverage	0.32	(0.11)**	0.45	(0.10)***
Firm level variables				
Revenue	-0.07	(0.07)	0.12	(0.10)
MTBR	0.05	(0.04)	0.06	(0.07)
Leverage	-0.03	(0.10)	0.04	(0.16)
ROA	-0.01	(0.06)	0.00	(0.11)
Independent Announcement \times Revenue			-0.29	(0.11)**
Independent Announcement \times MTBR			-0.04	(0.08)
Independent Announcement \times ROA			-0.07	(0.17)
Independent Announcement \times Leverage			-0.01	(0.11)
Campaign Affiliated Announcement \times Revenue			-0.36	(0.14)**
Campaign Affiliated Announcement \times MTBR			0.26	(0.28)
Campaign Affiliated Announcement \times ROA			-0.09	(0.13)
Campaign Affiliated Announcement \times Leverage			-0.04	(0.16)

Note: . $p<.20$. * $p<.10$. ** $p < .05$. *** $p < .01$.

The results revealed from fixed-effects models shown in *Table 2.3* further support the findings from prior analyses. In *Model 5*, the main effect of Campaign Affiliated Announcement and the moderation of Media Coverage on Campaign Affiliated Announcement remain robust ($\beta_{\text{Campaign Affiliated Announcement}}=.40$, $SE=.20$, $p\text{-value}<.05$;

$\beta_{\text{Media Coverage with Campaign Affiliated Announcement}}=.37$, $SE=.17$, $p\text{-value}<.05$ respectively). However, the effect of Independent Announcement becomes marginally significant with the coefficient of .19% and SE of .12 ($p\text{-value}=.10$). In *Model 6*, all the reaction level effects found in the prior analyses remain consistent with the addition of firm-level variables and their interactions with announcement variables ($\beta_{\text{Independent Announcement}}=.32$, $SE=.16$, $p\text{-value}<.05$; $\beta_{\text{Campaign Affiliated Announcement}}=.30$, $SE=.18$, $p\text{-value}<.10$; $\beta_{\text{Media Coverage with Campaign Affiliated Announcement}}=.50$, $SE=.17$, $p\text{-value}<.01$ respectively). For the firm-level variables, the negative moderating effect of Revenue on Independent Announcement is robust ($\beta_{\text{Revenue with Independent Announcement}}=-.38$, $SE=.19$, $p\text{-value}<.05$), while that on Campaign Affiliated Announcement drops to marginally significant ($\beta_{\text{Revenue with Campaign Affiliated Announcement}}=-.34$, $SE=.23$, $p\text{-value}=.15$).

As explained earlier, the fixed-effects models do not estimate coefficients for firm-level time-invariant variables (Revenue, MTBR, Leverage and ROA), since the fixed effects absorb these effects. Thus, in *Model 6*, only the interactions of each firm-level variable with the announcements are estimated.

Table 2.3. Results for the fixed-effects models

	Model 5		Model 6	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Reaction level variables				
Independent Announcement	0.19	(0.12).	0.32	(0.16)**
Campaign Affiliated Announcement	0.40	(0.20)**	0.30	(0.18)*
Media Coverage	0.06	(0.10)	-0.01	(0.09)
Independent Announcement \times Media Coverage	-0.09	(0.08)	0.02	(0.09)
Campaign Affiliated Announcement \times Media Coverage	0.37	(0.17)**	0.50	(0.17)***
Firm level variables				
Independent Announcement \times Revenue			-0.38	(0.19)**
Independent Announcement \times MTBR			-0.02	(0.05)
Independent Announcement \times ROA			0.07	(0.15)
Independent Announcement \times Leverage			-0.15	(0.16)

Campaign Affiliated Announcement \times Revenue	-0.34	(0.23).
Campaign Affiliated Announcement \times MTBR	-0.51	(0.53)
Campaign Affiliated Announcement \times ROA	-0.21	(0.18)
Campaign Affiliated Announcement \times Leverage	0.11	(0.27)

*Note: .p<.20. *p<.10. **p < .05. ***p < .01.*

2.5 Discussion

This research contributes empirical findings to the emerging academic focus on corporate boycotts. The results reveal that a firm's participation in a sociopolitical issue can have a positive impact on its stock market value. A general enhancement effect on firms' stock market value is observed when announcing boycotting Facebook. This increase in value is mainly attributed to the alignment between the firm's publicly announced stance and the values held by the majority. Investors consistently seek attractive returns on their investments from firms. In comparison to merely "doing good", investors place value on "doing well by doing good" (Falck & Heblich, 2007), where firms actively engage in CSR with the goal of achieving a win-win situation for both society and the firm (Sayekti, 2015). This, in turn, emphasizes the need for the sociopolitical causes that firms engage in to possess as many CSR attributes as possible to gain stakeholder recognition. Investors interpreted the boycott announcement as a positive signal for the firm's future cash flow, supporting the notion of the boycott as a CSR initiative. In other words, investors believed that the engagement in such a corporate boycott cause was perceived by most of the firm's stakeholders as a form of CSR engagement, benefiting society.

Apart from aligning with the values of the majority of stakeholder groups, the perceived benefit to firm value from the Facebook boycott is attributed to its reasonable method and manageable risks and losses. Investors also express concerns regarding the costs associated with CSR and their potential impact on a firm's future cash flow (Sprinkle & Maines, 2010). Overinvesting in CSR can potentially deplete a firm's resources and divert it from its core objectives, possibly affecting profitability. The Facebook boycott alleviated these concerns to some extent through its reasonable one-month advertisement withdrawal as the method, thus resulting in better control over risks and losses. The

involvement of professional advocacy groups in the initiation and organization also played a significant role.

Furthermore, the firms participating in the #StopHateForProfit campaign experienced a positive moderation in media exposure. In the context of corporate boycott and its impact on firm value, this research underscores that firms affiliated with an organized campaign require coordinated media exposure to bolster investment intentions. Effective CSR communication has been acknowledged as a means to heighten investor awareness and mitigate skepticism (Du et al., 2010). The idea that "more news is good news" finds support in empirical research on stock market performance (Jahn & Brühl, 2019; Nguyen, 2015). It is imperative that the media exposure of boycotting firms reached a level that served as a reminder to investors of their affiliation with a well-organized campaign, thereby stimulating the evaluation that these firms stood to benefit from the image spillover generated by the campaign.

One intriguing facet of this finding is that media exposure enhanced the impact of the boycott announcement for campaign-affiliated firms, irrespective of whether the news content was directly related to the boycott event. This effect may be attributed to the campaign itself garnering substantial media attention, and affiliated firms subsequently benefiting from increased visibility when the campaign was reported. As the association between the campaign and the firm developed, exposure from either side could activate this association, serving as a reminder of the other. Even when firms were mentioned in media reports irrelevant to the boycott, it triggered investor awareness of their engagement. This finding suggests that firms can leverage media coverage to amplify the impact of their boycott without overexploiting it.

Managerial implications

These findings are pertinent to firms and their multiple stakeholders. The primary insight for firms is that they can express their values by participating in corporate boycotts or similar sociopolitical causes without detriment to their stock prices, as long as they judiciously choose causes that align with well-recognized values. This necessitates a firm's ability and sensitivity to comprehend stakeholder inclinations and gauge public

sentiment on controversial matters. When a firm takes a stance that aligns with its corporate value and garners substantial support, particularly from stakeholders, it provides an excellent opportunity for the firm to vocalize it.

On the contrary, the firms criticized for wrongdoing and targeted for boycotts can redirect public opinion to recognize the partisan nature of the issue, addressing the rationale from both perspectives, challenging the legitimacy of the boycotts and gaining supporters. The greater the issue can be framed as contentious, and the more evenly matched the two opposing sides are, the less a boycotted firm is likely to suffer.

Boycotting firms can leverage a well-organized campaign to maximize the advantages they can derive from a boycott. Joining a collective campaign not only helps reduce perceived risk, as third-party monitoring enhances the perceived credibility of each participating firm, but also the strong awareness and professional image cultivated by the organizers can have a positive impact on the participating firms. These factors are likely to encourage investors to view participation in the boycott and campaign affiliation as positive signals for the firms' future cash flow. However, the findings of this research indicate that merely participating in the campaign is insufficient to trigger a more positive response. Firms are strongly recommended to concurrently manage their media exposure to stimulate the positive image spillover from the campaign. Increasing their presence in the media during the boycott, even if the news content is unrelated to the boycott, can help boost the positive stock market reaction.

The research findings also assist investors in making informed investment decisions when dealing with firms participating in corporate boycott events or similar sociopolitical occurrences. Four criteria can aid investors in a more accurate interpretation of such engagement:

- (i) The extent to which the boycott's values resonate with the public.
- (ii) The degree of control the participating firms have over their costs and potential losses resulting from the boycott.

(iii) The presence of firms' associations with an organized campaign and the reputation and influence of that campaign.

(iv) The extent to which the firms attract public attention through their media resources.

Advocacy groups can also gain insights to increase the success and impact of their campaign initiatives. Making the campaign appealing to as many potential participating firms is paramount. Advocacy groups should carefully select causes that resonate with the public and align with widely accepted values. This not only attracts more participants but also increases the influence of the boycott. Furthermore, it is crucial for advocacy groups to develop appropriate boycott methods that assist participating firms in conserving resources and minimizing costs. Another key implication involves campaign promotion and image building. Advocacy groups should invest in building a strong and positive image for their campaigns. The stronger and more favorable the campaign's image, the more it can benefit participating firms by enhancing their reputation and credibility.

Corporate boycotts warrant further research. First, the results came from a single event, the Facebook boycott, and the findings should be verified and assessed for their generalizability across various contexts. More specifically, identifying the effect of boycotts against various perceived corporate misdeeds would delineate the frontier between CSA and CSR. Second, the sample firms were constrained to the United States to measure media coverage in English. Future research could check stock market reactions beyond North American media coverage in local media ecosystems and languages.

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General Conclusion

This dissertation contributes to the existing literature by shedding light on the dynamic reciprocal effects of brand extensions' eWOM on parent brands' eWOM and corporate boycotts on the brand's stock market value. The findings provide valuable insights for companies looking to understand better and effectively utilize various branding strategies.

The first essay (Chapter 1) extends the scope of the reciprocal effect by studying the effects related to multiple eWOM metrics, namely volume, and valence. It finds that the feedback of extensions on parent brands takes effect both within and across eWOM metrics: parent eWOM volume is positively and instantly driven by the extension eWOM volume, and the parent eWOM valence is driven simultaneously by extensions' eWOM volume and valence. The disaggregated daily eWOM data for both parent brands and extensions allow for an investigation of the dynamic reciprocal effects from pre- to post-sequel release covering one year. The identified spillover, bandwagon, and mere exposure effects are incorporated into the ANT framework, further developing the theory. Besides, these findings indicate the dominant importance of eWOM volume over valence in the reciprocal effect scenario. Those results imply that creating buzz volume for extensions should be a primary marketing goal from the extensions' pre-launch period. This will benefit both parent brands' eWOM volume and valence.

The second essay (Chapter 2) provides empirical evidence of the impact of a corporate boycott on financial outcomes. The boycott of Facebook by a firm produces accrued daily stock market value. Moreover, those firms affiliating themselves to the organized #StopHateForProfit campaign benefited more from their boycott announcement when high media coverage conditions. The findings enrich the discussion about the blurred boundary between social responsibility and brand activism engagement, arguing that investors interpret the sociopolitical causes engagement as a positive signal of the firm's future cash flow if the cause is believed to have a CSR positioning. It is worth knowing that brands can voice their social values by engaging in sociopolitical causes without sacrificing stock prices. Joining a well-organized campaign and managing media

exposure during the cause campaign may trigger an image spillover from the campaign to the boycotting firm.

Other relevant stakeholders could gain insights from the second essay's findings. For advocate groups, positioning a sociopolitical cause as CSR and appealing to commonly shared values is the key to success. Investors can use the same criterion to predict the influence of the stock prices on the participating brands. In response to the boycott, the boycotted firm should address the core argument's controversy directly by emphasizing the importance of diverse voices, and it can even challenge the cause's legitimacy. A CSA positioning would leave them more space and retain their supporters.

This dissertation can be extended in several aspects. The effects could be verified using the longitudinal data of other industries. Regarding the reciprocal effects, the scenario can extend beyond brand extension to co-branding, brand alliance, sponsorship, and celebrity endorsement, where the two experiential brands have a close association and can mutually affect each other's eWOM. The dynamic marketing expenditure can be added to the models to validate the findings. The effects of search and credence product extensions are also worth further exploration. Based on the general effects detected, it could be interesting to study the conditions that affect the magnitude of the effects. For the corporate boycott effect, the other brand equity and financial performance level metrics can be examined if the data are available. Similar sociopolitical issues, especially the ones from other countries and cultures should be studied to enrich the understanding.

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Appendix

Appendix 1.1: Sample movies and US release dates

Parent movies	Release date (US) of parent movies	First sequels	Release date (US) of sequels
Alice in Wonderland	March 5, 2010	Alice Through the Looking Glass	May 27, 2016
Alien vs. Predator	August 13, 2004	Aliens vs. Predator: Requiem	December 25, 2007
Annabelle	October 3, 2014	Annabelle: Creation	August 11, 2017
Batman Begins	June 15, 2005	The Dark Knight	July 18, 2008
Before Sunrise	January 27, 1995	Before Sunset	July 30, 2004
Captain America: The First Avenger	July 22, 2011	Captain America: The Winter Soldier	April 4, 2014
Cars	June 9, 2006	Cars 2	June 24, 2011
Despicable Me	July 9, 2010	Despicable Me 2	July 3, 2013
Finding Nemo	May 30, 2003	Finding Dory	June 17, 2016
How to Train Your Dragon	March 26, 2010	How to Train Your Dragon 2	June 13, 2014
Godzilla	May 16, 2014	Godzilla: King of the Monsters	May 31, 2019
Guardians of the Galaxy	August 1, 2014	Guardians of the Galaxy Vol. 2	May 5, 2017
Halloween	August 31, 2007	Halloween II	August 28, 2009
Hellboy	April 2, 2004	Hellboy II: The Golden Army	July 11, 2008
Ice Age	March 15, 2002	Ice Age: The Meltdown	March 31, 2006
Iron Man	May 2, 2008	Iron Man 2	May 7, 2010
John Wick	October 24, 2014	John Wick: Chapter 2	February 10, 2017
Kung Fu Panda	June 6, 2008	Kung Fu Panda 2	May 26, 2011

Madagascar	May 27, 2005	Madagascar: Escape 2 Africa	November 7, 2008
Magic Mike	June 29, 2012	Magic Mike XXL	July 1, 2015
Meet the Parents	October 6, 2000	Meet the Fockers	December 22, 2004
National Treasure	November 19, 2004	National Treasure: Book of Secrets	December 21, 2007
Night at the Museum	December 22, 2006	Night at the Museum: Battle of the Smithsonian	May 22, 2009
Ocean's Eleven	December 7, 2001	Ocean's Twelve	December 10, 2004
Paddington	January 16, 2015	Paddington 2	January 12, 2018
Pirates of the Caribbean: The Curse of the Black Pearl	July 9, 2003	Pirates of the Caribbean: Dead Man's Chest	July 7, 2006
Resident Evil	March 15, 2002	Resident Evil: Apocalypse	September 10, 2004
Rise of the Planet of the Apes	August 5, 2011	Dawn of the Planet of the Apes	July 11, 2014
Saw	October 29, 2004	Saw II	October 28, 2005
Scooby-Doo	June 14, 2002	Scooby-Doo 2: Monsters Unleashed	March 26, 2004
Sherlock Holmes	December 25, 2009	Sherlock Holmes: A Game of Shadows	December 16, 2011
Shrek	May 18, 2001	Shrek 2	May 19, 2004
Sin City	April 1, 2005	Sin City: A Dame to Kill For	August 22, 2014
Spider-Man	May 3, 2002	Spider-Man 2	June 30, 2004
Star Trek	May 8, 2009	Star Trek Into Darkness	May 16, 2013
The Avengers	May 4, 2012	Avengers: Age of Ultron	May 1, 2015
The Bourne Identity	June 14, 2002	The Bourne Supremacy	July 23, 2004
The Conjuring	July 19, 2013	The Conjuring 2	June 10, 2016

The Expendables	August 13, 2010	The Expendables 2	August 17, 2012
The Hangover	June 5, 2009	The Hangover Part II	May 26, 2011
The Hobbit: An Unexpected Journey	December 14, 2012	The Hobbit: The Desolation of Smaug	December 13, 2013
The Hunger Games	March 23, 2012	The Hunger Games: Catching Fire	November 22, 2013
The Incredibles	November 5, 2004	Incredibles 2	June 15, 2018
The Chronicles of Narnia: The Lion, the Witch and the Wardrobe	December 9, 2005	The Chronicles of Narnia: Prince Caspian	May 16, 2008
The X-Files	June 19, 1998	The X-Files: I Want to Believe	July 25, 2008
Thor	May 6, 2011	Thor: The Dark World	November 8, 2013
Transformers	July 3, 2007	Transformers: Revenge of the Fallen	June 24, 2009
21 Jump Street	March 16, 2012	22 Jump Street	June 13, 2014
28 Days Later	June 27, 2003	28 Weeks Later	May 11, 2007
Unbreakable	November 22, 2000	Split	January 20, 2017
Underworld	September 19, 2003	Underworld: Evolution	January 20, 2006
X-Men Origins: Wolverine	May 1, 2009	The Wolverine	July 26, 2013

Appendix 1.2: Correlation matrixes

Variables in model predicting parent brand eWOM valence				
	T	R	SqlValCum	SqlVol
T	1.000			
R	0.843	1.000		
SqlValCum	-0.196	-0.297	1.000	
SqlVol	0.573	0.648	-0.390	1.000

Variables in model predicting parent brand eWOM volume				
	T	R	SqlValCum	SqlVol
T	1.000			
R	0.860	1.000		
SqlValCum	-0.186	-0.206	1.000	
SqlVol	0.129	0.216	0.046	1.000

Appendix 2.1: US listed firms announcing the Facebook boycott

Boycotting firms/ brands	Public/ subsidiary of public firms	Date of boycott announcement	If joining the #StopHateForProfit campaign
Acura	Subsidiary of Honda Motor Co.	June 30, 2020	No
Bank of Montreal	Public	July 1, 2020	No
Ben & Jerry's	Subsidiary of Unilever	June 23, 2020	Yes
Best Buy	Public	June 29, 2020	Yes
Boston Beer Company, Inc.	Public	July 1, 2020	Yes
Brown–Forman Corporation	Public	July 1, 2020	No
Campbell Soup Company	Public	June 30, 2020	No
Canadian Imperial Bank of Commerce	Public	July 1, 2020	No
Chipotle Mexican Grill, Inc.	Public	June 26, 2020	No
Clorox Co.	Public	June 29, 2020	Yes
Coca-Cola Co.	Public	June 26, 2020	No
Conagra Brands Inc.	Public	June 29, 2020	No
Constellation Brands, Inc.	Public	June 29, 2020	No
CVS Health	Public	July 1, 2020	No
Delta Air Lines, Inc.	Public	June 30, 2020	No
Denny's	Public	June 29, 2020	Yes
Diageo Plc	Public	June 27, 2020	Yes
Dockers	Subsidiary of Levi Strauss & Co.	June 26, 2020	Yes
Edgewell Personal Care	Public	June 29, 2020	Yes
Ford Motor Co.	Public	June 29, 2020	Yes
Fossil Group, Inc.	Public	July 1, 2020	Yes

Goodby, Silverstein & Partners	Subsidiary of Omnicom Group Inc.	June 24, 2020	Yes
Harley Davidson Inc.	Public	July 2, 2020	Yes
Hershey's	Public	June 26, 2020	Yes
Honda's Canadian division	Subsidiary of Honda Motor Co.	July 3, 2020	Yes
Honda's US division	Subsidiary of Honda Motor Co.	June 26, 2020	Yes
HP Inc.	Public	June 29, 2020	No
Intercontinental Hotels Group	Public	June 29, 2020	No
JanSport	Subsidiary of VF Corp.	June 26, 2020	Yes
Kay Jewelers	Subsidiary of Signet Jewelers	July 1, 2020	Yes
Kimberly-Clark Corporation	Public	July 1, 2020	No
LendingClub Corporation	Public	June 25, 2020	Yes
Levi Strauss & Co.	Public	June 26, 2020	Yes
Lululemon Athletica Inc.	Public	June 26, 2020	Yes
Merck & Co., Inc.	Public	July 2, 2020	No
Merrell	Subsidiary of Wolverine World Wide	June 30, 2020	Yes
Microsoft Corp.	Public	June 29, 2020	No
Molson Coors Beverage Co.	Public	June 30, 2020	No
PepsiCo Inc.	Public	June 28, 2020	No
Pfizer Inc.	Public	June 29, 2020	Yes
Royal Bank of Canada	Public	July 1, 2020	No
Samuel Adams Beer	Subsidiary of Boston Beer Company, Inc.	July 1, 2020	Yes
SAP SE	Public	June 22, 2020	Yes

Signet Jewelers	Public	July 1, 2020	No
Sony Interactive Entertainment Inc.	Subsidiary of Sony Corporation	July 2, 2020	Yes
Starbucks Corp.	Public	June 28, 2020	No
Target Corp.	Public	June 30, 2020	No
The Bank of Nova Scotia	Public	June 30, 2020	No
The J.M. Smucker Company	Public	June 29, 2020	Yes
The North Face	Subsidiary of VF Corp.	June 19, 2020	Yes
The Walt Disney Company	Public	July 18, 2020	No
Toronto-Dominion Bank	Public	July 1, 2020	No
UGG	Subsidiary of Deckers Brands	July 6, 2020	No
Unilever Plc	Public	June 26, 2020	Yes
Upwork Global Inc.	Public	June 19, 2020	Yes
Vans	Subsidiary of VF Corp.	June 29, 2020	Yes
Verizon Communications Inc.	Public	June 25, 2020	No
Vertex Pharmaceuticals, Inc.	Public	June 29, 2020	Yes
Whirlpool	Public	June 27, 2020	No
Wingstop Inc.	Public	June 30, 2020	Yes
Zale Corporation	Subsidiary of Signet Jewelers	July 1, 2020	Yes
