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## Exploring brand strength's nomological net and its dimensional dynamics

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## ABSTRACT

This research makes three contributions to the literature on brand strength. First, it examines a variety of antecedents that influence brand strength. Second, it investigates the inter-dimensional influences among brand strength's three dimensions. Third, it examines the influence of brand strength on word-of-mouth (WOM) behavior, and how brand preference mediation influences this relationship. Data were collected using an online survey approach and analyzed using structural equation modeling (SEM) methods. The results reveal that all but one of our proposed antecedents had a significant influence on our target brand strength dimensions. We found that brand familiarity has an antecedent influence on brand attitude and brand remarkability, and that the influence of brand strength on WOM is partially mediated by brand preference.

## 1. Introduction

There has been an increased interest with respect to research comprising brand strength (Capatina et al., 2018; Divakaran, 2018; Lin et al., 2018; Naidoo and Abratt, 2018; Wiedmann et al., 2018). It is a common assumption that strong brands lead to desired outcomes such as increased sales, increased brand loyalty, greater market share, and increased brand equity (Keller, 2003).

Most prior research which included brand strength in the investigation typically positioned brand strength as a dichotomous moderator. Brand strength was not measured as a continuous variable. Instead, investigators generally identified two industry brands (weak vs strong) based on sales or similar criteria (Glynn, 2010; Ho-Dac et al., 2013; Lin et al., 2018; Tsao et al., 2018). Researchers used examples of strong versus weak brands to examine the influence of a two-category brand strength moderator on the focal antecedent-consequent relationships under investigation.

Most prior research defined brand strength in terms of its likely outcomes. That is, brand strength was neither defined nor directly measured, but operationalized based on likely outcomes such as sales, market share, and so forth. For example, Balabanis and Diamantopoulos (2011) did not offer a conceptualization of the brand strength construct; rather, they referred to a strong brand as a brand with an established image and substantial brand equity. In their study, they used strong versus weak microwave oven brands for comparison purposes.

Prior research primarily limited the involvement of brand strength as a two-condition (strong vs. weak brand) operationalized moderator

to test various antecedent-consequent relationships in a strong versus weak brand condition. This has not been very helpful in advancing our knowledge of brand strength as a construct of interest. There are still salient gaps in our knowledge pertaining to this important construct. What is brand strength? How is it conceptualized? How is it measured? Wymer et al. (2016) have conducted research to help answer these questions, which will be discussed in the next section.

The purpose of this study is to extend the work of Wymer et al. (2016). Their key contributions were the development of a conceptualization of the brand strength construct and the creation of a scale for its valid measurement. In this study, we contribute to this stream of research by examining potential brand strength antecedents. Another contribution of this study is that we examine the inter-construct influences between the three brand strength dimensions. Although Wymer et al. (2016) conceptualized three dimensions of brand strength, no research to date has examined the way in which these three brand strength dimensions interact. It is reasonable to believe that the three dimensions of brand strength are not independent and isolated but exert influence on each other in some fashion which is not yet understood. Wymer et al. (2016) conceptualized brand strength as a first order reflective and second order formative model (Diamantopoulos et al., 2008). Thus, it is anticipated that an examination of the inter-dimensional relationships will enhance our understanding of the composite latent factor and may lead to further refinement of our theoretical understanding of the brand strength construct.

Lastly, we contribute to the extant literature by examining the

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influence of brand strength on important outcome constructs. As a brand becomes stronger, brand preference can be expected to increase. Brand preference, in turn, can be expected to influence several attitudinal and behavioral outcomes. We chose to examine the influence of brand strength, mediated by brand preference, on word-of-mouth (WOM) behavior, which is a desired and typical marketing outcome that is manifested across various research contexts or brand types. To realize these contributions, we developed a model of brand strength antecedents and outcomes and tested this model using a quantitative approach.

## 2. Theory and hypotheses development

One can agree upon which brands are weak versus strong, but the nature and characteristic of the brand strength construct have not received adequate emphasis in the literature (Wymer et al., 2016). Wymer et al. (2016) conceptualized brand strength as a distinct construct rather than conflating it with other constructs. They defined brand strength as the degree to which a brand is well-known to a target group, is perceived favorably by a target group, and is perceived to be remarkable by a target group/audience of interest. Hence, brand strength is conceptualized as a three-dimensional (brand familiarity, brand remarkability, and brand attitude) latent psychological construct.

It is noted that brand strength is defined by how a target group or audience of interest perceives the brand. The target group is group that is of interest to management. For a commercial organization, a target group or audience of interest might be current customers or prospective customers or even a competitor's customers, depending on the objectives of the managerial analysis. Evidently, it is possible that individuals not in a target group or audience of interest may have some familiarity with the brand. A phenomenon being studied in marketing research is usually investigated with a given population in mind (a brand's customers, for example). Our definitions simply take this reality into account in order to be more precise in our conceptualization of brand strength.

Three dimensions constitute brand strength. It is necessary for members of a target audience to have an adequate level of familiarity with the brand in order to: assess its relative merits; compare it to competing brands, substitutes/alternatives, or some experiential standard; and to develop an attitude toward the brand. In time, brand familiarity is developed through processing information about the brand derived from various sources and from personal experiences with the brand. However, brand familiarity is a necessary but insufficient component of brand strength. A strong brand is one that is perceived to be remarkable by its target group (Wymer et al., 2016).

Brand remarkability is another formative dimension of brand strength. How exceptional, excellent, and extraordinary is the brand? There is a comparative quality to brand remarkability. That is, the perceived level of excellence of a brand is assessed in relation to one's comparison with some standard derived from prior experiences with competing brands, similar products or services, or some other set of expectations developed over time. Being well-known and remarkable are necessary but insufficient components of brand strength. It is possible to be well-known and remarkable, but nevertheless disliked. For example, an actor might be well-known and excellent at acting. Yet, for a variety of reasons, such as involvement in a scandal, the actor may be disliked, weakening his/her brand strength. An organization such as an oil company serves as another example. Hence, in addition to high levels of brand familiarity and brand remarkability, a high level of positive brand attitudes is required in order to produce a high level of brand strength.

Wymer et al. (2016) empirical context involved charities as the focal brand objects. Their conceptualization of brand strength and the development of a measurement scale, while operationalized in the context of charities, were not meant to apply only to non-profit organizations. The researchers purposely conceptualized brand strength and developed the scale so that it could be used for various types of brand objects

(p. 1467). Indeed, if an object that is branded can have a quality or characteristic, then that characteristic should potentially apply to all objects that can be branded (Akbar and Wymer, 2017). Wymer et al. (2016) stated:

Our literature review revealed that prior research in the brand area was often conducted with an intentional or inadvertent bias in that researchers often assumed the brand object was a consumer product, the target group was consumers, and the marketing organization was a corporation. Given the marketing discipline's origins and history, this contextual assumption is understandable, but can produce weak scientific results. We avoided this biasing effect by conceptualizing brand strength in a manner that would be appropriate for an array of objects. In the scale development program, we chose to use nonprofit organizations as our brand objects. However, the scale items can be adapted for other brand objects (p. 1467).

In their conceptualization of brand strength, Wymer et al. (2016) described the nature or features of brand strength. Rather than describing brand strength in terms of its consequences (for example, a strong brand is strong because it has a high level of sales or market share), they described brand strength in terms of the three formative dimensions defined previously: brand familiarity, brand attitude, and brand remarkability. Brand strength is a latent psychological construct that is derived from the perceptions of a relevant target group or audience. Members of the group must have enough familiarity with the brand to be able to determine the degree to which they favor the brand and believe it is exceptional or extraordinary.

If one defines a strong brand in terms of its sales or market share, then an electricity company (that is, in effect, a monopoly) would be considered a strong brand since it enjoys high market share and high customer retention, arguably two important outcomes of a strong consumer brand. However, in our conceptualization of brand strength, the electricity monopoly could be a weak brand despite its market share. In our conceptualization, this company would be considered a strong brand only if customers rated it highly on each of the three dimensions of brand strength. Customers may view the electricity provider's performance as mediocre and its prices too high given the perceived service quality. If the electricity company is a strong brand according to our conceptualization of brand strength, then it is likely that it will continue to be a strong brand if suddenly faced with substantial competition. However, if the monopoly was perceived to be a weak brand, then its market share may drop precipitously if it were faced with significant competition.

Prior to the work of Wymer et al. (2016), research on brand strength had centered on the construct's expected outcomes rather than articulating the nature of the brand strength construct (Biel, 1992). However, it is a theoretical fallacy to define a construct in terms of its antecedents or consequences (Summers, 2001). Rather, the within-domain nature of the construct needs to be understood and specified. Wymer et al. (2016) defined brand strength as the degree to which a brand is well-known to a target group, is perceived favorably by a target group, and is perceived to be remarkable by a target group. Thus, brand strength is conceived as a latent psychological construct with three dimensions: brand familiarity, brand attitude, and brand remarkability. Brand familiarity refers to the level of knowledge the target audience has about the brand object. Brand attitude refers to the degree to which a brand object is perceived favorably by a target group. Brand remarkability refers to the degree to which a brand object is perceived by a target group to be extraordinary.

### 2.1. Brand strength and brand equity

Brand strength has been presented in some prior research as a dimension of brand equity (Lassar et al., 1995; Wood, 2000). This was not the case in the original conceptualization of brand equity, however. Originally, brand equity referred to the asset valuation of a brand for

accounting purposes (Farquhar, 1989; Keller, 1993). Brand equity was construed to be the asset valuation of a brand (Seetharaman et al., 2001). Keller (1993), however, modified the brand equity concept, renaming it *customer-based brand equity* which he defined “as the differential effect of brand knowledge on consumer response to the marketing of the brand” (p. 2). In elaborating on this definition, Keller stated “customer-based brand equity involves consumers’ reactions to an element of the marketing mix for the brand in comparison with their reactions to the same marketing mix element attributed to a fictitiously named or unnamed version of the product or service” (p. 2).

Keller’s (1993) conceptualization of consumer-based brand equity is defined in terms of its potential outcomes, an error in theory construction discussed earlier. The construct is defined in terms of its differential antecedent effects on desired consumer outcomes. Furthermore, the construct is conceptualized in a way that limits its applicability to the commercial realm of consumer products and services. Is brand equity a construct that applies to any brand object or just to consumer products and services? In his influential work, Keller relied on memory research to describe how brand recall and brand associations influence favorable brand management outcomes. The term *brand strength* does not appear in this article. Furthermore, defining a construct by equating it with another concept like brand associations is problematic. A brand association is “anything which is deep seated in customer’s mind about the brand.” “Brand associations are the attributes of the brand which come into consumers mind when the brand is talked about” (Brand Association, 2018, p. 1). While consumers may derive an understanding of a brand, once a sufficient level of brand familiarity is acquired from brand associations, this concept is insufficient to conceptualize a construct like brand strength. Furthermore, Keller’s (1993) concept of brand associations is similar to conceptualizations of brand image. Biel (1992) viewed brand image as a cluster of attributes and associations that consumers connect to the brand name.

Unfortunately, in the literature, brand equity “...has proliferated into multiple meanings” (Wood, 2000, p. 662). The fragmentation of marketing concepts into various meanings, measured in diverse ways, is not a new problem in the marketing literature (Jacoby, 1978). Indeed, the brand equity literature is further fragmented into areas of service brand equity (Berry, 2000), identity-based brand equity (Burmam et al., 2009), and social brand equity (Naidoo and Abratt, 2018). In the consumer-based brand equity stream of the brand equity literature, the consumers’ level of attachment to a brand has been called both *brand strength* and *brand loyalty* (Wood, 2000). From reading prior research on consumer-based brand equity such as that of Pappu et al. (2005), one can understand how a discussion of the strength of brand associations could have been misconstrued to refer to brand strength.

Srivastava and Shocker (1991) referred to brand equity as “the set of associations and behaviors on the part of a brand’s customers, channel members and parent corporations that permits the brand to earn greater volume or greater margins than it could without the brand name and that give the brand a strong, sustainable, and differentiated competitive advantage” (p. 5). This definition is a description of a set of related constructs in a nomological net rather than a conceptualization of a construct. Also, the authors limited the scope of their development of brand equity to the corporate marketer and consumer realm, limiting the external validity of their theory construction by omitting many types of brand objects such as people, organizations, places, and ideas. It becomes more apparent that this is a corporation-centered theory when one examines their conceptual model. Their applied corporate brand equity model begins with industry characteristics (strength of competition, stage of product life cycle) antecedent of brand strength. Brand strength is perceived to be a combination of performance profits (share/margins), longevity vulnerability, and growth potential). The influence of industry characteristics and brand strength on brand value is mediated by fit (synergies and joint efficiencies with product portfolio and company objectives). “Brand strength is measurable by a

brand’s competitive positioning and imagery relative to customer demands and desires” (p. 6). This conceptualization is a conflation of cause and effect relationships. They define brand strength in terms of its manifestations. That is, a brand is strong because of its market performance. However, it may be more correct to argue that a strong brand manifests or causes favorable market performance. Their idea that brand strength is partially held in consumers’ minds as a latent psychological construct is more akin to our conceptualization of brand strength, albeit underdeveloped.

Burmam et al. (2009) defined brand equity as “present and future valorization derived from the internal and external brand-induced performance” (p. 391). They further explain, “This definition includes three major categories: psychological brand equity, behavioral brand equity and financial brand equity. The conceptual proximity of the first two categories leads to a comprehensive and widely accepted term: brand strength” (p. 391). From this perspective, brand strength is merely used as a substitute term for either psychological brand equity or behavioral brand equity.

We believe the tendency to add additional meanings to a concept like brand equity by naming different *types* of brand equity leads to fragmentation in the literature and is conducive to confusion rather than knowledge discovery. The brand equity literature adds little to our understanding of the brand strength construct. We believe that brand equity and brand strength are distinct, albeit related, constructs. It is likely that brand strength is an antecedent of brand equity. That is, as brand strength increases, brand equity also increases. As consumers become more familiar with the brand, if they find the brand to be superior in comparison with alternative brands, and if they have a highly favorable attitude toward the brand, then we have, according to our conceptualization of brand strength, a strong brand. One can then expect consumers to develop a preference for the brand and this brand preference can be expected to influence consumer choices and behaviors pertaining to the brand. Hence, as brand strength increases, brand preference increases, thereby influencing brand-related behaviors. With respect to branded commercial products and services, because brand strength influences consumer behavior, the monetary value of the brand should also be influenced.

## 2.2. Nomological net

As discussed previously, in prior research, brand strength was often positioned as a dichotomous moderator variable and operationalized by obtaining two brands (strong versus weak), selected by using the consequences of brand strength as manifestations of brand strength (e.g., sales or market share). Using substitutes for brand strength does little to advance our knowledge because it is difficult to explore the nomological net of a construct if the nature of the construct is not understood and the actual construct is not investigated in the nomological net. Prior research that positioned brand strength as a dichotomous moderator generally found that antecedents have a greater influence on outcomes for strong brands than for weak brands. We believe that examining brand strength directly instead of through an operationalized surrogate will lead to knowledge discovery. For example, in this research, we investigate potential antecedents of brand strength, which is not something facilitated by using a strong versus weak brand dummy variable as a moderator.

In this investigation, we have chosen brand preference as a mediator and word-of-mouth (WOM) as our focal consequent or outcome construct. Both are largely independent of a contextual bias and, therefore, offer greater relevance across research contexts. Had we chosen an outcome specific to a brand object type, then the external applicability of our findings would have been more limited. In other words, brand preference and WOM are significant for all types of brand objects.

Brand preference is an important influencer of brand choice and other outcome variables. It refers to the degree to which an individual wants or likes one brand more than other brands among a given set of

**Table 1**  
Antecedents of brand familiarity.

Variable	Likert scale item
Information recency	I have been seeing, reading, or hearing about Coke more often recently.
Information longevity	I have been seeing, reading, or hearing about Coke over a long period of time.
Brand logo exposure	I see the Coke logo or name during a typical day.
Social – WOM	I often hear others talking about Coke.
Social – Brand use	I often see others drinking Coke.
Social – Brand choice	I often see others choosing Coke.
Brand experience	I have purchased Coke.

brand options (Wang, 2013). Brand preference is an important mediator in the brand nomological net. That is, the influence of an antecedent on the consequent is accounted for by its influence on brand preference (Hellier et al., 2003).

Word-of-mouth (WOM) refers to the degree to which individuals offer positive comments about a brand, including recommending the brand to others (El Hedhli et al., 2016). WOM is an outcome of interest for all types of brand objects. As one becomes more satisfied, more pleased, and more impressed by a brand, the more one is motivated to make favorable comments to others about the brand (Albert et al., 2013; Brown et al., 2005; De Matos and Rossi, 2008).

### 2.3. Antecedents of brand familiarity

Individuals form an understanding of a brand based on information they have received about the brand and their personal experiences with the brand (Wymer, 2013). The potential antecedents of brand familiarity that we investigate in this study are presented in Table 1.

It is reasonable to believe that brand familiarity is influenced by individuals' exposure to information pertaining to the brand (Campbell and Keller, 2003). The more information an individual receives about a brand, the more familiar the individual becomes with the brand. Information can have different characteristics. We included in our study the recency of the exposure to brand information (information recency), the degree to which brand information has been presented over time (information longevity), and the regular exposure to the brand name or logo (brand logo exposure). We chose these potential brand familiarity antecedents because they are generalizable across research contexts and brand object types, and because prior research supports the proposition that the exposure to information about a brand (Campbell and Keller, 2003) and experience with the brand are antecedents of brand familiarity (Alba and Hutchinson, 1987; Kent and Allen, 1994).

With respect to the influence of the recency of information on brand familiarity, psychology experiments on memory have generally found that the recency of information influences accurate recall of the information, which tends to degrade over time (da Costa Pinto and Baddeley, 1991; Miller and Campbell, 1959). McDaniel and Kinney (1998) found that recency of exposure to an ad influenced audience member sponsor awareness. This prior research suggests that memories associated with a brand are influenced by the recency of exposure to information about the brand.

With respect to information exposure over time and the regularity of brand information exposure, Hasher and Zacks (1984) found that the frequency of information exposure influences how the information is stored, encoded, and accessed in memory. Memory research has found that recency of information is not always as important as the repeated exposure to information over time (Oliphant, 1983).

Individuals can also be exposed to brand information through observations and interactions with other people. Hence, we included in our study receiving word-of-mouth brand comments (social – WOM), observing others using the brand (social – brand use), and observing

others choosing the brand (social – brand choice). Prior research has found that information can be more persuasive if it is received from social sources (Ozgen and Baron, 2007). Social learning theory (Bandura, 1986) is founded upon the idea that people learn from observing the behavior of others. It is reasonable to believe, then, that people also learn from listening to what other people say, an idea consistent with social cognitive theory (Bandura, 1977).

In addition to receiving information about a brand, actual brand experiences are likely to exert an important influence (Ha and Perks, 2005; Dwivedi et al., 2018). Prior research has found a relationship between brand awareness and brand experience (de Oliveira Santini et al., 2018). Cleff et al. (2014) found that brand experience influenced brand recall and recognition. Hence, we may conclude that brand experiences influence brand familiarity. That is, one is more likely to experience a brand of which one is aware; one is more likely to be familiar with a brand with which one has experience. Individuals can often better understand how a brand performs through their own experiences with the brand rather than from reading or hearing about the brand from other sources.

The preceding discussion pertaining to brand familiarity antecedents leads to testable hypotheses. First, all the proposed antecedents should exert an influence on brand familiarity.

**H1a.** The proposed antecedents described in the preceding discussion have a positive influence on brand familiarity.

It is unlikely that the various proposed antecedents will exert an equal influence on brand familiarity. Prior research on mere exposure and the recency/primacy effects offer little guidance in predicting differential brand familiarity antecedent effects. It is reasonable to believe, however, that personal brand experience will exert the greatest influence on brand familiarity. Prior research supports the idea that direct brand experience, rather than indirect experience, has a stronger influence on consumer beliefs (Fazio and Zanna, 1978; Smith and Swinyard, 1988). Park et al. (1994) found that product-related experience results in greater memory accessibility. Previous studies have also found that prior experiences with a product lead to an increase in the perceived validity and personal relevance of one's product knowledge (Nisbett and Ross, 1980).

One's personal experience of interacting with the brand provides sensory memory inputs that interact with one's moods and emotions to form more enduring memories (de Oliveira Santini et al., 2018). Hence, one's personal experience with a brand is likely to have a greater impact on one's memory than receiving brand information from a marketing organization or another individual. For example, one may learn of a new restaurant from its advertisements. One may then read reviews about the restaurant. These information sources would influence some degree of brand familiarity with respect to the restaurant. However, it is reasonable to expect one's own personal experience at the restaurant to have a greater influence on one's brand familiarity than other, secondary information sources.

**H1b.** Of the proposed brand familiarity antecedents, brand experience will exert the greatest influence on brand familiarity.

### 2.4. Antecedents of brand attitude

The proposed brand attitude antecedents used in this study are presented in Table 2. These variables were chosen because they represent different facets of information that individuals would commonly experience. Also, they are sufficiently general to apply to various contexts and types of brands.

Undoubtedly, the strength and valence of brand attitudes are influenced by the degree of favorability of information an individual receives about a brand (Kempf, 1999). Lee et al. (2009) found that the valence of consumer reviews influence individuals' attitudes toward a brand and its website. Previous studies have found brand experience to

**Table 2**  
Antecedents of brand attitude.

Variable	Likert scale item
Information favorability	The information I receive about Coke is favorable.
Information tone	In general, the tone of what I read or hear about Coke is positive
Positive referrals	Others recommend Coke to me.
Positive brand experience	My personal experiences drinking Coke are positive.
Positive industry reputation	The soft drink industry has a good reputation.

be an antecedent of brand attitude (de Oliveira Santini et al., 2018; Shamim and Mohsin Butt, 2013; Zarantonello and Schmitt, 2013). Moreover, prior research has found that a favorable corporate reputation increases customers' confidence in the company's products, services and advertising claims (Schwaiger, 2004). Tang (2010) found that corporate reputation influenced customer loyalty; hence, one may conclude that the influence of corporate reputation on customer loyalty is mediated by customers' attitudes toward the corporation.

Based on this prior research, we offer the following hypothesis.

**H2a.** Information favorability, information tone, positive referrals, positive brand experience, and positive industry reputation have a positive influence on brand attitude.

As in the previous discussion of brand familiarity antecedents, information that an individual receives about a brand can come from both nonsocial (e.g., advertising) and social (e.g., WOM) sources. Given the findings of previous studies (see section prior to H1b), it is reasonable to believe that an individual's personal experiences with a brand would exert greater influence on brand attitudes than receiving information about a brand, all other things being equal. Cleff et al. (2014) found that brand experience influenced brand attitudes; hence, individuals' consumption-based or other direct brand experiences may increase their knowledge of the brand (Van Osselaer and Janiszewski, 2001). This leads us to the following hypothesis:

**H2b.** Of the proposed brand attitude antecedents, positive brand experience will exert the greatest influence on brand attitude.

## 2.5. Antecedents of brand remarkability

Unlike the previous two dimensions of brand strength - brand familiarity and brand attitude - we do not offer antecedents of brand remarkability outside of the conceptual domain of brand strength. Brand remarkability refers to the degree to which a target group perceives a brand object to be extraordinary. Prior research supports the idea that individuals consider a brand on its own merits while also comparing it with competing brands (Oakley et al., 2007). How excellent is a brand? How outstanding or superior is a particular brand in comparison with its competing brands? To answer these questions and, thereby, develop a sense of how remarkable a particular brand may be, one needs to have a certain degree of familiarity with a brand. As one becomes more familiar with the brand, one obtains a sense of how good a brand is and how it compares with competing brands. It is difficult, at this early juncture in the theoretical development of brand strength, to identify antecedents of brand remarkability that are independent of the other two brand strength dimensions of brand familiarity and brand attitude.

## 2.6. Inter-dimensional dynamics of brand strength

Wymer et al. (2016) made an important contribution to brand-related research by clarifying the nature of brand strength, whereas prior research considered brand strength only in terms of its probable consequences or outcomes. Wymer et al. (2016) conceptualized brand

strength as a three-dimensional construct. The inter-dimensional relationships of the three brand strength dimensions within its conceptual domain, however, have not been examined in previous studies.

It is reasonable to believe that brand familiarity temporally precedes brand attitude and brand remarkability within the conceptual domain of brand strength. Brand familiarity begins from nothing (unawareness of the brand) and increases over time as one is exposed to social and nonsocial sources of information about the brand and one has experiences with the brand. With no familiarity with a brand, one would not be able to develop a sense of how favorable one feels toward the brand (brand attitude) or to develop a sense of the excellence or superiority of the brand (brand remarkability).

Prior research indicates that brand familiarity is a prerequisite for establishing memories pertaining to the brand, brand retrieval and brand recall (Baker et al., 1986). We argue that as one's brand familiarity increases, so does a comprehension of the brand and how the brand compares to similar brands with which the individual is also familiar. Brand attitude formation and an assessment of brand remarkability would then follow.

**H3a.** Brand familiarity is an antecedent of brand attitude and brand remarkability.

Brand attitude and brand remarkability are distinct, but related, constructs. Brand attitude relates to how favorably one feels about a brand. Brand remarkability relates to how excellent and superior one perceives a brand to be, often in comparison with similar brands (brands in the choice set or from the same brand object class). As one example, consider a charity as a brand. Charities do good work, helping those in need. Hence, we often have positive attitudes toward charities. However, it is unlikely that we would believe that all charities are equally effective and efficient. This, of course, assumes a sufficient level of brand familiarity so that brand attitudes and an assessment of brand remarkability can be developed. Even though individuals have positive attitudes toward charities, they are likely to direct their donations and other support to the charity which they believe will offer the greatest level of help to the needy (indicating the highest level of brand remarkability compared to other organizations).

As another example, consider a professional athlete as a brand (celebrities are often marketed as brands). The athlete may be the best, most highly skilled player in that sport (high brand remarkability). However, the athlete may be well-known for having a disagreeable, churlish personality and may not be well-liked (low brand attitude).

It is important, when developing a theory of brand strength, that a distinction is made in terms of dimensions even though they are inter-related as one would expect given that they co-exist within a common conceptual domain. Brand familiarity is a prerequisite for the development of brand attitude and brand remarkability. Hence, the formation of brand attitude and brand remarkability occurs in nearly the same temporal sequence as brand familiarity increases. That is, as one learns more about a brand by receiving information about the brand and having experiences with the brand (increasing brand familiarity), one develops a sense of how much one likes the brand (brand attitude) and how highly performing one believes the brand to be (brand remarkability). For example, before one can consider how a set of brands compare in regard to quality (Shankar et al., 1998) or attribute dominance (Zhang and Markman, 1998), one must be familiar with the brands. One gains a more enduring perception of a brand's quality over time as one accumulates knowledge about the brand (Erdem et al., 2008; Szymanowski and Gijbrecchts, 2012).

In our brand strength conceptualization, we argue that brand familiarity is an antecedent of brand attitude and brand remarkability. The measurement model of brand strength would necessarily be formative, as the three dimensions of brand strength (our latent construct) are formed by its three dimensions (our observed dimensions). As brand attitude and brand remarkability are formed somewhat concurrently with an increase in brand familiarity, we would expect a correlation

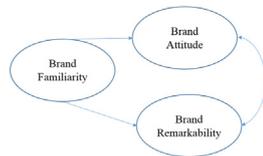


Fig. 1. Dimensional relationships within brand strength's conceptual domain.

between them. Both brand attitude and brand remarkability increase in magnitude as brand familiarity increases. However, although in practice the correlation between brand attitude and brand remarkability is likely to be positive, it is not a theoretical requirement. As in the earlier example of a professional athlete, theoretically, the correlation could be negative. Hence, we would expect brand attitude and brand remarkability to co-vary (they are developing in nearly the same temporal space), although a positive polarity is not a requirement. Fig. 1 presents the inter-dimensional relationships within the brand strength conceptual domain.

**H3b.** Brand attitude is correlated with brand remarkability.

## 2.7. WOM behavior

We chose WOM as our focal outcome variable because it is a desirable marketing outcome variable across marketing contexts, organization types, and brand object types. Hence, whether the brand is a consumer product, intellectual property, organization, tourist destination, or person, WOM is a desired marketing outcome.

Casidy and Wymer (2015), in a marketing study of higher education, examined the influence of a university's brand strength on student WOM. They reported that brand strength had a significant influence on WOM. This part of our model, therefore, will be a replication of this prior work in a consumer context.

We are interested in determining the influence of brand strength on WOM behavior. A strong brand is well-known, perceived in a positive manner, and believed to be exceptional and superior to other brands in its choice set. Therefore, all things being equal, it is reasonable to expect a strong brand to have a greater influence on WOM than a weak brand.

**H4.** Brand strength has a positive influence on WOM.

## 2.8. Brand preference as a mediator

We expect that the effect of brand strength on WOM is partly accounted for through its effect on brand preference, defined previously. That is, as brand strength increases, it stimulates the brand preference of its target audience (or target market segment). To the best of our knowledge, no previous studies have examined the mediation effect of brand preference on brand strength's influence on WOM.

It is reasonable to believe that brand strength has a positive influence on brand preference. An increase in brand strength is derived from an increase in its three dimensions. A strong brand is one that enjoys a high level of familiarity and a very favorable attitude, and is perceived to be remarkable. Hence, one's preference would be for the stronger brand. Strahilevitz and Myers (1998) found that brand support of charities could increase preference for the brand. As one's affect for a brand increases, so does one's preference for the brand. Brand strength generally captures the favorability of one's evaluation of a brand and should, likewise, influence one's preference for the brand.

Chang and Liu (2009) found that brand preference influenced purchase intentions. In our study, we believe a similar mechanism is at work, although the constructs are different. We believe brand preference could influence other outcome variables. We believe that as one's brand preference increases, so does one's motivation to make

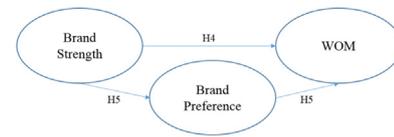


Fig. 2. Brand strength's predicted influence on marketing outcome variable.

favorable comments to others about the preferred brand. Casaló et al. (2008) found that consumer satisfaction with a bank's website increased consumer WOM. Casidy and Wymer (2016) found that university students' satisfaction with their university increased WOM. Likewise, if one perceives a brand to be sufficiently favorable to be the preferred brand, that preference should influence WOM.

**H5.** Brand preference mediates the influence of brand strength on WOM.

The predicted influence on brand strength on WOM as mediated by brand preference is depicted in Fig. 2.

Next, we report the results of a study conducted to test our hypotheses. In our initial journal submission, we reported the results of our first study using Coke, the dominant consumer soft drink brand. Reviewers expressed concern about our use of the strongest category brand as well as some of our measures. We responded to these concerns by adding a second study to this research in which we varied our measures and selected a challenger brand in a service category.

## 3. Empirical studies

In this section, we describe the two studies conducted to refine our model and test our hypotheses. We begin by discussing our data collection procedures and sample. Then we describe our measures, report our analyses and present our findings. For Study 1, we chose Coke as the focal brand for this study because it is the top-selling carbonated soft drink brand in the U.S. market from which our sample was drawn. Further, soft drink beverage is a product category with which most of the U.S. population is familiar (Statista, 2018). We utilized the data set from Study 1 to refine our Brand Strength measurement model. In Study 2, we chose T-Mobile, the third largest wireless carrier in the U.S. (Statista, 2018), as the brand context to test our hypotheses.

### 3.1. Sample

Participants for Study 1 were recruited from an online survey panel of U.S. residents from SurveyMonkey Audience, whereas participants for Study 2 were drawn from the MTurk platform in exchange for a small payment. Panel participants were contacted via email and invited to complete an online questionnaire, whereas MTurk participants were invited via a third-party company (MTurk Data) that managed and rewarded the respondents on behalf of the researchers.

The sample profile is shown in Table 3. After removing cases with incomplete responses ( $n = 87$ ), the final sample for Study 1 comprised 449 cases. The final sample for Study 2 comprised 203 cases with no missing cases.

### 3.2. Measures

All variables were measured using a 7-point Likert scale format. The scale items for brand familiarity and brand attitude antecedent measures are presented in the preceding section (see Table 1 and Table 2). The scale items for brand strength, brand preference, and WOM are presented in Table 4.

### 3.3. Study 1: measurement model refinement

For Study 1, we evaluated the measurement model properties by

**Table 3**  
Sample characteristics.

Variable	Categories	Study 1		Study 2	
		Frequency	Percent	Frequency	Percent
Gender	Male	262	51	113	56
	Female	230	44.7	90	44
	Missing	22	4.3	0	0
Age	18–29	79	15.4	76	37.4
	30–44	109	21.2	92	45.3
	45–60	169	32.9	30	14.8
	> 60	135	26.3	5	2.5
	Missing	22	4.3	0	0
Education	Less than high school degree	7	1.4	1	0.5
	High school degree	50	9.7	24	11.8
	Some college	127	24.7	55	27.1
	Assoc. or Bachelor degree	158	30.7	98	48.3
	Graduate degree	150	29.2	25	12.3
	Missing	22	4.3	0	0

conducting confirmatory factor analysis in two phases. First, we evaluated the measurement model of brand strength, which is a formative construct consisting of three dimensions: brand familiarity, brand attitude, and brand remarkability. We adopted an iterative approach to refine our measurement model. Specifically, items with low factor loadings (i.e. BA2 – “I like Coke”) and high modification indices (i.e. BR3 – “No soft drink is better than Coke” and BF3 – “I have been aware of Coke for a long time”) were removed from the model. This was deemed to be an acceptable modification because these were reflective indicators of the dimensions. As reflective indicators, they are manifestations rather than components of the dimensions. Reflective indicators are assumed to correlate, and their removal is acceptable as long as the conceptual domain of the factor from which they are manifested is covered by the remaining scale items (Edwards and Bagozzi, 2000; Finn and Wang, 2014). (Table 5).

After removing items with low factor loadings and high modification indices, the final measurement model (Fig. 3) exhibited excellent fit with the data ( $\chi^2 = 17.94$ ,  $df = 15$ ;  $CMIN/DF = 1.20$ ;  $RMSEA = 0.021$ ;  $CFI = 0.99$ ;  $TLI = 0.99$ ). Note in Fig. 3 that an endogenous variable, V33 (Coke is a strong brand), was added as a dependent variable for brand strength and that the loading for brand strength's error term was constrained to zero. This was done for the model to achieve identification which is an algorithmic necessity in formative measurement models, but not theoretically meaningful (Muthén and Muthén, 2012).

**Table 4**  
Focal construct measures.

Construct	Citation	Likert scale (1, strongly disagree → 7, strongly agree)
Brand strength	Wymer et al. (2016)	Brand familiarity (BF)
		BF1. I am knowledgeable about [X]
		BF2. I am able to describe [X]
		Brand attitude (BA)
		BA1. I have positive thoughts when I think of [X]
		BA2. I like [X]
		BA5. I have a positive impression of [X]
		Brand remarkability (BR)
		BR1. No [soft drink / telecommunication provider] is better than [X]
		BR2. [X] really stands apart as being exceptional
BR3. [X] stands out in comparison to others		
Brand preference	Sohail and Awal (2017)	1. I would use T-Mobile more than any other telecommunication provider 2. I would be inclined to use T-Mobile services over any other brand of telecommunication provider 3. T-Mobile is my preferred brand over any other telecommunication provider brands
WOM	Kim et al. (2009)	1. I tell others about T-Mobile 2. I recommend T-Mobile to others

[X] = Coke (Study 1), T-Mobile (Study 2).

### 3.4. Common method bias

We assessed the threat of common method bias using two approaches. First, we employed the marker variable technique recommended by Lindell and Whitney (2001) by incorporating a theoretically unrelated variable (i.e., gender) in the analysis as a proxy for common method variance (CMV). The average correlation coefficient for this marker variable ( $r = 0.09$ ) was used to calculate the CMV-adjusted correlations for the variables under examination (Malhotra et al., 2006). After partialing out the variance due to the marker variable, the mean difference between the original and the CMV-adjusted correlation was very low ( $r = 0.05$ ), suggesting that common method bias was not a problem in this study. Second, we employed the common latent factor technique by comparing the measurement model with and without the CMV factor. An observation of the path coefficients revealed no significant changes in the strength and significance of the effects, which suggested that CMV had minimum impact in this study.

### 3.5. Study 2: hypotheses testing

We replicated the structure of the measurement model from Study 1 in Study 2. As seen in Fig. 4, the brand strength measurement model exhibited excellent fit with the data ( $\chi^2 = 33.187$ ,  $df = 15$ ;  $CMIN/DF = 2.21$ ;  $RMSEA = 0.077$ ;  $CFI = 0.986$ ;  $TLI = 0.975$ ). Similarly, the full measurement model with antecedents and outcomes of brand strength exhibited good fit with the data ( $\chi^2 = 224.935$ ,  $df = 109$ ;  $CMIN/DF = 2.06$ ;  $RMSEA = 0.072$ ;  $CFI = 0.968$ ;  $TLI = 0.945$ ). Other indicators of construct reliabilities and square root of average variance extracted (Table 6) indicates convergent validity and discriminant validity. We found no multicollinearity issue as the variance inflation factors of the indicators in one-dimensional measurement models have an average value of 4.9 which is below the recommended cut-off value of 5 (Hair et al., 2011).

We tested the research hypotheses using the structural model in Mplus 7.3 (Preacher and Hayes, 2008). The structural model has acceptable fit with the data as reflected in the fit indices (Fig. 5). The model explained 76% variance in brand preferences and 82% variance in WOM behavior. The results are presented in Table 7.

All proposed antecedents of brand familiarity have significant effects on brand familiarity except for information recency which is marginally significant at 0.054 level. Thus, support was found for H1a. With regards to brand attitude, all antecedents were found to be significantly related to brand attitude, thereby supporting H2a. We utilized the model constraint command in Mplus 7.4 to compare the differences in effect sizes among brand familiarity and brand attitude antecedents. We utilized the bootstrapping method with 5000

**Table 5**  
Measurement items.

	STUDY 1: Coke				STUDY 2: T-Mobile			
	Factor Loadings		SE	t	Factor Loadings		SE	t
	Unstd	Std			Unstd	Std		
<i>Brand familiarity</i>								
I am knowledgeable about [Coke/T-Mobile]	1	0.807	0	999	1	0.916	0	999
I am able to describe [Coke/T-Mobile] to others	1.097	0.84	0.118	9.333	0.909	0.857	0.061	14.803
<i>Brand attitude</i>								
I have positive thoughts when I think of [Coke/T-Mobile]	1	0.919	0	999	1	0.941	0	999
I like [Coke/T-Mobile]	0.996	0.861	0.037	26.862	0.971	0.929	0.039	25.164
I have a positive impression of [Coke/T-Mobile]	1.045	0.912	0.034	30.649	1.019	0.913	0.043	23.611
<i>Brand remarkability</i>								
[Coke/T-Mobile] really stands apart as being exceptional	1	0.919	0	999	1	0.902	0	999
[Coke/T-Mobile] stands out in comparison to others	1.029	0.935	0.037	27.856	1.148	0.943	0.055	21.021
<i>Brand preference</i>								
I would use T-Mobile more than any other telecommunication provider	NA				1	0.94	0	999
I would be inclined to use T-Mobile services over any other brand of telecommunication provider					0.97	0.939	0.037	26.446
T-Mobile is my preferred brand over any other telecommunication provider brands					0.946	0.923	0.038	24.716
<i>Word-of-Mouth (WOM) Behavior</i>								
I tell others about T-Mobile	NA				1	0.941	0	999
I recommend T-Mobile to others					1.062	0.968	0.037	28.76

SFL=Standardized Factor Loadings SE=Standard Errors

resamples to estimate standard errors and the confidence interval for the differences of effect sizes (Muthén and Muthén, 2012).

We found significant differences in effect sizes among brand familiarity antecedents, thus providing support for H1b. As displayed in Table 8, brand experience was found to exert the strongest influence on brand familiarity ( $\beta = 0.42, p < .01$ ) compared to the other antecedents, namely information recency ( $\Delta\beta = 0.36, p < .01$ ), information longevity ( $\Delta\beta = 0.28, p < .01$ ), and social brand use ( $\Delta\beta = 0.25, p < .01$ ). With regards to brand attitude antecedents, results suggest that the effect sizes of positive brand experience are significantly stronger than positive industry reputation ( $\Delta\beta = 0.16, p < .01$ ), thereby supporting H2b. However, there are no significant differences in effect sizes between positive brand experience and information favorability in influencing brand attitude ( $\Delta\beta = 0.01, p > .10$ ).

With regards to the inter-dimensional dynamics of brand strength, we found that brand familiarity has significant positive effects on brand attitude ( $\beta = 0.14, p < .05$ ), and marginally significant effects on brand remarkability ( $\beta = 0.14, p < .07$ ). Thus, support was found for H3a. We also found strong significant correlations between brand attitude and brand remarkability ( $r = 0.64$ ), thereby supporting H3b.

With regards to the outcomes of brand strength, our analysis found

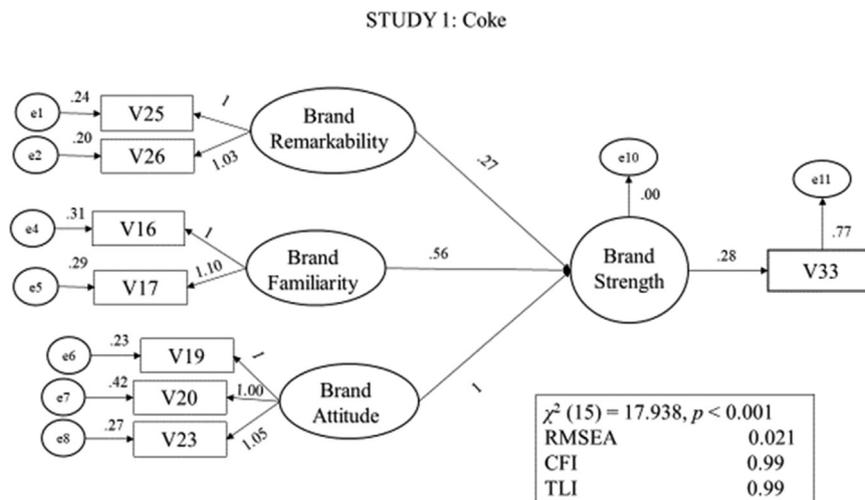
that brand strength has non-significant direct effects on WOM behavior ( $\beta = 0.06, p > .05$ ), thereby failing to support H4. However, our mediation analysis found that brand strength has significant indirect effects on WOM behavior ( $\beta_{\text{indirect}} = 0.11, t = 2.18, p < .03$ ) through brand preferences ( $\beta_{\text{Total}} = 0.17, t = 2.56, p < .01$ ), thereby supporting H5. The extent of mediation is considered as ‘full’ as the direct effects of brand strength on WOM are not significant when brand preference is included as a mediating construct. Fig. 5 summarizes the empirical results of this study.

**4. Discussion**

We begin this section by comparing our findings with the purposes of this research, discussed earlier in this article. Then we discuss the practical implications of our findings, followed by their theoretical implications.

*4.1. Contributions of this research*

One contribution of this research was the discovery of antecedents for two of the three brand strength dimensions: brand familiarity and



**Fig. 3.** Brand Strength Measurement Model in Study 1 (Coke).

STUDY 2: T-Mobile

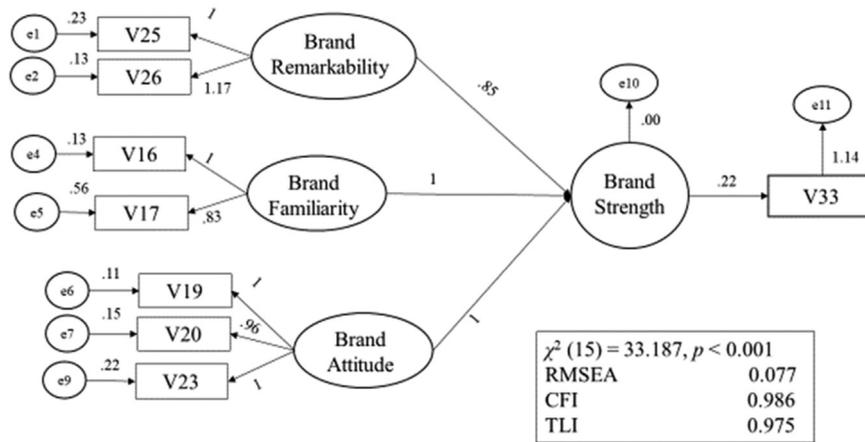


Fig. 4. Brand Strength Measurement Model in Study 1 (Coke). Non-standardized coefficients displayed.

Table 6  
Correlation matrix.

	CR	AVE	PREF	BRFAM	BATT	BREM	WOM
1. Brand preference	0.95	0.87	<i>0.93</i>				
2. Brand familiarity	0.88	0.79	0.60	<i>0.89</i>			
3. Brand attitude	0.95	0.86	0.73	0.51	<i>0.93</i>		
4. Brand remarkability	0.92	0.85	0.84	0.52	0.79	<i>0.92</i>	
5. Word-of-Mouth	0.95	0.91	0.89	0.61	0.72	0.82	<i>0.95</i>

CR = Composite Reliability AVE = Average Variance Extracted. Figures in italics indicate square root of average variance extracted. All correlations are significant at 0.01 level.

brand attitude. With respect to the proposed brand familiarity antecedents, all were found to have significant influence on brand familiarity, except information recency. With respect to the proposed brand attitude antecedents, all three proposed antecedents were found to have a significant influence on brand attitude. Furthermore, brand experience was found to have the greatest antecedent influence on brand attitude.

Another contribution of this study was the enhancement of our knowledge of inter-dimensional relationships within the brand strength conceptual domain. Although Wymer, Gross, and Helming (2016) conceptualized and validated a three-dimensional brand strength construct, the within-domain relationships among the three brand strength dimensions were beyond the scope of their research. In our study, we

proposed and tested a model in which brand familiarity exerted an antecedent influence on its two co-dimensions, brand attitude and brand familiarity, which were found to covary. Our findings supported our theory of the brand strength inter-dimensional dynamics.

This study also contributed to our knowledge of the influence of brand strength on WOM, mediated by brand preference. We found no prior studies that examined the mediation influence of brand preference on the relationship between brand strength and WOM. Our findings show that brand strength has a significant influence on brand preference, and that brand preference partially mediates the influence of brand strength on WOM.

It is reasonable to believe that marketing tactics do affect marketing outcomes as they have an influence on brand strength and, subsequently, brand preference. Hence, brand strength is an important mediator of the influence of marketing antecedents on marketing outcomes. Brand strength is, then, an antecedent to marketing outcomes such as brand equity. That is, as a brand gets stronger (i.e., it becomes better known and perceived to be superior to competing brands) it becomes the more preferred brand. Brand preference is manifested in a variety of outcomes like willingness-to-pay a premium price, intention to repurchase the preferred brand, WOM, and the value of the brand.

Too often in prior research, brand strength was portrayed as a dichotomous moderator; hence, researchers would examine their antecedent-consequent effects as moderated by a strong versus weak brand. We believe that it is more theoretically correct to place brand strength in the nomological net as a mediator, enabling this construct to be

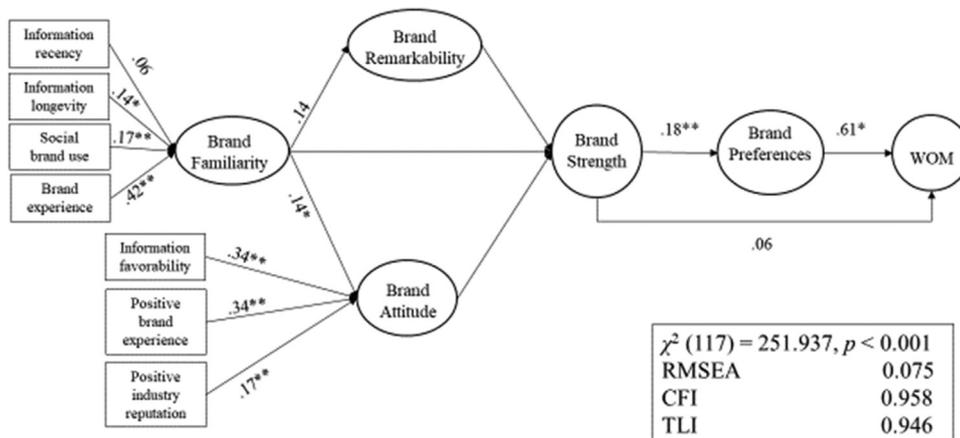


Fig. 5. Empirical results.

**Table 7**  
Test of hypotheses.

		UnStd	Std	SE	t
I have been seeing, reading, or hearing about T-Mobile more often recently (information recency)	→ brand familiarity	0.059	0.058	0.069	0.857
I have been seeing, reading, or hearing about T-Mobile over a long period of time (information longevity)	→ brand familiarity	0.139*	0.145*	0.064	2.178
I often see others using T-Mobile services (social brand use)	→ brand familiarity	0.169**	0.173**	0.062	2.745
I have used T-Mobile services (brand experience)	→ brand familiarity	0.418**	0.58**	0.042	10.053
The information I receive about T-Mobile is favorable (information favorability)	→ brand attitude	0.344**	0.352**	0.086	3.998
My personal experiences using T-Mobile services are positive (positive brand experience)	→ brand attitude	0.336**	0.392**	0.072	4.681
The soft drink industry has a good reputation (positive industry reputation)	→ brand attitude	0.174**	0.198**	0.049	3.552
brand familiarity	→ brand strength	1.275	0.267	0.915	1.394
brand attitude	→ brand strength	1	0.17	0	999
brand remarkability	→ brand strength	4.325	0.711	3.467	1.247
brand familiarity	→ brand attitude	0.139*	0.172*	0.056	2.476
brand familiarity	→ brand remarkability	0.137	0.175	0.078	1.759
brand strength	→ brand preferences	0.176**	0.871**	0.068	2.591
brand strength	→ Word-of-Mouth	0.063	0.314	0.036	1.77
brand preferences	→ Word-of-Mouth	0.611**	0.617**	0.128	4.788

**Table 8**  
Differences in effect sizes.

	$\Delta\beta$	se	t
<b>Brand Familiarity Antecedents</b>			
Information recency - Information longevity	- 0.08	0.111	- 0.718
Information recency - Social brand use	- 0.11	0.104	- 1.058
Information recency - Brand experience	- 0.359**	0.078	- 4.593
Information longevity - Social brand use	- 0.03	0.1	- 0.299
Information longevity - Brand experience	- 0.279**	0.079	- 3.553
Social brand use - Brand experience	- 0.249**	0.086	- 2.912
<b>Brand Attitude Antecedents</b>			
Information favorability - Positive brand experience	0.008	0.087	0.093
Information favorability - Positive industry reputation	0.17*	0.069	2.458
Positive brand experience - Positive industry reputation	0.162**	0.063	2.563

measured directly as a continuous variable.

This study has enhanced our understanding of the nature of brand strength. The purpose of brand management is to strengthen the brand. Rather than assuming a brand is strong by its manifestations, we have a better understanding of what a strong brand is. We have a better understanding of the conceptual domain of brand strength and its within-domain relational dynamics. We also have a better understanding of the antecedents and consequents of brand strength.

**4.2. Practical implications**

Favorable marketing outcomes like brand preference and WOM are influenced by brand strength but are distinct from, and should not be conflated with, brand strength. Brand strength is determined by the perceptions of one's target market or group. Increasing brand strength, then, is achieved by favorably influencing the target audience's perceptions of a brand. These perceptions are developed over time as the target audience acquires information about the brand from all sources, as well as from their own experiences with the brand.

To achieve a strong brand, the brand object should be perceived to be excellent. It should be perceived as the best among its competitors or similar brands. This can be realized by ensuring that the target brand performs in a superior manner (compared to other brands) with respect to the brand attributes that the target audience or group considers as important. In effect, a brand should be made to be extraordinary, excellent, and superior first. Second, brand familiarity can then be increased through an ongoing communication strategy. Because consumers receive communications about a brand from different sources, managers should take measures to ensure that brand experiences are consistently favorable over time.

Brand management planning can benefit from the brand strength of the focal brand and the brand strength of key competing brands being measured regularly. In so doing, brand managers have another means of evaluating the effectiveness of their brand management strategies. Marketing tactics may have a direct influence on the desired marketing outcomes such as, for example, increase in sales. However, much of the influence of marketing tactics may occur indirectly through brand strength. Hence, by measuring brand strength as well as the desired marketing outcome variables, brand managers have a better understanding of the effectiveness of marketing tactics.

The measurement of the brand strength dimensions provides useful diagnostic information that can inform brand management planning. For example, the brand manager can compare the focal brand against its key competing brands with respect to brand familiarity, brand attitude, and brand remarkability. This enables the brand manager to compare the consumer perceptions of various brands. The parsimony of our conceptualization and measurement of brand strength is especially advantageous. Is the problem to be solved by the brand manager one of communication or one of the brand object's attributes? If the target audience is relatively unfamiliar with the brand, then the brand manager should focus on communication to increase brand familiarity. If the target audience perceives the brand to be relatively unremarkable, then the brand manager must determine the reason for this. If the brand object is indeed superior to its competing brands, then the brand manager must communicate this to the target audience. Perhaps there are credibility issues of which the target audience is unaware and that can be clarified through brand communications. If the brand object is inferior to competing brands, then the brand manager can focus on adding desirable attributes to the brand object or on improving the quality of its existing bundle of attributes. Thus, by measuring brand strength, brand managers are better informed, enabling them to make better decisions for greater marketing effectiveness.

**4.3. Limitations and future research directions**

All research by necessity has limitations. We collected cross-sectional data from U.S. survey panels. Hence, interpretations of our findings and the application of our findings to other contexts should be done with due consideration, given the limitations of this work. Future studies could test the validity of our model using other techniques such as experimental design or secondary data analysis. Linking brand strength perceptions to actual sales data and WOM behavior would further strengthen our findings.

As the brand strength construct and its nomological net becomes better understood, future research opportunities to expand our knowledge of brand management abound. For example, a better understanding of the distinction and relationship between brand strength and

brand equity would be helpful. More needs to be known about brand strength antecedents. What are other antecedents of brand strength, in general, and the brand strength dimensions, in particular? What are the stronger or more influential brand strength antecedents?

More needs to be known about brand strength consequences. A variety of other desirable marketing outcome variables can be tested in future research. We chose our mediator and outcome in this study based on their applicability across contexts. That is, whether one markets a product, service, political candidate, artist, tourist destination, or charity, brand preference and WOM are important. However, the various brand management contexts that are possible in future research will contain other outcome variables. An investigation of the relationship between brand strength and these various outcome constructs will add to our knowledge.

The mechanism through which brand strength influences desirable marketing outcome variables is not well understood. In this study, we examine only the mediating influence of brand preference. However, there are other potential mediators and moderators which might affect the relationship between antecedents of brand strength and brand strength and its consequences. For example, brand object type (or within-object type differences like product class) may have an influence. Some target market segment characteristics may exert a moderating influence, and there are other factors which could be taken into consideration in future research.

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