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doi: https://doi.org/10.57709/11232661

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Investigating Time-Varying Effects of Stakeholder Relations on Firm Performance through Brand Equity

BY

Insu Park

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Doctor of Philosophy

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY
ROBINSON COLLEGE OF BUSINESS
2017

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ACCEPTANCE

This dissertation was prepared under the direction of the *Insu Park's* Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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ABSTRACT

Investigating Time-Varying Effects of Stakeholder Relations on Firm Performance through Brand Equity

BY

Insu Park

December 04, 2017

Committee Chair: *Dr. V. Kumar*

Major Academic Unit: *Marketing*

From the resource-based view of the firm, good stakeholder relations provide sustainable competitive advantages. To manage their scarce resources effectively, firms should understand how (1) multiple stakeholder relations influence firm performance separately and jointly through brand equity over time and (2) stakeholder relations interact with firms' strategic emphasis – a relative emphasis by which firms decide to allocate their resources toward value creation or appropriation. Using a sample of 165 North American firms during 2009-2015, the authors apply a hierarchical linear model (HLM) approach to measure the time-varying effects of multiple stakeholder relationships on firm performance. Following the classification of stakeholders in the literature, the authors subdivide multiple stakeholders into two categories: primary stakeholders that are essential for business operations and secondary stakeholders that are not essential for the survival of the firm. The results show the existence of individual time-varying effects of primary and secondary stakeholder relations on brand equity, as well as a time-varying synergistic effect. The authors find a slightly higher, but statistically insignificant, positive effect of primary stakeholder relations on brand equity than of secondary stakeholder relations. In addition, the authors find that when firms focus more on value creation, the effect of primary stakeholder relations on brand equity is stronger than is the effect of secondary stakeholder relations and vice versa. Brand equity is found to fully mediate the effect of relations with each group of stakeholders on long-term firm performance and to partially mediate the synergistic effect between primary and secondary stakeholders on long-term firm performance. These findings offer insights for managers to make strategic decisions about effectively and efficiently managing stakeholder relations considering their time-varying effects.

Keywords: Stakeholder Relations, Time-Varying Effects, Time-Varying Synergistic Effects, Stakeholder Synergy Theory, Strategic Emphasis, Brand Equity, Long-term Firm Performance

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INTRODUCTION

"The best businessman serves the communal good."

(Lao Tzu; Mitchell 2009, p. 165)

Firms face a more complex and competitive business environment more than ever where their multiple stakeholders are interdependent (Harrison et al. 2010) and express disparate needs not only directly to the firm but also to society, which indirectly influence firms through their reputation (Kaplan and Haenlein 2010). In such a business climate, if firms succeed in addressing the needs of one group of stakeholders, their reputation is often influenced by another group of stakeholders. For instance, as soon as Patagonia announced that it will protect the environment by emphasizing its anti-materialistic stance, current and potential customers responded positively and sales increased drastically (MacKinnon 2015). Another example is Whole Foods Market's declaration that it would cooperate more closely with its multiple stakeholders that are interdependent with each other (Auster and Freeman 2013). These examples show that firms could create brand equity, defined as "the marketing effects or outcomes that accrue to a product with its brand name compared with those that would accrue if the same product did not have the brand name" (Ailawadi et al. 2003, p. 1), through simultaneously managing the ever-changing needs and expectations of multiple stakeholders. At the same time, firms often have difficulty knowing how to allocate their scarce resources to multiple stakeholder groups. Therefore, we argue that understanding the time-varying effects of multiple stakeholders and appropriately prioritizing stakeholder groups would be a crucial driver of sustainable competitive advantages.

The topic of stakeholder relations, beyond the traditional marketing scope (i.e., customer relations), has been a burgeoning interest in the marketing literature (Hult et al. 2011; Kumar

2015; Merz et al. 2009). Recent marketing literature has shed light on the importance of managing stakeholder relations as an essential part of creating firm performance (Kumar 2015; Sisodia et al. 2014) and the influence of stakeholders on brand equity (Merz et al. 2009). A recent study also found that firms having good relations with multiple stakeholders outperform the S&P 500 firms by 14 times over a period of 15 years (Sisodia et al. 2014). The literature also emphasizes the role of marketing efforts in the relationship with multiple stakeholders (Hult et al. 2011; Kumar and Pansari 2016). Nevertheless, the recent literature on stakeholder relations contains several untapped research gaps.

First, the literature on stakeholder relations to date has mainly focused on empirical examination of the static relations between stakeholders and firm performance (Hult et al. 2011; Orlitzky et al. 2003). As the ever-changing marketplace makes a firm’s relations with its stakeholders a dynamic process (Mitchell et al. 1997), firms face challenges in making timely strategic decisions to address the dynamic demands and expectations of their multiple stakeholders. The stakeholder management literature discusses the concepts of the dynamic nature of stakeholder relations and the importance of prioritizing stakeholders (Mitchell et al. 1997). The recent marketing literature also addresses the importance of investigating the time-varying effects of multiple stakeholder relations (Kumar and Pansari 2016) and of understanding how firms can effectively prioritize stakeholders (Hult et al. 2011). However, despite the insightful conceptual discussion of the dynamic nature of stakeholder relations and the importance of examining its effect in the literature, to the best of our knowledge, there has been no empirical study of the time-varying effects of multiple stakeholder relations on firm performance in either the management or the marketing literature. To address this research gap, we examine the time-varying effects of multiple stakeholder relations on long-term firm performance through brand equity.

Second, although many conceptual studies emphasize the examination of multiple stakeholders as separate measures, most empirical studies only examine multi-faceted stakeholder relations as an aggregated measure. Only a few recent empirical studies discuss the effects of individual dimensions of stakeholders separately (e.g., Choi and Wang 2009; Mishra and Modi 2016; Torres et al. 2012). Regarding the effects of multiple stakeholder relations, we follow the classification of multiple stakeholders in the literature (Clarkson 1995; Waddock and Graves 1997b) and subdivide multiple stakeholders into two groups: primary and secondary stakeholders. Primary stakeholders (e.g., customers and employees) are essential for the survival of the firm, whereas secondary stakeholders are surrounded by the firm and are not engaged in transactions with the firms (Clarkson 1995; Hult et al. 2011; Waddock and Graves 1997b). There are two main reasons for examining these two categories of stakeholders. First, there has been a call for research examining the effects of primary versus secondary stakeholder relations (e.g., Clarkson 1995; Hult et al. 2011; Servaes and Tamayo 2013). Second, in order to take into account the time-varying effect of the stakeholder relations as well as a moderating variable, we decide to use the two groups of stakeholders rather than examine the effects of individual dimensions of multiple stakeholders.

The third research gap is that recent stakeholder literature has mostly focused on multiple stakeholder relations separately rather than on the synergistic effect among stakeholder relations. Multiple stakeholders are interconnected and interdependent (Hillebrand et al. 2015). Although multiple stakeholders have different interests and expectations, firms can identify some shared values among stakeholders (Porter and Kramer 2006). Simultaneously addressing all the disparate interests and needs that multiple stakeholders claim from firms would be a challenging task considering the firms' limited resources. However, if firms can identify the shared values among stakeholders, they can more effectively allocate their scarce resources to address them. Drawing on the "stakeholder synergy theory" proposed by Tantalo and Priem (2016), we examine empirically whether there is a time-varying synergistic effect of primary and secondary stakeholder relations and if there are, how the synergistic effect varies over time on brand equity and long-term firm performance.

Fourth, the existing stakeholder literature has not fully investigated how different stakeholder relations interact with firms' focal activities to create brand equity. Firms usually allocate their limited resources into two focal strategic activities – value creation (e.g., R&D) and value appropriation (e.g., advertising). Multiple stakeholders influence brand equity (Merz et al. 2009), but their levels of effects on brand equity will be dependent on some contextual factors (Jones 2005). We argue that firms' strategic emphasis between value creation and value appropriation will interact with the effects of primary and secondary stakeholder relations on brand equity. Existing marketing literature examines value creation (e.g., Luo and Bhattacharya 2006), value appropriation (e.g., Mishra and Modi 2016; Servaes and Tamayo 2013), or both (e.g., Luo and Bhattacharya 2009) as a moderator in the link between aggregated stakeholder relations and firm performance. To extend the literature, we propose strategic emphasis, defined as "the relative emphasis a firm places on value appropriation relative to value creation" (Mizik and Jacobson 2003, p. 63), as a contingency factor. Specifically, we examine how value creation versus value appropriation approaches interact with the primary and secondary stakeholder relations to influence brand equity.

The stakeholder literature conceptually agrees on the positive effect of stakeholder relations on firm performance, but empirical studies show somewhat equivocal findings on the direct link between stakeholder relations and firm performance (Margolis and Walsh 2003). There is a call to examine this complex relationship by investigating more the indirect link between stakeholder relations and firm performance (e.g., Orlitzky et al. 2003; Servaes and Tamayo 2013). Recent literature finds that good relations with multiple stakeholders are important sources of brand equity (Jones 2005; Torres et al. 2012; Wang and Sengupta 2016). Firm's efforts to manage good stakeholder relations lead to promoting their dynamic capabilities (Choi and Wang 2009; Wang and Sengupta 2016) and facilitating for firms to use their resources so that firms "integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al. 1997, p. 516). These dynamic capabilities and relatively abundant resource availability enable firms to build their brand equity (Maklan and Knox 2009; Wang and Sengupta 2016), which will yield long-term firm performance (Wang and Sengupta 2016). We follow Wang and Sengupta (2016)'s framework proposing the mediating role of brand equity in the stakeholder relations-firm performance link. The key difference between Wang and Sengupta (2016)'s study and ours is the level of measurements of the stakeholder relations. We examine the mediating effect of brand equity in the link between a disaggregated level of stakeholder relations (i.e., primary and secondary stakeholder relations and their interaction) and long-term firm performance, while Wang and Sengupta (2016) test brand equity as a mediator in the link between an aggregated level of stakeholder relations and long-term firm performance.

In summary, we seek to address the following research questions:

1. Do the effects of each stakeholder relations (primary versus secondary) and their synergistic effect on brand equity vary over time? If yes, are these effects increasing or decreasing? On average, which stakeholder relations, i.e., primary or secondary stakeholder relations, show a stronger effect on brand equity on average over time?
2. Does a firm's strategic emphasis moderate the effects of primary and secondary stakeholder relations on brand equity? If yes, what are the direction and magnitude of such effects?
3. Does brand equity have an overall mediating effect in the link between primary and secondary stakeholder relations and long-term firm performance?

Using multiple secondary and publicly available databases including CSRHub, Brand Finance, and COMPUSTAT, we collected variables of interest and covariates for a sample of 165 North American firms over the period from 2009 Q1 to 2015 Q4. We applied a hierarchical linear model (HLM) to investigate the time-varying effects of primary and secondary stakeholder relations and their time-varying synergistic effect on brand equity and long-term firm performance. We also investigate the moderating effect of strategic emphasis on the effects of primary and secondary stakeholder relations on brand equity, and the mediating effect of brand equity on the relationships between primary and secondary stakeholder relations and long-term firm performance.

Our results provide strong support for our research framework suggesting that the primary stakeholder relations have on average a slightly higher, but statistically insignificant for comparison test, positive effect on brand equity than secondary stakeholder relations. Our findings support the time-varying effects of primary and secondary stakeholder relations and the synergistic time-varying effect of these relations on brand equity. We also find a moderating effect of strategic emphasis such that when firms focus more on value creation, the positive effect on brand equity is stronger for primary stakeholder relations than for secondary stakeholder relations and vice versa. Finally, we find a mediating effect of brand equity in the link between primary and secondary stakeholder relations and long-term performance. Specifically, whereas brand equity fully mediates the separate effects of primary and secondary stakeholder relations on long-term firm performance, brand equity partially mediates the synergistic effect between primary and secondary stakeholder relations on long-term firm performance.

Our findings offer several contributions. First, this study contributes to the stakeholder management and marketing literature by testing the time-varying effects of stakeholder relations on brand equity. Given that the importance of examining the time-varying effects of stakeholder relations has only been conceptually discussed (Mitchell et al. 1997), we extend the literature by empirically testing how primary and secondary stakeholder relations, respectively and interactively, affect brand equity and how these effects vary over time. Second, we contribute to the literature by testing the comparison effect between primary and secondary stakeholder relations on brand equity. As firms make more strategic decision-making about effectively allocating their scarce resources, understanding how the dynamic nature of stakeholder relations varies over time and how one group of stakeholders interacts with another group of stakeholders in terms of their effect on brand equity is critical. Third, we extend the literature by testing strategic emphasis as a moderator to examine how it interacts with primary and secondary stakeholder relations. The results of this study provide insights that will help managers to understand the effects of stakeholder relations in a timely manner so they can effectively manage their stakeholder relations by using appropriate strategic emphasis between value creation and value appropriation. We extend the brand literature by addressing how primary and secondary stakeholder relations, separately and jointly, influence brand equity.

We organize the structure of this paper as follows. We first review the relevant literature on stakeholder relations in management and marketing and present the most relevant empirical studies in Table 1. We then develop the conceptual framework and propose several hypotheses as presented in Figure 1. Next, we describe the datasets and measures, discuss the model specifications and present the results. We then discuss the contributions of our study, the implications of our findings and future research opportunities.

[Insert Table 1 and Figure 1 about Here]

LITERATURE REVIEW

A stakeholder is defined as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman 2010, p.46). A great deal of interdisciplinary research has accumulated over several decades on understanding the relationship between stakeholder relations and firm performance and investigating how to establish good stakeholder relations. From the perspective of instrumental stakeholder theory (Jones 1995), a firm interacts with stakeholders and, as an instrument of the stakeholders, the firm makes strategic and managerial decisions to meet the diverse demands and expectations of its stakeholders (Freeman and Evan 1990; Hill and Jones 1992; Jones 1995). According to the resource-based view (RBV; Barney 1991), good stakeholder relations provide a firm with valuable, rare, inimitable, non-substitutable resources, which in turn lead to its sustainable competitive advantage (Jones 1995).

Extant literature agrees on the importance of investigating the multi-faceted construct of stakeholder relations and the effects of multiple stakeholders on firm performance separately (Hult et al. 2011). Satisfying the claims of multiple stakeholders simultaneously is important, but it is challenging for firms to meet the conflicting demands and expectations of their multiple stakeholders with their scarce capabilities and resources. Thus, firms need to understand how to identify salient stakeholders and prioritize their claims in day-to-day activities and decision-making (Mitchell et al. 1997). Mitchell et al. (1997) conceptualize stakeholder salience as “the degree to which managers give priority to competing stakeholder claims” (p. 854) and argue that firms should prioritize the claims of their salient stakeholders. According to their theory, stakeholder salience can be determined by combinations of the magnitude of three attributes: power, legitimacy and urgency. Power refers to the degree to which a stakeholder has power to influence the firm. Legitimacy refers to whether a stakeholder has a legitimate relationship with the firm. Urgency refers to the degree to which a stakeholder’s claim is urgent to the firm. Urgency exists when two conditions are met: the degree to which a delay of addressing a stakeholder’s claim is unacceptable to the stakeholder (i.e., time sensitivity) and the degree to which a stakeholder’s claim is important (i.e., criticality). If stakeholders have all three attributes, firms identify them as definitive stakeholders with a high level of stakeholder salience and give them priority in allocating the firms’ resources and attention.

In spite of rich conceptual discussion and development of the concept of the multi-faceted nature of stakeholder relations (Freeman 2010) and their dynamic natures (Mitchell et al. 1997), most empirical studies have examined the effects of multiple stakeholder relations using one aggregated construct of stakeholder relations (Mishra and Modi 2016) and focus on the static relationship between stakeholder relations and firm performance. A few recent empirical studies have attempted to investigate the multiple dimensions of static stakeholder relations separately (e.g., Choi and Wang 2009; Groening et al. 2016; Mishra and Modi 2016). Specifically, Choi and Wang (2009) show in their post-hoc analysis the empirical finding that companies with better employee relations and customer relations show persistent superior firm performance, and better community relations and building up diversity overcome persistent inferior performance. Mishra and Modi (2016) examine the effect of each dimension of multiple stakeholder relations on shareholder wealth and idiosyncratic risk separately. Both Choi and Wang (2009) and Mishra and Modi (2016) provide insights by examining the individual dimensions of multiple stakeholder relations. However, these studies do not compare the effects of primary and secondary stakeholder relations on firm performance. As Hult et al. (2011) note that “marketing researchers should examine the relative importance of each stakeholder group for value creation” (p.60), the relative effects of these stakeholder relations will help firms to create value through facilitating effective decision-making about resource allocation.

In line with these recent studies, we examine the effects of multi-faceted stakeholder relations separately. By following the classification of multiple stakeholders in the literature (Clarkson 1995; Waddock and Graves 1997b), we segment multiple stakeholders into two main categories: primary and secondary stakeholders. Primary stakeholders are those “without whose continuing participation the corporation cannot survive as a going concern” (Clarkson 1995, p. 106), such as employees, customers, suppliers, and shareholders. Thus, primary stakeholders are essential to the operation of the business (Godfrey et al. 2009; Hult et al. 2011; Mitchell et al. 1997). Clarkson (1995) notes, “The corporation’s survival and continuing success depend upon the ability of its managers to create sufficient wealth, value, or satisfaction for those who belong to each stakeholder group” (p. 107). Primary stakeholders are highly interdependent with the firm (Clarkson 1995) and engage in day-to-day activities related to business transactions. In light of stakeholder salience theory, primary stakeholders make legitimate claims and have power and urgency to press their claims (Godfrey et al. 2009). Specifically, employees as internal stakeholders of the firm engage in day-to-day activities that make up the value chain process, shaping the corporate brand equity. Customers are one of the most important stakeholders because they are directly associated with firms' revenues (Mitchell et al. 1997). Customers also participate in the value co-creation process through their opinions and demands related to product- and/or service-related activities. Building better customer relations increases customers' satisfaction (Luo and Bhattacharya 2006) and thus increases brand equity (Torres et al. 2012; Wang and Sengupta 2016).

Secondary stakeholders are "those who influence or affect, or are influenced or affected by, the corporation, but they are not engaged in transactions with the corporation and are not essential for its survival" (Clarkson 1995, p. 107). Secondary stakeholders include the local community[1], natural environment, public and media. Secondary stakeholders are relatively distant from the firm and have less frequent contacts with the firm. They are not engaged in day-to-day activities related to business transactions. According to stakeholder salience theory, secondary stakeholders have legitimate claims but usually have less urgency and power to enforce their claims (Godfrey et al. 2009). Firms' treatment of their local communities and concern about environmental issues are relatively less visible activities from customers' and other primary stakeholders' perspectives compared to the activities associated with primary stakeholders (Torres et al. 2012). Firms have mainly approached secondary stakeholders' issues

[1] Community is also categorized as a primary stakeholder in some literature, but we view community as a secondary stakeholder that does not engage in essential business transactions but can influence the primary stakeholders. (Torres et al. 2012; Waddock and Graves 1997b).

through corporate social responsibility or philanthropic initiatives (Hillman and Keim 2001). On the other hand, secondary stakeholders sometimes cause significant damage to firms (Clarkson 1995; Eesley and Lenox 2006). Eesley and Lenox (2006) note that "a set of actions such as protests, civil suits, and letter-writing campaigns to advance their interests … may impose direct operation costs in terms of legal fees, public relations expenses, and managerial attention … and…may have important consequences for a firm's reputation" (p. 765).

Therefore, managing good stakeholder relations not only for primary stakeholders but also for secondary stakeholders is important for firms to build up their brand equity, as stakeholder relations will influence their brand equity. Firms' brand equity is "is not just created through a dyadic relationship … but it is a multifarious construct that is affected by, or the sum of, a gamut of relationships" (Jones 2005, p. 10). Similarly, from their service dominant logic perspective, Merz et al. (2009) view brand value as "the brand's perceived use-value and determined, collectively, by all stakeholders" (p. 331). They describe "Brands-as-Dynamic-Social-Process" where "the brand value co-creation is a continuous, social, and highly dynamic interactive process between the firm, the brand, and all the stakeholders" (p. 331). That is, brand is constructed by a dynamic process through the interactions among the firm and its multiple stakeholders (Ballantyne and Aitken 2007; Merz et al. 2009).

In addition, firms' internally accumulated skills and knowledge from relations with stakeholders also enable firms to enhance their dynamic capabilities by recognizing opportunity, reconfiguring their resources and adapting to the continuously-changing market and business environment to improve their brand equity (Maklan and Knox 2009; Wang and Sengupta 2016). The degree to which firms obtain dynamic capabilities from interactions with their stakeholders will depend upon the level of resources that stakeholders provide. According to the resource dependence theory (Hult et al. 2011), firms depend on multidimensional resources including both internal and external resources. Primary stakeholders participate in a broad range of business units and processes and interact more often with firms by participating in various decision-making and essential business operations throughout the firms' value chain process. As firms tend to be more dependent upon the resources offered by their primary stakeholders, the dynamic capabilities obtained from interactions with their primary stakeholders will accumulate more than the capabilities gained from interactions with secondary stakeholders. Thus, we expect that good relations with primary stakeholder relations will have in general a more positive effect on brand equity than secondary stakeholder relations. Therefore, we propose the following hypothesis:

H1: The positive effect on brand equity will be stronger on average for primary stakeholder relations than for secondary stakeholder relations.

Time-Varying Effects of Stakeholder Relations

The stakeholder literature conceptually argues that stakeholder relations evolve over time (Friedman and Miles 2002; Mitchell et al. 1997). Mitchell et al. (1997) posit that the three attributes of stakeholders (i.e., power, legitimacy, and urgency) are dynamic rather than static. They suggest eight classes of stakeholders based on whether or not each attribute exists. For instance, stakeholders that have power over the firm and are legitimate but do not have urgency are classified as dominant stakeholders. Stakeholders who have all three attributes are classified as definitive stakeholders. Stakeholders can increase their salience to the firm. If a group of stakeholders classified as dominant has urgent claims, then they become definitive stakeholders to whom firms give priority. These temporal dynamics in stakeholder relations are also discussed in recent studies using interviews or self-reported surveys from business managers (Laasch and

Conaway 2014; Myllykangas et al. 2010). However, to the best of our knowledge, no studies empirically examine whether the effects of primary and secondary stakeholders on brand equity vary over time and what the patterns and directions of the effects look like.

As firms' brands are among their most valuable assets (Madden et al. 2006; Simon and Sullivan 1993), firms make huge efforts to build strong brand equity. Building brand equity is the collective and dynamic processes through which the focal firms interact with their multiple stakeholders (Ballantyne and Aitken 2007). The degree to which a group of stakeholders influences a firm's brand equity will depend on the degree of salience of the stakeholders. Primary stakeholders are usually viewed as salient stakeholders, so firms allocate their resources to maintain good relations with them. As employees provide internal resources such as customer service which firms incorporate as a part of their brand assets, having good relations with employees by satisfying the needs and claims of their employees enables firms to increase their brand equity. For instance, "*Fortune*'s 100 Best Companies to Work For" annual ranking lists announce firms' good relations with their employees, which influence the perceptions of other stakeholders such as their customers and brand communities. Customers are considered the most important stakeholders for creating revenues, so firms have paid great attention to identifying the needs and expectations of their customers and satisfy them, which increases their brand equity. As the degree of stakeholder's salience is expected to be dynamic over time depending on the temporal changes of the three attributes – power, legitimacy and urgency – the effect of primary stakeholder relations on brand equity will vary over time. When primary stakeholder relations of a firm are considered successful, other firms within an industry benchmark these cases so that knowledge and capabilities about managing good stakeholder relations become widespread within the industry and, eventually, become homogenous and standardized among the firms in the industry according to institutional theory (DiMaggio and Powell 1983). Therefore, even though we expect a time-varying effect of primary stakeholder relations on brand equity, the degree of change in the effects over time will not fluctuate much, as firms in the industry already have standardized and similar levels of knowledge and capabilities to manage good relations with their primary stakeholders unless they create innovative ways of managing primary stakeholder relations.

Recent brand literature views brand value as "co-created with all stakeholders and determined through all stakeholders' collectively perceived value" (Merz et al. 2009, p. 340). For instance, brand communities co-create a firm's brand value as a place where members share their experiences, thoughts and ideas regarding the brand and non-users of the brand can participate in discussion regarding the brand. Focusing on good relations with secondary stakeholders, such as brand communities, is now becoming more important. Nevertheless, firms' good relations with secondary stakeholders, such as supporting local communities and protecting the natural environment, have not been considered essential initiatives for firms' survival. From the firm's perspective, secondary stakeholder relations are not very salient compared to primary stakeholder relations, are hard to control and have outcomes that are hard to predict, so firms have allocated relatively fewer resources to manage secondary stakeholder relations. Compared to primary stakeholder relations, firms have not accumulated their competencies and capabilities to manage secondary stakeholder relations well. The effect on brand equity is therefore expected to increase and/or decrease temporarily depending on the salience of any of the three attributes. However, the degree of the time-varying effect of secondary stakeholder relations on brand equity will fluctuate more than the degree of the time-varying effect of primary stakeholder relations. Thus, we propose the following hypothesis:

H2: The effects of primary and secondary stakeholder relations on brand equity vary over time.

Time-Varying Synergistic Effects between Primary and Secondary Stakeholders

Multiple stakeholders do not act alone. Rather, stakeholders are interconnected and interdependent (Hillebrand et al. 2015). The stakeholder management literature has recently conceptually discussed the importance of creating shared value for sustainable competitive advantages (e.g., Freeman 2010; Freeman et al. 2007; Porter and Kramer 2011; Porter and Kramer 2006). For instance, the success of a firm and the healthy growth of the local community and natural environment are mutually interdependent, so the firm's managers should utilize the firm's resources and dynamic capabilities to meet these shared values among its primary and secondary stakeholders. However, satisfying the diverse needs and expectations of multiple stakeholders simultaneously is hard to achieve because of the scarce resources and capabilities that firms have. The extant stakeholder management literature has mostly suggested that firms balance the needs and claims of multiple stakeholders by rotating their attention and resources to each stakeholder's claims in turn (Mitchell et al. 1997; Post et al. 2002). However, this approach has some limitations. For instance, if firms underserve their employees and make them wait for their turn, the employees could be demotivated to serve the firms and/or move to other firms (Meyer et al. 2004).

To address this issue, Tantalo and Priem (2016) propose "stakeholder synergy" theory by developing an analytical model using multi-attribute utility functions. They defined a firm's business system as "comprised of current essential stakeholders, … plus other groups depending on the firm's context" (p. 317) and a total value creation of a business system defined as "the sum of all the valuation estimates made by each of that system's essential stakeholder groups for the multiple utilities they receive from participating in the system" (p. 317). They argue that each stakeholder has multiple attributes in their utility functions and some of their attributes are interdependent and complementary, which enables the firm's managers to take strategic actions to satisfy the shared utilities of those multiple stakeholders without subtracting value from any other stakeholders. For instance, if a firm serves customers who support local produce and seek organic products, then the firm's action to support local communities and not use chemical fertilizers to protect the natural environment can be beneficial to the customers. In other words, instead of rotating a firm's attention or resources to a certain group of stakeholders in turn, Tantalo and Priem (2016) present in their analytical model that firms can find "complementary utilities," or "complementarities in needs across two or more essential stakeholder groups" (p. 323) and meet these complementary utilities of more than one group of stakeholders simultaneously.

Marketing researchers have empirically examined whether there are synergistic effects of multiple stakeholder relations (e.g., Groening et al. 2016; Kumar and Pansari 2016; Torres et al. 2012). Specifically, Groening et al. (2016) find a synergistic effect between customer relations and employee relations on long-term firm performance. They argue that simultaneous examination of firms' activities directed to two groups of stakeholders provides a credible signal of the firm's competitive advantage to the firm's investors, which leads to better long-term firm performance (Groening et al. 2016). Torres et al. (2012) argue that firms' activities related to their local community positively moderate the effects of the other primary stakeholder (i.e., employee, customer, governance, and supplier) relations on global brand equity since building good relations with local communities creates credibility for global brands. Kumar and Pansari (2016) empirically test the interaction between customer engagement and employee engagement and report a positive but insignificant interaction effect.

Drawing on the "stakeholder synergy" theory (Tantalo and Priem 2016) and following the existing marketing literature, we propose that there exists a synergistic effect between primary stakeholder relations and secondary stakeholder relations on brand equity. If firms find complementary utilities of both primary and secondary stakeholders, addressing these utilities will increase the values of both stakeholders, which in turn increases the brand equity of the firms. For instance, when Brita promoted its brand not just as a filter brand but also as a water brand by advertising additional social benefits regarding health and wellness, its revenue increased by 47% (Vila and Bharadwaj 2017).

The synergistic effect between primary stakeholder relations and secondary stakeholder relations on brand equity will vary over time depending on the degree of stakeholder saliences and finding the degree and type of complementary utilities among stakeholders. The synergistic effect between primary and secondary stakeholder relations will tend to increase in the long-term perspective. However, in the short term, the strength of the synergistic effect will vary over time depending on the levels of the three attributes the stakeholders have at a given time. Thus, we propose the following hypotheses:

H3: The interaction between primary stakeholder relations and secondary stakeholder relations has a positive effect on brand equity on average.

H4: The synergistic effects of primary stakeholder relations and secondary stakeholder relations on brand equity vary over time.

Moderating Effects of Strategic Emphasis

Brand value is created through dynamic interactions and continuous processes among the brand, the firm, and its multiple stakeholders (Jones 2005; Merz et al. 2009). Thus, creating brand equity by cooperating with multiple stakeholders not only depends on firms' good relations with stakeholders but also on firms' capabilities and focal activities. The existing marketing literature examines firms' strategic foci by examining their R&D expenditures (e.g., Luo and Bhattacharya 2006), advertising expenditures (e.g., Servaes and Tamayo 2013), or both R&D and advertising separately (e.g., Luo and Bhattacharya 2009) as moderators in the link between aggregated stakeholder relations and firm performance.

Value creation activities, "typically research and development – enable a firm to develop new sources of economic rents through activities that create value for customers" (Han et al. 2017, p. 25). By contrast, value appropriation activities, defined as advertising and branding activities, "enable a firm to appropriate greater value of increasing profits from existing customers" (Han et al. 2017, p. 25). As they have finite resources and capabilities to facilitate both of these strategic foci - value creation and value appropriation – firms should make strategic decisions about the extent to which they emphasize each. However, firms cannot simultaneously pursue both strategies in an unconstrained way because of their limited resources (Han et al. 2017) and do not choose one over the other as both are fundamental and essential activities. Rather, firms tend to determine how much they relatively focus on one strategic approach over the other. Despite the importance of examining relative strategic emphasis, however, only a few studies in the marketing literature do so (Han et al. 2017) and, to the best of our knowledge, there is no study examining relative strategic emphasis in the stakeholder literature. Although Luo and Bhattacharya (2009) examine R&D and advertising expenditure as moderators in the link between the aggregated level of stakeholder relations and firm performance, their approach on strategic emphases is in an unconstrained manner and not considered to be a relative emphasis. Therefore, in line with and extending the existing literature, we argue that firms' strategic emphasis between value creation and value appropriation will interact with the effects of primary and secondary stakeholder relations on brand equity.

Strategic emphasis is defined as “the relative emphasis a firm places on value appropriation relative to value creation” (Mizik and Jacobson 2003, p. 63). Firms with a value creation emphasis tend to invest more in their R&D expenditures, while firms with a value appropriation emphasis tend to invest more in their advertising expenditures.

Primary stakeholders such as employees, suppliers, shareholders and customers actively engage in day-to-day business transactions and decisions as co-creators through the value chain process. If the firms focus more on value creation than on value appropriation, they will allocate their finite resources to create value, such as making R&D expenditures for new products and services. As firms’ value creation activities are more likely to be internally focused (Saboo et al. 2016a), primary stakeholders are usually more involved in firms’ internal activities as co-creators in the value chain processes. For instance, employees as internal stakeholders within the firm perform day-to-day business transactions to create value. Suppliers as providers of resources cooperate with the firm to create value. Customers, as potential recipients of the outcome of the value creation (buyers of new products or services), suggest their needs and ideas regarding new products to the firms. As primary stakeholders have more chances to engage in value creation processes to build up brand equity, good relations with primary stakeholders will show a greater positive impact on brand equity when the firms focus relatively more on value creation activities.

On the other hand, when firms focus relatively more on value appropriation, they will deliver their value propositions to the marketplace by allocating their finite resources and capabilities to advertising and marketing their products and services. When firms invest more resources in value appropriation, we expect that good relations with secondary stakeholders, such as support for local communities and protecting the natural environment, will be advertised to the marketplace where their multiple stakeholders can perceive the brand value of the firm. With respect to the distance between the firm and stakeholders, good secondary stakeholder relations will not be obvious or easy to see. Nevertheless, firms' good relations with secondary stakeholders will have greater impact on brand equity than their good relations with primary stakeholders when they emphasize value appropriation relatively more. For example, the Coca-Cola Company's world-famous advertising commercial, "I'd Like to Teach the World to Sing" is to promote world-peace by harmonizing societies in the world (Vila and Bharadwaj 2017). For firms with a value appropriation emphasis like the Coca-Cola Company, the positive effect on brand equity will be stronger for secondary stakeholder relations than for primary stakeholder relations. Thus, we propose the following hypothesis:

H5a: The positive effect of primary stakeholder relations on brand equity increases when the firm's strategic emphasis is relatively more on value creation (vs. appropriation).

H5b: The positive effect of secondary stakeholder relations on brand equity increases when the firm's strategic emphasis is relatively more on value appropriation (vs. creation).

Mediating Effect of Brand Equity

Brand equity is measured broadly from three perspectives: customer-based, product-market-based, and financial-based (Keller and Lehmann 2006). Customer-based brand equity is mostly measured with customer's psychological and behavioral outcomes such as awareness, associations, attitude, and loyalty (Aaker 1996; Agarwal and Rao 1996; Keller and Lehmann 2006). There is a positive effect of stakeholder relations on customer-based brand equity

(Hoeffler and Keller 2002; Lichtenstein et al. 2004). Customers respond more positively to brands with strong brand equity because they tend to have many positive associations related to the brands and perceive higher quality of the brands, and thus they are more loyal to the brands (Yoo et al. 2000). Product-market-based brand equity, measured with price premiums, can increase communications and channel effectiveness as well as decrease price sensitivity (Ailawadi et al. 2003; Keller and Lehmann 2006). Financial-based brand equity is measured in terms of stock price and value (Amir and Lev 1996; Keller and Lehmann 2006).

Brand equity is perceived by all the stakeholders in the market place (Merz et al. 2009). Rust et al. (2000) argue that stakeholder relations will have a positive influence on customers' brand perception. Torres et al. (2012) find a positive relationship between stakeholder relations and global brand equity. Brand equity is a strong antecedent of firm performance (Madden et al. 2006; Morgan et al. 2009). Drawing on resource-based theory, Wang and Sengupta (2016) find a mediating role of brand equity between stakeholder relations and firm performance. Based on the dynamic capabilities approach, they conceptualize the role of stakeholder relationships in creating brand equity. Specifically, firms accumulate skills and knowledge from managing good stakeholder relations to address the rapidly changing market and business environments. These dynamic capabilities help firms to build up their corporate brand equity (Eisenhardt and Martin 2000; Teece et al. 1997).

In this study, we adopt Wang and Sengupta (2016)'s framework that presents a mediating role of brand equity on the stakeholder relationship-firm performance link. Specifically, firms' good relationships with stakeholders will help them shape better reputations and increase brand equity, which results in increased long-term firm performance (Wang and Sengupta 2016). The key difference between Wang and Sengupta (2016)'s study and ours is that, in this study, we examine the mediating effect of brand equity in the link between a disaggregated level of stakeholder relations (i.e., primary and secondary stakeholder relations as well as their interaction) and long-term firm performance, while Wang and Sengupta (2016) test brand equity as a mediator in the relationship between an aggregated level of stakeholder relations and long-term firm performance. We propose the following hypothesis:

H6: The individual and synergistic effects of primary and secondary stakeholder relations on firm performance are mediated by brand equity.

DATA AND MEASURES

Sample of Data

We utilize several secondary databases to measure the variables for this study. For multiple stakeholder relations, we used the CSRHub database, which provides the overall rating scores of approximately 17,413 companies from 134 countries (retrieved from https://www.csrhub.com/ on May 12, 2017). As an objective measure including aggregated information gathered from more than 100 sources such as research firms, governmental agencies and non-profit organizations, the CSRHub database has been recently used in the academic literature (e.g., Cruz et al. 2014; Vaia et al. 2017) as well as widely used in business practices.

In order to obtain more complete information on the other variables of interest (e.g., Tobin's Q, R&D expenditures, and advertising expenditures), we focused on North American firms. Our sample data include 165 companies in the United States, Canada and Mexico with measures of stakeholder relations during the period from 2009 Q1 (the first year and quarter in which complete CSRHub data are available) to 2015 Q4.

Primary and Secondary Stakeholder Relations. In this study, we subcategorize multiple stakeholder relations into primary and secondary stakeholder relations. Primary stakeholders include customers and employees and secondary stakeholders cover community and environment. Four categories of the CSRHub scores were used in this study. Based on the guidelines of the CSRHub database (https://www.csrhub.com/), stakeholder relations include the following areas:

Customer Relations. Customer relations relate to the company's responsibility to develop, design and manage its products and services and reflect the company's ability to deliver products and services that reduce environmental costs, create new marketing opportunities though sustainable innovation and provide goods and services to enhance customers' health and quality of life.

Employee Relations. Employee relations include the evaluation of inclusive diversity policies, fair treatment of all employees, robust diversity programs and training, disclosure of employee diversity data, strong labor codes, comprehensive benefits, demonstrated training and development opportunities, employee health and safety policies, basic and industry-specific safety training, demonstrated safety management systems, and a positive safety performance record.

Community Relations. Community relations reflect a firm's community citizenship through charitable donations and volunteer work hours of staff, including protecting public health (e.g., industrial accident avoidance) and managing the social impacts of its operations on local communities. The impact of a firm's land use and building design on the local economy and ecosystem are also included.

Environmental Relations. Environmental relations evaluate corporate environmental performance, compliance with environmental regulations, mitigation of environmental footprint, leadership in addressing climate change through appropriate policies and strategies, energy-efficient operations, the development of renewable energy and other alternative environmental technologies, disclosure of sources of environmental risk and liability and actions to minimize exposure to future risk, implementation of natural resource conservation and efficiency programs, pollution prevention programs, demonstration of a strategy for sustainable development, integration of environmental sustainability and responsiveness with management and the board and programs to measure and engage stakeholders for environmental improvement.

Each dimension of stakeholder relations receives a numeric score of 0 to 100 (100 = highest rating) and the scores are reported on a monthly basis in the CSRHub database. In order to match these scores with financial data, we transform the monthly-based data into quarterly-based data by taking the average of three months for one quarter. We operationalize primary stakeholder relations as the standardized average score of the customer relations and employee relations, and secondary stakeholder relations as the standardized average score of the community relations and environment relations.

Strategic Emphasis. Previous researchers (e.g., Han et al. 2017; Mizik and Jacobson 2003) operationalized strategic emphasis between value appropriation and value creation using two operational variables: 1) advertising intensity (Luo and Bhattacharya 2006; Luo and Bhattacharya 2009) and 2) R&D intensity (Choi and Wang 2009; Luo and Bhattacharya 2006; Luo and Bhattacharya 2009). To account for missing values for advertising and R&D expenditures in the COMPUSTAT database, we created a dummy variable indicating 1 if either variable is missing and 0 for not missing (Brower and Mahajan 2013). Following Mizik and Jacobson (2003) and using the COMPUSTAT database, we compute strategic emphasis using the following equation:

$$Strategic\ Emphasis_{it} = \frac{Advertising\ Expenditures_{it} - R\&D\ Expenditures_{it}}{Assets_{it}}$$

Brand Equity. For the brand equity variable, we used the "Most Valuable Brand Global 500" list from the Brand Finance database, which is created by an independent company that publishes a yearly measurement of brand value[2], notably providing brand value for the 500 most valuable global brands. In connection with the brand equity variable, brand finance values are expressed in dollars and have been transformed into logarithmic numbers to reduce skewness in the distribution.

Tobin's Q. Tobin's Q is a long-term firm performance indicator that has been widely used in the management and marketing literature (e.g., Groening et al. 2016; Luo and Bhattacharya 2006; Servaes and Tamayo 2013). It is defined as a stock market-based performance indicator that represents the long-term financial value of a company as a company's performance outcome. We calculated Tobin's Q with the financial and accounting data for publicly traded companies from COMPUSTAT. In accordance with the method proposed in previous literature (e.g., Groening et al. 2016), Tobin's Q is calculated as the ratio of the market value of a company's securities to the replacement cost of tangible assets on a quarterly basis:

$$TQ_{it} = \frac{(\text{Stock Price}_{it} \times \text{Number of Shares Outstanding}_{it}) + (\text{Assets}_{it} - \text{Common Equity}_{it})}{\text{Assets}_{it}}$$

[2] The annual data of brand value was transformed to the quarterly data using moving average.

Control Variables. We use several control variables in the model. Firm risk (*Risk*; i.e., financial leverage), defined as the ratio of long-term debt to total assets, is also used to control the effect on firm performance (Choi and Wang 2009; Groening et al. 2016; Luo and Du 2015). Firm size (*Size*), measured as the natural logarithm of total sales (Choi and Wang 2009; Groening et al. 2016; Torres et al. 2012), is used to control for resource availability. One-period lagged return on assets (ROA_{t-1}) (Angulo-Ruiz et al. 2014; Wang and Sengupta 2016) is used to control for the effect of previous short-term firm performance. For controlling industry effects, two dummy variables are used: (1) 1 for service industry and 0 for goods industry (*Service*; Groening et al. 2016) and (2) 1 if the business belongs to the B2C industry and 0 for the B2B industry (*B2C*; Groening et al. 2016). Lastly, the natural logarithm of GDP (*Ln(GDP)*) are used for controlling national economic effects (Kumar et al. 2011). All the measures and sources of the variables are presented in Table 2.

[Insert Table 2 about Here]

METHOD

Model Specification

To examine the time-varying effects of primary and secondary stakeholder relations and their synergistic effects over time, we use a Hierarchical Linear Model (HLM). By following the hierarchical linear model specification for Brand Equity and Tobin's Q, we specify the model using a two-level hierarchical structure in which the firms at Level 1 are nested within the times at Level 2.

Level 1: Firm Level. The model for Brand Equity ($Ln(BE)_{it}$) is specified as follows in equation (1):

$$\begin{aligned}\mathrm{Ln}(\mathrm{BE_{it}}) &= \alpha_{0t} + \alpha_{1t}PrR_{it} + \alpha_{2t}SeR_{it} + \alpha_{3t}PrR_{it}\times SeR_{it} + \beta_1 SE_{it} + \\ &\beta_2 PrR_{it}\times SE_{it} + \beta_3 SeR_{it}\times SE_{it} + \beta_4 PrR_{it}\times SeR_{it}\times SE_{it} + \beta_5 Risk_{it} + \\ &\beta_6 Size_{it} + \beta_7 ROA_{it-1} + \beta_8 Missings_{it} + \beta_9 Service_i + \beta_{10} B2C_i + \\ &\beta_{11}\ln(\mathrm{GDP}_{ct}) + \tau_1\hat{\delta}_{it}^{PrR} + \tau_2\hat{\delta}_{it}^{SeR} + \tau_3\hat{\delta}_{it}^{SE} + error_{it},\end{aligned} \tag{1}$$

where t = quarterly basis from the first quarter of 2009 (t = 1) to the fourth quarter of 2015 (t = 28); PrR_{it} = primary stakeholder relations of a firm *i* at time *t*; SeR_{it} = secondary stakeholder relations of a firm *i* at time *t*; SE_{it} = strategic emphasis of a firm *i* at time *t*.

In the model, α_{0t} is the time-varying intercept, α_{1t} is the time-varying coefficient associated with primary stakeholder relations (PrR_{it}) for firm *i* at time *t*, α_{2t} is the time-varying coefficient associated with secondary stakeholder relations (SeR_{it}) for firm *i* at time *t*, and α_{3t} is the time-varying coefficient associated with the interaction between primary stakeholder relations (PrR_{it}) and secondary stakeholder relations (SeR_{it}) for firm *i* at time *t*. Coefficients from β_1 to β_{10} are the time-invariant coefficients associated with the strategic emphasis, interaction terms between stakeholders relations and strategic emphasis, firm risk, firm size, one-lagged *ROA*, missing-dummy variable of R&D expenditures or advertising expenditures, and industry-type (service and B2C) dummy variables, respectively, for a firm *i* at time *t*. $\beta_{11}$is the time-invariant coefficient associated with the logged *GDP* for a country *c* at time *t*. τ_1, τ_2 and τ_3 are the time-invariant coefficients associated with the correction terms for a firm *i* at time *t*. The correction terms are obtained from the control function approach which we will discuss in the next section. Lastly, $error_{it}$ is a random error associated with a firm *i* at time *t*.

The following model in equation (2) is for Tobin's Q (TQ_{it}):

$$TQ_{it} = \alpha_{0t} + \alpha_{1t}PrR_{it} + \alpha_{2t}SeR_{it} + \alpha_{3t}PrR_{it}\times SeR_{it} + \beta_1 \ln(\mathrm{BE_{it}}) + \beta_2 SE_{it} + \beta_3 PrR_{it}\times SE_{it} + \beta_4 SeR_{it}\times SE_{it} + \beta_5 PrR_{it}\times SeR_{it}\times SE_{it} + \beta_6 Risk_{it} + \beta_7 Size_{it} + \beta_8 ROA_{it-1} + \beta_9 Missings_{it} + \beta_{10} Service_i + \beta_{11} B2C_i + \beta_{12} \ln(\mathrm{GDP_{ct}}) + \tau_1 \hat{\delta}_{it}^{PrR} + \tau_2 \hat{\delta}_{it}^{SeR} + \tau_3 \hat{\delta}_{it}^{SE} + error_{it}, \tag{2}$$

where α_{0t} is the time-varying intercept, α_{1t} is the time-varying coefficient associated with primary stakeholder relations (PrR_{it}) for a firm *i* at time *t*, β_1 is the time-invariant coefficient associated with the logged value of the brand equity of a firm *i* at time *t*, τ_1, τ_2 and τ_3 are the time-invariant coefficients associated with the correction terms and $error_{it}$ is a random error associated with a firm *i* at time *t*. All the independent variables used for Tobin's Q, as shown in equation (2), are the same as the independent variables used for Brand Equity, as shown in equation (1), except the logged brand equity ($Ln(BE)_{it}$) used as an independent variable in equation (2).

Level 2: Time Level. In order to examine the time-varying effects of stakeholder relations on brand equity and long-term firm performance, we set the time as the second level of hierarchical linear modeling by following a similar approach proposed by Kumar et al. (2011). The model is presented in equation (3):

$$\begin{aligned} \alpha_{jt}^{BE} &= a_{j0}^{BE} + b_{jt}^{BE} + \varepsilon_j^{BE}, \\ \alpha_{jt}^{TQ} &= a_{j0}^{TQ} + b_{jt}^{TQ} + \varepsilon_j^{TQ}, \end{aligned} \tag{3}$$

where j represents each time-varying coefficient of variables (intercept if j=0; PrR_{it} if j=1; SeR_{it} if j=2; and $PrR_{it}\times SeR_{it}$ if j=3) used in equations (1) and (2).

In the level-2 models, the level-1 coefficients of covariates are used as dependent variables. α_{jt}^{BE} *and* α_{jt}^{TQ} are the time-varying coefficients of the variables, respectively. a_{j0}^{BE} *and* a_{j0}^{TQ} are fixed effects, representing group mean (i.e., averaged coefficient values over time) and b_{jt}^{BE} and b_{jt}^{TQ} are random effects, representing the group-to-group deviations (i.e., deviations from the group mean over time).

Accounting for Endogeneity of Stakeholder Relations

We use a control function approach (Garen 1984; Petrin and Train 2010) to correct for potential endogeneity issues that may arise due to the unobserved factors that are not independent of the endogenous variables (Petrin and Train 2010; Wooldridge 2010). In addition, applying slack resource theory (Waddock and Graves 1997a), previous literature also notes some possibility of a reversed causal relationship between stakeholder relations and firm performance such that better-performing firms make more investment in improving stakeholder relations using their slack resources. The control function approach requires two steps (Petrin and Train 2010). In the first equation, we regress the endogenous variables on a set of exogenous variables and the instrumental variables and obtain residuals (i.e., the correction terms) from the first equation. Let z_{it} be a vector of exogenous variables that influence the level of the stakeholder relations, PrR_{it} and SeR_{it}, of a firm *i* at time *t*. Humanity and ethical leadership are likely to be related to stakeholder relations, but less likely to be related to brand equity and Tobin's Q. We use humanity (Hum_{it}) and ethical leadership (Let_{it}) as the instrumental variables. Based on the *resource-allocation inertia* perspective (Hall et al. 2012), most firms tend to allocate the same level of resources to their business units every year. We include the previous level of primary and secondary stakeholder relations, PrR_{it-1} and SeR_{it-1}, to account for the dynamic panel bias

(Blundell et al. 2000; Saboo et al. 2016b). We include firm's risk ($Risk_{it}$) as the exogenous variable. We also include a set of exogenous variables including firm's size ($Size_{it}$), the lagged return on assets (ROA_{it-1}), the first-lagged strategic emphasis (SE_{it-1}), the second-lagged strategic emphasis (SE_{it-2}), and the global reporting initiative (GRI_{it}). The control function approach is presented in equation (4):

$$\begin{aligned} PrR_{it} &= z_{it}^{PrR}\gamma^{PrR} + \delta_{it}^{PrR} \\ SeR_{it} &= z_{it}^{SeR}\gamma^{SeR} + \delta_{it}^{SeR}, \end{aligned} \tag{4}$$

where z_{it} is a vector of exogeneous variables including the instrumental variables, γ is an unknown parameter vector, and δ_{it} is random error, assumed to be independently and normally distributed.

In the second equation, we regress the dependent variables, Brand Equity ($Ln(BE)_{it}$) and Tobin's Q (TQ_{it}), on the endogenous variables, the set of exogenous variables and the obtained correction terms, δ_{it} , from the first equation.

Accounting for Endogeneity of Strategic Emphasis

We use a control function approach to address the potential sources of endogeneity with respect to strategic emphasis. Previous researchers suggest that firms make decisions with respect to their advertising and R&D expenditures based on industry norms (Cohen and Levinthal 1989), so we use the level of industry average strategic emphasis, SE_Ind_{it}, as an instrument variable (Han et al. 2017). We also include the first-lagged strategic emphasis (SE_{it-1}), the second-lagged strategic emphasis (SE_{it-2}) to account for the dynamic panel bias (Blundell et al. 2000; Saboo et al. 2016b) and other exogeneous variables including firm's risk ($Risk_{it}$), firm's size ($Size_{it}$), the lagged return on assets (ROA_{it-1}), service industry ($Service_i$) and B2C industry ($B2C_i$).

The control function approach for strategic emphasis is presented in equation 5.

$$SE_{it} = z_{it}^{SE}\gamma^{SE} + \delta_{it}^{SE}, \tag{5}$$

where z_{it} is a vector of exogeneous variables including the instrumental variables, γ is an unknown parameter vector, and δ_{it} is random error, assumed to be independently and normally distributed.

RESULTS

Descriptive Statistics

We present the pairwise correlations and the descriptive statistics in Table 3. The summary statistics suggest a significant variation in the variables of interest. To address multicollinearity concerns which may cause biased coefficients (Hair Jr 2006), we test variance inflation factors (VIFs). The results of testing the VIFs show that the range of all the variables including the interaction terms is between 1.07 ($Risk_{it}$) and 3.47 (PrR_{it}) for Brand Equity ($Ln(BE)_{it}$) and between 1.10 ($Risk_{it}$) and 3.55 (PrR_{it}) for Tobin's Q (TQ_{it}). This is lower than the threshold value of 10, indicating that multicollinearity is not a concern in our analysis.

[Insert Table 3 about Here]

Endogenous Correction Procedure

The results of the control function approach to correct for the potential endogeneity of primary and secondary stakeholder relations are presented in Table 4. The results provide some insights into managing stakeholder relations and strategic emphasis between value appropriation and value creation.

[Insert Table 4 about Here]

The previous levels of primary and secondary stakeholder relations have a strongly, significantly positive effects on the current primary and secondary stakeholder relations respectively (PrR_{it}: β = 0.815, $p < 0.01$; SeR_{it}: β = 0.787, $p < 0.01$). These high values of the standardized coefficients may suggest that firms have maintained a consistent level of their resource allocations over time. In addition, the previous (the first- and second-lagged) strategic emphases are positively related to the current strategic emphasis (SE_{it-1}: β = 0.735, $p < 0.01$; SE_{it-2}: β = 0.215, $p < 0.01$). This tendency of firms' behaviors is referred to as *resource-allocation inertia* (Hall et al. 2012), which refers to the tendency of firms to allocate the same level of resources to the same business operations every period.

Humanity (Hum_{it}) is positively associated with each stakeholder relation (PrR_{it}: β = 0.077, $p < 0.01$; SeR_{it}: β = 0.084, $p < 0.01$). A positive relationship with ethical leadership (Let_{it}) is also shown in all the stakeholder relations. (PrR_{it}: β = 0.035, $p < 0.01$; SeR_{it}: β = 0.079, $p < 0.01$). The level of industry average strategic emphasis (SE_Ind_{it}) is also positively associated with the firm's strategic emphasis (SE_{it}: β = 0.032, $p < 0.01$)

Firm Size ($Size_{it}$) is positively related to primary and secondary stakeholder relations (PrR_{it}: β = 0.019, $p < 0.01$; SeR_{it}: β = 0.014, $p < 0.05$), in line with previous findings that bigger firms have more resources to allocate to stakeholder relations (Hillman and Keim 2001; Johnson and Greening 1999). We find that firm size ($Size_{it}$) is negatively related to strategic emphasis (SE_{it}: β = -0.0002, $p < 0.01$), which infers that larger firms tend to invest more resources to advertising for appropriating value.

Global reporting initiative (*GRI*) is positively related to primary and secondary stakeholder relations (PrR_{it}: β = 0.113, $p < 0.01$; SeR_{it}: β = 0.068, $p < 0.01$). B2C industry

($B2C_i$) is positively associated with strategic emphasis (SE_{it}: β = 0.0002, $p < 0.05$), which means that B2C firms tend to invest more their resources to advertising expenditures for appropriating value.

Effects of Stakeholder Relations on Brand Equity and Long-term Performance

The results regarding the primary and secondary stakeholder relations and their interaction effects on brand equity are presented in Table 5 and Figure 2. The results regarding primary and secondary stakeholder relations and their interaction effects on long-term firm performance are shown in Table 6 and Figure 3.

[Insert Tables 5 and 6; and Figures 2 and 3 about Here]

Main Effect of Primary Stakeholder Relations on Brand Equity As seen in Table 5, primary stakeholder relations (PrR_{it}) positively affect brand equity ($Ln(BE)_{it}$) on average (β = 0.138, $p < 0.01$) over time. As primary stakeholder relations increase by one standardized unit, brand equity increases by 13.8% on average over the given period. As shown in Figure 2A, we find that the time-varying effect of primary stakeholder relations on brand equity shows positive coefficients across time and an increasing pattern over time.

Main Effect of Secondary Stakeholder Relations on Brand Equity As seen in Table 5, secondary stakeholder relations (SeR_{it}) positively affect brand equity ($Ln(BE)_{it}$) on average over time (β = 0.136, $p < 0.01$). As secondary stakeholder relations increase by one standardized unit, brand equity increases by 13.6% on average over the given period. By comparing the effect of secondary stakeholder relations with the effect of primary stakeholder relations, we see that the standardized coefficient of primary stakeholder relations is slightly bigger (β = 0.138, $p < 0.01$) than the standardized coefficient of secondary stakeholder relations (β = 0.136, $p < 0.01$). As a result of a Wald test, we found that there is no statistically significant difference ($p > 0.05$) between effects of primary and secondary stakeholder relations on brand equity over time on average finding not supporting H1. As shown in Figure 2B, we find the effect of secondary stakeholder relations on brand equity varies over time, with a generally increasing pattern over time.

Synergistic Effects of Stakeholder Relations As presented in Table 5 and Table 6, the interaction between primary and secondary stakeholder relations ($PrR_{it} \times SeR_{it}$) positively affects not only brand equity ($Ln(BE)_{it}$), but also Tobin's Q (TQ_{it}) on average over time (for $Ln(BE)_{it}$: $\beta = 0.051$, $p < 0.01$; for TQ_{it}: $\beta = 0.037$, $p < 0.05$). As shown in Figure 2C and 3C, we find the interaction effects between primary and secondary stakeholder relations on brand equity ($Ln(BE)_{it}$) and Tobin's Q (TQ_{it}) vary over time, with an increasing trend over time. These results empirically support the stakeholder synergy theory (Tantalo and Priem 2016).

Effect of Brand Equity as a Mediator As seen in Table 6, brand equity ($Ln(BE)_{it}$) positively affects Tobin's Q (TQ_{it}) on average over time ($\beta = 0.360$, $p < 0.01$): with one percentage increase in brand equity, Tobin's Q increases by 0.360 on average over the given period. In light of this result, we conduct a mediation test for brand equity in the link between primary and secondary stakeholder relations and Tobin's Q.

We conduct mediation tests using two approaches: 1) Sobel Test (Sobel 1982) and 2) Monte Carlo Method (20,000 repetitions for creating 95% confidence intervals for indirect effects; Selig and Preacher 2008). Regarding the mediation effect of brand equity on the separate effects of primary and secondary stakeholder relations on Tobin's Q, after accounting for brand equity ($Ln(BE)_{it}$) which is presented in Table 6, we find insignificant effects of primary stakeholder relations (PrR_{it}) and secondary stakeholder relations (SeR_{it}) on Tobin's Q (β_{PrR} =

-0.073, $p > 0.05$; β_{SeR} = -0.024, $p > 0.05$). As presented in Table 7, we find significant indirect effects of primary and secondary stakeholder relations on Tobin's Q through brand equity, both from Sobel Test and Monte Carlo Method. The results indicate that good stakeholder relations do not directly influence the firm's long-term performance but instead have an indirect effect on the firms' long-term performance through brand equity.

Regarding the mediation effect of brand equity on the interaction effect of primary and secondary stakeholder relations on Tobin's Q, after controlling for brand equity presented in Table 6, we find that the interaction between primary and secondary relations ($PrR_{it} \times SeR_{it}$) positively affects Tobin's Q (TQ_{it}) on average (β = 0.037, $p < 0.05$). Figure 3C shows that the positive effect of the interaction between primary and secondary stakeholder relations on Tobin's Q has an upward trend over time. The synergistic effect between primary and secondary stakeholders has not only a direct effect on Tobin's Q, but also an indirect effect on Tobin's Q through brand equity. Therefore, we confirm that brand equity partially mediates the relationship between interaction effect between primary and secondary stakeholder relations and Tobin's Q.

[Insert Table 7 about Here]

GENERAL DISCUSSION

Having a good relationship with stakeholders is now a central strategy of organizations. Firms want to have a good relationship with stakeholders to help their bottom-line performance in the long term. However, dealing with multiple stakeholders' needs and expectations is a challenging task. We conceptualize stakeholder relations with firms as varying over time. From a resource allocation perspective, firms may need to prioritize some stakeholders' needs and expectations more than others at different times, and they may need some dashboard or reference for how they can allocate their resources effectively. In this study, we analyze the time-varying effects of primary and secondary stakeholder relations as well as their time-varying synergistic effects on not only brand equity but also long-term firm performance. Utilizing a sample of 165 North American firms with 28 quarterly time units between the years of 2009-2015 obtained from multiple secondary databases, we investigate time-varying effects using hierarchical linear modeling (HLM). To the best of our knowledge, this is the first study to empirically examine the time-varying effects of primary and secondary stakeholder relations and their interaction on brand equity and long-term firm performance.

Theoretical Contributions

Our research contributes to the literature on stakeholder relations and marketing resource allocation. First, this study also contributes to the extant stakeholder literature by conceptually arguing for differential effects of a multi-faceted construct of stakeholder relations and their interaction effects between primary and secondary stakeholder relations. Choi and Wang (2009) empirically tested the effects of disaggregated levels of multiple stakeholders as post-hoc analyses but did not develop a conceptual argument. They note that “some promising directions for future research may include a further exploration of the role of each stakeholder group on a conceptual level” (p. 904). Groening et al. (2016) also mention that “a firm’s activities directed at a key stakeholder group should not be viewed in isolation but rather in conjunction with how the firm treats another key stakeholder group” (p. 74). To address these research calls, we discuss conceptually the differential effects of primary and secondary stakeholder relations and their synergistic effects on brand equity and long-term firm performance as well.

Moreover, this is the first empirical study to answer the call for research to investigate the time-varying effects of primary and secondary stakeholder relations and the time-varying synergistic effect between primary and secondary stakeholder relations. We extend the theory of stakeholder salience by considering the time-varying effects of each stakeholder relation and their synergistic effects. Mitchell et al. (1997) conceptualized the dynamic nature of stakeholder salience, but no empirical research has examined the temporal variation of the effects of stakeholder relations and their synergistic effects. Only a few survey studies and interviews find changes of stakeholder salience among multiple stakeholder relations over time. By applying the hierarchical linear model, we empirically examine the time-varying effects of primary and secondary stakeholder relations and their synergistic effects on brand equity and long-term firm performance.

Managerial Implications

The findings of this study provide several managerial implications. We recommend that managers take into account the time-varying relationships between stakeholder relations and brand equity. Firms' resources available for stakeholder relations are limited, and addressing the needs of multiple stakeholders simultaneously is challenging. Therefore, firms may need to prioritize their resources to focus on key stakeholders. Given this situation, the current findings provide some managerial guidelines for how firms can make strategic decisions about prioritizing stakeholder relations in light of their unique situations. Considering the individual effects and the synergistic effects together, we argue that although the primary stakeholders – customers and employees – are important as definite stakeholders, maintaining good relationships with secondary stakeholders – local communities and the natural environments – is also very important. The increasing patterns of synergistic effects between primary and secondary stakeholder relations on brand equity and long-term firm performance over time show that firms should allocate their resources to both sides of stakeholder relations harmonically. By simultaneously addressing both primary and secondary stakeholder relations, firms can achieve sustainable competitive advantage.

Second, we propose that good stakeholder relations improve a firm's long-term firm performance through brand equity. In line with the existing literature, we test the mediating effect of brand equity in the link between stakeholder relations and long-term firm performance and find a full mediation effect between, respectively, primary and secondary stakeholder relations on brand equity. When it comes to the synergistic effect between primary and secondary stakeholder relations, we find a partial mediation effect. Specifically, firms' good relations with both types of stakeholders not only directly influence the firm's long-term performance but also have an indirect influence on it through brand equity. This mediation effect of brand equity provides the insight that a firm's good relationships with multiple stakeholders shape better corporate brand image, which will lead current and potential customers to choose the firm's products and services in the marketplace. Firms should invest their resources in treating their stakeholders well in order to enhance their corporate brand equity, which will increase long-term firm performance.

Limitations and Future Research Opportunities

We propose several future research opportunities. In this study, we limit our analysis to North American companies. Future researchers can extend this study to test the time-varying effects of multiple stakeholder relations using data from companies in multiple countries. The time-varying effects of stakeholder relations are likely to show different patterns across cultures or countries. For instance, in developed countries, the effects of primary stakeholder relations will show a positive but somewhat decreasing pattern, but in developing countries, the effects of primary stakeholder relations will show positive and increasing patterns. This may be because in developed countries, capabilities and resources directed at primary stakeholder relations are somewhat standardized as more and more companies in the marketplace adopt advanced know-how or benchmark the successful cases of their competitors. This suggests that the effects of these stakeholder relations are not very impactful. Rather, the synergistic effect between primary and secondary stakeholder relations will be more influential on long-term firm performance. However, in developing countries where information and systems have not been established, the effect of primary stakeholder relations would be more impactful and the synergistic effect between primary and secondary stakeholder relations will not be realized until the system is established.

Future researchers could also investigate other types of stakeholder relations such as investor relations, supplier relations and mass media. Due to the lack of measures on those types of stakeholder relations in the current dataset, this study does not include them. Future researchers who can get access to data related to these stakeholder relations may be able to extend our test of the time-varying effects of these stakeholder relations and their time-varying synergistic effects.

Another future study could be done on the time-varying effects of stakeholders within an organization. Primary research using survey and interview methods within an organization may enable future researchers to more fully understand the time-varying effect of an individual dimension of the stakeholder relations within an organization.

Table 1. Relevant Empirical Studies

Study	*IVs*		*Moderators: Strategic Emphasis*			*Mediators*	*DVs*	*Modeling Approach*		
	Primary Stakeholders	*Secondary Stakeholders*	*Value Creation*	*Value Appropriation*	*Relative measure*			*Models*	*Time-Varying Effects*	*Synergistic Time Varying Effects*
Luo and Bhattacharya (2006)	One aggregated variable		YES	NO	NO	Customer Satisfaction	Tobin's Q, Stock return	Structural Equation Model	NO	NO
Luo and Bhattacharya (2009)	One aggregated variable		YES	YES	NO	NO	Idiosyncratic Risk	Four-Factor Model, Panel Regression	NO	NO
Choi and Wang (2009)	Employee Customer Diversity	Community Environment	NO	NO	NO	NO	ROA, Tobin's Q	AR (1) Model	NO	NO
Torres et al. (2012)	Employee Customer Governance Supplier	Community	NO	NO	NO	NO	Brand Equity	Panel Regression	NO	NO
Servaes and Tamayo (2013)	Employees Diversity	Community, Environment, Human Rights	NO	YES	NO	NO	Tobin's Q	Panel Regression	NO	NO
Mishra and Modi (2016)	Employee Customer Governance Diversity	Community Environment	NO	YES	NO	NO	Stock Return, Idiosyncratic Risk	Four-Factor Model, Panel Regression	NO	NO
Wang and Sengupta (2016)	One aggregated variable		NO	NO	NO	Brand Equity	Tobin's Q	Simultaneous Equations Model	NO	NO
Groening et al. (2016)	Employee Customer	None	NO	NO	NO	NO	Tobin's Q	Hierarchical Linear Model	NO	NO
Kumar and Pansari (2016)	Employee Customer	None	NO	NO	NO	NO	Revenue, Net Income	Hierarchical Linear Model	NO	NO
This Study	**Employee Customer**	**Community Environment**	**YES**	**YES**	**YES**	**Brand Equity**	**Tobin's Q**	**Hierarchical Linear Model**	**YES**	**YES**

Table 2. Measures

Variables	Descriptions	Sources
Tobin's Q (TQ_{it})	The ratio of the market value of a company's securities to the replacement cost of tangible assets	COMPUSTAT
Brand Equity (BE_{it})	Brand Finance Global 500 brand value	Brand Finance
Primary Stakeholder Relation (PrR_{it})	Quarterly standardized averaged score on customer and employee relations	CSRHub
Secondary Stakeholder Relation (SeR_{it})	Quarterly standardized averaged score on community and environment relations	CSRHub
Firm Risk ($Risk_{it}$)	The ratio of long-term debt to total assets	COMPUSTAT
Firm Size ($Size_{it}$)	The natural logarithm of total sales	COMPUSTAT
Return on Assets (ROA_{it})	Net Income divided by total assets	COMPUSTAT
Strategic Emphasis (SE_{it})	Advertising intensity ($ADInt_{it}$) minus R&D intensity ($RDInt_{it}$)	
	$ADInt_{it}$ is computed as the ratio of advertising expenditure to total assets	COMPUSTAT
	$RDInt_{it}$ is computed as the ratio of R&D expenditure to total assets	COMPUSTAT
Service ($Service_i$)	Dummy variable if service industry = 1 otherwise = 0	COMPUSTAT
B2C ($B2C_i$)	Dummy variable if B2C firm = 1 otherwise = 0	
GDP (GDP_{ct})	Gross Domestic Product (GDP) for each country *c* in each period *t*	The World Bank
Humanity (Hum_{it})	Quarterly averaged score on Humanity	CSRHub
Leadership Ethics (Let_{it})	Quarterly averaged score on Leadership Ethics	CSRHub
Global Reporting Initiative (GRI_{it})	Dummy variable if GRI sustainability report is published = 1 otherwise = 0 for each firm *i* in each period *t*	GRI Database

Table 3. Pairwise Correlation Coefficients

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) TQ_{it}	1.00																	
(2) $Ln(BE)_{it}$	0.04^{a}	1.00																
(3) PrR_{it}	-0.06^{b}	0.28^{b}	1.00															
(4) SeR_{it}	-0.04^{b}	0.28^{b}	0.74^{b}	1.00														
(5) SE_{it}	0.10^{b}	-0.10^{b}	-0.13^{b}	-0.11^{b}	1.00													
(6) $Missing_{it}$	-0.30^{b}	-0.16^{b}	-0.08^{b}	-0.08^{b}	0.06^{b}	1.00												
(7) $Risk_{it}$	-0.05^{b}	-0.01	-0.15^{b}	-0.12^{b}	0.13^{b}	-0.03^{a}	1.00											
(8) $Size_{it}$	-0.39^{b}	0.59^{b}	0.21^{b}	0.15^{b}	-0.10^{b}	0.09^{b}	-0.07^{b}	1.00										
(9) ROA_{it-1}	0.34^{b}	0.06^{b}	-0.03	0.00	0.14^{b}	-0.14^{b}	-0.03^{a}	-0.09^{b}	1.00									
(10) $Service_{i}$	-0.05^{b}	0.00	-0.20^{b}	-0.19^{b}	0.03^{a}	0.21^{b}	0.06^{b}	-0.12^{b}	-0.14^{b}	1.00								
(11) $B2C_{i}$	0.02	0.06^{b}	-0.13^{b}	-0.15^{b}	0.29^{b}	-0.04^{b}	0.11^{b}	-0.02	-0.02	0.30^{b}	1.00							
(12) $Ln(GDP)_{ct}$	0.17^{b}	0.18^{b}	-0.05^{b}	-0.06^{b}	0.02	-0.23^{b}	-0.02	0.09^{b}	0.11^{b}	-0.13^{b}	-0.09^{b}	1.00						
(13) Hum_{it}	0.06^{b}	-0.01	0.45^{b}	0.51^{b}	0.04^{b}	-0.10^{b}	0.00	-0.11^{b}	0.01	0.07^{b}	0.08^{b}	-0.13^{b}	1.00					
(14) Let_{it}	-0.10^{b}	0.10^{b}	0.52^{b}	0.62^{b}	-0.06^{b}	-0.06^{b}	-0.15^{b}	0.07^{b}	0.01	-0.16^{b}	-0.16^{b}	-0.10^{b}	0.48^{b}	1.00				
(15) SE_Ind_{it}	0.09^{b}	0.00	-0.10^{b}	-0.10^{b}	0.59^{b}	-0.02	0.14^{b}	-0.04^{b}	0.06^{b}	0.04^{b}	0.41^{b}	-0.02	0.06^{b}	-0.10^{b}	1.00			
(16) SE_{it-1}	0.08^{b}	-0.10^{b}	-0.12^{b}	-0.10^{b}	0.98^{b}	0.06^{b}	0.13^{b}	-0.11^{b}	0.15^{b}	0.03^{a}	0.29^{b}	0.02	0.05^{b}	-0.05^{b}	0.59^{b}	1.00		
(17) SE_{it-2}	0.09^{b}	-0.10^{b}	-0.13^{b}	-0.10^{b}	0.98^{b}	0.06^{b}	0.13^{b}	-0.11^{b}	0.20^{b}	0.03^{a}	0.29^{b}	0.02	0.05^{b}	-0.05^{b}	0.59^{b}	0.98^{b}	1.00	
(18) GRI_{it}	-0.16^{b}	0.29^{b}	0.41^{b}	0.33^{b}	-0.03^{b}	0.02	-0.05^{b}	0.37^{b}	-0.06^{b}	-0.15^{b}	-0.09^{b}	-0.11^{b}	0.13^{b}	0.19^{b}	-0.01	-0.03^{a}	-0.03^{a}	1.00
Mean	2.00	8.73	0.00	0.00	0.00	0.66	0.22	8.69	0.02	0.68	0.82	9.46	0.00	0.00	0.00	0.00	0.00	0.53
S.D.	1.37	0.79	1.00	1.00	0.01	0.47	0.16	1.11	0.03	0.47	0.38	0.69	1.00	1.00	0.01	0.01	0.01	0.50

Notes. $^{a}p < 0.05$, $^{b}p < 0.01$

Table 4. Estimations of Control Function Approach

DV1: Primary Stakeholder Relations (PrR_{it})

Variable	Coef.	Std. Err.	z
Constant	-0.208**	0.055	-3.76
PrR_{it-1}	0.815**	0.008	105.98
Hum_{it}	0.077**	0.007	10.68
Let_{it}	0.035**	0.008	4.64
$Risk_{it}$	-0.059	0.036	-1.63
$Size_{it}$	0.019**	0.006	3.07
ROA_{it-1}	0.100	0.332	0.30
SE_{it-1}	5.101	3.430	1.49
SE_{it-2}	-6.503	3.401	-1.91
GRI_{it}	0.113**	0.013	8.49

Notes. * $p < 0.05$, ** $p < 0.01$

DV2: Secondary Stakeholder Relations (SeR_{it})

Variable	Coef.	Std. Err.	z
Constant	-0.153**	0.055	-2.80
SeR_{it-1}	0.787**	0.008	98.68
Hum_{it}	0.084**	0.007	11.77
Let_{it}	0.079**	0.008	9.81
$Risk_{it}$	0.001	0.036	0.02
$Size_{it}$	0.014*	0.006	2.33
ROA_{it-1}	0.081	0.329	0.24
SE_{it-1}	1.023	2.473	0.41
SE_{it-2}	-2.168	2.421	-0.90
GRI_{it}	0.068**	0.013	5.28

Notes. * $p < 0.05$, ** $p < 0.01$

DV3: Strategic Emphasis (SE_{it})

Variable	Coef.	Std. Err.	z
Constant	0.002**	0.000	4.97
SE_{it-1}	0.735**	0.011	65.67
SE_{it-2}	0.215**	0.011	19.85
SE_Ind_{it}	0.032**	0.006	5.88
$Risk_{it}$	-0.0003	0.000	-1.64
$Size_{it}$	-0.0002**	0.000	-5.36
ROA_{it-1}	-0.003	0.001	-1.83
$Service_{i}$	0.0000	0.000	-0.23
$B2C_{i}$	0.0002*	0.000	2.27

Notes. * $p < 0.05$, ** $p < 0.01$

Table 5. Fixed Effects of Stakeholder Relations on Brand Equity

Variable	Coef.	Std. Err.	z	Hypotheses
Constant	2.719**	0.170	16.030	
PrR_{it}	0.138**	0.020	6.885	H1 NOT Supported
SeR_{it}	0.136**	0.020	6.720	
$PrR_{it}\times SeR_{it}$	0.051**	0.010	5.024	H3 Supported
SE_{it}	-1.291	1.045	-1.235	
$PrR_{it}\times SE_{it}$	-4.686**	1.131	-4.145	H5a Supported
$SeR_{it}\times SE_{it}$	5.866**	1.257	4.665	H5b Supported
$PrR_{it}\times SeR_{it}\times SE_{it}$	-1.268	0.682	-1.858	
$Missing_{it}$	-0.186**	0.022	-8.419	
$Risk_{it}$	0.481**	0.061	7.925	
$Size_{it}$	0.460**	0.010	44.337	
ROA_{it-1}	7.481**	0.579	12.910	
$Service_{i}$	0.241**	0.024	10.231	
$B2C_{i}$	0.232**	0.029	8.007	
$Ln(GDP)_{ct}$	0.147**	0.015	9.645	
$Residual1_{it}$	-0.011	0.043	-0.270	
$Residual2_{it}$	0.028	0.041	0.688	
$Residual3_{it}$	4.820	6.848	0.704	

Notes. * $p < 0.05$, ** $p < 0.01$

Table 6. Fixed Effects of Stakeholder Relations on Tobin's Q

Variable	Coef.	Std. Err.	z
Constant	1.509**	0.271	5.572
PrR_{it}	-0.073	0.037	-1.941
SeR_{it}	-0.024	0.034	-0.705
$PrR_{it} \times SeR_{it}$	0.037*	0.015	2.381
$Ln(BE)_{it}$	0.360**	0.027	13.438
SE_{it}	-1.729	1.586	-1.090
$PrR_{it} \times SE_{it}$	10.467**	1.729	6.055
$SeR_{it} \times SE_{it}$	-2.052	1.923	-1.067
$PrR_{it} \times SeR_{it} \times SE_{it}$	4.954**	1.035	4.787
$Missing_{it}$	-0.347**	0.034	-10.223
$Risk_{it}$	-0.225*	0.093	-2.420
$Size_{it}$	-0.466**	0.020	-23.271
ROA_{it-1}	26.202**	0.902	29.060
$Service_{i}$	0.003	0.036	0.069
$B2C_{i}$	-0.028	0.044	-0.631
$Ln(GDP)_{ct}$	0.137**	0.024	5.802
$Residual1_{it}$	-0.036	0.066	-0.550
$Residual2_{it}$	0.082	0.062	1.321
$Residual3_{it}$	-4.727	10.393	-0.455

Notes. * $p < 0.05$, ** $p < 0.01$

Table 7. Effects of Stakeholder Relations on Tobin's Q with a Mediator

Indirect Effects	Coefficient (a*b)	Sobel Test statistic	Std. Error	95% Confidence Interval
Primary Stakeholder	0.050^{**}	6.128	0.008	[0.03436, 0.06622]
Secondary Stakeholder	0.049^{**}	6.011	0.008	[0.03331, 0.06511]
Primary and Secondary	0.018^{**}	4.708	0.004	[0.01093, 0.02638]

Notes. * $p < 0.05$, ** $p < 0.01$

Figure 1. Conceptual Framework

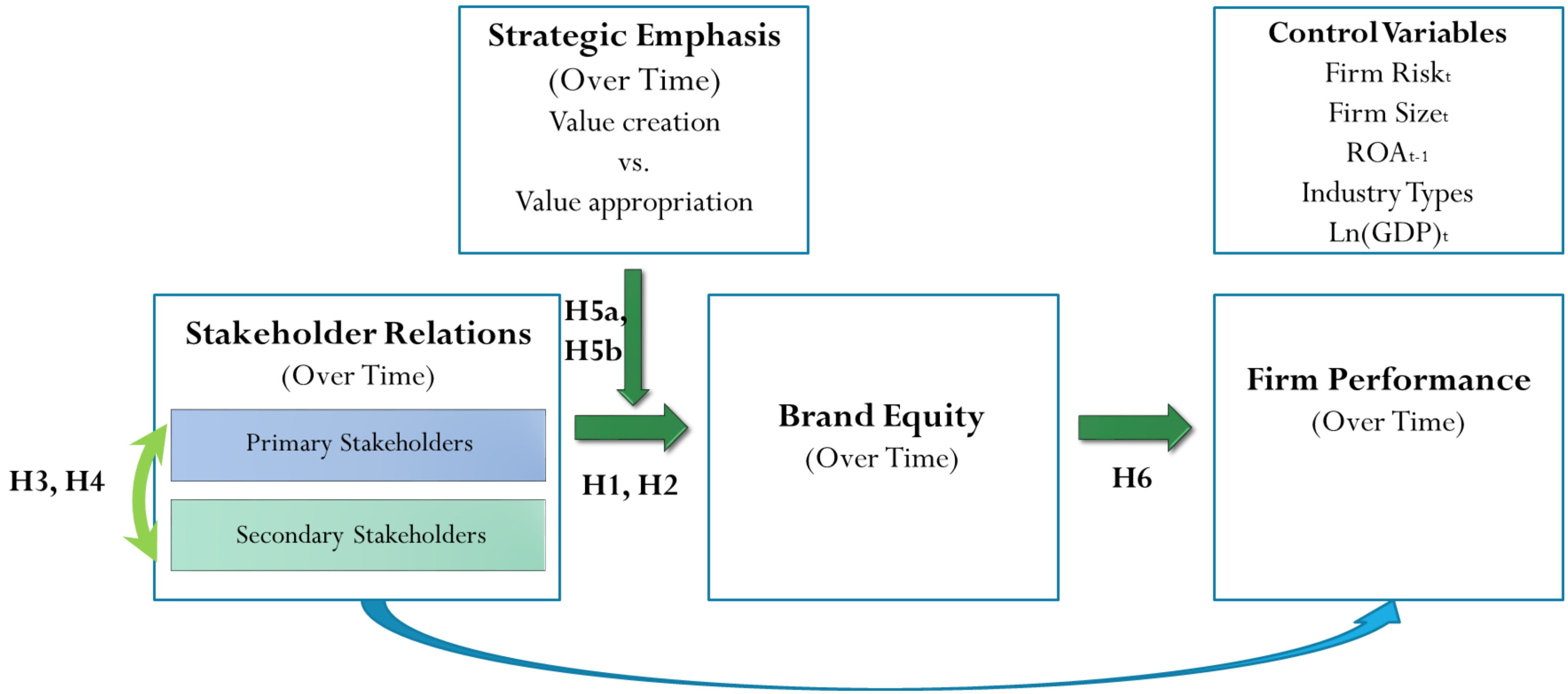
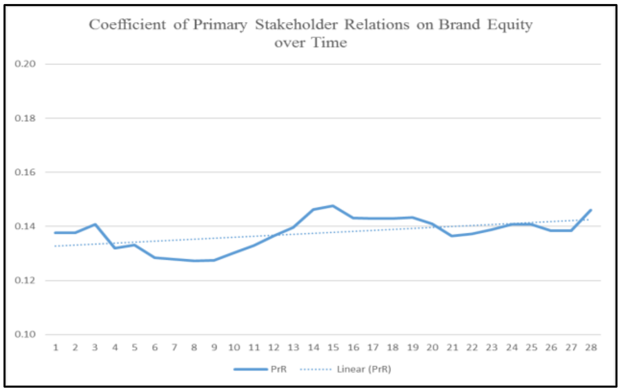
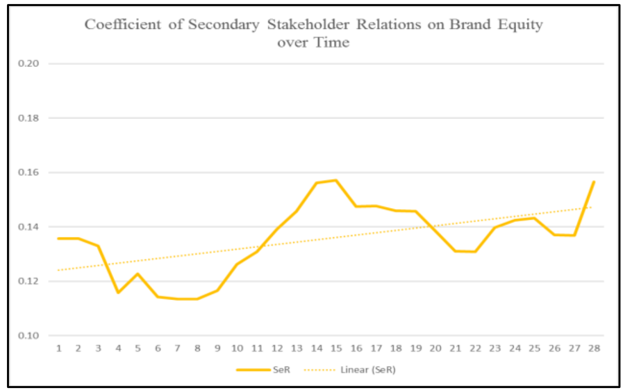


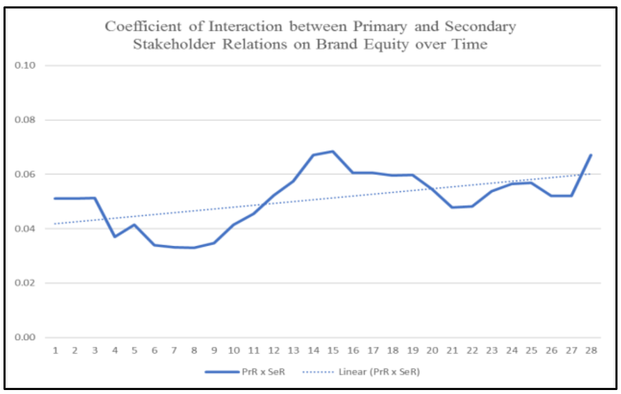
Figure 2. The Time-Varying Effects of Stakeholder Relations on Brand Equity



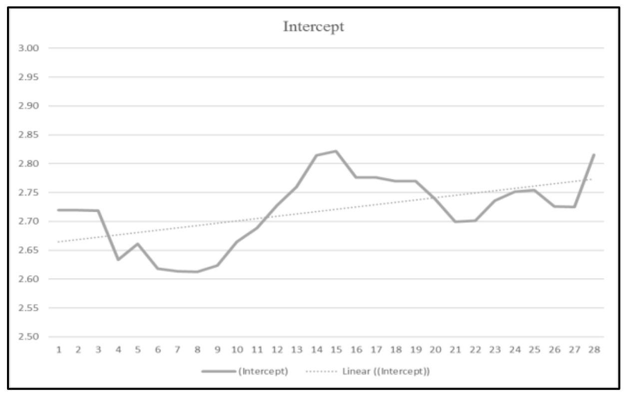
A. Primary Stakeholder Relations



B. Secondary Stakeholder Relations

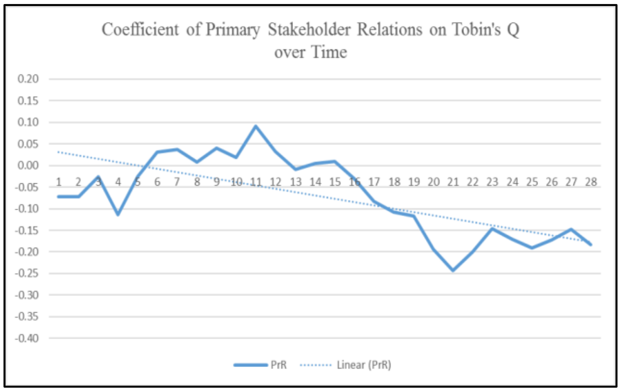


C. Interaction Effect between Primary and Secondary Stakeholder Relations

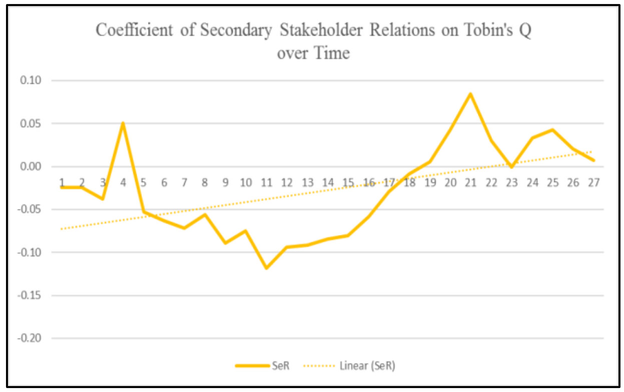


D. Intercept

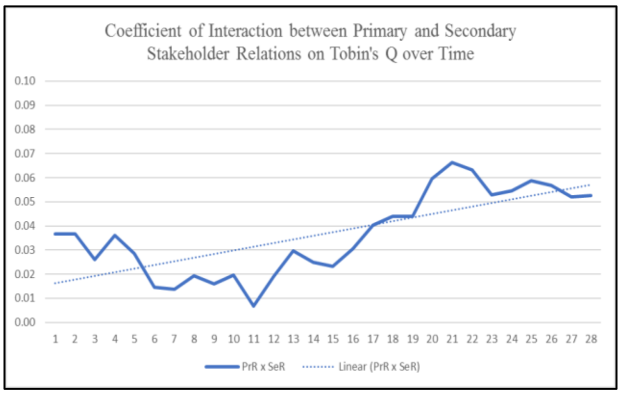
Figure 3. The Time-Varying Effects of Stakeholder Relations on Tobin's Q



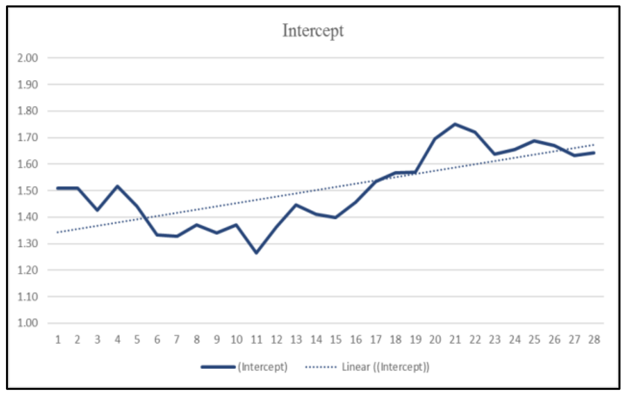
A. Primary Stakeholder Relations



B. Secondary Stakeholder Relations



C. Interaction Effect between Primary and Secondary Stakeholder Relations



D. Intercept

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